

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net

каталог, описание, технические, характеристики, datasheet, параметры, маркировка, габариты, фото, модуль,
Murrelektronik, даташит, модуль, преобразователь,

Каталог Murrelektronik2025г.

Murrelektronik в Беларуси

купить, продажа в Минске, Беларусь
электронные компоненты

[где и как купить в Минске?](#)



Продукция Murrelektronik

о компании Murrelektronik

Murrelektronik - это немецкая компания, специализирующаяся на разработке и производстве электронных компонентов и систем для промышленной автоматики. Компания была основана в 1975 году и имеет свою штаб-квартиру в Опфенбахе, Германия.

Murrelektronik является одним из ведущих производителей электронных компонентов и систем для промышленной автоматики, включая:

1. **Модульные системы:** компания предлагает широкий спектр модульных систем для промышленной автоматики, включая системы управления, системы питания и системы связи.
2. **Силовая электроника:** Murrelektronik производит различные компоненты силовой электроники, включая преобразователи, фильтры и удлинители.
3. **Системы управления:** компания предлагает системы управления для промышленной автоматики, включая системы управления двигателями, системы управления насосами и системы управления вентиляторами.
4. **Сенсорная техника:** Murrelektronik предлагает различные типы датчиков, включая датчики положения, датчики температуры, датчики давления и т.д.
5. **Системы связи:** компания предлагает системы связи для промышленной автоматики, включая системы Ethernet, системы Wi-Fi и системы Modbus.

Murrelektronik имеет широкий спектр применения своих продуктов, включая:

1. **Автомобильная промышленность:** компания поставляет свои продукты в автомобильную промышленность, включая системы управления и системы питания для автомобильных заводов.
2. **Пищевая промышленность:** Murrelektronik предлагает решения для пищевой промышленности, включая системы управления и системы питания для пищевых предприятий.
3. **Химическая промышленность:** компания поставляет свои продукты в химическую промышленность, включая системы управления и системы питания для химических предприятий.
4. **Фармацевтическая промышленность:** Murrelektronik предлагает решения для фармацевтической промышленности, включая системы управления и системы питания для фармацевтических предприятий.

Murrelektronik имеет сильную позицию на мировом рынке и имеет офисы и представительства в более чем 50 странах мира. Компания известна своим высоким качеством продуктов и услуг, а также своим инновационным подходом к разработке новых решений для промышленной автоматизации.

Некоторые из ключевых преимуществ Murrelektronik включают:

- **Высокое качество:** компания гарантирует высокое качество своих продуктов и услуг, включая сертификацию по ISO 9001.
- **Инновации:** Murrelektronik инвестирует в исследования и разработку новых технологий и решений для промышленной автоматизации.
- **Глобальная поддержка:** компания имеет широкую сеть офисов и представительств по всему миру, обеспечивая глобальную поддержку своих клиентов.
- **Энергетическая эффективность:** Murrelektronik предлагает решения для энергетической эффективности, включая системы управления и системы питания, которые помогают снизить энергопотребление.

1

ELECTRONICS IN THE CONTROL CABINET

Transformers / Rectified Power Supplies	1.1
Power Supply Units	1.2
UPS-Systems / Buffer- / Redundancy Modules	1.3
Intelligent Power Distribution	1.4
Converters / Rectifiers	1.5
Control Cabinet Power Outlets	1.6
EMC Filters	1.7
EMC Suppressors	1.8
Relays / Safety Relays	1.9
Optocouplers / Semiconductors	1.10
Switches	1.11
Active Interface Technology	1.12
Passive Interface Technology	1.13
Eurocard Holders / Control Modules	1.14

An overview of this product range can be found in our online shop

An overview of this product range can be found in our online shop

An overview of this product range can be found in our online shop

An overview of this product range can be found in our online shop

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net

TRANSFORMERS / RECTIFIED POWER SUPPLIES

- Approvals for the global market
- Flexible and versatile
- Customized solutions

MTS, MST, MET OR MTL – THE RIGHT TRANSFORMER FOR EVERY APPLICATION

Different situations require different voltages. Transformers have to be just as flexible as the application. Murrelektronik's range provides you with the flexibility you need!

No matter if it's an isolation transformer, control transformer, or safety transformer – we have the right solution for any application. Murrelektronik's transformers are reliable, safe and their approvals and voltage ranges make them ideal for worldwide use.

BASIC FUNCTIONS

Rectified power supplies galvanically separate input and output. They convert mains voltage into Protected Extra Low Voltage. The electronic unit rectifies and smooths the voltage.

Rectified power supplies are designed for a frequency of 50/60 Hz. Their slow reaction prevents voltage spikes from being passed from the mains side to the output, which would interfere with peripheral devices.

They have fixing brackets with keyholes that ensure easy wall mounting. Models for DIN-rail mounting are available for applications up to 5 A.

Transformers



MTS – Isolation class T 40/B

- Nominal power rating: 40...250 VA
- Input voltage: 230, 400 V AC or multi voltage (± 15 V AC)
- Output voltage: 24 V AC or 230 V AC
- Ambient temperature: 40 °C

Page 1.1.1



MST – Isolation class T 40/B

- Nominal power rating: 320...1000 VA
- Input voltage: 230, 400 V AC or multi voltage
- Output voltage: 24 V AC or 230 V AC
- Ambient temperature: 40 °C

Page 1.1.4



MTL – Isolation class T 60/B

- Nominal power rating: 25...2500 VA
- Input voltage: 230/400 V AC ± 15 V AC
- Output voltage: 2 x 24 V AC or 2 x 115 V AC
- Ambient temperature: 60 °C

Page 1.1.7

Single-phase, single/two-phase, smoothed (Rectified Power Supplies)



MEN

- Input voltage: 115/230 V AC and 230/400 V AC
±15 V AC reconnectable
- Output voltage: 24 V DC SELV
- Output current: 1.0/2.5/5/7.5/10/15/20 A

Page 1.1.8



MTPS

- Input voltage: 230/400 V AC
±15 V AC reconnectable
- Output voltage: 24 V DC SELV
- Output current: 0.5/1/2/4/6/10 A

Page 1.1.12

Three-phase, smoothed (Rectified Power Supplies)



MPL

- Input voltage: 3 × 400 V AC ±5% reconnectable
3 × 208...520 V AC
- Output voltage: 24 V DC SELV
- Output current: 5...60 A

Page 1.1.13

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals: 

MTS

OUTPUT: 230 V AC
Screw terminals



MTS

OUTPUT: 230 V AC
Spring clamp terminals

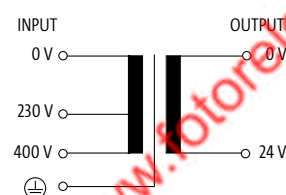
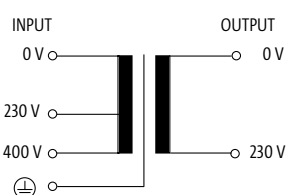
MTS

OUTPUT: 24 V AC
Screw terminals

MTS

OUTPUT: 24 V AC
Spring clamp terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
40 VA	79×78×93/0.8	86346	79×78×93/0.8	6686346	79×78×93/0.8	86340	79×78×93/0.8	6686340
63 VA	79×78×93/1.2	86347	79×78×93/1.2	6686347	79×78×93/1.2	86341	79×78×93/1.2	6686341
100 VA	86×84×98/2.0 – GL	86348	86×84×98/2.0	6686348	86×84×98/2.0 – GL	86342	86×84×98/2.0	6686342
160 VA	101×96×106/2.7 – GL	86349	101×96×106/2.7	6686349	101×96×106/2.7 – GL	86343	101×96×106/2.7	6686343
250 VA	102×96×108/3.5 – GL	86351	102×96×108/3.5	6686351	102×96×108/3.5 – GL	86345	102×96×108/3.5	6686345

Input

Input voltage 230/400 V AC

Frequency 50...60 Hz

Output

Output voltage 230 V AC

Output rating 40 VA

General data

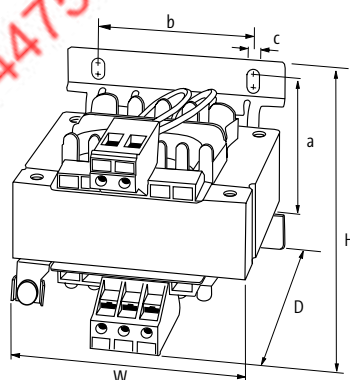
Test isolation voltage 4 kV (prim./sec.)

Standards EN 61558-1, EN 61558-2-4, EN 62041 category 0

Mounting method Long-hole mounting or DIN-rail mountable TH35 (EN 60715)

Temperature range -20...+40 °C (storage temperature -40...+80 °C)

Dimension drawing



Notes

GL-Approval from 100 VA and with screw terminals.

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

Approvals: 

MTS+

OUTPUT: 230 V AC
Screw terminals



MTS+

OUTPUT: 230 V AC
Spring clamp terminals



MTS+

OUTPUT: 24 V AC
Screw terminals

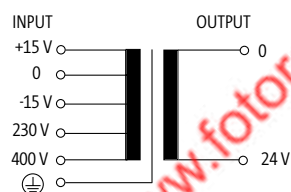
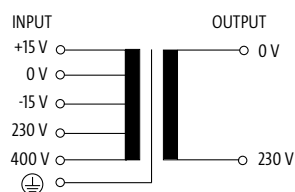


MTS+

OUTPUT: 24 V AC
Spring clamp terminals



Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
40 VA	79×78×93/0.8	86366	79×78×93/0.8	6686366	79×78×93/0.8	86360	79×78×93/0.8	6686360
63 VA	79×78×93/1.2	86367	79×78×93/1.2	6686367	79×78×93/1.2	86361	79×78×93/1.2	6686361
100 VA	86×84×98/2.0 – GL	86368	86×84×98/2.0	6686368	86×84×98/2.0 – GL	86362	86×84×98/2.0	6686362
160 VA	101×96×106/2.7 – GL	86369	101×96×106/2.7	6686369	101×96×106/2.7 – GL	86363	101×96×106/2.7	6686363
250 VA	102×96×108/3.5 – GL	86371	102×96×108/3.5	6686371	102×96×108/3.5 – GL	86365	102×96×108/3.5	6686365

Input

Input voltage 230/400 ±15 V AC

Frequency 50...60 Hz

Output

Output voltage 230 V AC

24 V AC (SELV)

Output rating 40 VA

General data

Standards EN 61558-1, EN 61558-2-4, EN 62041 category 0

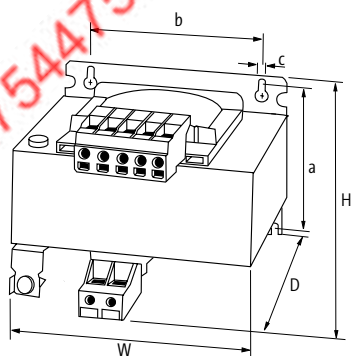
EN 61558-1, EN 61558-2-6, EN 62041 category 0

Test isolation voltage 4 kV (prim./sec.)

Mounting method Long-hole mounting or DIN-rail mountable TH35 (EN 60715)

Temperature range -20...+40 °C (storage temperature -40...+80 °C)

Dimension drawing



Notes

GL-Approval from 100 VA and with screw terminals.

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 208...550 V AC

– Isolation class T 40/B

Approvals: 

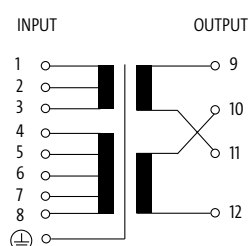
MTS Multi

OUTPUT: 1 × 230, 1 × 115, 2 × 115 V AC

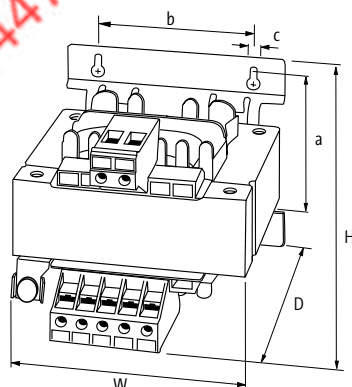
Screw terminals



Circuit diagram



Order Data	H×W×D/kg	Art-No.
25 VA	90×78×102/0.7	86140
40 VA	88×78×93/1.1	86141
63 VA	97×78×93/1.4	86142
100 VA	105×84×98/2.0 – GL	86143
160 VA	101×96×106/2.7 – GL	86144
Input		
Input voltage	208, 230, 380, 400, 420, 440, 460, 480, 500, 525, 550 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	25 VA	
General data		
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0	
Test isolation voltage	4 kV (prim./sec.)	
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)	
Temperature range	-20...+40 °C (storage temperature -20...+80 °C)	
Dimension drawing		



Notes

GL-Approval from 100 VA and with screw terminals.

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals: 

MST

OUTPUT: 230 V AC
Screw terminals



MST

OUTPUT: 230 V AC
Spring clamp terminals

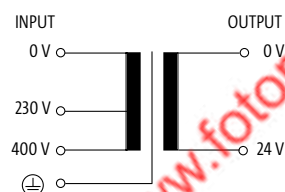
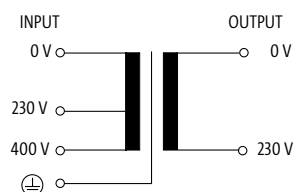
MST

OUTPUT: 24 V AC
Screw terminals

MST

OUTPUT: 24 V AC
Spring clamp terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
320 VA	92×120×122/4.2 – GL	86306	92×120×122/4.2	6686306	92×120×122/4.2 – GL	86326	92×120×122/4.2	6686326
400 VA	104×120×123/5.2 – GL	86307	104×120×123/5.2	6686307	104×120×123/5.2 – GL	86327	104×120×123/5.2	6686327
500 VA	108×135×134/6.5 – GL	86308	108×135×134/6.5	6686308	108×135×134/6.5 – GL	86328		
630 VA	113×150×145/7.7 – GL	86309	113×150×145/7.7	6686309	113×150×145/7.7 – GL	86329		
800 VA	129×150×145/10.1 – GL	86310	129×150×145/10.1	6686310	136×150×149/10.1 – GL	86330		
1 000 VA	128×174×160/12.3 – GL	86311	128×174×160/12.3	6686311	133×174×165/12.3 – GL	86331		

Input

Input voltage	230/400 V AC
Frequency	50...60 Hz

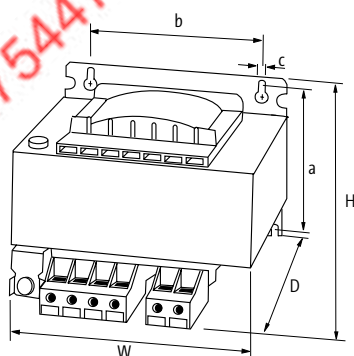
Output

Output voltage	230 V AC	24 V AC (SELV)
Output rating	320 VA	

General data

Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0	EN 61558-1, EN 61558-2-6, EN 62041 category 0
Test isolation voltage	4 kV (prim./sec.)	
Mounting method	Key-hole mounting	
Temperature range	-20...+40 °C (storage temperature -40...+80 °C)	

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

Approvals:

MST+

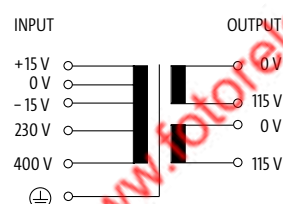
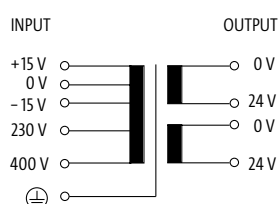
OUTPUT: 24 V AC, 48 V AC
Screw terminals



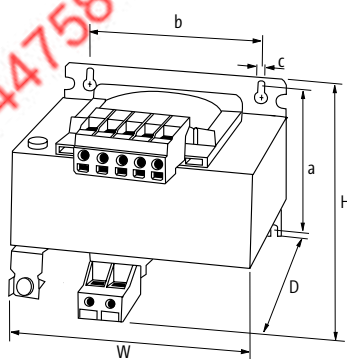
MST+

OUTPUT: 115 V AC, 230 V AC
Screw terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
630 VA	121×150×165/8.0	86463	113×150×146/8.2	86483
1 000 VA	156×150×197/13.5	86464	156×150×146/13.5	86484
1 600 VA	168×174×222/19.5	86465	168×174×163/19.5	86485
2 500 VA	182×192×242/27.0	86466	182×192×196/27.0	86486
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC		1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	630 VA			
General data				
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0			
Test isolation voltage	5.8 kV (prim./sec.)			
Mounting method	Key-hole mounting			
Temperature range	-20...+40 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 208...550 V AC

– Isolation class T 40/B

Approvals:  

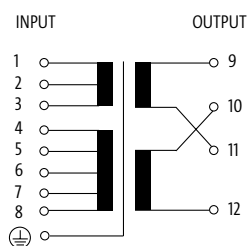
MST Multi

OUTPUT: 1 × 230, 1 × 115, 2 × 115 V AC

Screw terminals



Circuit diagram



Order Data	H×W×D/kg	Art-No.
250 VA	104×120×122/4.0	86145
320 VA	115×135×132/5.8	86146
400 VA	115×135×132/6.2	86147
500 VA	138×135×135/5.8	86148
800 VA	156×150×150/7	86150
1 000 VA	128×174×160/12.3	86151
1 600 VA	168×174×163/7	86152
2 000 VA	185×192×185/10	86153
2 500 VA	200×195×217/10	86154
3 000 VA	250×197×193/29.5	86155
5 000 VA	248×197×250/9	86157

Input

Input voltage 208, 230, 380, 400, 420, 440, 460, 480, 500, 525, 550 V AC

Frequency 50...60 Hz

Output

Output voltage 1 × 230, 1 × 115, 2 × 115 V AC

Output rating 250 VA

General data

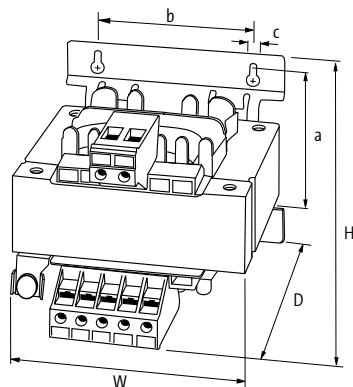
Standards EN 61558-1, EN 61558-2-4, EN 62041 category 0

Test isolation voltage 4 kV (prim./sec.)

Mounting method Key-hole mounting

Temperature range -20...+40 °C (storage temperature -20...+80 °C)

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 60/B

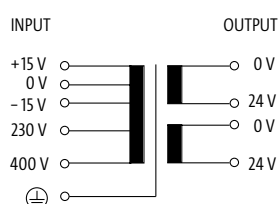
Approvals:  
MTL

OUTPUT: 24 V AC, 48 V AC
Screw terminals

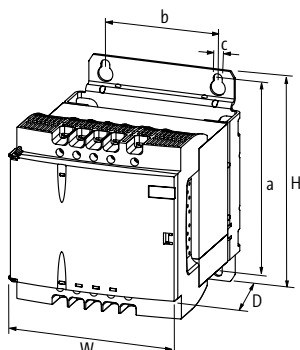
MTL

OUTPUT: 115 V AC, 230 V AC
Screw terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
25 VA	108×87×98/1.1	86450	108×87×98/1.1	86470
40 VA	108×87×104/1.4	86451	108×87×104/1.4	86471
63 VA	108×87×116/2.0	86452	108×87×116/2.0	86472
100 VA	108×87×139/2.9	86453	108×87×139/2.9	86473
160 VA	153×123×128/4.4	86454	153×123×128/4.4	86474
250 VA	153×123×142/5.7	86455	153×123×142/5.7	86475
320 VA	153×123×160/7.2	86456	153×123×160/7.2	86476
Technical Data				
LED display	LED (green) for input voltage			
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC		1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	25 VA			
General data				
Test isolation voltage	5.1 kV (prim./sec.)		4 kV (prim./sec.)	
Standards	EN 61558-2-4, EN 61558-2-6, EN 62041 category 0		EN 61558-1, EN 61558-2-4, EN 62041 category 0	
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting			
Temperature range	20...+60 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

Single-phase

– OUTPUT: 24 V DC (SELV)

Approvals: 

MEN

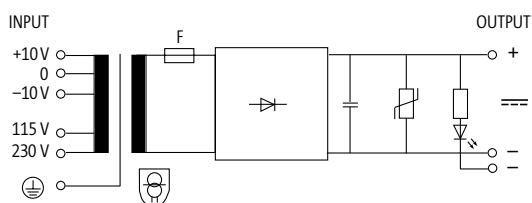
INPUT: 115/230 V AC



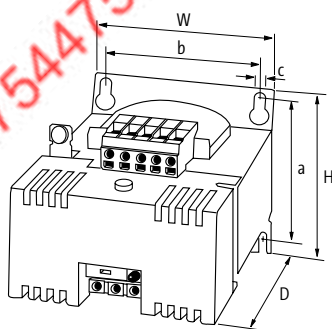
MEN

INPUT: 115/230 V AC
with MES DIN-rail adapter

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/1 A	64×78×120/1.3	85360	64×78×120/1.3	8985360
24 V DC/2.5 A	83×84×124/2.1	85361	83×84×124/2.1	8985361
24 V DC/5 A	95×96×136/3.0	85362	95×96×136/3.0	8985362
24 V DC/7.5 A	103×105×151/5.6	85363		
Input				
Input voltage	115/230 V AC ±10 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting		DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting	
Temperature range	-20...+60 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

Single-phase

– OUTPUT: 24 V DC (SELV)

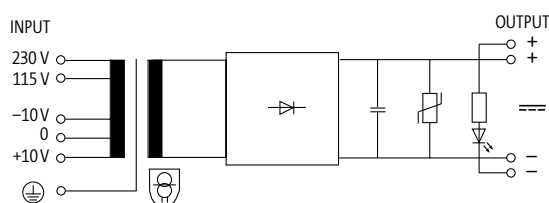
Approvals:  **UL**
Listed

MEN

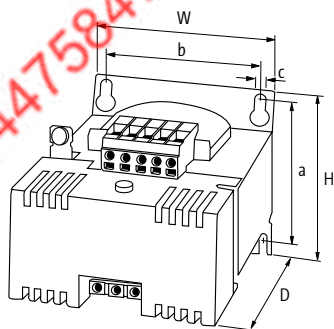
INPUT: 115/230 V AC



Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	85364
24 V DC/15 A	139×135×182/8.2	85355
24 V DC/20 A	127×174×214/12.8	85356
Input		
Input voltage	115/230 V AC ±10 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 %rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2	
Mounting method	Key-hole mounting	
Temperature range	-20...+60 °C, no condensation	
Dimension drawing		



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

Approvals: 

MEN

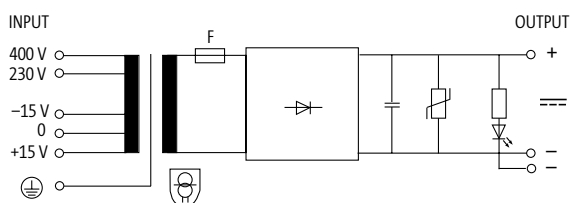
INPUT: 230/400 V AC



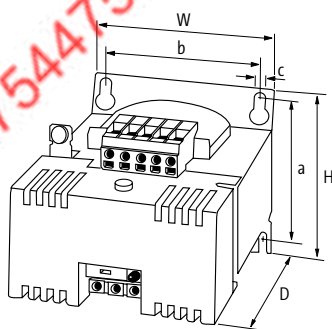
MEN

INPUT: 230/400 V AC
with MES DIN-rail adapter

Circuit diagram



Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
24 V DC/1 A	64x78x120/1.3	85349	64x78x120/1.3	8985349
24 V DC/2.5 A	83x84x124/2.1	85350	83x84x124/2.1	8985350
24 V DC/5 A	95x96x136/3.0	85351	95x96x136/3.0	8985351
24 V DC/7.5 A	103x105x151/5.6	85357		
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting		DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting	
Temperature range	-20...+60 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

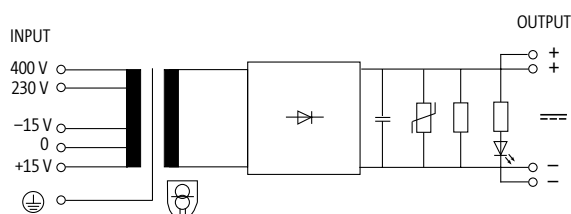
Approvals:  **UL**
Listed

MEN

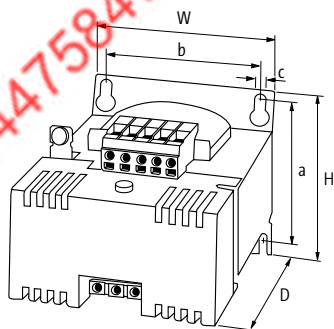
INPUT: 230/400 V AC



Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	85352
24 V DC/15 A	139×135×182/8.2	85353
24 V DC/20 A	127×174×214/12.8	85354
Input		
Input voltage	230/400 ±15 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 %rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2	
Mounting method	Key-hole mounting	
Temperature range	-20...+60 °C, no condensation	
Dimension drawing		



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

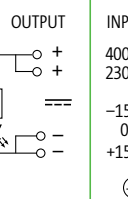
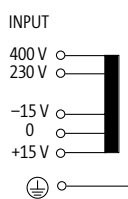
Approvals: 

MTPS

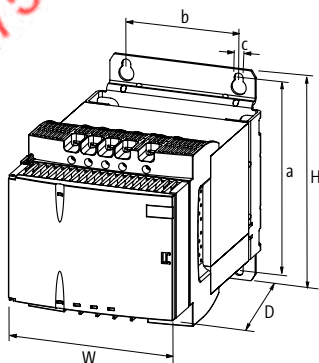
INPUT: 230/400 V AC



Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/0.5 A	108×87×124/1.3	85400		
24 V DC/1 A	108×87×124/1.3	85401		
24 V DC/2 A	108×87×142/2.0	85402		
24 V DC/4 A	108×87×165/2.9	85403		
24 V DC/6 A	153×123×153/4.9	85404		
24 V DC/10 A			153×123×185/7.7	85405
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
LED display	LED (green) for input voltage			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Temperature range	-20...+60 °C, no condensation			
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting		Key-hole mounting	
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

3-phase

– OUTPUT: 24 V DC (SELV)

Approvals: UL Listed

MPL

INPUT: 3 × 400 V AC, ±5% reconnectable

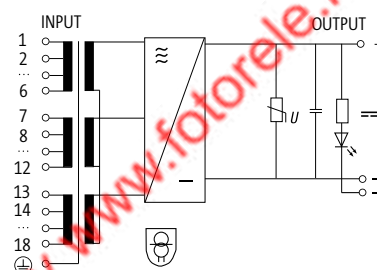
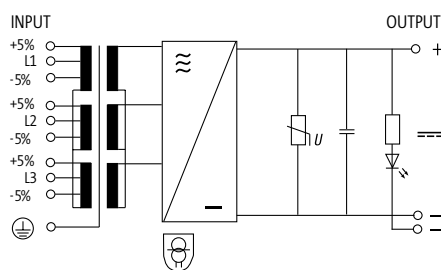


MPL Multi

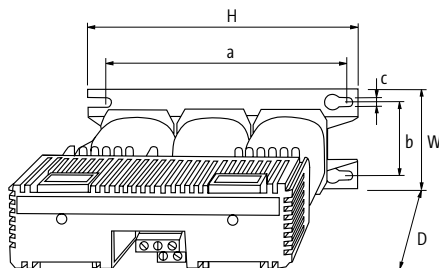
INPUT: 3 × 208...520 V AC



Circuit diagram



Order Data	HxWxD/kg	Art-No.	HxWxD/kg	Art-No.
24 V DC/5 A	125x73x153/2.9 – cURus	85921		
24 V DC/7.5 A	185x78x188/4.4 – cURus	85923		
24 V DC/10 A	185x78x188/4.5 – cURus	85925	185x93x188/6.6	85953
24 V DC/15 A	220x82x208/8.2 – cURus	85927	220x82x208/7.5	85954
24 V DC/20 A	220x103x213/10.5 – cURus	85929		
24 V DC/25 A	220x103x213/11.0 – cURus	85931	220x103x213/11.1 – cURus	85955
24 V DC/30 A	240x107x250/13.5 – cURus	85933		
24 V DC/40 A	280x124x313/17.8 – cURus	85935	280x124x313/17.9 – cURus	85956
24 V DC/50 A	280x134x313/20.9 – cURus	85937	280x134x313/20.9 – cURus	85957
24 V DC/60 A	280x154x313/26.1 – cURus	85939		
Input				
Input voltage	3 × 400 V AC ±5%		3 × 208...520 V AC	
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 2%rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting			
Temperature range	-20...+55 °C, for any mounting position at vertical wall, no condensation			
Dimension drawing				



Notes



SWITCHING POWER SUPPLIES EMPARRO® – SIMPLY THE BEST

- Efficiency up to 96%
- 150% Power Boost for 4 seconds

EMPARRO® – THE SWITCHING POWER SUPPLY WITH MAXIMUM EFFICIENCY

- Efficiency up to 96%
- 150% Power Boost for four seconds
- Metal housing with optimum EMC characteristics
- Derating only at +60 °C
- Reduced width
- Long bridging time in case of a power failure
- More than 30 variants – the solution for many applications

Competitive comparison of Emparro®

The comparison based on the same input current shows: Emparro (on the left) releases significantly less heat than conventional switching power supplies. The devices remain cooler and protect the neighboring components. This results in a longer service life.



Switching power supplies



Emparro®

- Single-phase, two-phase, three-phase
- Spring clamp terminal
- AS-Interface

Page 1.2.1



Emparro® HD

- Single-phase
- Robust design

Page 1.2.4



Emparro®67

- Single-phase
- IP67
- IO-Link
- Preventive diagnostics



Page 1.2.8



Evolution/Evolution+

- Two-phase, three-phase
- Extended temperature range from -25...+70 °C
- Approvals for worldwide use

Page 1.2.10



ECO-Rail-2

- Single-phase
- Useful and flexible

Page 1.2.16



PICCO

- Single-phase
- 16 variants
- 12 V or 24 V outputs
- 10 W, 30 W, 60 W or 100 W

Page 1.2.18

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:  

Emparro®

OUTPUT: 24...28 V DC
Current: 5 A



Emparro®

OUTPUT: 24...28 V DC
Current: 10 A

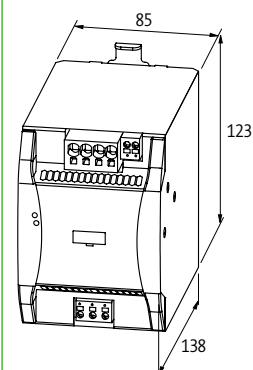
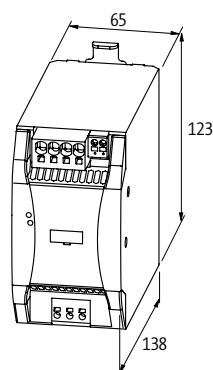
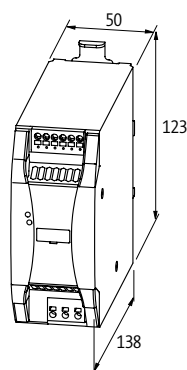


Emparro®

OUTPUT: 24...28 V DC
Current: 20 A



Order Data	Art-No.		Art-No.
24 V DC/5 A (for DIN-Rail)	85440		
24 V DC/5 A (for screwing)	85702		
24 V DC/10 A (for DIN-Rail)			85441
24 V DC/10 A (for screwing)			85703
24 V DC/20 A (for DIN-Rail)			85442
24 V DC/20 A (for screwing)			85704
Input			
Input voltage	85...265 V AC/90...250 V DC		90...265 V AC/90...250 V DC
Input current	1.3 A (100 V AC); 0.61 A (240 V AC)	2.6 A (100 V AC); 1.1 A (240 V AC)	5.2 A (100 V AC); 2.2 A (240 V AC)
Inrush current after 1 ms	max. 5.5 A (230 V AC)	max. 13 A	max. 23 A (230 V AC)
Power factor	0.87 (230 V AC)	0.95 (230 V AC)	0.96 (230 V AC)
Frequency	50...60 Hz		
Input fuse (internal)	6.3 A (T)		10 A (T)
Output			
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable		
Power Boost	I _{out} N × 150% (min. 4 s)		
Output current	5 A	10 A	20 A
Mains failure bridging time	min. 30 ms (100 V AC); 5 A (24 V DC)	min. 30 ms (100 V AC); 10 A (24 V DC)	min. 30 ms (100 V AC); 20 A (24 V DC)
Ripple	max. 50 mVrms		
Spikes	max. 200 mV p-p		
Unit protection	Short-circuit and overload protected		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 5 units/max. 2 units		
General data			
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47		
Relative humidity	5...95%, no condensation		
Protection	IP20		
Efficiency	92.7% (110 V AC); 94.5% (230 V AC)	92.8% (110 V AC); 94.3% (230 V AC)	91.7% (110 V AC); 94.1% (230 V AC)
Connection	Push-In spring clamp terminals		
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:   

Emparro®

OUTPUT: 48...56 V DC
Current: 2.5 A



Emparro®

OUTPUT: 48...56 V DC
Current: 5 A



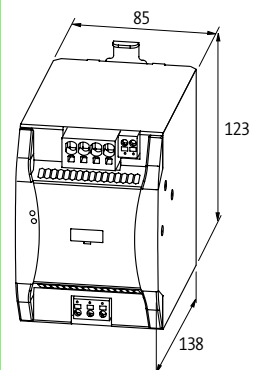
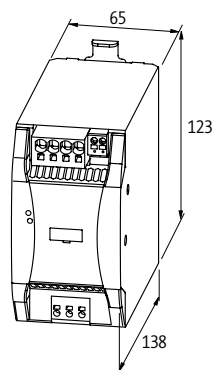
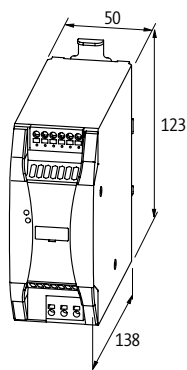
Emparro®

OUTPUT: 48...56 V DC
Current: 10 A



Order Data	Art-No.	Art-No.	Art-No.
48 V DC/2.5 A (for DIN-Rail)	85437		
48 V DC/2.5 A (for screwing)	85722		
48 V DC/5 A (for DIN-Rail)		85438	
48 V DC/5 A (for screwing)		85723	
48 V DC/10 A (for DIN-Rail)			85439
48 V DC/10 A (for screwing)			85724

Input			
Input voltage	85...265 V AC/90...250 V DC		
Input current	1.2 A (100 V AC); 0.6 A (240 V AC)	2.6 A (100 V AC); 1.1 A (240 V AC)	5.1 A (100 V AC); 2.4 A (240 V AC)
Inrush current after 1 ms	max. 3.5 A (230 V AC)	max. 5.5 A (230 V AC)	max. 11 A (230 V AC)
Power factor	0.87 (230 V AC)	0.95 (230 V AC)	0.94 (230 V AC)
Frequency	50...60 Hz		
Input fuse (internal)	6.3 A (T)		10 A (T)
Output			
Output voltage	48 V DC (SELV), ±1%; 48...56 V adjustable		
Power Boost	Iout N × 150% (min. 4 s)		
Output current	2.5 A	5 A	10 A
Mains failure bridging time	min. 30 ms (100 V AC); 2.5 A (48 V DC)	min. 30 ms (100 V AC); 5 A (48 V DC)	min. 30 ms (100 V AC); 10 A (48 V DC)
Ripple	max. 50 mVrms		
Spikes	max. 200 mV p-p		
Unit protection	Short-circuit and overload protected		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 5 units/max. 2 units		
General data			
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47		
Relative humidity	5...95%, no condensation		
Protection	IP20		
Efficiency	92.8% (110 V AC); 94.6 % (230 V AC)	93.7% (110 V AC); 95.1% (230 V AC)	95%
Connection	Push-In spring clamp terminals		
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– Alarm contact

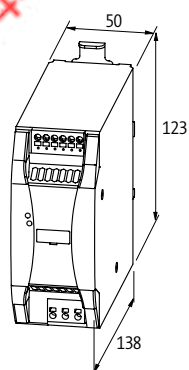
Approvals:   

Emparro®

OUTPUT: 12...15 V DC
Current: 10 A



Order Data		Art-No.
12 V DC/10 A (for DIN-Rail)		85434
12 V DC/10 A (for screwing)		85712
Input		
Input voltage	85...265 V AC/90...250 V DC	
Input current	1.2 A (100 V AC); 0.6 A (230 V AC)	
Inrush current after 1 ms	max. 10 A (230 V AC)	
Power factor	0.88 (230 V AC)	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	12 V DC (SELV), ±1%; 12...15 V adjustable	
Power Boost	I _{out} N × 150% (min. 4 s)	
Output current	10 A	
Mains failure bridging time	min. 30 ms (100 V AC); 10 A (12 V DC)	
Ripple	max. 50 mVrms	
Spikes	max. 200 mV p-p	
Unit protection	Short-circuit and overload protected	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 5 units/max. 2 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	91.4% (110 V AC); 93.2% (230 V AC)	
Connection	Push-In spring clamp terminals	
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– IP20

– rugged design

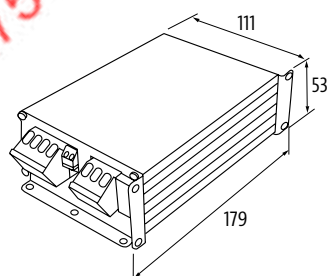
Emparro® HD

OUTPUT: 24...28 V DC

Current: 10 A



Order Data		Art-No.
24 V DC/10 A		85449
Input		
Input voltage	90...265 V AC/90...370 V DC	
Input current	1.1 A (240 V AC)	
Inrush current after 1 ms	max. 7 A (240 V AC)	
Power factor	0.91 (230 V AC)	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), $\pm 1\%$; 24...28 V adjustable	
Power Boost	15 A (min. 5 s)	
Output current	10 A	
Mains failure bridging time	min. 35 ms (100 V AC); 10 A (24 V DC)	
Ripple	max. 30 mVrms	
Spikes	max. 300 mV p-p	
Unit protection	Short-circuit and overload protected	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units/max. 2 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	93.5% (115 V AC); 94.2% (230 V AC)	
MTBF	1 000 000 h	
Connection	Spring clamp terminals	
Mounting method	screw fixing	
Temperature range	-40...+50 °C, ...+80 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

2-/3-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:   

Emparro®

OUTPUT: 24...28 V DC
Current: 5 A



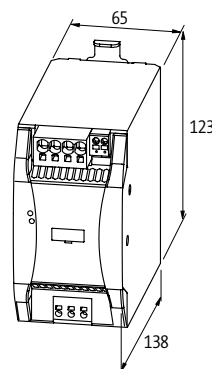
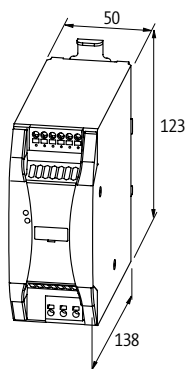
Emparro®

OUTPUT: 24...28 V DC
Current: 10 A



Order Data	Art-No.	Art-No.
24 V DC/5 A (for DIN-Rail)	85690	
24 V DC/5 A (for screwing)	85695	
24 V DC/5 A (varnished board)	87690	
24 V DC/10 A (for DIN-Rail)		85691
24 V DC/10 A (for screwing)		85696
24 V DC/10 A (varnished board)		87691

Input		
Input voltage	3 × 324...572 V AC/450...745 V DC	
Input current	0.45 A (3 × 360 V AC); 0.3 A (3 × 500 V AC)	0.75 A (3 × 360 V AC); 0.55 A (3 × 500 V AC)
Inrush current after 1 ms	max. 9.5 A (3 × 500 V AC)	max. 9.0 A (3 × 500 V AC)
Power factor	0.61 (3 × 400 V AC)	0.66 (3 × 500 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	3 × 6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Power Boost	I _{out} N × 150% (min. 5 s)	
Output current	3.7 A (70 °C); 5.0 A (60 °C); 6.0 A (45 °C)	12 A (45 °C); 10 A (60 °C); 7 A (70 °C)
Mains failure bridging time	min. 25 ms (3 × 360 V AC); 5 A (24 V DC)	min. 45 ms (3 × 500 V AC); 10 A (24 V DC)
Ripple	max. 20 mVrms	
Spikes	max. 50 mV p-p	
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	92.5% (3 × 400 V AC); 91.8% (3 × 480 V AC)	93.7% (3 × 400 V AC); 93.2% (3 × 480 V AC)
Connection	Push-In spring clamp terminals	
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

2-/3-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:    

Emparro®

OUTPUT: 24...28 V DC
Current: 20 A



Emparro®

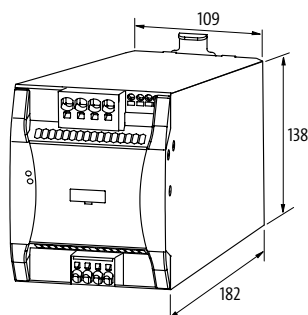
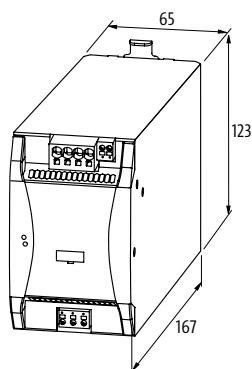
OUTPUT: 24...28 V DC
Current: 40 A



Order Data	Art-No.	Art-No.
24 V DC/20 A (for DIN-Rail)	85692	
24 V DC/20 A (for screwing)	85697	
24 V DC/20 A (varnished board)	87692	
24 V DC/40 A (for DIN-Rail)		85693
24 V DC/40 A (for screwing)		85698
24 V DC/40 A (varnished board)		87693

Input		
Input voltage	3 × 324...572 V AC/450...745 V DC	3 × 324...572 V AC/480...745 V DC
Input current	1.3 A (3 × 360 V AC); 1.0 A (3 × 500 V AC)	2.3 A (3 × 360 V AC); 1.6 A (3 × 500 V AC)
Inrush current after 1 ms	max. 13 A (3 × 500 V AC)	max. 14 A (3 × 500 V AC)
Power factor	0.65 (3 × 500 V AC)	0.88 (3 × 500 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	3 × 6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Power Boost	I _{out} N × 150% (min. 5 s)	
Output current	15 A (70 °C); 20 A (60 °C); 24 A (45 °C)	30 A (70 °C); 40 A (60 °C); 48 A (45 °C)
Mains failure bridging time	min. 40 ms (3 × 500 V AC)	
Ripple	max. 20 mVrms	
Spikes	max. 90 mV p-p	
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	94.8% (3 × 400 V AC); 94.5% (3 × 480 V AC)	93.7% (3 × 400 V AC); 93.5% (3 × 480 V AC)
Connection	Push-In spring clamp terminals	
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)	

Dimension drawing



Notes

POWER SUPPLY UNITS

2-/3-phase

– AS-Interface

– Short-circuit and overload protected

– Alarm contact

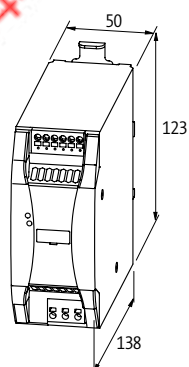
Approvals:   

Emparro®

OUTPUT: 30...32 V DC



Order Data		Art-No.
30.5 V DC/4 A		85383
Input		
Input voltage	3 × 324...572 V AC/450...745 V DC	
Input current	0.45 A (3 × 360 V AC); 0.3 A (3 × 500 V AC)	
Inrush current after 1 ms	max. 9.5 A (3 × 500 V AC)	
Power factor	0.61 (3 × 400 V AC)	
Frequency	50...60 Hz	
Input fuse (internal)	3 × 6.3 A (T)	
Output		
Output voltage	30.5 V DC (SELV), ±1%; 30...32 V adjustable	
Power Boost	I _{out} N × 150% (min. 5 s)	
Output current	4.8 A (45 °C); 4.0 A (60 °C); 2.9 A (70 °C)	
Mains failure bridging time	min. 20 ms (3 × 360 V AC); 5 A (24 V DC)	
Ripple	max. 20 mVrms	
Spikes	max. 50 mV p-p	
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	92.5% (3 × 400 V AC); 91.8% (3 × 480 V AC)	
Connection	Push-In spring clamp terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

Single-phase

– IP67

Emparro®67

OUTPUT: 24 V DC
Current: 4 A



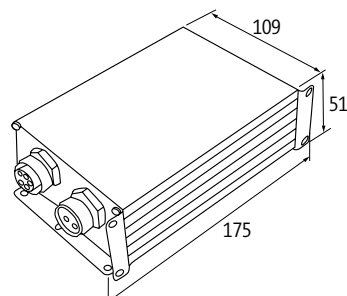
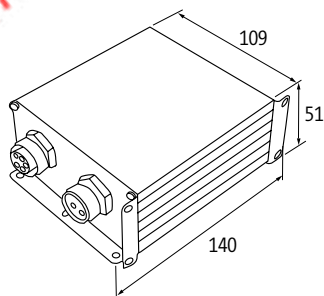
Emparro®67

OUTPUT: 24 V DC
Current: 8 A



Approvals:  US
Listed

Order Data	Art-No.		Art-No.
24 V DC/4 A	9000-11112-1962020		
24 V DC/8 A			9000-11112-2062020
Input			
Input voltage	90...265 V AC/90...265 V DC		
Input current	1.1 A (100 V AC); 0.5 A (240 V AC)	2.1 A (100 V AC); 0.9 A (240 V AC)	
Inrush current after 1 ms	max. 8.9 A (230 V AC)	max. 7 A (230 V AC)	
Power factor	0.98 (230 V AC)	0.95 (230 V AC)	
Connection	7/8" male, 3-pole		
Frequency	50...60 Hz		
Input fuse (internal)	6.3 A (T)		
Output			
Output voltage	24 V DC (SELV), ±2%		
Power Boost	Iout N × 150% (min. 4 s)		
Output current	4 A	8 A	
Connection	7/8" (female), 5-pole		
Mains failure bridging time	min. 45 ms (230 V AC); 4 A (24 V DC)	min. 35 ms (230 V AC); 8 A (24 V DC)	
Ripple	max. 20 mVrms	max. 30 mVrms	
Spikes	max. 100 mV p-p	max. 300 mV p-p	
Unit protection	Short-circuit, overload and temperature		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 3 units/max. 2 units		
General data			
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2		
Relative humidity	4...100%		
Protection	IP67		
Efficiency	91.7% (115 V AC), 92.4% (230 V AC)	93.5% (115 V AC); 94.2% (230 V AC)	
Mounting method	screw fixing		
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

POWER SUPPLY UNITS

Single-phase

- Over current protection device
- 2×MICO 7/8" IOL
- Preventive Diagnostic

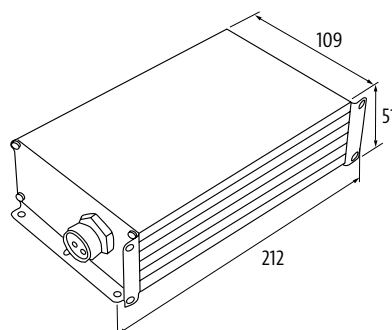
IO-Link

Emparro®67 Hybrid

OUTPUT: 24...28 V DC
Current: 10 A



Order Data		Art-No.
24 V DC/10 A		85676
Input		
Input voltage	90...265 V AC/90...265 V DC	
Input current	1.1 A (230 V AC)	
Inrush current after 1 ms	max. 7 A (230 V AC)	
Power factor	0.88 (230 V AC)	
Connection	7/8" male, 3-pole	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Output current	max. 8 A (per channel), max. 10 A (total)	
No. of channels	2×MICO (Over current protection device)	
Connection	7/8" (female), 5-pole	
Mains failure bridging time	min. 20 ms (230 V AC)	
Ripple	max. 10 mVrms	
Spikes	max. 150 mV p-p	
Unit protection	Short-circuit, overload and temperature	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	no	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	4...100%	
Protection	IP67	
Efficiency	91.6% (115 V AC); 92.8% (230 V AC)	
MTBF	430 000 h	
Mounting method	screw fixing	
Temperature range	25...+50 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

For an explanation of MICO features, see the chapter Intelligent Power Distribution

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected

Approvals:  

Evolution

OUTPUT: 22...28 V DC
Current: 5 A

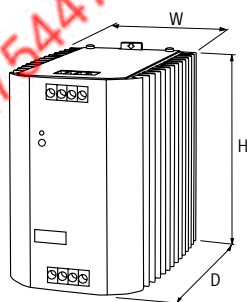


Evolution

OUTPUT: 22...28 V DC
Current: 10 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/5 A	132×83×98/1.0	85000		
24 V DC/10 A			132×93×114/1.3	85001
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 0.45 A		3 × 0.8 A	
Inrush current after 1 ms	max. 10 A		max. 15 A	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 10 A		3 × 10 A (T)	
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	5 A (+55 °C); 3 A (+70 °C)		10 A (+55 °C); 6.5 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 30 ms (400 V AC)		min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47			
Relative humidity	5...95%, no condensation			
Protection	IP20			
Efficiency	86% (3 × 360 V AC); 86% (3 × 520 V AC)		90% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected

Approvals:  

Evolution

OUTPUT: 22...28 V DC
Current: 20 A

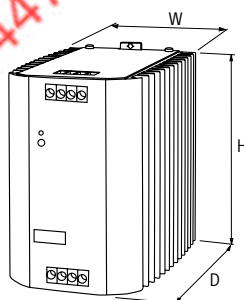


Evolution

OUTPUT: 22...28 V DC
Current: 40 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/20 A	132×113×136/2.0	85002		
24 V DC/40 A			132×164×142/3.0	85004
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 1.3 A		3 × 2.4 A	
Inrush current after 1 ms	max. 19 A		—	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 20 A			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	20 A (+55 °C); 15.8 A (+70 °C)		40 A (+55 °C); 30 A (+70 °C)	
Power Boost	I _{out} N × 150% (min. 4 s)			
Mains failure bridging time	min. 19 ms (400 V AC)			
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2, SEMI F47		EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation			
Protection	IP20			
Efficiency	90% (3 × 400 V AC); 89% (3 × 520 V AC)		91% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected
- Varnished board

Approvals:  

Evolution+

OUTPUT: 22...28 V DC
Current: 5 A

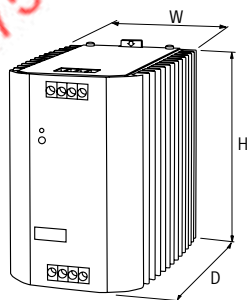


Evolution+

OUTPUT: 22...28 V DC
Current: 10 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/5 A	132×83×98/1.0	85640		
24 V DC/10 A			132×93×114/1.2	85641
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 0.45 A		3 × 0.8 A	
Inrush current after 1 ms	max. 10 A		max. 15 A	
Frequency	50...60 Hz			
Primary fusing external	3 × 10 A (T)			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	5 A (+55 °C); 3 A (+70 °C)		10 A (+55 °C); 6.5 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 30 ms (400 V AC)		min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47			
Relative humidity	5...95%, no condensation			
Protection	Varnished board			
Protection	IP20			
Efficiency	86% (3 × 400 V AC); 86% (3 × 520 V AC)		90% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected
- Varnished board

Approvals:  

Evolution+

OUTPUT: 22...28 V DC
Current: 20 A

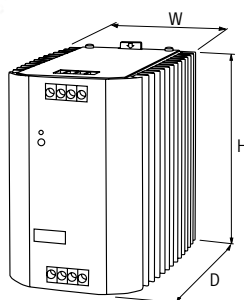


Evolution+

OUTPUT: 22...28 V DC
Current: 40 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/20 A	132×113×136/2.0	85642		
24 V DC/40 A			132×164×142/3.0	85644
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 1.3 A		3 × 2.4 A	
Inrush current after 1 ms	max. 19 A		—	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 20 A			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	20 A (+55 °C); 15.8 A (+70 °C)		40 A (+55 °C); 30 A (+70 °C)	
Power Boost	I _{out} N × 150% (min. 4 s)			
Mains failure bridging time	min. 19 ms (400 V AC)			
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2, SEMI F47		EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation			
Protection	Varnished board			
Protection	IP20			
Efficiency	90% (3 × 400 V AC); 89% (3 × 520 V AC)		91% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

- stable output voltage
- Short-circuit and overload protected
- Varnished board

Approvals:  Listed

Evolution+

OUTPUT: 48...56 V DC
Current: 5 A



Evolution+

OUTPUT: 48...56 V DC
Current: 10 A

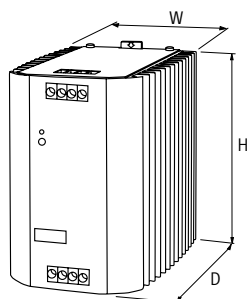


Evolution+

OUTPUT: 48...56 V DC
Current: 20 A



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
48 V DC/5 A	132×93×114/1.4	85009				
48 V DC/10 A			132×113×136/2.0	85010		
48 V DC/20 A					132×164×142/3.0	85011
Input						
Input voltage	3 × 324...572 V AC/480...745 V DC					
Input current	3 × 0.8 A		3 × 1.3 A		3 × 1.9 A	
Inrush current after 1 ms	max. 9 A		max. 23 A		—	
Frequency	50...60 Hz					
Primary fusing external	max. 3 × 20 A					
Output						
Output voltage	48 V DC (SELV), ±1%; 48...56 V adjustable					
Output current	5 A (+55 °C); 3.73 A (+70 °C)		10 A (+55 °C); 8 A (+70 °C)		20 A (+55 °C); 15 A (+70 °C)	
Power Boost	lout N × 150% (min. 4 s)					
Mains failure bridging time	min. 17 ms (400 V AC)		min. 24 ms (400 V AC)		min. 17 ms (400 V AC)	
Ripple	max. 50 mVrms					
Spikes	max. 100 mV p-p					
LED display	LED (green): OK; LED (red): overload					
Parallel usage/serial usage	max. 5 units/no					
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm					
General data						
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2					
Relative humidity	5...95%, no condensation					
Protection	Varnished board					
Protection	IP20					
Efficiency	91.3% (3 × 360 V AC); 90.5% (3 × 520 V AC)		92.3% (3 × 360 V AC); 91% (3 × 520 V AC)		92.5% (3 × 360 V AC); 90.5% (3 × 520 V AC)	
Connection	Screw terminals					
Mounting method	DIN-rail mountable TH35 (EN 60715)					
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)					
Dimension drawing						



Notes

POWER SUPPLY UNITS

2-/3-phase

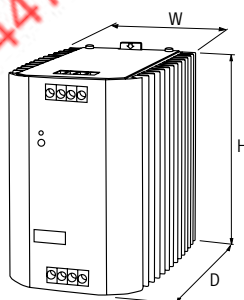
- stable output voltage
- Short-circuit and overload protected

Evolution

OUTPUT: 12...13.5 V DC
Current: 20 A



Order Data	H×W×D/kg	Art-No.
12 V DC/20 A	132×93×114/1.3	85016
Input		
Input voltage	3 × 324...572 V AC/480...745 V DC	
Input current	3 × 0.8 A	
Inrush current after 1 ms	max. 15 A	
Frequency	50...60 Hz	
Primary fusing external	3 × 10 A (T)	
Output		
Output voltage	12 V DC (SELV), ±1%; 12...13.5 V adjustable	
Output current	20 A (+55 °C); 15.8 A (+70 °C)	
Power Boost	100% (min. 4 s)	
Mains failure bridging time	min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms	
Spikes	max. 100 mV p-p	
LED display	LED (green): OK; LED (red): overload	
Parallel usage/serial usage	max. 5 units/max. 4 units	
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	89% (3 × 400 V AC); 88% (3 × 520 V AC)	
Connection	Spring clamp terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

Approvals:  UL US Listed

Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 1.3 A



Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 2.5 A

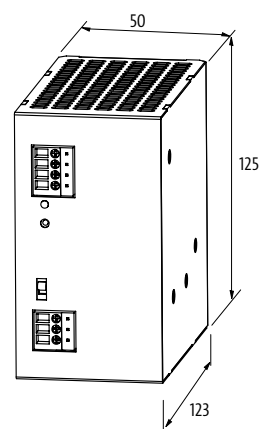
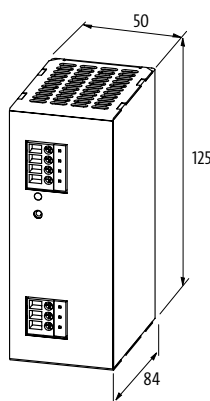
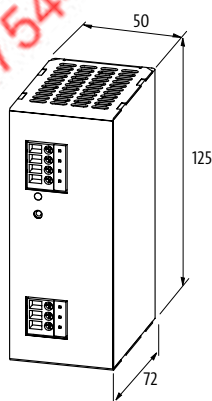


Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 5 A



Order Data	Art-No.		Art-No.	Art-No.
24 V DC/1.3 A	85131			
24 V DC/2.5 A			85132	
24 V DC/5 A				85133
Input				
Input voltage	100...240 V AC			
Input current	0.7 A (100 V AC); 0.4 A (240 V AC)	1.3 A (100 V AC); 0.6 A (240 V AC)	2.4 A (100 V AC); 1.2 A (240 V AC)	
Inrush current after 1 ms	max. 10 A (230 V AC)	max. 20 A (230 V AC)		
Frequency	50...60 Hz			
Input fuse (internal)	2 A (T)	4 A (T)	5 A (T)	
Output				
Output voltage	24 V DC $\pm 1\%$; 23...28 V adjustable			
Output current	1.3 A (+40 °C); 1.0 A (+55 °C)	2.5 A (+40 °C); 2.0 A (+55 °C)	5 A (+40 °C); 4 A (+55 °C)	
Mains failure bridging time	min. 23 ms (115 V AC); min. 130 ms (230 V AC)	min. 20 ms (115 V AC); min. 100 ms (230 V AC)	min. 45 ms (115 V AC); min. 45 ms (230 V AC)	
Ripple	max. 10 mVrms			
Spikes	max. 50 mV p-p			
Unit protection	Short-circuit and overload protected			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	no/yes (max. 2 units)			
General data				
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2			
Relative humidity	20...90%, no condensation			
Protection	IP20			
Efficiency	83% (115 V AC); 84% (230 V AC)	84% (115 V AC); 85% (230 V AC)	87% (115 V AC); 88% (230 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+40 °C, ...+55 °C derating (storage temperature -20...+85 °C)			
Dimension drawing				



Notes

Single-phase

– Short-circuit and overload protected

Approvals:  **UL** US Listed

Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 10 A

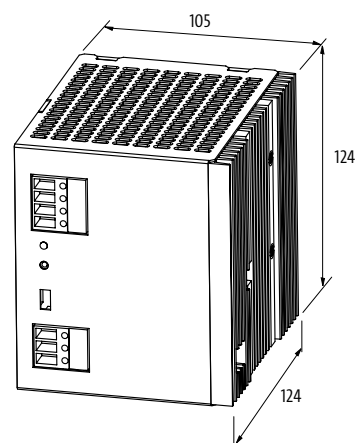
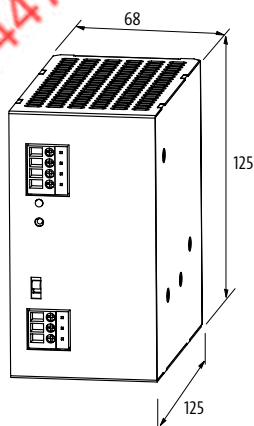


Eco-Rail-2

OUTPUT: 23...28 V DC
Current: 20 A



Order Data	Art-No.	Art-No.
24 V DC/10 A	85135	
24 V DC/20 A		85137
Input		
Input voltage	90...132 V AC/173...264 V AC	
Input current	4.3 A (100 V AC); 2.1 A (240 V AC)	7.8 A (100 V AC); 4.0 A (200 V AC)
Inrush current after 1 ms	max. 18 A (230 V AC)	max. 40 A (230 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	5 A (T)	12 A (T)
Output		
Output voltage	24 V DC $\pm 1\%$; 23...28 V adjustable	
Output current	10 A (+40 °C); 7.5 A (+55 °C)	20 A (+40 °C); 16 A (+55 °C)
Mains failure bridging time	min. 12 ms (115 V AC); min. 30 ms (230 V AC)	min. 15 ms (115 V AC); min. 20 ms (230 V AC)
Ripple	max. 10 mVrms	max. 50 mVrms
Spikes	max. 50 mV p-p	max. 100 mV p-p
Unit protection	Short-circuit and overload protected	
LED display	LED (green) for output voltage	
Parallel usage/serial usage	no/yes (max. 2 units)	
General data		
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2	
Relative humidity	20...90%, no condensation	
Protection	IP20	
Efficiency	86% (115 V AC); 87% (230 V AC)	89% (115 V AC); 90% (230 V AC)
Connection	Screw terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+40 °C...+55 °C derating (storage temperature -20...+85 °C)	
Dimension drawing		



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

Approvals:   Listed

Picco

OUTPUT: 24...28 V DC
Current: 0.42 A



Picco

OUTPUT: 24...28 V DC
Current: 1.25 A



Picco

OUTPUT: 24...28 V DC
Current: 2.5 A



Picco

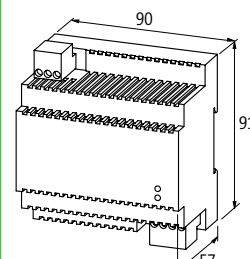
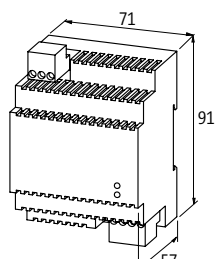
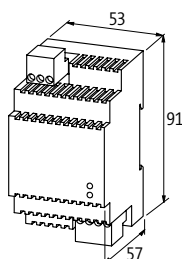
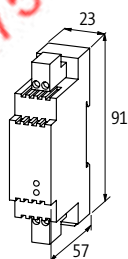
OUTPUT: 24...28 V DC
Current: 4.2 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
Screw terminals	87011	87013	87015	87017
Spring clamp plug-in terminals	87111	87113	87115	87117

Input				
Input voltage	100...240 V AC/120...370 V DC			
Input current	0.2 A (115 V AC); 0.12 A (230 V AC)	0.6 A (115 V AC); 0.4 A (230 V AC)	1.1 A (115 V AC); 0.6 A (230 V AC)	1.7 A (115 V AC); 1 A (230 V AC)
Inrush current after 1 ms	max. 30 A	max. 40 A	max. 60 A	
Frequency	50...60 Hz			
Primary fusing external	max. 10 A		max. 16 A	max. 10 A
Output				
Output voltage	24 V DC (SELV), $\pm 1\%$; 24...28 V adjustable			
Output current	0.42 A (+50 °C); 0.042 A (+70 °C)	1.25 A (+50 °C); 0.125 A (+70 °C)	2.5 A (+50 °C); 0.25 A (+70 °C)	4.2 A (+50 °C); 0.42 A (+70 °C)
Mains failure bridging time	10...25 ms (115 V AC)			
Ripple	max. 20 mVrms			
Spikes	max. 100 mV p-p			
Unit protection	Short-circuit and overload protected			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2			
Relative humidity	20...90%, no condensation			
Protection	IP20			
Efficiency	79% (110 V AC); 80% (230 V AC)	86% (110 V AC); 88% (230 V AC)		
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+50 °C, ...+60 °C derating (storage temperature -25...+85 °C)			
Dimension drawing				

Dimension drawing



Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

Approvals:   Listed

Picco

OUTPUT: 12...15 V DC
Current: 0.85 A



Picco

OUTPUT: 12...15 V DC
Current: 2.5 A



Picco

OUTPUT: 12...15 V DC
Current: 4.5 A

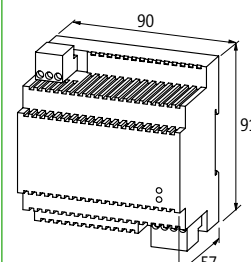
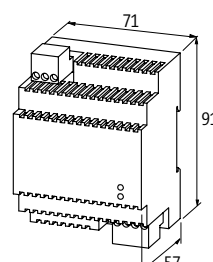
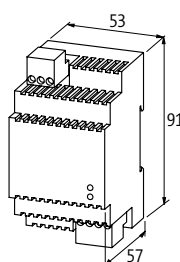
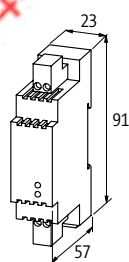


Picco

OUTPUT: 12...15 V DC
Current: 6 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
Screw terminals	87012	87014	87016	87018
Spring clamp plug-in terminals	87112	87114	87116	87118
Input				
Input voltage	100...240 V AC/120...370 V DC			
Input current	0.2 A (115 V AC); 0.12 A (230 V AC)	0.6 A (115 V AC); 0.4 A (230 V AC)	1 A (115 V AC); 0.58 A (230 V AC)	1.3 A (115 V AC); 0.75 A (230 V AC)
Inrush current after 1 ms	max. 30 A	max. 40 A	max. 60 A	
Frequency	50...60 Hz			
Primary fusing external	max. 10 A		max. 16 A	max. 10 A
Output				
Output voltage	12 V DC (SELV), ±1%; 12...15 V adjustable			
Output current	0.85 A (+50 °C); 0.085 A (+70 °C)	2.5 A (+50 °C); 0.25 A (+70 °C)	4.5 A (+50 °C); 0.45 A (+70 °C)	6 A (+50 °C); 0.6 A (+70 °C)
Mains failure bridging time	10...25 ms (115 V AC)			
Ripple	max. 20 mVrms			
Spikes	max. 100 mV p-p			
Unit protection	Short-circuit and overload protected			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2			
Relative humidity	20...90%, no condensation			
Protection	IP20			
Efficiency	86% (110 V AC); 88% (230 V AC)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+50 °C, ...+60 °C derating (storage temperature -25...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

Mounting accessories			Art-No.
	Label plates KES 20 × 8 (white)	(10 pieces/2 plates)	996067
	DIN-Rail Clip DIN-rail mountable TH35 (EN 60715)		85148

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net



UPS SYSTEMS / BUFFER / REDUNDANCY MODULES

- Stable power supply
- Protection of processes
- Increase of machine availability

UPS MODULE OR BUFFER MODULE ON THE BASIS OF CAPACITORS?

The UPS module Emparro ACCUcontrol is the right solution if a longer power failure have to be bridged without having to deal with failures and downtimes in production. Thanks to the externally connected lead battery, even a bridging time of several hours is possible.

Emparro Cap works based on ultra condensers, is maintenance-free for its entire service life and is the right solution if a certain amount of power is required to shut machines and control systems down in a structured manner.

Project matrix

Load current	Seconds		Minutes						Hours			
	1	16	1	2	5	10	15	30	1	3	5	10
0.5 A	●	●	●	●	●	●	●	●	●	●	●	●
1 A	●	●	●	●	●	●	●	●	●	●	●	●
2 A	●	●	●	●	●	●	●	●	●	●	●	●
5 A	●	●	●	●	●	●	●	●	●	●	●	
10 A	●	●	●	●	●	●	●	●	●	●	●	
15 A	●	●	●	●	●	●	●	●	●	●	●	
20 A	●	●	●	●	●	●	●	●	●	●	●	
40 A	●	●	●	●	●	●	●	●	●	●	●	

● MB Cap 20 A/0.2 s

● MB Cap Ultra 3 A/7 s

● MB Cap Ultra 10 A/38 s

● Emparro Cap 20 A/1.0 s

● MB Cap Ultra 20 A/16 s

● MB Cap Ultra 40 A/3.6 s

● Emparro ACCUControl 20 A

● Emparro ACCUControl 40 A

UPS systems / Buffer / Redundancy modules



UPS systems

- Predictive Maintenance
- Mini USB for connection to an industrial PC

Page 1.3.1



Buffer modules

- Maintenance-free ultra capacitors
- Buffer time more than 1 second at full load of 20 A
- Metal housing

Page 1.3.2



Buffer modules

- Maintenance-free ultra capacitors

Page 1.3.3



Redundancy modules

Page 1.3.6

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

UPS systems

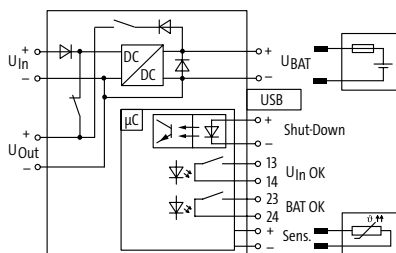
Emparro® ACCUcontrol

Emparro® ACCUcontrol

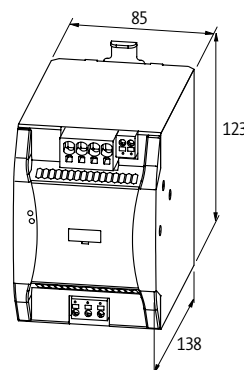
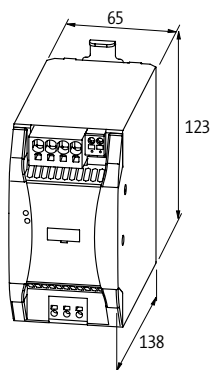
Approvals:  UL Listed



Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/20 A	85414	
24 V DC/40 A		85415
Technical Data		
Sensor type	KTY 81-210 (Art.No. 89600)	
Battery type	Lead battery (max. 40 Ah, sealed)	
Input		
Input voltage	21.6...30 V DC (buffer operation)	
Input current	max. 23 A	max. 43 A
Loading current	2 A	
Output		
Output voltage	27.7...19.2 V DC	
Output current	max. 20 A	max. 40 A
Control inputs		
Input voltage shutdown (SH)	24 V DC (6...45 V DC), potential free	
Control outputs		
Battery (BAT OK)	min. 5 V DC, 1 mA; max. 30 V DC, 100 mA	
Input voltage (Uin OK)	min. 5 V DC, 1 mA; max. 30 V DC, 100 mA	
General data		
Connection	Push-In Spring clamp terminals, Mini-USB	
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)	
Temperature range	-25...+45 °C	
Dimension drawing		



Notes

The required batteries can be found at the end of chapter 1.3.

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Buffer modules

Emparro® Cap 20/24 1.0s

1.0 s (20 A); 40 s (1 A)



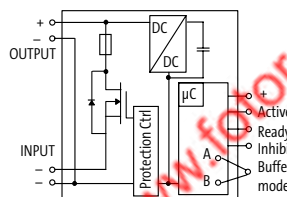
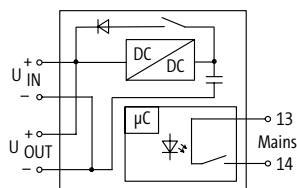
Emparro® Cap 20/48 0.1s

0.1 s (20 A); 2 s (1 A)

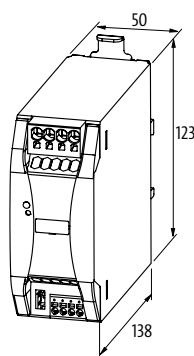
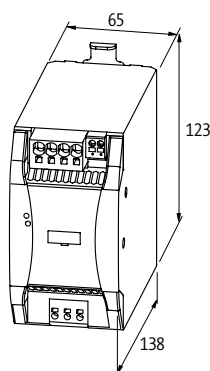


Approvals:  Listed

Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/20 A	85458	
48 V DC/20 A		85459
Input		
Input voltage	21.6...26.4 V DC	46...56 V DC (SELV/PELV)
Input current	20 A	60 mA
Inrush current	max. 25 A	—
Protection of voltage spikes	—	max. 72 V DC
Loading time	max. 75 s	20...45 s
Loading current	max. 3 A	max. 500 mA
Output		
Output voltage	25.5...19 V DC ±2%	48 V DC (46...56 V DC)
Output current	max. 20 A	
Current limit	65 A	26 A
Buffer time	1.0 s (20 A); 40 s (1 A)	0.1 s (20 A); 2 s (1 A)
Parallel circuit	possible	
Ripple	—	max. 200 mV p-p
General data		
Standards	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-3, EN 55022 B
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)	DIN-rail mountable TH35 (EN 60715)
Efficiency	90%	99%
Temperature range	-40...+60 °C (storage temperature -40...+60 °C)	-25...+60 °C, ...+70 °C derating (storage temperature -40...+85 °C)
Dimension drawing		



Notes

Buffer modules

MB Cap Ultra 3/24 7s

7 s (3 A); 21 s (1 A)



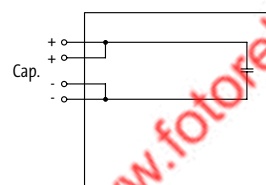
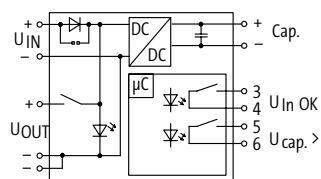
MB Cap Ultra expansion module 3/24 12s

12 s (3 A); 36 s (1 A)



Approvals:  UL
Listed

Circuit diagram



Order Data

24 V DC/3 A

Art-No.

85460

use with Art.-No. 85460

Art-No.

85462

Input

Input voltage

20.4...26.4 V DC

Input current

3 A

Loading time

min. 25 s

Output

Output voltage

23 V DC $\pm 2\%$

Output current

max. 3 A (+60 °C)

Buffer time

7 s (3 A); 21 s (1 A)

12 s (3 A); 36 s (1 A)

General data

Standards

EN 60950, EN 50178, SELV/PELV

Mounting method

DIN-rail mountable TH35 (EN 60715)

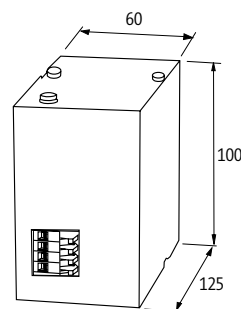
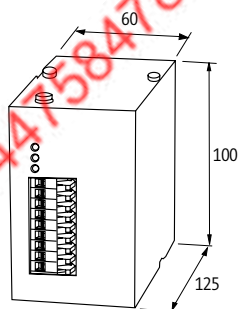
Efficiency

90%

Temperature range

-20...+60 °C (storage temperature -20...+60 °C)

Dimension drawing



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Buffer modules

MB Cap Ultra 10/24 38s

38 s (10 A); 380 s (1 A)



MB Cap Ultra 20/24 16s

16 s (20 A); 320 s (1 A)



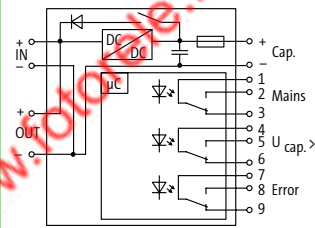
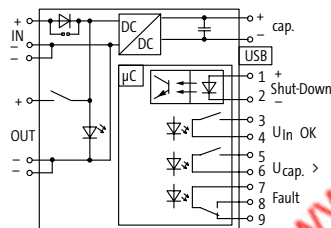
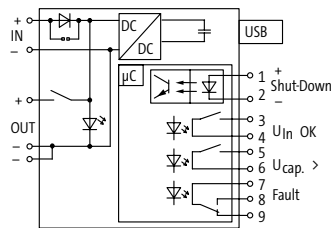
MB Cap Ultra 40/24 3.6s

3.6 s (40 A); 170 s (1 A)

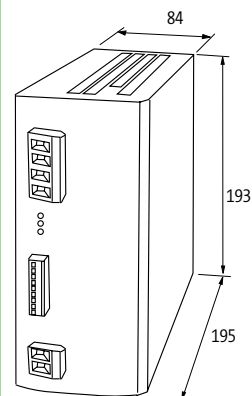
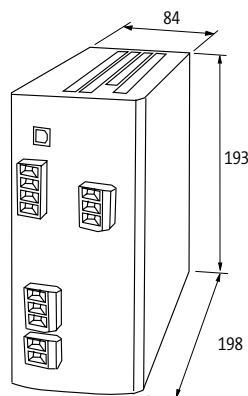
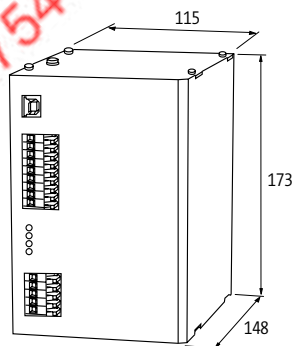


Approvals:  Listed

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC/10 A	85467		
24 V DC/20 A		85468	
24 V DC/40 A			85469
Input			
Input voltage	10.5...15 V DC; 24...27 V DC	24...29 V DC	21.6...26.4 V DC
Input current	10 A	20 A	40 A
Inrush current	max. 35 A/2 ms	max. 36.5 A/2 ms	max. 36.5 A
Loading time	typ. 100 s; max. 210 s	typ. 40 s; max. 500 s	typ. 140 s; max. 300 s
Output			
Output voltage	11.3 V DC $\pm 4\%$; 23.3 V DC $\pm 2\%$	23.3 V DC $\pm 2\%$	25.5...19 V DC $\pm 2\%$
Output current	max. 10 A (+60 °C)	max. 20 A (+60 °C)	max. 40 A (+60 °C)
Buffer time	38 s (10 A); 380 s (1 A)	16 s (20 A); 320 s (1 A)	3.6 s (40 A); 170 s (1 A)
General data			
Standards	EN 60950, EN 50178, SELV/PELV	EN 60950-1, EN 61204-3, EN 55011 A	EN 61000-6-2, EN 61000-6-4
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)		
Efficiency	90%		
Temperature range	-20...+60 °C (storage temperature -20...+60 °C)		
Dimension drawing			



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Buffer modules

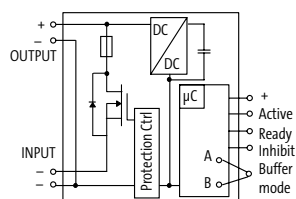
MB Cap 20/24 0.2s

0.2 s (20 A); 4 s (1 A)



Approvals:  UL Listed

Circuit diagram



Order Data

24 V DC/20 A

Art-No.

85394

Input

Input voltage	23...30 V DC (SELV/PELV)
Input current	85 mA
Protection of voltage spikes	max. 35 V DC
Loading time	20...45 s
Loading current	max. 500 mA

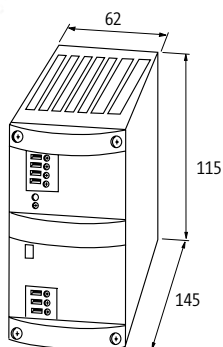
Output

Output voltage	24 V DC (22...28 V DC)
Output current	max. 20 A (+70 °C)
Current limit	26 A
Buffer time	0.2 s (20 A); 4 s (1 A)
Ripple	max. 200 mV p-p
Parallel circuit	possible

General data

Standards	EN 61000-6-2, EN 61000-6-3, EN 55022 B, EN 60950-1, SELV
Mounting method	DIN-rail mountable TH35 (EN 60715)
Efficiency	95%
Temperature range	0...+70 °C (storage temperature -25...+85 °C)

Dimension drawing



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Redundancy modules

MB Redundancy Balance 2 × 20/24

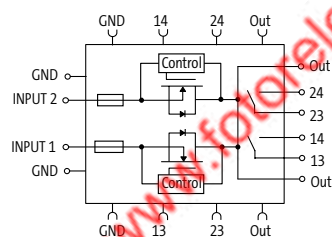
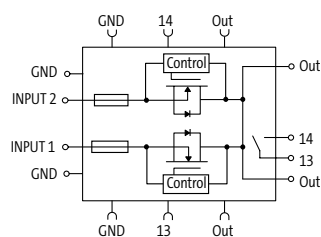
MB Redundancy Balance 2 × 20/24

Auto-Balancing (50/50)



Approvals:  

Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/2 × 20 A/1 × 40 A	85495	85496

Input

Input voltage	24 V DC (18...30 V DC)
Input current	2 × 20 A
Total current	max. 40 A
Invers-polarity protection	max. 30 V DC
Auto-Balancing (50/50)	no

Output

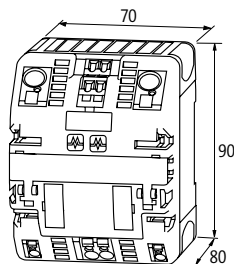
Output voltage	24 V DC (18...30 V DC)
Output current	26 A (-25...+40 °C)
LED display	LED (red/green)
Parallel usage/serial usage	2 units: 40 A (-25...+60 °C); 52 A (-25...+40 °C)/-
Alarm output	potential free (relay contact) for input voltage

potential free (relay contact) for input voltage/load distribution

General data

Standards	EN 61000-6-2, EN 61000-6-3
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Relative humidity	5...95%, no condensation
Efficiency	99.5%
Connection	Spring clamp terminals
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

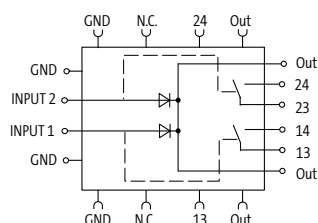
Redundancy modules

MB Diode

Approvals:  **UL**
Listed



Circuit diagram



Order Data

24 V DC/2 × 20 A/1 × 40 A

Art-No.

85396

Input

Input voltage	24 V DC (21...30 V DC)
Input current	2 × 20 A/1 × 40 A
Total current	max. 40 A
Invers-polarity protection	internal protection against reverse polarization up to 60 V DC
Auto-Balancing (50/50)	no

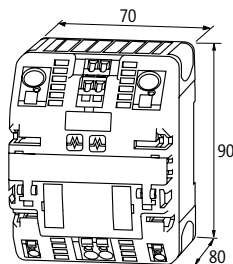
Output

Output voltage	24 V DC (21...30 V DC)
Output current	20 A (-25...+55 °C); 40 A (-25...+40 °C)
Overload	at 20 A +50% for 4 s
LED display	LED (green)
Alarm output	potential free per channel (relay contact)

General data

Standards	EN 61000-6-2, EN 61000-6-3
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Relative humidity	5...95%, no condensation
Power loss	U (approx. 0.5 V) × I
Efficiency	97%
Connection	Spring clamp terminals
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	-25...+55 °C (storage temperature -25...+85 °C)

Dimension drawing



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Accessories			Art-No.
	Lead battery 1.2 Ah 96×69×105 mm/2 kg	for Emparro® ACCUcontrol	89550
	Lead battery 7 Ah 115×174.5×159 mm/2.32 kg	for Emparro® ACCUcontrol	89552
	Lead battery 12 Ah 115×240.5×159 mm/3.7 kg	for Emparro® ACCUcontrol	89553
	Lead battery 17 Ah 170×155×182 mm/18 kg	for Emparro® ACCUcontrol	89554
	Lead battery 24 Ah 137×335×200 mm/20 kg	for Emparro® ACCUcontrol	89555



MICO

INTELLIGENT POWER DISTRIBUTION

- Monitor
- Detect
- React

FIRST CLASS POWER DISTRIBUTION

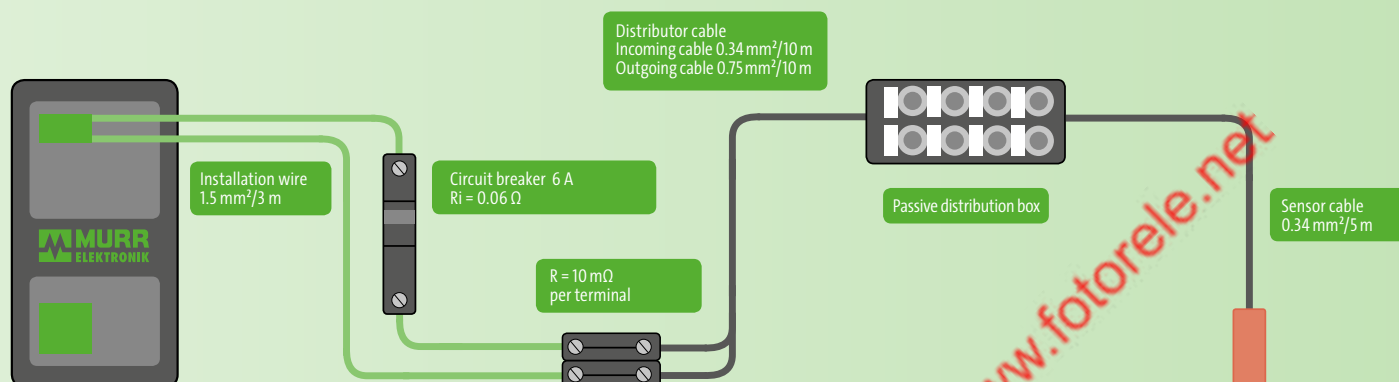
MICO is the intelligent power distribution module from Murrelektronik for 24 VDC. It monitors currents, indicates when approaching the maximum load and make targeted circuit isolations during overload or short circuit conditions. This makes sure systems run at maximum capacity.

- Convenient handling – installation without tools
- Diagnosis on location or via the controller
- Patented tripping characteristics for optimal switch-off time

Mico Pro®	
 Mico Pro® PM • Power module • Cover plate included • Cumulative signal output Page 1.4.1	 Mico Pro® PD • Potential distributor • Multiplication of secured channels or potentials Page 1.4.1
 Mico Pro® fix • Preset current ranges • Preventive diagnostics Page 1.4.2	 Mico Pro® flex • Adjustable current ranges • Channels with remote switch on/off function • Preventive diagnostics Page 1.4.3

MICO	
 MICO+ • Adjustable current ranges • Channels with remote switch on/off function • Preventive diagnostics Page 1.4.4	 MICO • Adjustable current ranges • Channels with remote switch on function • Group alarm output Page 1.4.6
 MICO BASIC • Preset current ranges • Small size Page 1.4.10	 MICO FUSE • Socket for glass tube fuses 5 × 20 mm Page 1.4.13

EXAMPLE: Why don't circuit breakers trigger reliably in a 24 VDC system?



Specific resistance of copper (ρ)	$= 0.0178 \text{ } (\Omega \times \text{mm}^2 / \text{m})$		
Wire resistance:	$R = \frac{(\rho) \times l}{A}$	$= \frac{0.0178 \times (2 \times 3 \text{ m})}{1.5 \text{ mm}^2}$	$= 0.07 \text{ } \Omega$
Distributor cable resistance:	$R = \frac{(\rho) \times l}{A}$	$= \frac{0.0178 \times (2 \times 10 \text{ m})}{(0.34 + 0.75 \text{ mm}^2) / 2}$	$= 0.65 \text{ } \Omega$
Sensor cable resistance:	$R = \frac{(\rho) \times l}{A}$	$= \frac{0.0178 \times (2 \times 5 \text{ m})}{0.34 \text{ mm}^2}$	$= 0.52 \text{ } \Omega$
Inner resistance of circuit breaker and connection terminals	$= 0.08 \text{ } \Omega$		
Total loop resistance	$= 1.32 \text{ } \Omega$		

Calculation of maximum possible current flow $I = \frac{U}{R} = \frac{24 \text{ V}}{1.32 \text{ } \Omega} = \underline{\underline{18.18 \text{ A}}}$
(limited by loop resistance)

Required tripping current of the 6 A circuit breaker Type C
 $14 \times I_{\text{Nenn}} = 14 \times 6 \text{ A} = \underline{\underline{84 \text{ A}}}$



Tripping current Max. current flow
84 A > 18.18 A

Over current protection device

– Power supplies

Approvals:   

Mico Pro® PM 24 V DC/40 A

Power module
Cover plate included



Mico Pro® PD 2x12

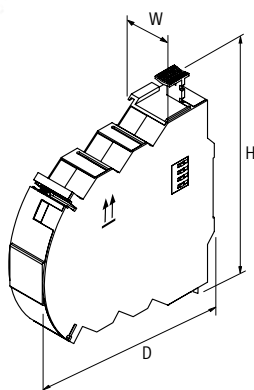
Potential distributor
1 channel (x11)



Mico Pro® PD 2x2x06

Potential distributor
2 channels per (x5)

Order Data	Art-No.	Art-No.	Art-No.
40 A	9000-41190-0000000		
20 A		9000-41000-0000212	
2 x 20 A			9000-41000-0002206
Input			
Operating voltage	12 V DC; 24 V DC (9...30 V DC)	12 V DC, 24 V DC	
Total current	max. 40 A	max. 20 A	max. 2 x 20 A
Output			
Parallel usage/serial usage	-/Selectivity in 2 levels	–	
Control inputs			
Input voltage (ON)	9...30 V DC	–	
Impulse length (ON)	"high" 120 ms	–	
Input voltage (CTRL)	9...30 V DC	–	
Impulse length (CTRL)	OFF "high" 40/400 ms, ON "high" 20/200 ms	–	
Control outputs			
Early warning (90%)	max. 30 V AC/DC	–	
Group alarm output	max. 30 V AC/DC	–	
Connections (IN)			
Connection	Bridge system		
Connections (OUT)			
Connection	Push-In spring clamp terminals		
Cross section (rigid)	0.75...16 mm ² (AWG 20...4)	0.2...2.5 mm ² (AWG 24...14)	
Cross section (flex)	0.75...16 mm ² (AWG 20...4)	0.2...2.5 mm ² (AWG 24...14)	
General data			
Protection	IP20		
Bridging concept	Bridge set (max. 40 A)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	-25...+55 °C (storage temperature -40...+80 °C)		
Dimensions H x W x D	130x24x114 mm		
Dimension drawing			



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges

Approvals:   

Mico Pro® fix

1 channel



Mico Pro® fix

1 channel



Mico Pro® fix

2 channels

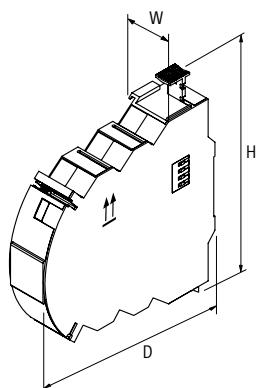


Mico Pro® fix

4 channels



Order Data	Art-No.	Art-No.	Art-No.
2 A	9000-41011-0200000	9000-41012-0200000	9000-41014-0200000
4 A	9000-41011-0400000	9000-41012-0400000	9000-41014-0400000
6 A	9000-41011-0600000	9000-41012-0600000	9000-41014-0600000
8 A	9000-41011-0800000		
10 A	9000-41011-1000000		
16 A		9000-41011-1600000	
Input			
Operating voltage	12 V DC; 24 V DC (9...30 V DC)		
Total current	max. 40 A		
Output			
No. of channels	1	2	4
Inrush capacity	max. 30 mF		
Tolerance	0...+20%		
Parallel usage/serial usage	-/Selectivity in 2 levels		
Control inputs			
Input voltage (ON)	via power module		
Impulse length (ON)	via power module		
Input voltage (CTRL)	via power module		
Impulse length (CTRL)	via power module		
Control outputs			
Group alarm output	via power module		
Early warning (90%)	via power module		
Connections (IN)			
Connection	Bridge system		
Connections (OUT)			
Connection	Push-In spring clamp terminals		
Cross section (rigid)	0.2...2.5 mm² (AWG 24...14)		
Cross section (flex)	0.2...4 mm² (AWG 24...12)		
General data			
Protection	IP20		
Bridging concept	Bridge set (max. 40 A)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	-25...+55 °C (storage temperature -40...+80 °C)		
Dimensions H × W × D	130×8×114 mm	130×12×114 mm	130×24×114 mm
Dimension drawing			



INTELLIGENT POWER DISTRIBUTION

Over current protection device

- adjustable current ranges
- channel-specific messages

Approvals:   

Mico Pro® flex

1 channel



Mico Pro® flex

1 channel



Mico Pro® flex

2 channels

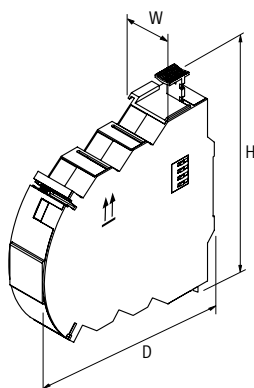


Mico Pro® flex

4 channels



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
1, 2, 3, 4, 5, 6, 7, 8, 9, 10 A	9000-41091-0101000		9000-41092-0101000	9000-41094-0101000
11, 12, 13, 14, 15, 16, 17, 18, 19, 20 A		9000-41091-1102000		
Input				
Operating voltage	12 V DC; 24 V DC (9...30 V DC)			
Total current	max. 40 A			
Output				
No. of channels	1	2	4	
Inrush capacity	max. 30 mF			
Tolerance	0...+20%	-5...+15 %	0...+20%	
Parallel usage/serial usage	-/Selectivity in 2 levels			
Control inputs				
Input voltage (ON)	9...30 V DC			
Impulse length (ON)	"high" 120 ms			
Input voltage (CTRL)	9...30 V DC			
Impulse length (CTRL)	OFF "high" 40/400 ms, ON "high" 20/200 ms			
Control outputs				
Group alarm output	via power module			
Early warning (90%)	like operating voltage - max. 20 mA, via power module			
Connections (IN)				
Connection	Bridge system			
Connections (OUT)				
Connection	Push-In spring clamp terminals			
Cross section (rigid)	0.2...2.5 mm² (AWG 24...14)			
Cross section (flex)	0.2...4 mm² (AWG 24...12)			
General data				
Protection	IP20			
Bridging concept	Bridge set (max. 40 A)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	25...+55 °C (storage temperature -40...+80 °C)	-25...+50 °C (storage temperature -40...+80 °C)	-25...+55 °C (storage temperature -40...+80 °C)	
Dimensions H × W × D	130×8×114 mm	130×12×114 mm		130×24×114 mm
Dimension drawing				



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– adjustable current ranges

– early warning (90%)

Approvals:   

MICO+ 4.4

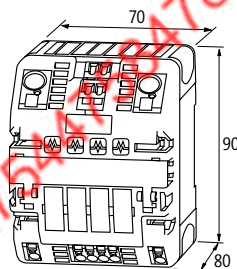
4 channels



MICO+ 4.6

4 channels

Order Data	Art-No.		Art-No.
1 A, 2 A, 3 A, 4 A	NEC Class 2	9000-41084-0100400	
1 A, 2 A, 4 A, 6 A			9000-41084-0100600
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	1 A, 2 A, 3 A, 4 A, by countersunk rotary switch, sealed	1 A, 2 A, 4 A, 6 A, by countersunk rotary switch, sealed	
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Remote start (OFF)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON		
Early warning (90%)	max. 20 mA; high: one channel over 90%; low: all channels under 90%		
General data			
Connection	Spring clamp terminals		
Input terminals	2 × 16 mm ²		
Output terminals	per output 2 × 1.5 mm ²		
Alarm terminals	2.5 mm ²		
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

- adjustable current ranges
- early warning (90%)

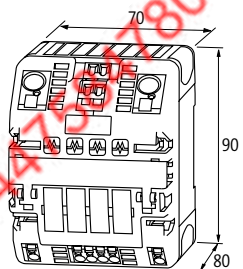
Approvals:   

MICO+ 4.10

4 channels



Order Data	Art-No.
4 A, 6 A, 8 A, 10 A	9000-41084-0401000
Input	
Operating voltage	24 V DC (18...30 V DC)
Output	
Current adjustment	4 A, 6 A, 8 A, 10 A, by countersunk rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)
Control inputs	
Input voltage (ON)	10...30 V DC
Remote start (OFF)	10...30 V DC
Impulse length (ON)	min. 20 ms
Control outputs	
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON
Early warning (90%)	max. 20 mA; high: one channel over 90%; low: all channels under 90%
General data	
Connection	Spring clamp terminals
Input terminals	2 × 16 mm ²
Output terminals	per output 2 × 1.5 mm ²
Alarm terminals	2.5 mm ²
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	0...+55 °C (storage temperature -40...+80 °C)
Dimension drawing	



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

Approvals:  Class 2  US
UL3310/NEC 725 Listed



MICO 4.4

4 channels

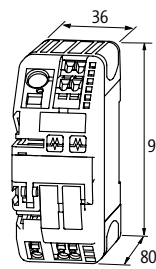
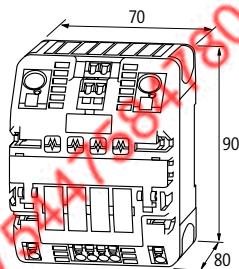


MICO 2.4

2 channels



Order Data	Art-No.		Art-No.
1 A, 2 A, 3 A, 4 A	DNV-GL	9000-41034-0100400	cURus 9000-41042-0100400
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	1 A, 2 A, 3 A, 4 A, by countersunk rotary switch, sealed		
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	potential free 30 V AC/DC, 100 mA		
General data			
Connection	Spring clamp terminals		
Input terminals	2 × 16 mm ²	1 × 16 mm ²	
Output terminals	per output 1 × 4 mm ²		
Alarm terminals	2.5 mm ²		
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	one side, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

Over current protection device

MICO 4.6

4 channels



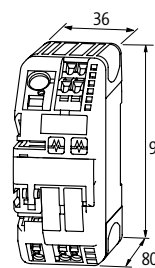
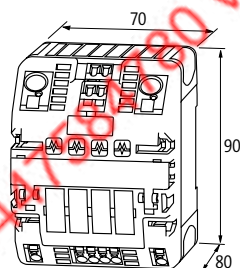
MICO 2.6

2 channels



Approvals:   

Order Data	Art-No.		Art-No.
1 A, 2 A, 4 A, 6 A	DNV-GL	9000-41034-0100600	cURus 9000-41042-0100600
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	1 A, 2 A, 4 A, 6 A, by countersunk rotary switch, sealed		
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	potential free 30 V AC/DC, 100 mA		
General data			
Connection	Spring clamp terminals		
Input terminals	2 × 16 mm ²	1 × 16 mm ²	
Output terminals	per output 1 × 4 mm ²		
Alarm terminals	2.5 mm ²		
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)		one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

MICO 4.10

4 channels



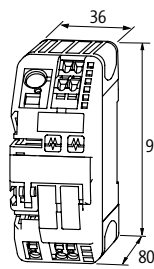
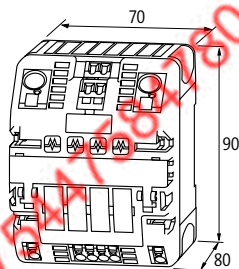
MICO 2.10

2 channels



Approvals:   

Order Data	Art-No.		Art-No.
4 A, 6 A, 8 A, 10 A	DNV-GL	9000-41034-0401000	cURus 9000-41042-0401000
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	4 A, 6 A, 8 A, 10 A, by countersunk rotary switch, sealed		
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	potential free 30 V AC/DC, 100 mA		
General data			
Connection	Spring clamp terminals		
Input terminals	2 × 16 mm ²	1 × 16 mm ²	
Output terminals	per output 1 × 4 mm ²		
Alarm terminals	2.5 mm ²		
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)		one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

MICO 4.4.10 ACTUATOR-SENSOR

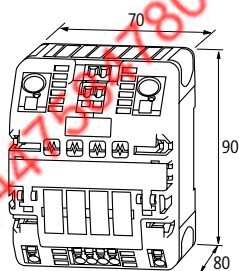
MICO 4.10 SPEED START

4 channels
optimized start-up behavior

Approvals:   



Order Data	Art-No.	Art-No.
1 A, 2 A, 3 A, 4 A; 4 A, 6 A, 8 A, 10 A	9000-41034-0101000	
4 A, 6 A, 8 A, 10 A		9000-41034-0401005
Input		
Operating voltage	24 V DC (18...30 V DC)	
Output		
Current adjustment	1 A, 2 A, 3 A, 4 A; 4 A, 6 A, 8 A, 10 A, by countersunk rotary switch, sealed	4 A, 6 A, 8 A, 10 A, by countersunk rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)	max. 30 mF (per channel)
Control inputs		
Input voltage (ON)	10...30 V DC	
Impulse length (ON)	min. 20 ms	
Control outputs		
Group alarm output	potential free 30 V AC/DC, 100 mA	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm ²	
Output terminals	per output 1 × 4 mm ²	
Alarm terminals	2.5 mm ²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges

Approvals:   



MICO BASIC 8.2

8 channels



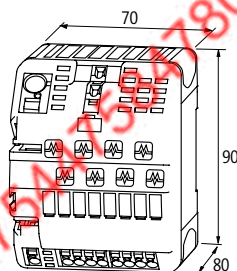
MICO BASIC 8.4

8 channels

MICO BASIC 8.6

8 channels

Order Data	Art-No.		Art-No.	
2 A	NEC Class 2	9000-41068-0200000		
4 A			NEC Class 2	9000-41068-0400000
6 A				9000-41068-0600000
Input				
Operating voltage	24 V DC (18...30 V DC)			
Output				
Current adjustment	2 A	4 A	6 A	
Inrush capacity	max. 20 mF (per channel)			
Control inputs				
Input voltage (ON)	10...30 V DC			
Impulse length (ON)	min. 20 ms			
Control outputs				
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON			
General data				
Input terminals	1 × 16 mm²			
Output terminals	per output 1 × 4 mm²			
Alarm terminals	2.5 mm²			
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)			
Connection	Spring clamp terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+55 °C (storage temperature -40...+80 °C)			
Dimension drawing				



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges

Approvals:   



MICO BASIC 4.2

4 channels



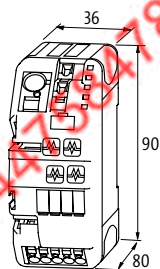
MICO BASIC 4.4

4 channels

MICO BASIC 4.6

4 channels

Order Data	Art-No.		Art-No.
2 A	NEC Class 2	9000-41064-0200000	
4 A		NEC Class 2	9000-41064-0400000
6 A			9000-41064-0600000
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	2 A	4 A	6 A
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON		
General data			
Connection	Spring clamp terminals		
Input terminals	1 × 16 mm ²		
Output terminals	per output 1 × 4 mm ²		
Alarm terminals	2.5 mm ²		
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges

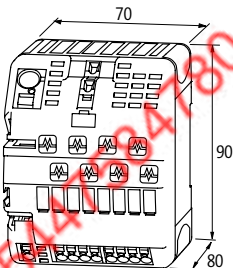
Approvals:  Class 2  UL3310/NEC 725  US

MICO BASIC 5.2/3.6

8 channels



Order Data		Art-No.
5 × 2 A; 3 × 6 A		9000-41068-0200600
Input		
Operating voltage	24 V DC (18...30 V DC)	
Output		
Current adjustment	5 × 2 A; 3 × 6 A	
Inrush capacity	max. 20 mF (per channel)	
Control inputs		
Input voltage (ON)	10...30 V DC	
Impulse length (ON)	min. 20 ms	
Control outputs		
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON	
General data		
Connection	Spring clamp terminals	
Input terminals	1 × 16 mm ²	
Output terminals	per output 1 × 4 mm ²	
Alarm terminals	2.5 mm ²	
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		



Notes

INTELLIGENT POWER DISTRIBUTION

Socket for glass tube fuses

MICO FUSE 24 LED

8 channels



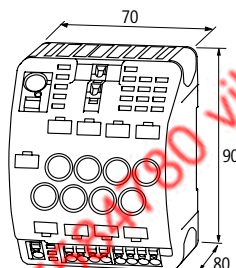
MICO FUSE 250

8 channels



Approvals: **UL** **CE**

Order Data	Art-No.	Art-No.
24 V DC	9000-41078-0600001	
max. 250 V AC/DC		9000-41078-0600002
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	max. 250 V AC/DC
Operating current	max. 6 A (40 °C)	
Total current	max. 40 A	
Control outputs		
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON	–
General data		
Connection	Spring clamp terminals	
Input terminals	1 × 16 mm ²	
Output terminals	1 × 0.5...4 mm ²	
Alarm terminals	2.5 mm ²	–
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+55 °C	
Dimension drawing		



Notes

INTELLIGENT POWER DISTRIBUTION

Accessories			Art-No.
	Bridge system		
		Quantity: 1 piece	9000-41034-0000002
		Quantity: 10 pcs.	9000-41034-0000001
	Shortened buttons		
		Quantity: 4 pcs.	9000-41034-0000003
	Label plates		
	KES 20 × 8 (white)	(10 pieces/2 plates)	996067
	KMR 5 × 10 (white)	(64 pieces/4 plates)	996078
	MICO BASIC, MICO FUSE, Mico Pro®		
	Glass automotive fuse		
	2 A (T)		9000-41078-0000002
	4 A (T)		9000-41078-0000004
	6 A (T)		9000-41078-0000006
	Fuse cap		
		Quantity: 8 pcs.	9000-41078-0000010
Accessories Mico Pro®			Art-No.
	Plug-In-Link 2 × blue		
	Length: 500 mm		9000-41000-0000000
	Plug-In-Link 2 × red		
	Length: 500 mm		9000-41000-0000001
	Plug-In-Link 1 × blue, 1 × red		
	Length: 500 mm		9000-41000-0000002
	Cover plate		
	1 Set (left/right)		9000-41000-0000006



CONVERTERS / RECTIFIERS

- Compact design
- Galvanic separation
- Switch mode models

SMALL VOLTAGE CONVERTERS

Voltages in control systems often have to be converted. The DC/DC converters in the MDD series do this perfectly! It doesn't matter if you need 5, 10, 12 or 24 volts – Murrelektronik has the right product.

If there is only AC voltage available, the NG rectifier series can convert into DC voltage. All models can be conveniently mounted in the control cabinet on DIN rail.

AC/DC and DC/DC Converters



MDD, GLS, GSS, NG, NT

- Output current range: 0.5...4 A

Page 1.5.1

Rectifiers



NG

- Output current range: 2.6...10 A

Page 1.5.3

CONVERTERS / RECTIFIERS

Switched mode

– with galvanic isolation

MDD

OUTPUT: 24 V DC
Current: 0.3 A


MDD

OUTPUT: 12 V DC
Current: 0.7 A


MDD

OUTPUT: 5 V DC
Current: 1.5 A

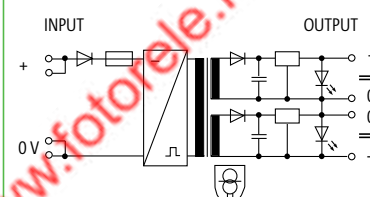
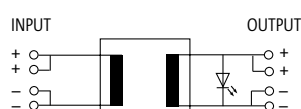

MDD

OUTPUT: ± 10 V DC
Current: 2×0.25 A


MDD

OUTPUT: ± 15 V DC
Current: 2×0.25 A


Circuit diagram



Order Data

24 V DC/0.3 A

Art-No.

85655

Art-No.

85656

Art-No.

85657

Art-No.

85658

Art-No.

85659

12 V DC/0.7 A

5 V DC/1.5 A

 ± 10 V DC/2 $\times$ 250 mA

 ± 15 V DC/2 $\times$ 250 mA

Input

Input voltage

24 V DC

Input current

0.6 A

0.85 A

Input fuse (external)

2 A (T)

–

Input fuse (internal)

1.5 A (T)

Output

Output fuse

short-circuit and overload protected, restart after overload by removing power supply

Output voltage

24 V DC (SELV), $\pm 2\%$

12 V DC (SELV), $\pm 2\%$

5 V DC (SELV), $\pm 2\%$
 ± 10 V DC (SELV), $\pm 5\%$
 ± 15 V DC (SELV), $\pm 5\%$

Output current

max. 0.3 A

max. 0.7 A

max. 1.5 A

max. 2 $\times$ 250 mA

Ripple

max. 0.2 %rms

General data

Standards

EN 61204-3

Test isolation voltage

4 kV (input/output)

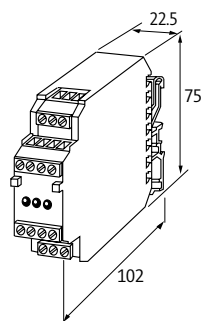
Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

Temperature range

0...+50 °C, no condensation

Dimension drawing



Notes

CONVERTERS / RECTIFIERS

DC/DC converters

AC/DC converters

GLS

OUTPUT regulated: 5 V DC
Current: 1.2 A



GSS

OUTPUT switched mode: 5 V DC
Current: 4 A

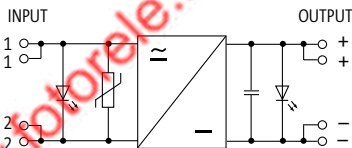
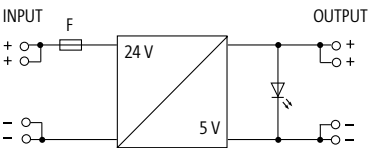


NT

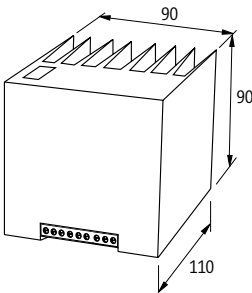
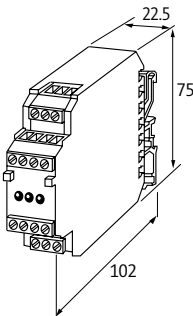
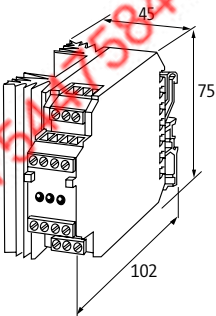
OUTPUT: 5...35 V DC
Current: 3.5 A



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
5 V DC/1.2 A	85600		
5 V DC/4 A		85650	
5...35 V DC/3.5 A			85660
Input			
Input voltage	24 V DC (+10 -15%)	15...40 V DC	10...32 V AC/12...42 V DC
Input current	1.2 A	1.04 A (24 V DC); max. 1.7 A	max. 3 A
Input fuse (internal)	2 A (T)		6.3 A (T)
Frequency	–		50...60 Hz
Output			
Output voltage	5 V DC (SELV), ±5%		5...35 V DC (SELV), Uout-max. = Uin -5 V
Output current	max. 1.2 A	max. 4 A	max. 3.5 A
Ripple	max. 0.2 %rms		max. 300 mVrms
Output fuse	short-circuit protected		
General data			
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	-20...+60 °C, no condensation		
Dimension drawing			



Notes

CONVERTERS / RECTIFIERS

Rectifier modules

– Single-phase

– IP00

NG 2

INPUT: max. 41 V AC



NG 5

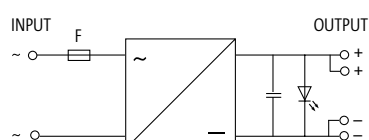
INPUT: max. 41 V AC

NG 10

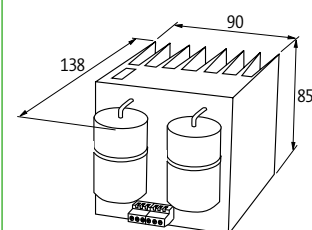
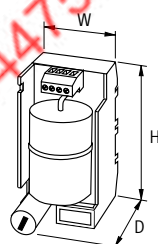
INPUT: 29 V AC



Circuit diagram



Order Data	H×W×D	Art-No.	H×W×D	Art-No.	H×W×D	Art-No.
24 V DC/2.6 A	86×45×92 mm	85700				
24 V DC/5 A			90×68×87 mm	85710		
24 V DC/10 A						85730
Input						
Input voltage	max. 5...44 V AC				29 V AC	
Input current	max. 2.6 A; 1.8 A (+60 °C)		max. 5 A; 4 A (+60 °C)		max. 10 A	
Frequency	45...65 Hz				50...60 Hz (or as additional smoothing for DC)	
Input fuse (external)	–		8 A (T), 5 × 20 mm		16 A (T), 5 × 20 mm	
Input fuse (internal)	3.15 A (T), 5 × 20 mm					
Output						
Output voltage	U-IN × 1.16/max. 60 V DC				U-IN × 1.16/39 V DC	
Output current	max. 2.6 A; 1.8 A (+60 °C)		max. 5 A; 4 A (+60 °C)		max. 10 A	
Ripple	max. 5 %rms					
Output filter	smoothed with smoothing capacitor and LED					
General data						
Mounting method	DIN-rail mountable TH35 (EN 60715)					
Temperature range	-20...+60 °C					
Dimension drawing						



Notes



MODLINK MSVD – CONTROL CABINET POWER OUTLETS

- Safe
- Easy to install
- Meet international standards

KEEP IT SAFE – EVEN IN THE CONTROL CABINETS

Using components temporarily in the control cabinet require right power outlets.
Murrelektronik has the right tools: a wide range of power outlets for different countries.

Control Cabinet Power Outlets



German standard (VDE)

- For DIN-rail mounting acc. to EN 60715
- With screw terminals or spring clamp terminals

An overview of this product range can be found in our online shop



French standard (UTE)

- For DIN-rail mounting acc. to EN 60715
- With screw terminals or spring clamp terminals

An overview of this product range can be found in our online shop



American standard (NEMA 5-15)

- For DIN-rail mounting acc. to EN 60715
- With screw terminals
- LED display

An overview of this product range can be found in our online shop



Different international standards

- For DIN-rail mounting acc. to EN 60715

An overview of this product range can be found in our online shop

Минск +375447584780 viber zakaz@ight.by www.fotorele.net



EMC FILTERS FOR MAXIMUM SAFETY

- Meets EMC guidelines
- Increases interference protection
- Decreases interference emissions

KEEP IT SAFE – EVEN IN THE CONTROL CABINETS

Mains filters are used to reduce interference without affecting the supply. Murrelektronik's filters decrease incoming interference, which can affect sensitive equipment, and also decrease outgoing interference from the equipment they are connected to, which could damage the mains supply. Typical sources of continuous interference are switch mode power supplies, motors and phase controllers.

These sources are made up of inductive and capacitive components and work the best when their impedance is matched to the source of the interference. In regards to grounding, it's important to have a low impedance. Ideally, the filter should be as close as possible to the point where the cable enters the cabinet. If that's not possible, then shielded cables should be used between the filter and the entry point. Ground straps should be as short as possible and connection surfaces should be free from paint, etc.

Single-phase



MEF Emparro® 1/1 – one-stage

- Operating voltage: max. 265 V AC/DC
- Nominal current: 20 A

Page 1.7.1



MEF 1/2 SY and MEF 1/2 AS – two-stage

- Operating voltage: max. 250 V AC/DC, 0...60 Hz
- Nominal current: 10...16 A

Page 1.7.2

Three-phase



MEF 3/1 N – one-stage

- Operating voltage: max. 3 × 440 V AC
- Nominal current: 3...20 A

Page 1.7.5



MEF 3/1 N HD – one-stage

- Operating voltage: max. 3 × 500 V AC
- Nominal current: 10...135 A

Page 1.7.6



MEF 3/1 and MEF 3/2 – one and two-stage

- Operating voltage: max. 3 × 500 V AC / 3 × 600 V AC
- Nominal current: 8...180 A

Page 1.7.7

EMC FILTERS

1-phase, 1-stage

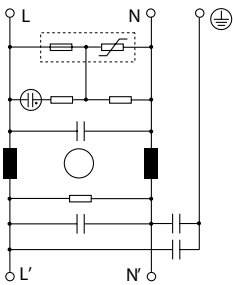
– DIN-rail mountable

Approvals: 

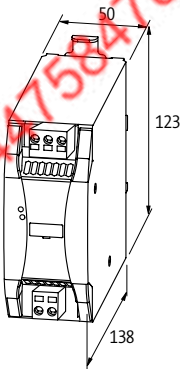
MEF Emparro® 1/1
wide attenuation spectrum



Circuit diagram



Order Data		Art-No.
20 A		10701
Technical Data		
Operating voltage	85...265 V AC/100...230 V DC	
Operating frequency	50...60 Hz	
Consumption	max. 1 mA (250 V AC)	
Connection cross section	1.5...10 mm ² single core (AWG 16...8); 1.5...6 mm ² multiple core (AWG 16...10)	
General data		
Climatic category	Environment class (EN 60721)	
Connection	Push In terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Dimension drawing		



Notes

EMC FILTERS

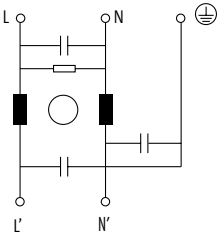
1-phase, 1-stage
– DIN-rail mountable

Approvals: c  US

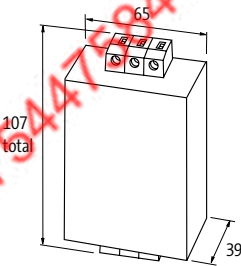
MEF 1/1
for universal applications



Circuit diagram



Order Data		Art-No.
10 A		10415
20 A		10416
Technical Data		
Operating voltage	max. 250 V AC/300 V DC	
Operating frequency	50...60 Hz	
Consumption	max. 5 mA (250 V AC)	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
Connection cross section	0.2...6 mm² single core (AWG 24...9); 0.2...4 mm² multiple core (AWG 24...11)	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)	
Connection	Screw connection, touch protected	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Dimension drawing		



Notes

EMC FILTERS

1-phase, 2-stage

– DIN-rail mountable

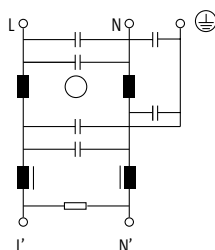
Approvals: 

MEF 1/2 SY

against symmetrical interferences



Circuit diagram



Order Data

	Art-No.
1 A	10460
2 A	10461
3 A	10462
4 A	10463
6 A	10464
16 A	10466

Technical Data

Operating voltage	max. 250 V AC/300 V DC
Operating frequency	50...60 Hz
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Consumption	max. 5 mA (250 V AC)
Connection cross section	0.2...6 mm ² single core (AWG 24...9); 0.2...4 mm ² multiple core (AWG 24...11)

General data

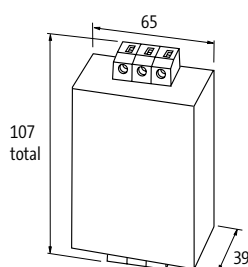
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Description

Functional description The single phase 2-stage EMC filters MEF 1/2 are used in the range 0.1...30 MHz to suppress cable carried interference on mains and control cables. The best filter performance is achieved by using short connection wires (suggestion: earth connection < 10 cm) and the largest possible diameter. The EMC filters work bi-directionally (in both directions). The filters are for demanding applications. The filters are designed for use with fixed modules. One step of the filter is always for the suppression of asymmetrical interferences (magnetically compensated suppression). The second step is, dependant on application for symmetrical or asymmetrical interferences.

Application symmetrical interferences: units with high repetitions of the switching processes, - switch mode P.S.U.s, - phase angle controller, - supply of universal motors, - behind transformers

Dimension drawing



Notes

EMC FILTERS

1-phase, 2-stage

– DIN-rail mountable

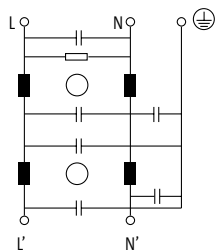
Approvals:  ^{us}

MEF 1/2 AS

against asymmetrical interferences



Circuit diagram



Order Data	Art-No.
3 A	10470
6 A	10471
10 A	10472

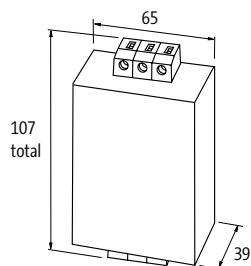
Technical Data	
Operating voltage	max. 250 V AC/300 V DC
Operating frequency	50...60 Hz
Consumption	max. 5 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Connection cross section	0.2...6 mm ² single core (AWG 24...9); 0.2...4 mm ² multiple core (AWG 24...11)

General data	
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - PE), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Description	
Functional description	The single phase 2-stage EMC filters MEF 1/2 are used in the range 0.1...30 MHz to suppress cable carried interference on mains and control cables. The best filter performance is achieved by using short connection wires (suggestion: earth connection < 10 cm) and the largest possible diameter. The EMC filters work bi-directionally (in both directions). The filters are for demanding applications. The filters are designed for use with fixed modules. One step of the filter is always for the suppression of asymmetrical interferences (magnetically compensated suppression). The second step is, dependant on application for symmetrical or asymmetrical interferences.

Application	asymmetrical interferences: - units with high switching frequency and repetition, - switch mode P.S.U.s, - in DC mains, - in front of transformers, - for frequency inverters
-------------	---

Dimension drawing	
-------------------	--



Notes	
-------	--

EMC FILTERS

3-phase, 1-stage

– DIN-rail mountable

– with neutral

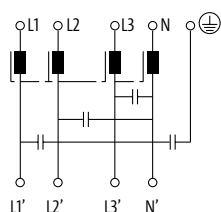
Approvals:  

MEF 3/1 N

for universal applications



Circuit diagram



Order Data

	Art-No.
3 A	10510
6 A	10511
10 A	10512
20 A	10513

Technical Data

Operating voltage	max. 4 × 440 V AC
Operating frequency	50...60 Hz
Consumption	max. 3 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Connection cross section	0.2...6 mm ² single core (AWG 24...9); 0.2...4 mm ² multiple core (AWG 24...11)

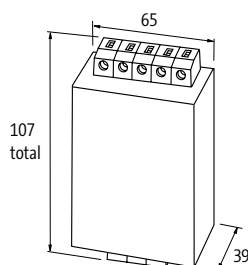
General data

Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Description

Functional description
The 3-phase and one-stage EMC filters MEF 3/1 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-S, TN-CS, and TT networks. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that regularly appear with electronically controlled three phase units through mains influences.

Dimension drawing



Notes

EMC FILTERS

3-phase, 1-stage

– with neutral

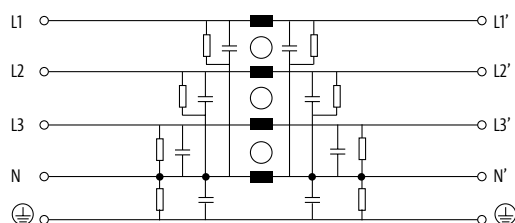
Approvals: 

MEF 3/1 N HD

with increased damping



Circuit diagram



Order Data	H×W×D/kg	Art-No.
10 A	153×130×100/1.0	10571
18 A	153×130×100/1.0	10572
36 A	153×130×100/1.1	10574
72 A	153×118×125/1.6	10575
100 A	170×180×140/3.4	10577
135 A	170×180×140/4.5	10578

Technical Data

Connection cross section	0.2...10 mm ² single core (AWG 24...7); 0.2...6 mm ² multiple core (AWG 24...9)
Operating voltage	max. 3 × 500 V AC
Operating frequency	50...60 Hz
Consumption	max. 15 mA (250 V AC)
Overload current	18 × (I _N t) max. 0.5 ms; 1.5 × (I _N t) max. 1 min. (1 × per hour)

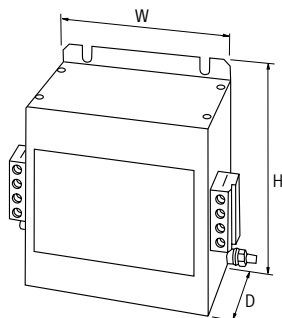
General data

Mounting method	screw fixing, M6
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L - L), 2 s

Description

Functional description	The 3-phase and one-stage EMC filters MEF 3/1 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-S, TN-CS, and TT networks. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that regularly appear with electronically controlled three phase units through mains influences.
------------------------	--

Dimension drawing



Notes

EMC FILTERS

3-phase, 1-stage

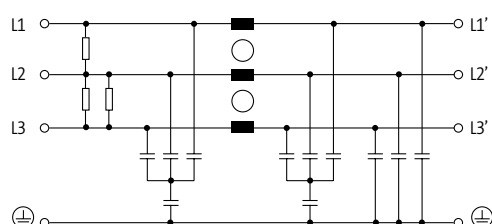
– Space saving book form

MEF 3/1



Approvals: 

Circuit diagram



Order Data	H×W×D/kg	Art-No.
8 A	250×90×100/1.3	10531
16 A	250×90×100/1.3	10532
25 A	250×90×100/1.3	10533
36 A	250×90×100/1.5	10534
50 A	250×90×100/1.7	10535
80 A	270×85×135/2.2	10537
110 A	270×90×150/3.2	10538
180 A	380×120×170/5.1	10539

Technical Data

Operating voltage	max. 3 × 600 V AC
Operating frequency	50...60 Hz
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Consumption	max. 10 mA (250 V AC)
Connection cross section	0.2...10 mm ² single core (AWG 24...7); 0.2...6 mm ² multiple core (AWG 24...9)

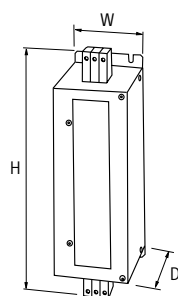
General data

Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L - L), 2 s
Connection	Screw connection, touch protected
Mounting method	screw fixing

Description

Functional description The 3-phase and 1-/2-stage EMC filters MEF 3/1-3/2 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-C-mains. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that often occur with frequency converters and switch mode power supplies.

Dimension drawing



Notes

EMC FILTERS

3-phase, 2-stage

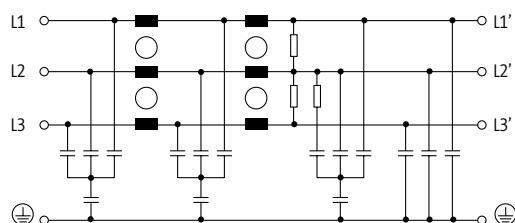
– Space saving book form

Approvals: 

MEF 3/2



Circuit diagram



Order Data	HxWxD/kg	Art-No.
8 A	226x50x140/1.7	10550
12 A	226x50x140/1.7	10551
16 A	226x50x140/1.7	10552
25 A	226x50x140/1.7	10553
36 A	226x50x140/1.7	10554
50 A	295x70x177/3.7	10555
80 A	295x70x177/5.1	10556

Technical Data

Operating voltage	max. 3 × 500 V AC
Operating frequency	50...60 Hz
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Consumption	max. 15 mA (250 V AC)
Connection cross section	0.2...10 mm ² single core (AWG 24...7); 0.2...6 mm ² multiple core (AWG 24...9)

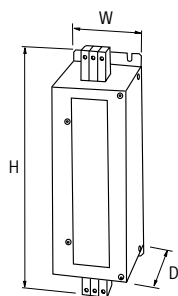
General data

Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L - L), 2 s
Connection	Screw connection, touch protected
Mounting method	screw fixing

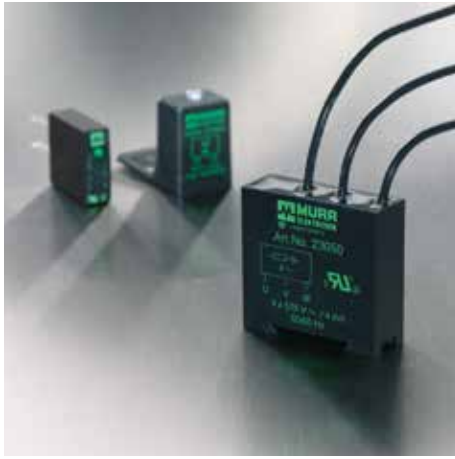
Description

Functional description The 3-phase and 1-1/2-stage EMC filters MEF 3/1-3/2 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-C-mains. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that often occur with frequency converters and switch mode power supplies.

Dimension drawing



Notes



EMC SUPPRESSORS

SMALL DEVICE, BIG IMPACT

- Meets EMC guidelines
- Reduces voltage peaks
- Prevents coil short circuits

MURRELEKTRONIK SOLVES YOUR INTERFERENCE PROBLEMS

- Optimum interference results by adjusting your inductive load
- Prefabricated modules make it easy to install – reliably mounted every time
- Prevents operative failures and outages and increases availability
- Long service life of contacts and switching elements lower maintenance costs

THE RIGHT SUPPRESSION FOR ALL STANDARD INDUCTIVE LOADS

For Contactors

- Integrated system solutions for all standard contactors
- Universal suppressors for contactors or relays that snap in or stick to the mounting surface

For Motors

- Suppression directly next to the interference source or inside the motor terminal box
- Motor connector has 10 poles and an earth connection point with integrated suppressor module and pre-wired cable
- Integrated system solutions for direct connection to the contactor
- Universal suppressors snap in next to the motor contactor

For Valves

- Suppressors are simply mounted between valve base and valve plug instead of the flat gasket

EMC Suppressors



For Contactors

ABB, General Electric, Eaton, Omron, Rockwell A. B.,
Schneider-Telemecanique, Siemens

Universal Suppressors

Page 1.8.1



For Motors – Installation on the Motor

RC 3 U, RC 3 R, RC 3 ST

Page 1.8.12



For Motors – Installation in the Cabinet

RC 3 BUR, HRC 3 AS, RC 3 RT

Page 1.8.15



For Valves

Form A, B, BI, C, CI

Page 1.8.17

Suppressors for contactors



Approvals: **CE** **UL** **US**

BC

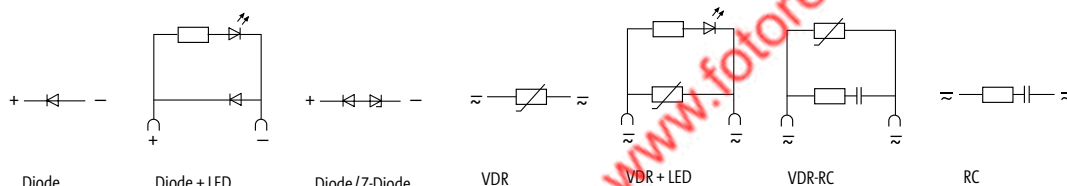


A 16



A 110

Circuit diagram



Appropriate contactors

B 6, BC 6, VB 6, KC 6

A 9...A 16

A 26...A 110

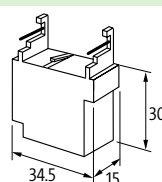
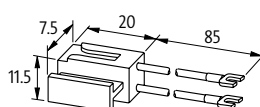
Order Data

Voltage	Suppression	Approval	Art.-No.	Approval	Art.-No.	Approval	Art.-No.
24...240 V DC	Diode				26440		
24 V DC	Diode + LED						
	Diode/Z-Diode						
24 V AC/DC	VDR	CSA	26277				
	VDR + LED						
	RC						
48 V DC	Diode/Z-Diode						
48 V AC/DC	VDR	CSA	26278				
	RC						
110 V AC/DC	VDR						
	VDR + LED						
	VDR-RC						
	RC						
230 V AC/DC	VDR	CSA	26079	CSA	21172	CSA	21173
	VDR + LED						
	VDR-RC						
	VDR-RC + LED						
	RC			CSA	21172	CSA	21173
400 V AC/DC	VDR						
	RC						
415 V AC/DC	RC						

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors for contactors



Approvals:

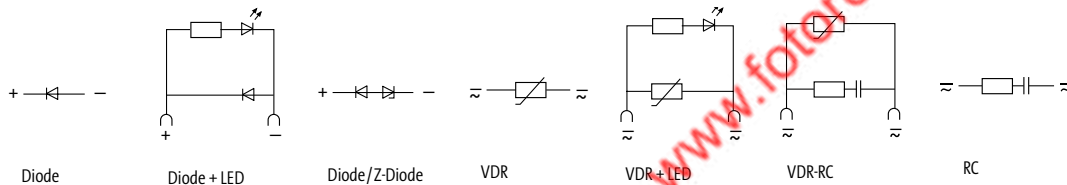
M



CL



Circuit diagram



Appropriate contactors

M

CL00, 01, 02, 25

CL03, 04, 45

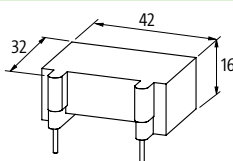
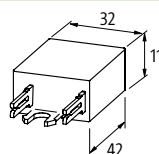
CL05...10

Order Data		Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	Suppression				
24...240 V DC	Diode	2000-68300-1100000	2000-69100-1100000	2000-69200-1100000	
24 V DC	Diode + LED				
	Diode/Z-Diode				
24 V AC/DC	VDR	2000-68300-4400000	2000-69100-4400000	2000-69200-4400000	2000-69100-4400000
	VDR + LED				
	RC	2000-68300-4300000	2000-69100-4300000	2000-69200-4300000	2000-69101-4300000
48 V DC	Diode/Z-Diode				
48 V AC/DC	VDR	2000-68300-4400000	2000-69100-4400000	2000-69200-4400000	2000-69100-4400000
	RC	2000-68300-4300000	2000-69100-4300000	2000-69200-4300000	2000-69101-4300000
110 V AC/DC	VDR		2000-69100-7400000	2000-69200-7400000	2000-69100-7400000
	VDR + LED				
	VDR-RC				
	RC		2000-69100-7300000		
230 V AC/DC	VDR		2000-69100-2420000	2000-69200-2420000	
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC			2000-69200-2320000	2000-69101-2320000
400 V AC/DC	VDR		2000-69100-5420000	2000-69200-5420000	2000-69100-5420000
	RC				
415 V AC/DC	RC				

Technical Data

Damping factor	$\sim 1.5 \times U_n$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

Art.-No. 2000-69200-1100000 – also for CL05...10 DC-coils.

EMC SUPPRESSORS

Suppressors for contactors



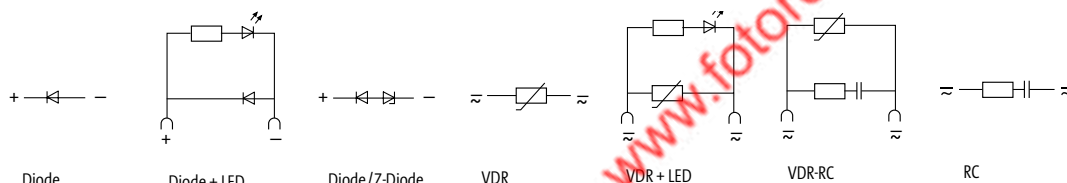
Approvals:



X-Start



Circuit diagram



Appropriate contactors

DIL M7...15
DIL MP20, DIL A

DIL M17...32

DIL M40...95

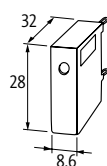
Order Data

		Art.-No.	Art.-No.	Art.-No.
Voltage	Suppression			
	24...240 V DC			
	24 V DC			
24 V AC/DC	Diode + LED			
	Diode/Z-Diode			
	VDR			
	VDR + LED	26013	26015	
48 V DC	RC			
	Diode/Z-Diode			
	VDR + LED	26013	26015	
	RC			
110 V AC/DC	VDR			
	VDR + LED	26014		
	VDR-RC			
	RC	20007	20008	20009
230 V AC/DC	VDR			
	VDR + LED	26014		
	VDR-RC			
	VDR-RC + LED			
	RC	20007	20008	20009
400 V AC/DC	VDR			
	RC			

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

LED indicator for 24 V DC without suppression available on request.

EMC SUPPRESSORS

Suppressors for contactors

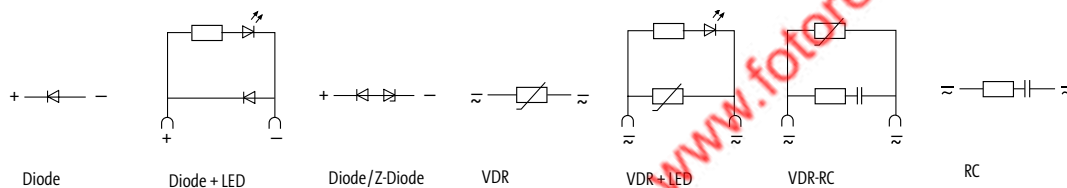


Approvals:

DIL E



Circuit diagram



Appropriate contactors

DIL E...

Order Data

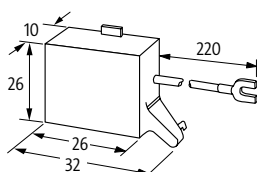
Art.-No.

Voltage	Suppression	
24...240 V DC	Diode	
24 V DC	Diode + LED	
	Diode/Z-Diode	
24 V AC/DC	VDR	
	VDR + LED	
	RC	
48 V DC	Diode/Z-Diode	
48 V AC/DC	VDR	
	RC	
110 V AC/DC	VDR	
	VDR + LED	
	VDR-RC	
	RC	21054
230 V AC/DC	VDR	26086
	VDR + LED	
	VDR-RC	
	VDR-RC + LED	
	RC	21054
400 V AC/DC	VDR	
	RC	

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors for contactors

OMRON

J7KNA



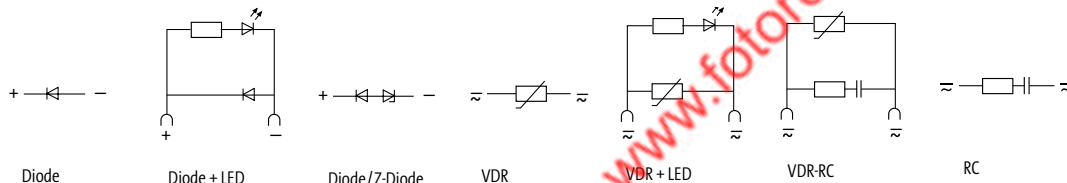
J7KN



J7KN



Circuit diagram



Appropriate contactors

J7KNA

J7KN

J7KN

Order Data

Art.-No.

Art.-No.

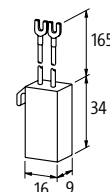
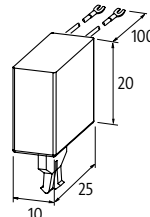
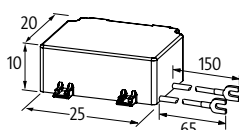
Art.-No.

Voltage	Suppression			Approval	
24...240 V DC	Diode				
24 V DC	Diode + LED				
	Diode/Z-Diode				
24 V AC/DC	VDR			cURus / CSA	26400
	VDR + LED				
	RC	2000-68800-2300000	2000-69000-2300000		
48 V DC	Diode/Z-Diode				
48 V AC	VDR			cURus / CSA	26401
	RC				
110 V AC/DC	VDR				
	VDR + LED				
	VDR-RC				
	RC	2000-68800-7300000			
230 V AC/DC	VDR			cURus / CSA	26403
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC	2000-68800-2320000			
400 V AC/DC	VDR			cURus / CSA	26404
	RC				

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

Further types on request.

EMC SUPPRESSORS

Suppressors for contactors

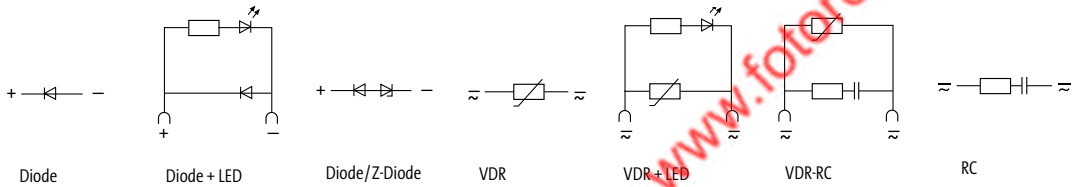


Approvals:

I00-C



Circuit diagram



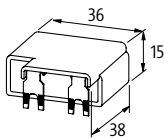
Appropriate contactors

I00-C09...C85

Order Data		Art.-No.
Voltage	Suppression	
24...240 V DC	Diode	2000-68200-1100000
24 V DC	Diode + LED	
24 V AC/DC	Diode /Z-Diode	
	RC	2000-68200-4300000
	VDR	2000-68200-4400000
48 V AC/DC	RC	2000-68200-4300000
	VDR	2000-68200-4400000
110 V AC/DC	VDR	2000-68200-7400000
	VDR + LED	
	VDR-RC	
	RC	2000-68200-1320000
230 V AC/DC	VDR	2000-68200-2420000
	VDR + LED	
	VDR-RC	
	VDR-RC + LED	
400 V AC/DC	RC	2000-68200-1320000
	RC	2000-68200-5320000
	VDR	2000-68200-5420000

Technical Data	
Damping factor	~1.5 × U _N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors for contactors



TeSys



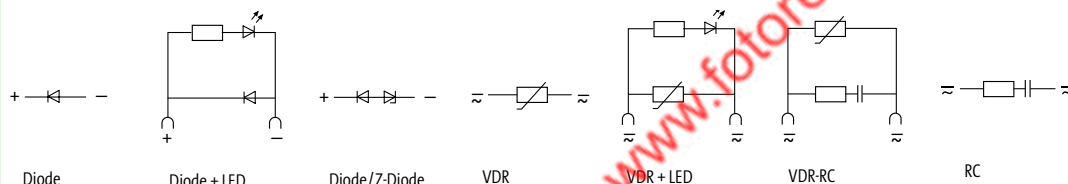
TeSys



TeSys



Circuit diagram



Appropriate contactors

LC 1 D09...D38
LC 1 DT20, DT40, LC 2 D09...D38
AC-coil

LC 1 D09...D38
LC 1 DT20, DT40, LC 2 D09...D38
DC-coil

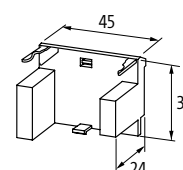
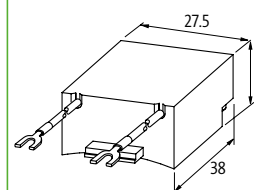
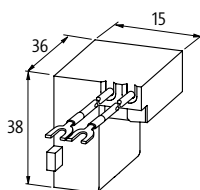
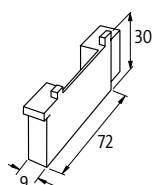
CA 2 DN, CA 3 DN serie „d“
LC 1 DT20, DT40, LC 2 D09...D38

Order Data		Art.-No.	Art.-No.	Art.-No.	Art.-No.
Voltage	Suppression		Approval	Approval	
24...240 V DC	Diode			cURus 2000-69300-1100000	26481
24 V DC	Z-Diode	26476		cURus 2000-69300-5200000	
24 V AC/DC	VDR		cURus 2000-69400-4400000	cURus 2000-69300-4400000	
	RC		cURus 2000-69400-4300000	cURus 2000-69300-4300000	21070
30...250 V DC	Z-Diode				
48 V AC/DC	VDR		cURus 2000-69400-4400000	cURus 2000-69300-4400000	
	VDR + LED				
	RC		cURus 2000-69400-4300000	cURus 2000-69300-4300000	21070
110 V AC/DC	VDR		cURus 2000-69400-7400000	cURus 2000-69300-7400000	
	VDR + LED				
	RC	21063	cURus 2000-69400-7300000	cURus 2000-69300-7300000	21071
230 V AC/DC	VDR		cURus 2000-69400-2420000	cURus 2000-69300-2420000	
	VDR + LED				
	VDR-RC + LED				
	RC	21063	cURus 2000-69400-2320000	cURus 2000-69300-2320000	21060
	RC + LED				
400 V AC/DC	VDR		cURus 2000-69400-5420000		
	RC		cURus 2000-69400-5320000		

Technical Data

Damping factor	~1.5 × U _N			
Temperature range	-20...+70 °C			
Material	plastic, flame retardant (UL 94)			
Connection wires	plug contact	self-securing cable forks	self-securing cable forks	plug contact

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors for contactors

SIEMENS



Approvals:



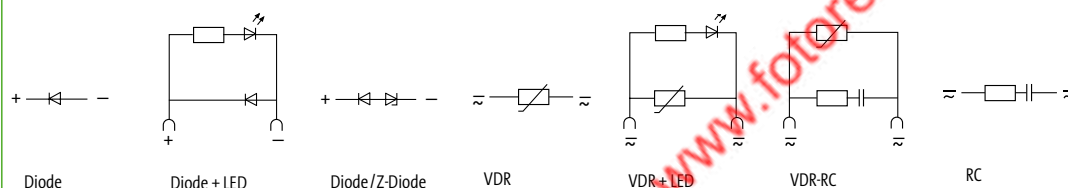
S00



S0



Circuit diagram



Appropriate contactors

3 RT 20.15/16/17/18

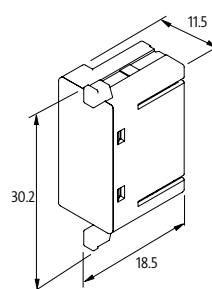
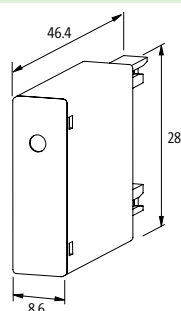
3 RT 20.25/26/27/28

Order Data		Art.-No.	Art.-No.
Voltage	Suppression		
24...240 V DC	Diode	2000-68500-1100000	
24 V DC	Diode + LED		2000-68400-2010000
	Diode/Z-Diode		
24 V AC/DC	VDR	2000-68500-4400000	2000-68400-4400000
	VDR + LED	2000-68500-4410000	2000-68400-4410000
	RC	2000-68500-4300000	2000-68400-4300000
48 V AC/DC	VDR		
	RC	2000-68500-4300000	2000-68400-4300000
110 V AC/DC	VDR	2000-68500-7400000	2000-68400-7400000
	VDR + LED	2000-68500-7410000	2000-68400-7410000
	VDR-RC		
	RC	2000-68500-7300000	2000-68400-7300000
230 V AC/DC	VDR	2000-68500-2420000	2000-68400-2420000
	VDR + LED	2000-68500-2470000	
	RC	2000-68500-2320000	2000-68400-2320000
400 V AC/DC	VDR	2000-68500-5420000	2000-68400-5420000
	RC	2000-68500-5320000	2000-68400-5320000

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

Suppressors for contactors

SIEMENS

S0 4



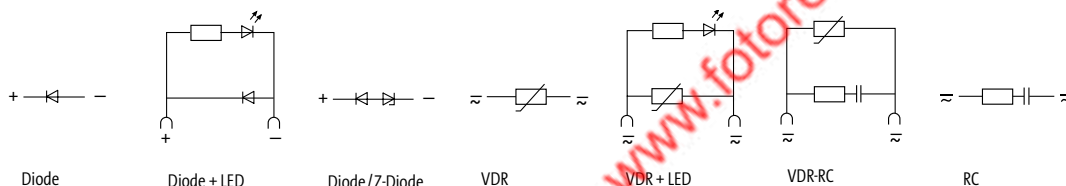
S0 1



3 TF/L-3 TF



Circuit diagram



Appropriate contactors

3 TF 30...35
3 TF 40...45

3 TF 30...45
3 TB 40...3 TB 44

3 TH 2, 3 TF 2
3 TH 20, 3 TF 20

Order Data

Art.-No.

Art.-No.

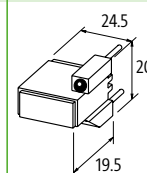
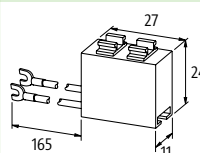
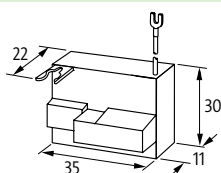
Art.-No.

Voltage	Suppression	Approval	Art.-No.	Approval	Art.-No.	Approval	Art.-No.
24...240 V DC	Diode	CSA	26588	UR / CSA	26283	cURus / CSA	26036
24 V DC	Diode + LED			UR / CSA	26051	cURus / CSA	26530
	Diode/Z-Diode			UR / CSA	26051	cURus / CSA	26034
24 V AC/DC	VDR	CSA	26576				
	VDR + LED			UR / CSA	22050		
	RC						
48 V DC	Diode/Z-Diode						
48 V AC/DC	VDR	CSA	26576			cURus / CSA	26038
	RC			UR / CSA	22051		
110 V AC/DC	VDR						
	VDR + LED						
	VDR-RC						
	RC			UR / CSA	22051		
230 V AC/DC	VDR	CSA	26578	UR / CSA	26317	cURus / CSA	26039
	VDR + LED						
	VDR-RC						
	RC			UR / CSA	22052		
	RC			UR / CSA	22054		
400 V AC/DC	VDR						
	RC			UR / CSA	22054		

Technical Data

Damping factor	$\sim 1.5 \times U_N$
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

EMC SUPPRESSORS

Suppressors

– universal

A0



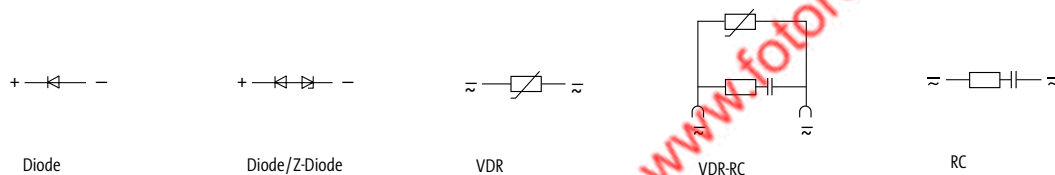
AD



CF



Circuit diagram



Appropriate contactors

universal

universal

universal

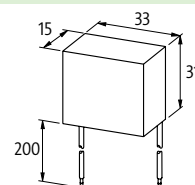
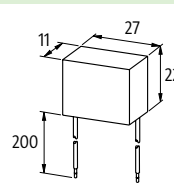
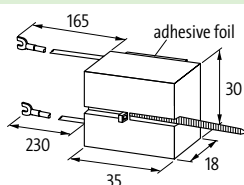
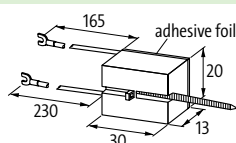
Order Data

Voltage	Suppression	Approval	Art.-No.	Approval	Art.-No.	Approval	Art.-No.	sugg. coil valves
Max. 240 V DC	Diode	CSA	26001					AO
24V DC	Z-Diode	CSA	26120	CSA	26073			AD
24V AC/DC	VDR	cURus / CSA	26180	CSA	26720			CF
	RC					CSA	20680	
48V AC/DC	VDR	cURus / CSA	26181					
	RC	cURus / CSA	20001	cURus / CSA	20013			
110V AC/DC	VDR	cURus / CSA	26182	CSA	26722			
	VDR-RC							
	RC							
230V AC/DC	VDR	cURus / CSA	26183	CSA	26723			
	VDR	cURus / CSA	26184					
	RC			CSA	20014	CSA	20682	
	RC	cURus / CSA	20002	cURus / CSA	20010	CSA	20683	
	RC			cURus / CSA	20011	CSA	²⁾ 20687	
400V AC/DC	VDR			CSA	26724			
	RC	cURus / CSA	20004	cURus / CSA	20012	CSA	20688	
	RC							

Technical Data

Damping factor	approx. 1.5
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Form 1

²⁾ Form 2

Notes

Art.-No. 26184 – up to 300 V AC/DC

Suppressors

– universal

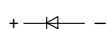
H

RC-BUG 2

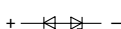
BU + UB



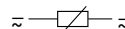
Circuit diagram



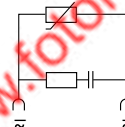
Diode



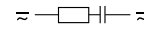
Diode/Z-Diode



VDR



VDR-RC



RC

Appropriate contactors

universal

universal

universal

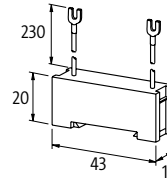
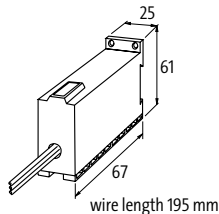
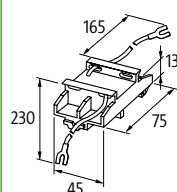
Order Data

		Art.-No.		Art.-No.		Art.-No.		sugg. coil valves		
Voltage	Suppression	Approval		Approval		Approval		H	RC-BUG 2	BU + UB
24...240 V DC	Diode	CSA	26097			CSA	26020	25 W		50 W
24 V DC	Z-Diode	CSA	26095			CSA	26130	25 W		50 W
24 V AC/DC	VDR	cURus / CSA	26090			cURus / CSA	26150	50 VA/W		50 VA/W
	RC									
48 V AC/DC	VDR									
	RC	CSA	20100					15 VA		
110 V AC/DC	VDR									
	VDR-RC									
	RC			CSA	26613				146 VA	
230 V AC/DC	VDR									
	VDR			CSA	26619	cURus / CSA	26155		100 VA/W	200 VA/W
	RC	CSA	20101	CSA	26614	CSA	20031	15 VA	146 VA	25 VA
	RC	CSA	20102			CSA	20033	25 VA		25 VA
	RC	CSA	20103			CSA	20034	75 VA		25 VA
400 V AC/DC	VDR									
	RC			CSA	26615	CSA	20032		146 VA	25 VA
	RC			CSA	26616				146 VA	

Technical Data

Damping factor	approx. 1.5		
Temperature range	-20...+70 °C		
Material	plastic, flame retardant (UL 94)		
Mounting method	DIN-rail mounting (EN 60715)	with adapter ASA Art.-No. 20900 , DIN-rail mounting (EN 60715)	
Connection wires	self-securing cable forks		

Dimension drawing



Notes

Art.-No. 20034 – without adapter, can be directly snapped onto DIN-rail, ASA adapter **Art.-No. 20900** included in delivery.
Art.-No. 26616 – up to 600 V AC/DC

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- on the motor terminal box
- inside the motor terminal box
- inside the distribution box
- on 35 mm DIN-rail acc. to EN 60715

RC 3 U

M16 × 1.5



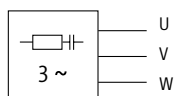
RC 3 BU



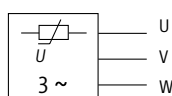
RC 3 BUG



Circuit diagram



RC



VDR



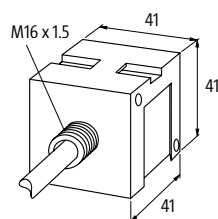
RC-(1) per phase

Order Data		Art.-No.		Art.-No.	
Voltage	Motor rating	Suppression/Approval		Suppression/Approval	
3 × 400 V AC	4 kW	RC	23022	RC / cURus	23050
	4 kW			VDR / cURus	23115
	4 kW			VDR / cURus	23115
	7.5 kW	RC	23011	VDR / cURus	23118
	10 kW	RC-per phase	23043		
	20 kW				
3 × 575 V AC	4 kW			RC / cURus	23050
	7.5 kW	RC / cURus	23035		
	20 kW				
	45 kW				
3 × 690 V AC	4 kW			RC / cURus	23056
	7.5 kW				
	20 kW				

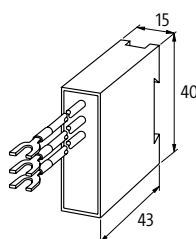
Technical Data

Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz				
Material	plastic, flame retardant (UL 94)				
Potting compound	2-component epoxy				
Temperature range	-20...+60 °C				
Connection method	approx. 500 mm PVC cable 3 × 0.75 mm ² or 7 × 0.75 mm ²	approx. 200 mm single core 0.35 mm ² ; Art.-No. 23056 0.5 mm ² with self-securing M4 cable forks M4	approx. 500 mm single core 1 mm ²		

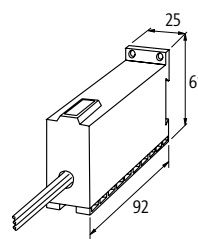
Dimension drawing



For DIN-rail mounting use
2 × **Art.- No. 20900** adapter feet



For DIN-rail mounting use
Art.- No. 20900 adapter feet



For DIN-rail mounting use
2 × **Art.- No. 20900** adapter feet

Notes

Do not use RC motor suppressors on variable frequency drives.
1 × **Art.-No. 23103, 23043** required per phase.

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- with M16 × 1.5 and M20 × 1.5
- on the motor terminal box with plug connectors

RC 3 R

M16 × 1.5 screw



RC 3 R

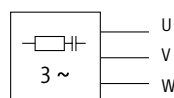
M16 × 1.5 screw

RC 3 RG

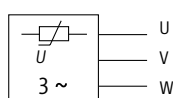
M20 × 1.5 screw



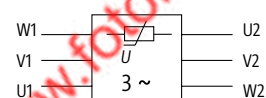
Circuit diagram



RC



VDR



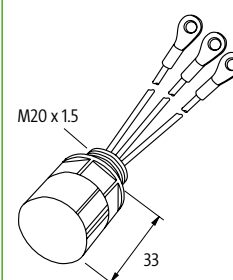
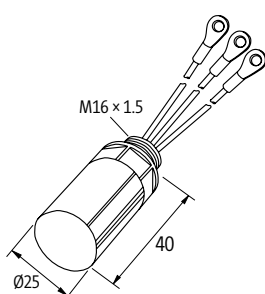
VDR-(1) per phase

Order Data		Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	Suppression/Approval	Suppression/Approval	Suppression/Approval
3 × 400 V AC	4 kW	VDR / cURus	23170	23175
	4 kW			
	4 kW			
	7.5 kW	VDR	23171	
	10 kW			VDR
	20 kW			VDR
3 × 575 V AC	4 kW	VDR / cURus	23172	RC / cURus
	7.5 kW	VDR / cURus	23173	
	10 kW			VDR / cURus
	20 kW			VDR / cURus
	20 kW			VDR-Einzel
	20 kW			
3 × 690 V AC	7.5 kW	VDR	23174	
	20 kW			VDR

Technical Data

Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz			
Material	plastic, flame retardant (UL 94)			
Potting compound	2-component epoxy			
Temperature range	-20...+60 °C			
Connection method	approx. 100 mm single core 0.5 mm²		approx. 150 mm single core 1 mm²	
Ring terminals	isolated M6	isolated M4	isolated M6	

Dimension drawing



Notes

Do not use RC motor suppressors on variable frequency drives.

Art.-No. 23174 – wire diameter 1.5 mm².

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- on the motor terminal box with plug connectors

RC 3 ST

Connector with cable and integrated motor suppression
Cable outlet in the back

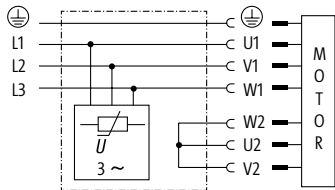


RC 3 ST

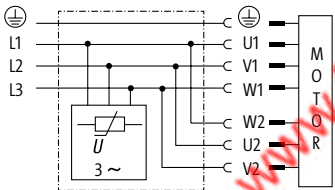
Connector with cable and integrated motor suppression
Cable outlet (right angle)



Circuit diagram



Varistor-suppression (star)

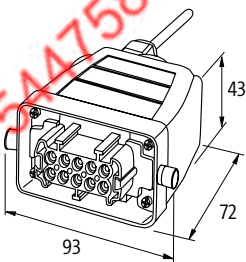


Varistor-suppression (delta)

Order Data				Art.-No.	Art.-No.
Voltage	Motor rating	Cable length	Suppression		
max.	5.5 kW	5 m	VDR/star	236139	236148
3 × 575 V AC	5.5 kW	8 m	VDR/star	236141	
	5.5 kW	10 m	VDR/star	236142	236149

Technical Data	
Frequency	10...400 Hz
Plug connector	females, 10-pol. + PE
Housing	aluminium pressure diecasting
Temperature range	-20...+60 °C
Connection method	PUR cable black, 4 × 1.5 mm ² ; numbered wires, halogen free
	PUR cable black, 4 × 1.5 mm ² ; numbered wires, DESINA® compliant

Dimension drawing



(without compression gland)

Notes

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- on 35 mm DIN-rail acc. to EN 60715
- bolted together, stacked
- DIN-rail mounting under the control gear

HRC 3



HRC 3 K



RC 3 BUR

Connects onto
Siemens SIRIUS 3 RT 20 contactors,
with screw terminal

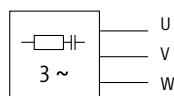


RC 3 BUC

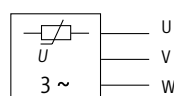
Connects onto
Siemens SIRIUS 3 RT 20 contactors,
with spring clamp terminal



Circuit diagram



RC



VDR



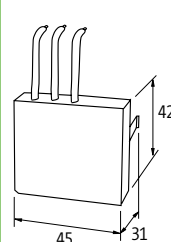
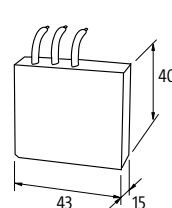
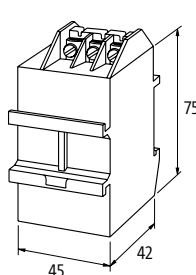
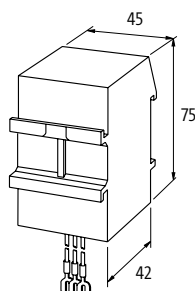
RC(1) per phase

Order Data		Art.-No.		Art.-No.		Art.-No.	
Voltage	Motor rating	Suppression/Approval		Suppression	Suppression/Approval		Suppression/Approval
3 × 400 V AC	4 kW	RC / cURus	23004	RC	23005		
	4 kW	RC / cURus	233463				
	5.5 kW				RC / cURus	236082	
	7.5 kW						RC / cURus 23220
	10 kW	RC / cURus	23002	RC	23003		
	20 kW	RC-per phase / cURus	23009				
	20 kW	VDR / cURus	23015				
3 × 500 V AC +10 %	4 kW	RC / cURus	23000	RC	23001		
3 × 575 V AC	5.5 kW				RC / cURus	236082	
	7.5 kW	RC / cURus	23006	RC	23007		
	7.5 kW	RC / cURus	230563				RC / cURus 23220
	10 kW	VDR / cURus	23016				
	20 kW			RC	23018		
3 × 690 V AC	10 kW	RC	23017				

Technical Data

Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz				
Material	plastic, flame retardant (UL 94)				
Potting compound	2-component epoxy				
Temperature range	-20...+60 °C				
Connection method	approx. 250 mm s. core (Art.-No. 23000: 300 mm) 0.5 mm ² (Art.-No. 23000: 1.5 mm ²) with self-securing M4 cable forks	3-pole terminal 2 × (0.75...2.5 mm ²) M4	wire (solid core) 1.5 mm ²	wire with ferrule ends 2.0 mm ²	

Dimension drawing



Notes

Do not use RC motor suppressors on variable frequency drives.
Art.-No. 233463 and 230563 – with ferrule ends.

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- DIN-rail mounting under the control gear
- fixes onto contactors
- available with integrated coil suppression

HRC 3 AS

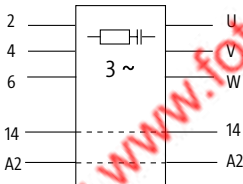
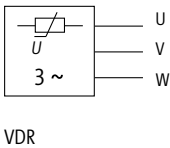
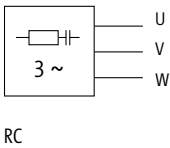


RC 3 RT

Connects onto Siemens SIRIUS 3 RT 10 contactors with screw terminal



Circuit diagram



Appropriate contactors

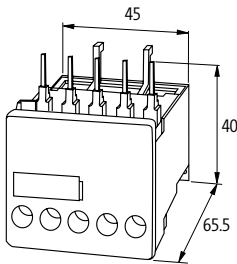
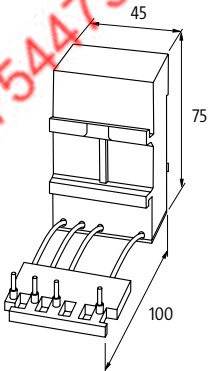
Motor contactors up to 5.5 kW from Siemens, Moeller, Sprecher + Schuh etc.

Siemens 3 RT 10

Order Data		Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	Suppression motor + coil	Suppression motor + coil	Suppression/Approval
3 × 400 V AC	5.5 kW	RC 23160	VDR 23163	RC / cURus / CSA 23180
	5.5 kW	RC + Diode 23151		
3 × 575 V AC	5.5 kW	RC 23161	VDR 23164	RC / cURus / CSA 23181
	5.5 kW		VDR + Diode 23157	

Technical Data

Suppression Spule	for RC: 230 V AC/20 VA; for RC + Diode: 24...230 V DC/36 W
Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz
Material	plastic, flame retardant (UL 94)
Temperature range	-20...+60 °C
Connection method	ferrules, load side securely fixed
Dimension drawing	fits directly into SIRIUS contactors, size 00



Notes

Do not use RC motor suppressors on variable frequency drives.

Suppressors for valves

- with LED
- with suppression

VBS

Form A
Pin spacing 18 mm
EN 175301-803 (ISO 4400)

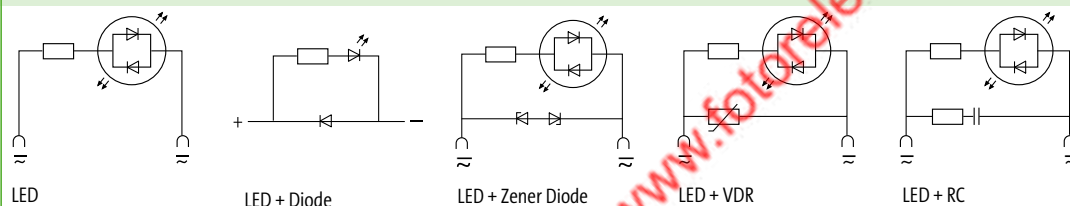


LBS

Form BI Industrial Standard
Pin spacing 11 mm



Circuit diagram

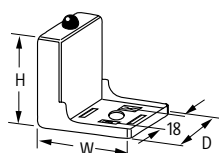


Order Data		Art.-No.	Art.-No.	Switch off delay time [ms]	Switch off voltage peak [V]	Valve hold-on rating [W/VA]
Voltage	Suppression					
24 V DC	LED + Diode	¹⁾ 3124021	3124221	200	1	50
	LED	¹⁾ 3124015	3124215	–	–	50
	LED + Z-Diode	¹⁾ 3124033	3124233	20	55	100
	LED + VDR	¹⁾ 3124048	3124248	15	45	50
	LED + RC	3124068		20	105	10
	LED + RC		3124269	20	70	20
48 V AC/DC	LED	¹⁾ 3124017		–	–	50
	LED + VDR	¹⁾ 3124052		10	75	100
	LED + RC	²⁾ 3124071		20	90	30
110 V AC/DC	LED	3124018		–	–	50
	LED + VDR	3124046		10	235	100
	LED + RC	3124070		20	250	10
	LED + RC	²⁾ 3124072		20	250	25
230 V AC/DC	LED	3124016	3124216	–	–	50
	LED + VDR	3124049	3124249	15	360	100
	LED + RC	3124063	3124263	20	300	10
	LED + RC	²⁾ 3124064		20	300	25

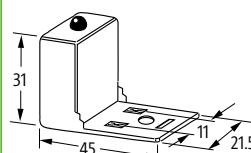
Technical Data

Supply indicator	LED yellow
Contact material	silvered bronze
Protection	IP65 when fully mounted
Material	polyamide black, flame retardant, temperature resistant up to 130 °C
Temperature range	-20...+60 °C

Dimension drawing



Housing H × W × D: 37 × 45 × 30 mm
¹⁾ Housing H × W × D: 37 × 39 × 30 mm
²⁾ Housing H × W × D: 37 × 53 × 33 mm
 0° and 180° version on request



Note PIN arrangement (PE at cable outlet of connector)
 180° version on request

Notes

Do not use plug gasket when fitting adapter. Other LED colors on request.
 For double valves the VA 2 series is suitable (please inquire). At Art.-No. 3124021 and 3124221 polarity dependent

EMC SUPPRESSORS

Suppressors for valves

- with LED
- with suppression

DAB/PBS

Form B/BI
Pin spacing 10/11 mm
EN 175301-803 (ISO 6952)

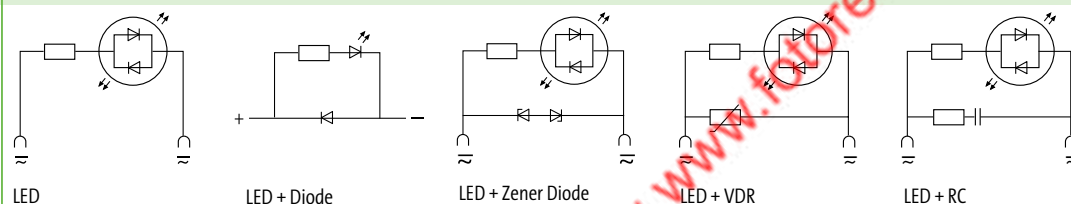


MVK/MVT

Form C/CI
Pin spacing 8/9.4 mm
EN 175301-803 (ISO 6952)



Circuit diagram

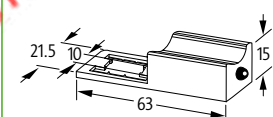


Order Data		Art.-No.	Art.-No.	Art.-No.	Art.-No.			
Voltage	Suppression	EN 175301-803 (ISO 6952)		EN 175301-803 (ISO 6952)		Switch off delay time	Switch off voltage peak	Valve- hold-on rating
		Form B	Form BI	Form C	Form CI	[ms]	[V]	[W/VA]
24 V DC	LED + Diode	3124871	3124121			200	1	50
24 V AC/DC	LED	3124875	3124115	3124811	3124815	–	–	50
	LED + Z-Diode	3124873	3124133	3124833	3124832	20	55	100
	LED + VDR		3124148			15	45	50
	LED + RC		3124165			20	70	20
110 V AC/DC	LED + RC		3124170			20	250	10
230 V AC/DC	LED		3124116			–	–	50
	LED + VDR					15	360	100
	LED + RC		3124163			20	300	10

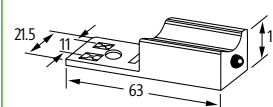
Technical Data

Supply indicator	LED yellow
Contact material	silvered bronze
Protection	IP65 when fully mounted
Material	polyamide black, flame retardant, temperature resistant up to 130 °C
Temperature range	-20...+60 °C

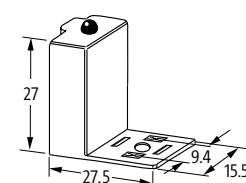
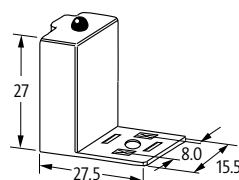
Dimension drawing



Suitable for 0° and 180° installation



Note PIN arrangement
(PE at cable outlet of connector)
180° version on request



0° and 180° version on request

Notes

Do not use plug gasket when fitting adapter. Other LED colors on request. Right-angle housing version with 10 mm pin spacing (DAR/DARU), on request. At Art.-No. 3124871 and 3124121 polarity dependent.

RELAYS / SAFETY RELAYS INCREDIBLY VERSATILE

- Over 600 different modules ready for all applications
- Push-In technology, spring clamps or screw terminals available
- Worldwide approvals

TWICE AS SMALL, TWICE AS FAST!

Each system includes different kinds of active interface modules. Relay modules are used to separate two different potential levels. The control side is galvanically isolated from the load/contact side and should be protected from the wrong voltage. These interfaces adjust the different signal levels to work with the existing system.

With MIRO SAFE+, Murrelektronik offers safe switching devices for a wide range of safe industrial applications. They are the perfect solution to reach high safety standards – up to performance level e (PLe) according to EN 13849-1. **With MIRO SAFE+ you can design many different safety applications like: emergency stops, guard doors, two hand monitoring, light curtains, and safety magnet switch monitoring.**

Relays



Relay 6.2 mm pluggable

- Output relay
- Input relay

Page 1.9.1



Relay 6.2 mm

- Output relay
- Input relay

Page 1.9.4



Relay 12.4 mm

- Output relay
- Input relay

Page 1.9.9



Relay 22.5 mm

- Output relay
- Input relay

Page 1.9.17

Safety Relays



Safety Relay 22.5/45 mm

- MIRO SAFE+

Page 1.9.20

RELAYS / SAFETY RELAYS

Terminal relay

- pluggable
- with bridge system

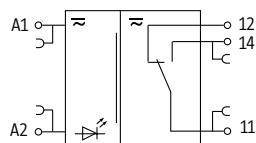
Approvals:  

MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data

	Art-No.
6 V AC/DC (5...7.2 V AC/DC) - 25 mA	3000-16023-3100022
12 V AC/DC (9.8...14 V AC/DC) - 14.2 mA	3000-16023-3100005
24 V AC/DC (19.2...28.8 V AC/DC) - 12 mA	3000-16013-3100020

Accessories

	Art-No.
Removable plug-in relay 6 V AC/DC	3000-16023-2100000
Removable plug-in relay 12 V AC/DC	3000-16023-2100005
Removable plug-in relay 24 V AC/DC	3000-16023-2100010

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110 V AC); 1.5 A (230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (green)
-------------	-------------

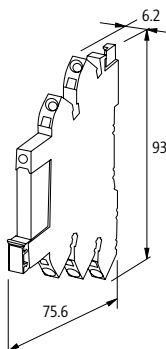
Output

Switching voltage	max. 250 V AC/30 V DC
Switching current per output	max. 6 A
Min. load current	100 mA
Power rating (voltage dependent)	max. 1 500 VA/180 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O ₂
Energize/release/contact bounce time	8/4/- ms

General data

Test isolation voltage	250 V
Mech./ elect. life	10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

– pluggable

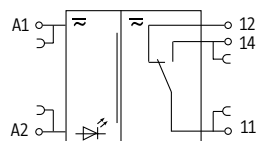
– with bridge system

MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data

60 V AC/DC (43.5...72 V AC/DC) - 7 mA	cURus, cCSAus	Art-No.
115...125 V AC/DC (88...138 V AC/DC) - 8 mA		3000-16513-3100022
230 V AC/DC (184...264 V AC/DC) - 4 mA		3000-16013-3100025
		3000-16013-3100030

Accessories

Relay 60/125/230 V AC/DC	Art-No.
	3000-16023-2100020

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110 V AC); 1.5 A (230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (green)
-------------	-------------

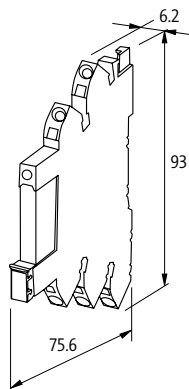
Output

Switching voltage	max. 250 V AC/30 V DC
Switching current per output	max. 6 A
Min. load current	100 mA
Power rating (voltage dependent)	max. 1 500 VA/180 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O ₂
Energize/release/contact bounce time	8/4/- ms

General data

Test isolation voltage	250 V
Mech./ elect. life	10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

- pluggable
- with bridge system

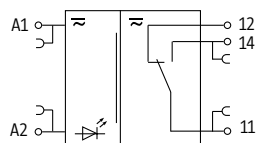
Approvals:  

MIRO 6.2

Input relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data

24 V AC/DC (19.2...26.8 V AC/DC) - 14 mA

Art-No.

3000-16013-3100040

Accessories

Removable plug-in relay 24 V AC/DC

Art-No.

3000-16023-2100030

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110 V AC); 1.5 A (230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

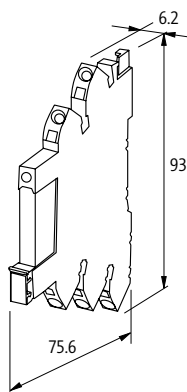
Output

Switching voltage	max. 250 V AC/30 V DC
Switching current per output	max. 6 A
Min. load current	10 mA
Power rating (voltage dependent)	max. 1 500 VA/180 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O ₂ , gold plated
Energize/release/contact bounce time	8/4/- ms

General data

Test isolation voltage	250 V
Mech./ elect. life	10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals:  

MIRO 6.2

Output relay
1 NO/NC contact
Screw terminals



MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals



MIRO 6.2

Output relay
1 NO contact
Screw terminals

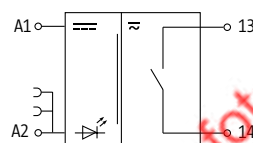
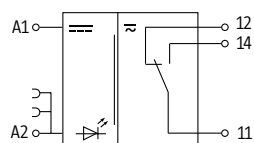


MIRO 6.2

Output relay
1 NO contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
12 V DC (10...15 V DC) - 20 mA	52050	6652050		
24 V DC (19.2...30 V DC) - 14 mA	52000	6652000	52002	6652002
24 V DC (19.2...30 V DC) - 17 mA	52001	6652001	52015	6652015

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

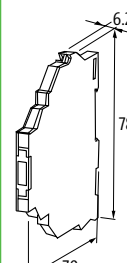
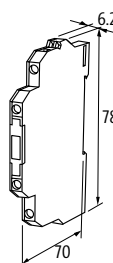
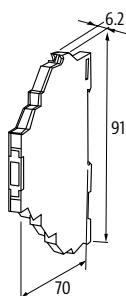
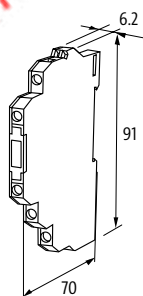
Output

Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Min. load current	10 mA (12 V DC) 100 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

Terminal relay

– with bridge system

Approvals:  

MIRO 6.2

Output relay
1 NO/NC contact
Screw terminals

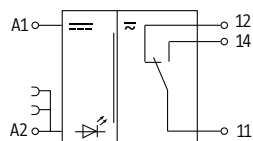


MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data

110 V AC/DC (95...121 V AC/DC) - 4 mA
230 V AC/DC (195...253 V AC/DC) - 3 mA

Art-No.

52030
52040

Art-No.

6652030
6652040

Utilization category

AC-12 6 A (24/110/230 V AC)
AC-15 3 A (24/110/230 V AC)
DC-13 1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

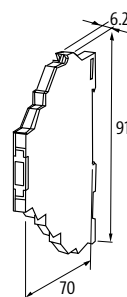
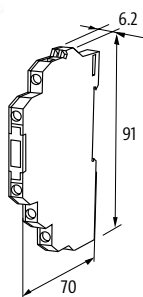
Output

Switching voltage max. 250 V AC/DC
Switching current per output max. 6 A
Min. load current 10 mA (12 V DC)
Power rating (voltage dependent) max. 1 500 VA/120 W
Switching frequency max. 10 Hz
Contact material Ag Sn O2
Energize/release/contact bounce time 10/15/1.5 ms

General data

Mech./ elect. life 20 000 000 switching cycles/load dependent
Test isolation voltage 4 kV; safe separation (EN 60947-1)
Mounting method DIN-rail mountable (EN 60715)
Temperature range -20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals:   

MIRO 6.2

Input relay
1 NO/NC contact
Screw terminals

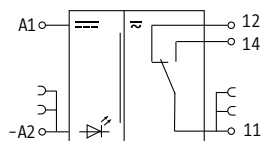


MIRO 6.2

Input relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC (19.2...30 V DC) - 14 mA	52005	6652005
24 V AC/DC (19.2...30 V AC/DC) - 16 mA	52003	6652003

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (yellow)
-------------	--------------

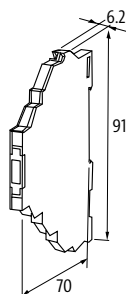
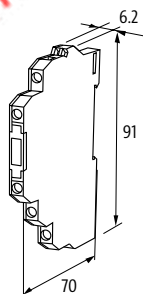
Output

Switching voltage	max. 30 V AC/36 V DC
Switching current per output	max. 6 A
Switching current per output (Signal)	max. 20 mA
Min. load current	1 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2 hv
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

Terminal relay

– with bridge system

Approvals:   

MIRO 6.2

Input relay
1 NO contact
Screw terminals

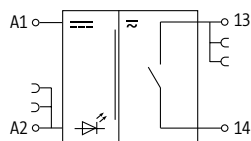


MIRO 6.2

Input relay
1 NO contact
Spring clamp terminals



Circuit diagram



Order Data

24 V DC (19.2...30 V DC) - 14 mA

Art-No.

52004

Art-No.

6652004

Utilization category

AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	3 A (24/110/230 V AC)

Input

LED display LED (yellow)

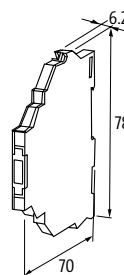
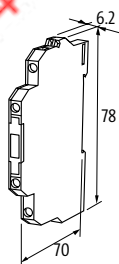
Output

Switching voltage	max. 30 V AC/36 V DC
Switching current per output	max. 50 mA
Min. load current	1 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2 hv
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

Approvals:  

MIRO 6.2

Input relay
1 NO/NC contact
Screw terminals

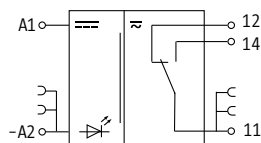


MIRO 6.2

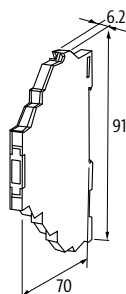
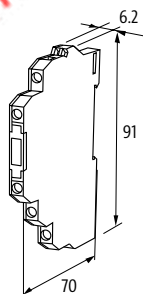
Input relay
1 NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.
110 V AC/DC (95...121 V AC/DC) - 4 mA	52031	6652031
230 V AC/DC (195...253 V AC/DC) - 3 mA	52041	6652041
CCC	CCC	CCC
Utilization category		
AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (yellow)	
Output		
Switching voltage	max. 30 V AC/36 V DC	
Switching current per output	max. 6 A	
Switching current per output (Signal)	max. 20 mA	
Min. load current	1 mA (12 V DC)	
Power rating (voltage dependent)	max. 1 500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20 000 000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-20...+55 °C	
Dimension drawing		



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

Terminal relay

– with bridge system

MIRO 12.4

Output relay
2 NO/NC contacts
Screw terminals



MIRO 12.4

Output relay
2 NO/NC contacts
Spring clamp terminals



MIRO 12.4

Input relay
2 NO/NC contacts
Screw terminals



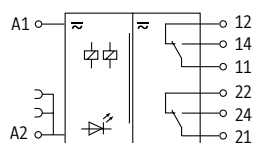
MIRO 12.4

Input relay
2 NO/NC contacts
Spring clamp terminals



Approvals: **ULus**

Circuit diagram



Order Data

		Art-No.		Art-No.		Art-No.	Art-No.
24 V DC (19.2...30 V DC) - 18 mA	cCSAus, CCC	52102	cCSAus, CCC	6652102	CCC	52110	6652110
24 V AC/DC (19.2...30 V AC/DC) - 20 mA	CCC	52103	CCC	6652103	CCC	52111	6652111
110 V AC/DC (95...121 V AC/DC) - 7 mA		52130		6652130		52136	6652136
230 V AC/DC (195...253 V AC/DC) - 5 mA	CCC	52140	CCC	6652140	CCC	52146	6652146

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

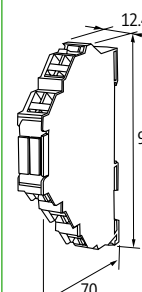
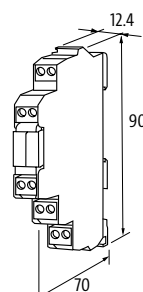
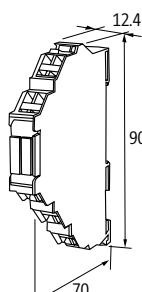
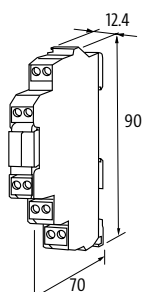
Output

Switching voltage	max. 250 V AC/DC	max. 30 V AC/36 V DC
Switching current per output	max. 6 A	
Switching current per output (Signal)	–	max. 20 mA
Min. load current	100 mA (12 V DC)	1 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	Ag Sn O2 hv
Energize/release/contact bounce time	10/15/1.5 ms	

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Terminal relay

– with bridge system

MIRO 12.4

Output relay
2 NO contact
Screw terminals



MIRO 12.4

Output relay
2 NO contact
Spring clamp terminals



MIRO 12.4

Output relay
2 NO contact
Screw terminals



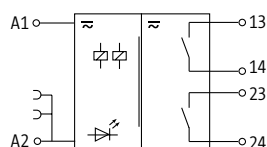
MIRO 12.4

Output relay
2 NO contact
Spring clamp terminals



Approvals:

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V AC/DC (19.2...30 V AC/DC) - 20 mA	52104	6652104		
24 V AC/DC (19.2...30 V AC/DC) - 16 mA			52106	6652106

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

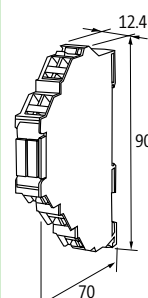
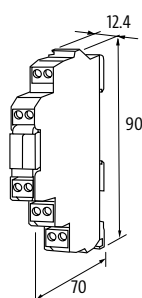
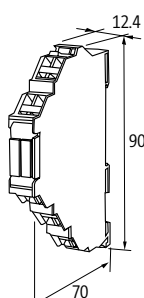
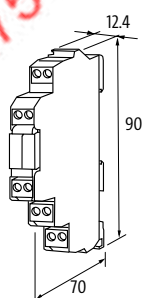
Output

Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Min. load current	100 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

Terminal relay

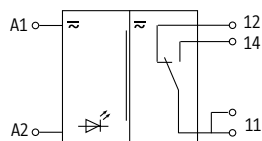
MIRO 12.4 Multi voltage

Output relay
1 NO/NC contact
Screw terminals



Approvals:

Circuit diagram



Order Data

	Art-No.
24 V AC/DC - 6...27 mA	52160
48 V DC - 6...27 mA	52160
110 V AC/DC - 6...27 mA	52160
230 V AC/DC - 6...27 mA	52160

Utilization category

AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)

Input

LED display LED (green)

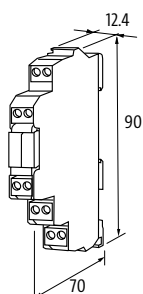
Output

Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Min. load current	10 mA (12 V DC)
Power rating (voltage dependent)	max. 1 500 VA/120 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV; safe separation (EN 60947-1)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-20...+55 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

RELAYS / SAFETY RELAYS

Relays

- Screw terminals
- with minus plug link

RMM

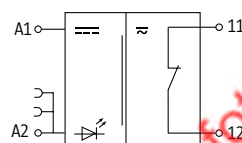
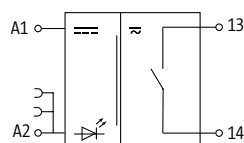
Output relay
1 relay; 1 NO contact



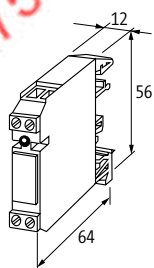
RMM

Output relay
1 relay; 1 NC contact

Circuit diagram



Order Data	Art-No.	Art-No.
24 V AC/DC (19.2...30 V AC/DC) - 15 mA	51851	51808
Utilization category		
AC-1	5 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	1.3 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
Input		
Plug link (supplied)	Art.-No. 90960	
LED display	LED (red)	
Output		
Switching voltage	max. 250 V AC/300 V DC	
Switching current per output	max. 5 A	
Min. load current	100 mA	
Power rating (voltage dependent)	max. 1 250 VA/240 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Ni 0.15 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	10 000 000 switching cycles/load dependent	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Temperature range	-20...+60 °C	
Dimension drawing		



Notes

Relays

– Screw terminals

RMM

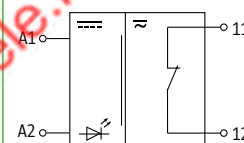
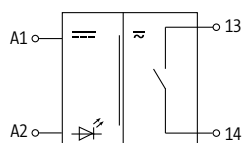
Output relay
1 relay; 1 NO contact



RMM

Output relay
1 relay; 1 NC contact

Circuit diagram



Order Data

	Art-No.	Art-No.	Art-No.	Art-No.
24 V AC/DC (19.2...30 V AC/DC) - 15 mA	51551	512764		51508
110 V AC/DC (95...121 V AC/DC) - 3.5 mA			51552	
230 V AC/DC (195...250 V AC/DC) - 3.5 mA			51515	
230 V AC/DC (195...250 V AC/DC) - 4 mA				51562

Utilization category

AC-12	–	6 A (24/110/230 V AC)	5 A (24/110/230 V AC)
AC-1	5 A (24/110/230 V AC)	–	
AC-15	3 A (24/110/230 V AC)	4 A (24/110/230 V AC)	3 A (24/110/230 V AC)
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)

Input

LED display	LED (red)	LED (green)	LED (red)
-------------	-----------	-------------	-----------

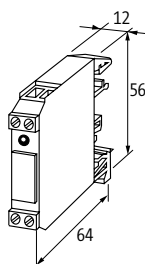
Output

Switching voltage	max. 250 V AC/300 V DC
Switching current per output	max. 5 A
Min. load current	100 mA
Power rating (voltage dependent)	max. 1 250 VA/240 W
Switching frequency	max. 10 Hz
Contact material	Ag Ni 0.15 hv; Ag hv
Energize/release/contact bounce time	10/15/1.5 ms

General data

Mech./ elect. life	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)
Temperature range	-20...+50 °C

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Relays

– Screw terminals

RMME

Input relay
1 relay; 1 NO contact
with minus plug link



RMME

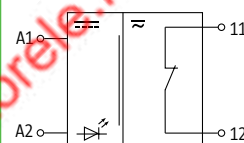
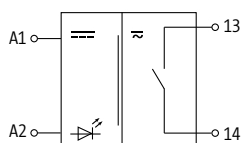
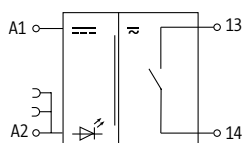
Input relay
1 relay; 1 NO contact



RMME

Input relay
1 relay; 1 NC contact

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V AC/DC (21.6...26.4 V AC/DC) - 6 mA	51860			
24 V AC/DC (19.2...30 V AC/DC) - 6 mA		51560		
110 V AC/DC (95...121 V AC/DC) - 3.5 mA		51526		
230 V AC (195...253 V AC) - 6 mA			51517	
24 V AC/DC (19.2...30 V AC/DC) - 15 mA				51571

Utilization category

AC-15	1 A (24 V AC); 0.5 A (125 V AC)	0.25 A (50 V AC)	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.5 A (125 V DC)	–	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
AC-1	–		5 A (24/110/230 V AC)
AC-12	–	0.5 A (50 V AC)	–

Input

Plug link (supplied)	Art.-No. 90960
LED display	LED (yellow)

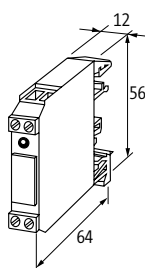
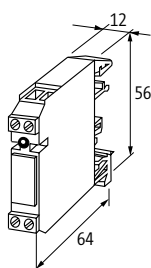
Output

Switching voltage	max. 125 V AC/DC
Switching current per output	max. 1 A
Min. load current	1 mA
Power rating (voltage dependent)	max. 60 VA/30 W
Switching frequency	max. 15 Hz
Contact material	Pd Ni-Au 8h
Energize/release/contact bounce time	10/10/1 ms

General data

Mech./ elect. life	100 000 000 switching cycles/load dependent
Test isolation voltage	1.5 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)
Temperature range	-20...+60 °C

Dimension drawing



Notes

Relays

– with minus plug link

– Screw terminals

RMMD

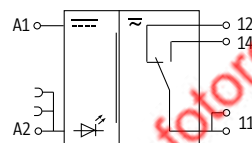
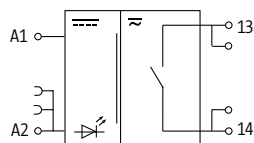
Output relay
1 relay; 1 NO contact



RMMD

Output relay
1 relay; 1 NO/NC contact

Circuit diagram



Order Data

24 V DC (21.6...26.4 V DC) - 13.5 mA
230 V AC/DC (195...253 V AC/DC) - 4.5 mA
24 V DC (21.6...26.4 V DC) - 15 mA
24 V AC/DC (19.2...30 V AC/DC) - 10 mA

Art-No.

51100

Art-No.

51108

Art-No.

51120

Art-No.

51125

Utilization category

Utilization category	8 A (24/110/230 V AC)	6 A (24/110/230 V AC)	8 A (24/110/230 V AC)
AC-1	8 A (24/110/230 V AC)	6 A (24/110/230 V AC)	8 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)	4 A (24/110/230 V AC)	3 A (24/110/230 V AC)
DC-13	2.5 A (24 V DC); 0.4 A (110 V DC); 0.3 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	2.5 A (24 V DC); 0.4 A (110 V DC); 0.3 A (230 V DC)

Input

Input	Art-No. 90960	Art-No. 90960
Plug link (supplied)	Art-No. 90960	Art-No. 90960
LED display	LED (red)	

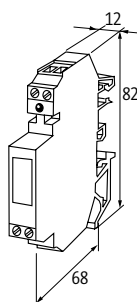
Output

Output	max. 250 V AC/DC	max. 8 A	max. 6 A	max. 8 A
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 8 A	max. 6 A		max. 8 A
Min. load current	100 mA			
Power rating (voltage dependent)	max. 2 000 VA/240 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Ni			
Energize/release/contact bounce time	10/15/2 ms			

General data

General data	20 000 000 switching cycles/load dependent	5 kV; safe separation (IEC 61140/EN 61140)	4 kV	5 kV; safe separation (IEC 61140/EN 61140)
Mech./ elect. life	20 000 000 switching cycles/load dependent			
Test isolation voltage	5 kV; safe separation (IEC 61140/EN 61140)	4 kV		5 kV; safe separation (IEC 61140/EN 61140)
Temperature range	-20...+50 °C			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			

Dimension drawing



Notes

Art-No. 51125 with low connection current.

RELAYS / SAFETY RELAYS

Relays

- with minus plug link
- with bridge system
- Screw terminals

RMMDE

Input relay
1 relay; 1 NO contact/1 NC contact



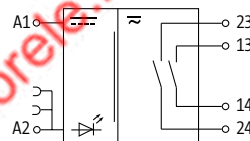
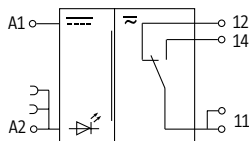
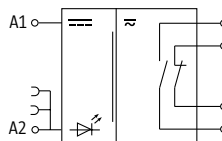
RMMDE

Input relay
1 relay; 1 NO/NC contact

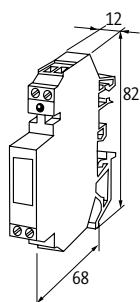
RMMDE

Input relay
1 relay; 2 NO contacts

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC (17.5...30 V DC) - 14 mA	516014			
24 V DC (19.2...30 V DC) - 17 mA		51130		
230 V AC/DC (195...253 V AC/DC) - 4.5 mA			51138	
24 V DC (19.2...30 V DC) - 15 mA				51140
Utilization category				
AC-1	3 A (24 V AC); 2 A (230 V AC)	5 A (24/110/230 V AC)		2 A (24 V AC; 110 V AC; 230 V AC)
AC-15	1 A (24 V AC); 0.1 A (230 V AC)	3 A (24/110/230 V AC)	4 A (24/110/230 V AC)	1 A (24 V AC); 0.1 A (230 V AC)
DC-13	0.8 A (24 V DC); 0.01 A (230 V DC)	1.3 A (24 V DC); 0.25 A (110 V DC); 0.10 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	0.8 A (24 V DC); 0.1 A (110 V DC); 0.01 A (230 V DC)
Input				
Plug link (supplied)	Art-No. 90960		–	Art-No. 90960
LED display	LED (red)	LED (yellow)		
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 3 A	max. 20 mA	max. 5 A	max. 2 A
Min. load current	1 mA			5 mA
Power rating (voltage dependent)	max. 500 VA/180 W	max. 1 500 VA/180 W		max. 250 VA/150 W
Switching frequency	max. 10 Hz	max. 15 Hz		
Contact material	Ag Ni 0.15 hv	Ag Ni 0.15 hv; Ag hv		Ag Au
Energize/release/contact bounce time	6/3/2 ms	10/10/1 ms		
General data				
Mech./ elect. life	20 000 000 switching cycles/load dependent	100 000 000 switching cycles/load dependent		20 000 000 switching cycles/load dependent
Test isolation voltage	2.5 kV	4 kV		1.5 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Temperature range	-20...+60 °C			-20...+50 °C
Dimension drawing				



Notes

Relays

– Screw terminals

RM

Output relay
1 relay; 2 NO/NC contacts



RM

Output relay
1 relay; 4 NO/NC contacts

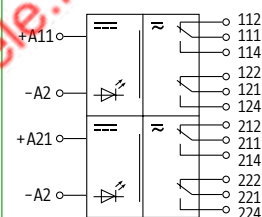
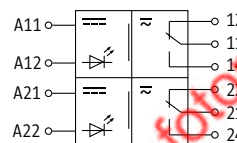
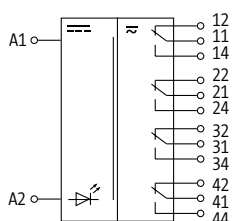
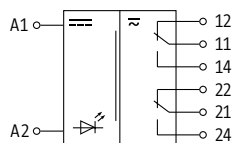
RM

Output relay
2 relays; each 1 NO/NC contact

RM

Output relay
2 relays; each 2 NO/NC contacts

Circuit diagram



Order Data

24 V AC/DC (20.4...26.4 V AC/DC) - 20 mA

Art-No.

51540

230 VAC (195...250 VAC) - 10 mA

Art-No.

51410

24 V AC/DC (19.2...30 V AC/DC) - 10 mA

51413

Art-No.

51412

24 V AC/DC (19.2...30 V AC/DC) - 14 mA

51485

Art-No.

51465

Utilization category

AC-1

8 A (24/110/230 V AC)

–

8 A (24/110/230 V AC)

AC-12

–

2 A (24 V AC); 0.5 A (230 V AC)

–

AC-15

3 A (24/110/230 V AC)

1 A (24 V AC); 0.1 A (230 V AC)

3 A (24/110/230 V AC)

DC-13

2 A (24 V DC); 0.3 A (110 V DC);
0.2 A (230 V DC)

0.8 A (24 V DC); 0.01 A (230 V DC)

1.5 A (24 V DC); 0.3 A (110 V DC);
0.15 A (230 V DC)

2 A (24 V DC); 0.3 A (110 V DC);
0.2 A (230 V DC)

Input

LED display

LED (red)

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 8 A

max. 2 A

max. 8 A

Min. load current

100 mA

0.1 mA

100 mA

Power rating (voltage dependent)

max. 1 250 VA/240 W

max. 125 VA/60 W

max. 1 250 VA/240 W

Switching frequency

max. 0.1 Hz (with load)

Contact material

Ag Ni 0.15 hv

Ag Au

Ag Sn O2

Ag Ni 0.15 hv

Energize/release/contact bounce time

10/10/2 ms

10/20/2 ms

10/10/2 ms

General data

Mech./ elect. life

50 000 000 switching cycles/load dependent

20 000 000 switching cycles/load dependent

Test isolation voltage

4 kV

1.5 kV

4 kV

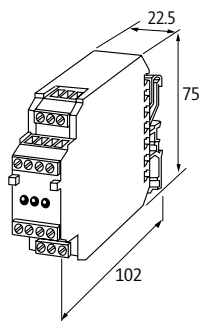
Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

Temperature range

-20...+50 °C

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Relays

– Screw terminals

– with force guided contacts

RM

Output relay
1 relay; 2 NO contacts/2 NC contacts



RM

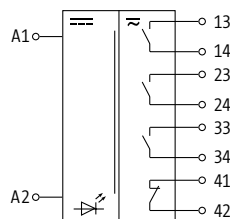
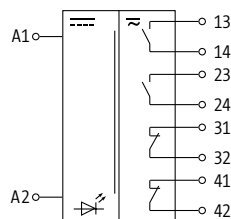
Output relay
1 relay; 3 NO contacts/1 NC contact

MKS

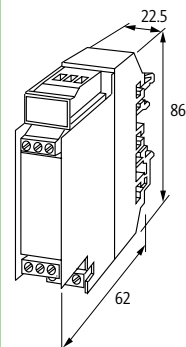
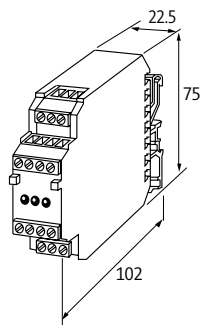
Output relay
1 relay; 1 NO contact/1 NC contact



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC (21.6...28 V DC) - 29 mA	51300		
24 V DC (21.6...28 V DC) - 30 mA		51301	
24 V AC/DC (21.6...28 V AC/DC) - 38 mA			51302
Utilization category			
AC-1	5 A (24/110/230 V AC)		6 A (24/110/230 V AC)
DC-13	2 A (24 V DC); 0.4 A (110 V DC); 0.2 A (230 V DC)		3 A (24 V DC); 0.22 A (110 V DC); 0.1 A (230 V DC)
AC-15	4 A (24 V AC); 3 A (110 V AC); 2 A (230 V AC)		3 A (24/110/230 V AC)
Input			
LED display	LED (red)		LED (green)
Output			
Switching voltage	max. 250 V AC/DC		
Switching current per output	max. 5 A		max. 6 A
Min. load current	300 mA		10 mA
Power rating (voltage dependent)	max. 1 000 VA/50 W		max. 1 500 VA/100 W
Switching frequency	max. 0.1 Hz (with load)	max. 1 Hz	max. 5 Hz
Contact material	Ag Ni 10 hv	Ag hv; Ag Sn O2	Ag Ni 10 hv
Energize/release/contact bounce time	15/15/2 ms		15/15/1.5 ms
General data			
Mech./ elect. life	1 000 000 switching cycles/load dependent		10 000 000 switching cycles/load dependent
Test isolation voltage	2.5 kV		4 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Temperature range	-20...+50 °C		
Dimension drawing			



Notes

Relays

– Screw terminals

RM

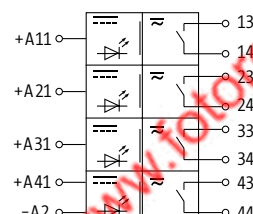
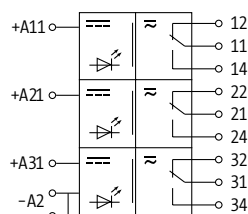
Output relay
3 relays; each 1 NO/NC contact



RM

Output relay
4 relays; each 1 NO contact

Circuit diagram



Order Data

24 V DC (19.2...30 V DC) - 16 mA

Art-No.

51403

Art-No.

512498

Utilization category

AC-1 8 A (24/110/230 V AC)
AC-15 3 A (24/110/230 V AC)
DC-13 1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)

5 A (24/110/230 V AC)

Input

LED display

LED (red)

Output

Switching voltage max. 250 V AC/DC

Switching current per output max. 8 A

max. 5 A

Min. load current 100 mA

Power rating (voltage dependent) max. 1 250 VA/240 W

Switching frequency max. 0.1 Hz (with load)

Contact material

Ag Sn O2

Ag hv

Energize/release/contact bounce time

10/10/2 ms

General data

Mech./ elect. life 20 000 000 switching cycles/load dependent

50 000 000 switching cycles/load dependent

Test isolation voltage

4 kV

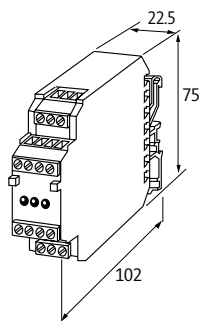
Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

Temperature range

-20...+50 °C

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Safety relay

– Protection-door and emergency-stop control

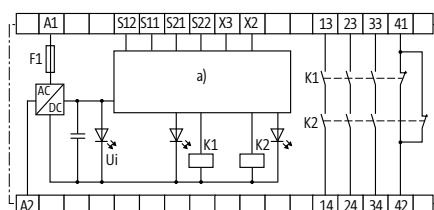
Approvals:  US
Listed

MIRO SAFE+ Switch H 48-230

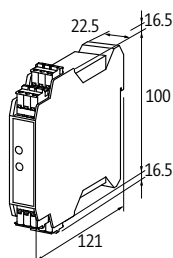
with/without start button monitoring



Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-1020012
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP0
DC-13	6 A (24 V DC) STOP0
Safety Indicators	
PL	up to e
Category	up to 4
DC	99%
SIL	up to 3
Service life	20 years
Input	
Input voltage	48...240 V AC
Input current	max. 2.8 VA
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+45 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

RELAYS / SAFETY RELAYS

Safety relay

- Protection-door and emergency-stop control
- Light curtain control
- Safety magnetic switch control

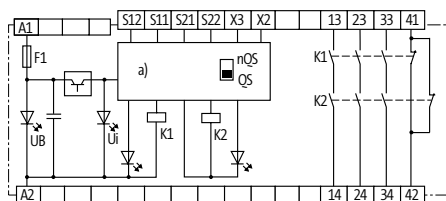
Approvals:  

MIRO SAFE+ Switch H L 24

with/without start button monitoring



Circuit diagram



Order Data

3 safety contacts

Art-No.

3000-33113-3020012

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC) STOP0

DC-13

6 A (24 V DC) STOP0

Safety Indicators

PL

up to e

Category

up to 4

DC

99%

SIL

up to 3

Service life

20 years

Input

Input voltage

24 V DC (-15 +20%), 24 V AC (-15 +10%)

Input current

max. 4.9 VA/2.0 W

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 8 A

Total current

24 A (45 °C); 18 A (55 °C); 12 A (60 °C)

Number of auxiliary contacts

1 - (41-42)

Number of alarm outputs

0

Number of safety contacts

3 - (13-14); (23-24); (33-34)

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Spring clamp plug-in terminals

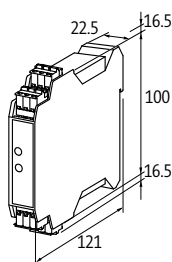
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Safety relay

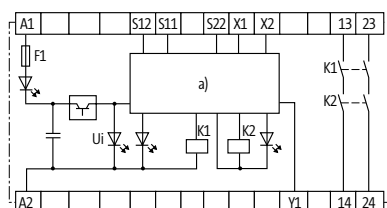
- Protection-door and emergency-stop control
- Light curtain control
- Safety magnetic switch control

MIRO SAFE+ Switch ECOA 24

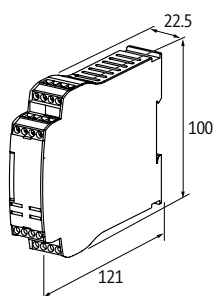
without start button monitoring



Circuit diagram



Order Data	Art-No.
2 safety contacts	3000-33113-3020005
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/4 A; min. 5 V AC/1 mA (ohm./ind.), at suitable suppression
AC-15	2 A (230 V AC) STOP0
DC-13	1 A (24 V DC) STOP0
Alarm outputs	100 mA (24 V DC)
Safety Indicators	
PL	up to 4
Category	–
DC	–
SIL	–
Service life	–
Input	
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)
Input current	max. 5.2 VA/2.0 W
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 4 A
Number of auxiliary contacts	0
Number of alarm outputs	1 - (Y1)
Number of safety contacts	2 - (13-14; 23-24)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Screw terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

Safety relay

- Protection-door and emergency-stop control
- Light curtain control
- Safety magnetic switch control

Approvals:  **UL** US Listed

MIRO SAFE+ Switch BA L 24

without start button monitoring

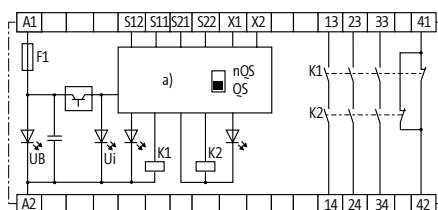


MIRO SAFE+ Switch BCS L 24

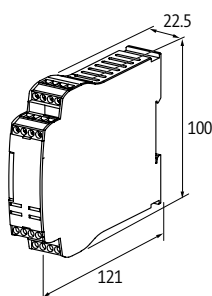
with start button monitoring



Circuit diagram



Order Data	Art-No.		Art-No.
3 safety contacts	3000-33113-3020025		3000-33113-3020020
Utilization category			
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression		
AC-15	6 A (230 V AC) STOP0		
DC-13	6 A (24 V DC) STOP0		
Safety Indicators			
PL	up to e		
Category	up to 4		
DC	99%		
SIL	up to 3		
Service life	20 years		
Input			
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)		
Input current	max. 4.9 VA/2.0 W	max. 4.4 VA/1.8 W	
Output			
Switching voltage	max. 250 V AC/DC		
Switching current per output	max. 8 A		
Total current	24 A (45 °C); 18 A (55 °C); 12 A (60 °C)		
Number of auxiliary contacts	1 - (41-42)		
Number of alarm outputs	0		
Number of safety contacts	3 - (13-14); (23-24); (33-34)		
Contact material	AgSnO, self cleaning, positively driven		
General data			
Mech./ elect. life	10 000 000 switching cycles/load dependent		
Connection	Screw terminals		
Mounting method	DIN-rail mountable (EN 60715)		
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)		
Dimension drawing			



Notes

RELAYS / SAFETY RELAYS

Safety relay

- Protection-door and emergency-stop control
- Light curtain control
- Safety magnetic switch control

Approvals:  Listed

MIRO SAFE+ T 1 24

with/without start button monitoring

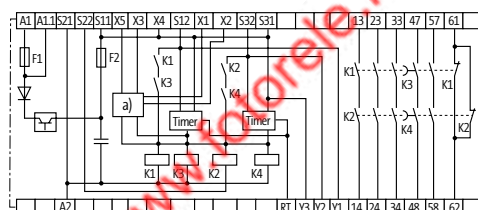
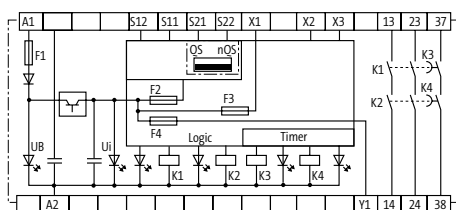


MIRO SAFE+ T 2 24

with/without start button monitoring



Circuit diagram



Order Data

3 safety contacts

Art-No.

3000-33113-3020065

5 safety contacts

Art-No.

3000-33113-3020060

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/8 A; min. 5 V AC/5 mA (ohm./ind.), at suitable suppression

max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

Safety contacts (STOP 1)

max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC) STOP0; 3 A (230 V AC) STOP1

DC-13

5 A (24 V DC) STOP0; 2 A (24 V DC) STOP1

6 A (24 V DC) STOP0; 2 A (24 V DC) STOP1

Safety Indicators

PL

up to e (STOP0); up to d (STOP1)

Category

up to 4 (STOP0); up to 3 (STOP1)

DC

99% (STOP0); min. 60% (STOP1)

SIL

up to 3 (STOP0); up to 2 (STOP1)

Service life

20 years

Input

Input voltage

24 V DC (-15 +20%); 24 V AC (-15 +10%)

Input current

5.9 VA/2.4 W (with monitoring output)

max. 7.1 VA/3.2 W (with monitoring output)

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 8 A (STOP0); max. 6 A (STOP1)

max. 6 A

Number of auxiliary contacts

0

1 - (31-32)

Total current (STOP 0)

–

18 A (45 °C); 15 A (55 °C); 12 A (60 °C)

Number of alarm outputs

1 - (Y1)

3 - (13-14); (23-24); (33-34)

Total current (STOP 1)

–

12 A (45 °C); 10 A (55 °C); 8 A (60 °C)

Number of safety contacts

2 - (13-14), (23-24), STOP0; 1 - (37-38), STOP1

3 - (13-14), (23-24), (33-34), STOP0; 2 - (47-48), (57-58), STOP1

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Spring clamp plug-in terminals

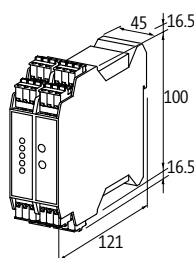
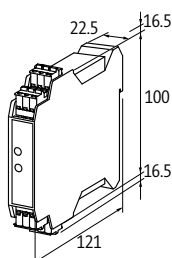
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Safety relay

– Two hand control

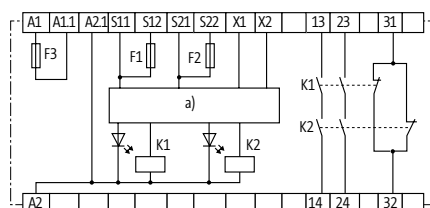
Approvals:  **UL**
Listed

MIRO SAFE+ HAND 24

without start button monitoring



Circuit diagram



Order Data

2 safety contacts

Art-No.

3000-33113-3020030

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC) STOP0

DC-13

6 A (24 V DC) STOP0

Safety Indicators

PL

up to e

Category

up to 4

DC

99%

SIL

up to 3

Service life

20 years

Input

Input voltage

24 V DC $\pm 10\%$

Input current

max. 1.2 W

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 6 A

Number of auxiliary contacts

1 - (31-32)

Number of alarm outputs

0

Number of safety contacts

2 - (13-14); (23-24)

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Spring clamp plug-in terminals

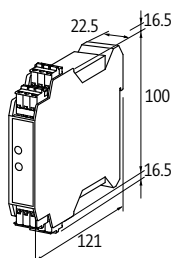
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Safety relay

- Protection-door control
- Pressure-sensitive mat. control

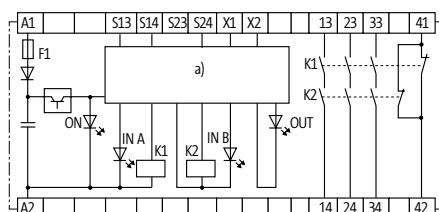
Approvals:  US
Listed

MIRO SAFE+ STEP 24

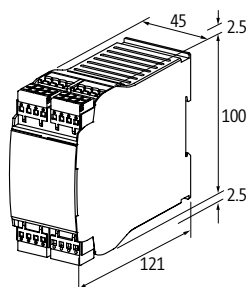
without start button monitoring



Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-3020050
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP0
DC-13	6 A (24 V DC) STOP0
Safety Indicators	
PL	up to e
Category	up to 4
DC	99%
SIL	up to 3
Service life	20 years
Input	
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)
Input current	max. 3.7 VA/1.6 W (24 V DC)
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 8 A
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

Expansion modules

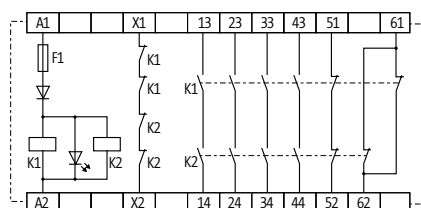
MIRO SAFE+ E 24

Expansion module



Approvals: UL
Listed

Circuit diagram



Order Data

4 NO contacts

Art-No.

3000-33113-3020075

Utilization category

Safety contacts (STOP 0)

max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression

AC-15

6 A (230 V AC)

DC-13

6 A (24 V DC)

Safety Indicators

PL

up to e

Category

up to 4

SIL

up to 3

Service life

20 years

Input

Input voltage

24 V DC (-15 +20%), 24 V AC (-15 +10%)

Input current

max. 1.0 VA

Output

Switching voltage

max. 250 V AC/DC

Switching current per output

max. 6 A

Number of auxiliary contacts

2 - (51-52); (61-62)

Number of alarm outputs

0

Number of contacts

4 - (13-14); (23-24); (33-34); (43-44)

Contact material

AgSnO, self cleaning, positively driven

General data

Mech./ elect. life

10 000 000 switching cycles/load dependent

Connection

Spring clamp plug-in terminals

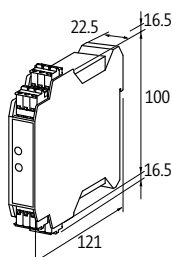
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-25...+45 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

RELAYS / SAFETY RELAYS

Labeling accessories			Art-No.
	ACS label plate (KM 5) for self marking (9 × 20 mm) 5 × 10 mm		7000-99001-0000000 90931
	Label plate (KWI 5/15) (88 pieces per plate)		90901
Wiring accessories			Art-No.
	Potential plug link max. 48 V/2 A	RMM..., RMMD...	90960
	Potential plug link max. 50 V/2 A	MIRO	90961
	Potential plug link blue	MIRO 6.2 pluggable	3000-90000-0300010
	Potential plug link black	MIRO 6.2 pluggable	3000-90000-0300020
	Potential rail blue 10-pole, spacing 6.2 mm 40-pole, spacing 12 mm	MIRO 6.2 (screw terminals) RMM..., RMMD...	90975 90970
	Potential rail red 10-pole, spacing 6.2 mm 40-pole, spacing 12 mm	MIRO 6.2 (screw terminals) RMM..., RMMD...	90976 90971
	End caps for potential rail blue	MIRO 6.2 RMM..., RMMD...	90980
	End caps for potential rail red	MIRO 6.2 RMM..., RMMD...	90982

RELAYS / SAFETY RELAYS

Wiring accessories			Art-No.
	Wire chain 16-pole Connection cable left and right approx. 50 cm; bk; 1 mm ²	MIRO (spring clamp terminals)	90977
	Double spring clamp terminal pluggable	MIRO SAFE+	3000-33010-0000000

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net



OPTOCOUPERS / SEMICONDUCTORS SWITCHING WITHOUT WEAR

- Shortest possible switching times
- High switching frequencies
- Resistant to EMC interference

MILLIONS OF SWITCHING CYCLES – EVEN WITH HIGH FREQUENCIES

Optocouplers and semiconductors are used to combine different signal levels or to isolate one signal from another. They are similar to a relay interface because they provide an optoelectronic signal transfer between input and output.

Optocouplers and semiconductors have a long life span because they don't have any mechanical components that could wear out. They are suitable for applications with high switching frequencies, even over a long time.

Some benefits of optocouplers and semiconductors:

- Silent operation
- No contact bounce
- Galvanic separation between input and output
- High resistance to shock and vibration
- High switching currents
- Low input power

Optocouplers / Semiconductors



Optocouplers

- Pluggable
- DC applications

Page 1.10.1



Optocouplers

- DC applications

Page 1.10.2



Semiconductors

- AC applications

Page 1.10.18

Terminal optocoupler

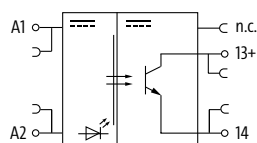
- pluggable
- with bridge system
- Complete module

MIRO 6.2

Transistor 6 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC (18...30 V DC) - 9 mA

Art-No.

3000-32512-2100040

Accessories

Removable plug-in module

Art-No.

3000-32522-2100040

Input

Connection voltage - current 24 V DC (18...30 V DC) - 9 mA

LED display LED (yellow)

Output

Switching time ON/OFF 15/31 μ s

Switching voltage 3...30 V DC

Switching current per output 10 mA...6 A

Saturation voltage (across output) max. 240 mV

Switching frequency max. 500/50 Hz (ohm./ind.)

General data

Test isolation voltage 50 V

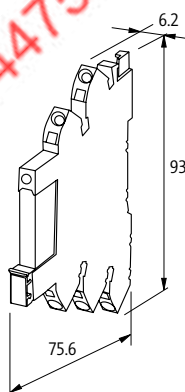
Surge voltage resistance 2.5 kV

Protection IP20

Mounting method pluggable

Temperature range -25...+50 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

MIRO 6.2

Transistor 1 A
Screw terminals



MIRO 6.2

Transistor 1 A
Spring clamp terminals



MIRO 6.2

Transistor 2 A
Screw terminals

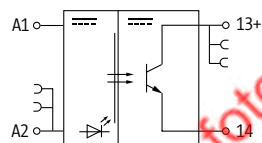
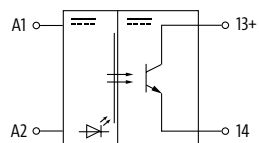


MIRO 6.2

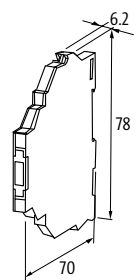
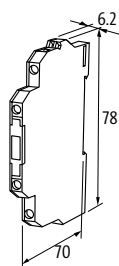
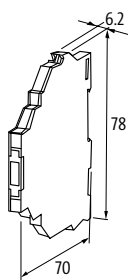
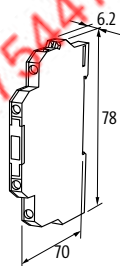
Transistor 2 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	52515	6652515		
5 V DC/6 mA			cURus, cCSAus	52502
			cURus, cCSAus	6652502
Input				
Voltage range ON	11...30 V DC		4...5.5 V DC	
Voltage range OFF	0...5 V DC		0...2 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	3...48 V DC		5...48 V DC	
Switching current per output	500 µA...1 A		1 mA...2 A	
Saturation voltage (across output)	max. 0.12 V DC		max. 0.3 V DC	
Leakage current (output is open)	max. 25 µA		max. 10 µA	
Switching time ON/OFF	1.5/1 ms (100 mA load)		1/5 ms	
Switching frequency	max. 40/4 Hz (resist./ind.)		max. 10/1 Hz (resist./ind.)	
General data				
Test isolation voltage	500 V		2.5 kV	
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 2 A
Screw terminals



MIRO 6.2

Transistor 2 A
Spring clamp terminals



MIRO 6.2

Transistor 0.5 A
Screw terminals

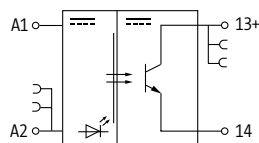


MIRO 6.2

Transistor 0.5 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/6 mA

Art-No.

52501

Art-No.

6652501

Art-No.

52505

Art-No.

6652505

48 V DC/6 mA

Input

Voltage range ON

10...48 V DC

Voltage range OFF

0...5 V DC

Control current

6 mA

LED display

LED (yellow)

Output

Switching voltage

5...48 V DC

Switching current per output

1 mA...2 A

Saturation voltage (across output)

max. 0.3 V DC

Leakage current (output is open)

max. 10 µA

Switching time ON/OFF

1/5 ms

Switching frequency

max. 10/1 Hz (resist./ind.)

General data

Test isolation voltage

2.5 kV

Mounting method

DIN-rail mountable (EN 60715)

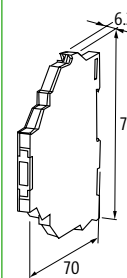
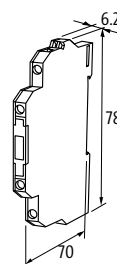
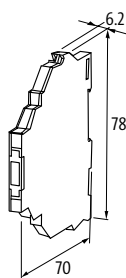
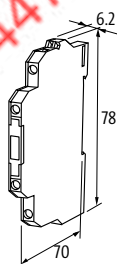
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

Approvals: 

MIRO 6.2

Transistor 6 A
Screw terminals



MIRO 6.2

Transistor 6 A
Spring clamp terminals



MIRO 6.2

Transistor 10 A
Screw terminals

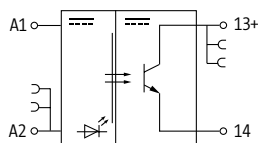


MIRO 6.2

Transistor 10 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	cURus	52519	6652519	
24 V DC/10 mA			cURus	52520
				6652520

Input

Voltage range ON	10...53 V DC
Voltage range OFF	0...5 V DC
Control current	approx. 10 mA
LED display	LED (yellow)

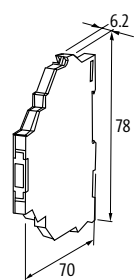
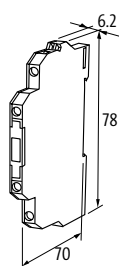
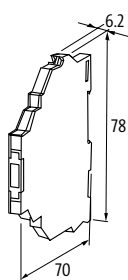
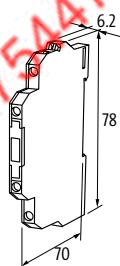
Output

Switching voltage	5...48 V DC
Switching current per output	1 mA...6 A (without derating)
Saturation voltage (across output)	max. 0.1 V DC
Leakage current (output is open)	max. 25 µA
Switching time ON/OFF	2/5 ms
Switching frequency	max. 1/0.1 Hz (resist./ind.)

General data

Test isolation voltage	2.75 kV
Mounting method	DIN-rail mountable (EN 60715)
Housing	Black plastic, flame retardant
Temperature range	-20...+60 °C

Dimension drawing



Notes

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 10 A
Screw terminals



MIRO 6.2

Transistor 10 A
Spring clamp terminals



MIRO 6.2

Transistor 0.5 A
Screw terminals

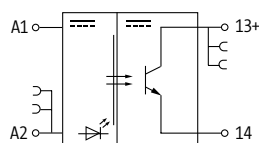


MIRO 6.2

Transistor 0.5 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/10 mA (pulse control operation)

Art-No.

52521

Art-No.

6652521

Art-No.

52500

Art-No.

6652500

24 V DC/6 mA

Input

Voltage range ON

10...53 V DC

Voltage range OFF

0...5 V DC

Control current

10 mA

LED display

LED (yellow)

Output

Switching voltage

5...48 V DC

Switching current per output

1 mA...10 A, short-circuit and overload protected (pulse switching)

0.1 mA...0.5 A

Saturation voltage (across output)

max. 0.12 V DC

max. 1.2 V DC

Leakage current (output is open)

max. 25 μ A

max. 10 μ A

Switching time ON/OFF

2/5 ms (10 A load)

35/400 μ s

Switching frequency

max. 1/0.1 Hz (resist./ind.)

max. 1000/100 Hz (resist./ind.)

General data

Test isolation voltage

2.75 kV

3.75 kV

Mounting method

DIN-rail mountable (EN 60715)

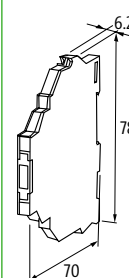
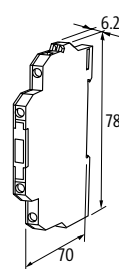
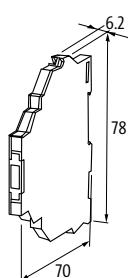
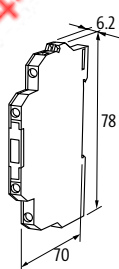
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

MIRO 6.2

Transistor 0.5 A
Screw terminals



MIRO 6.2

Transistor 0.5 A
Spring clamp terminals



MIRO 6.2

Transistor 0.5 A
Screw terminals



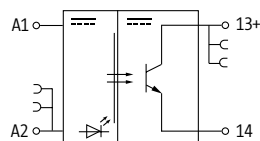
MIRO 6.2

Transistor 0.5 A
Spring clamp terminals

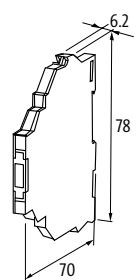
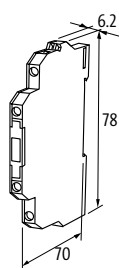
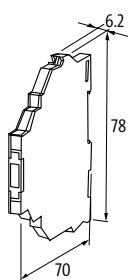
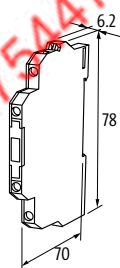


Approvals:

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
110 V AC/DC - 6 mA	52506	6652506		
230 V AC - 6 mA			52507	6652507
Input				
Voltage range ON	70...130 V AC/DC		90...250 V AC	
Voltage range OFF	0...30 V AC/DC		0...40 V AC	
Control current	6 mA		7 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	0.1 mA...0.5 A			
Saturation voltage (across output)	max. 1.2 V DC			
Leakage current (output is open)	max. 0.3 mA			
Switching time ON/OFF	100/700 µs		55/15 ms	
Switching frequency	max. 500/30 Hz (resist./ind.)			
General data				
Test isolation voltage	3.75 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 2 A
Screw terminals

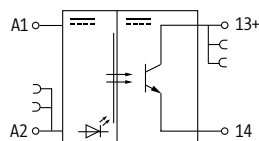


MIRO 6.2

Transistor 2 A
Spring clamp terminals



Circuit diagram



Order Data

230 V AC - 6 mA

Art-No.

52508

Art-No.

6652508

Input

Voltage range ON 90...250 V AC

Voltage range OFF 0...30 V AC

Control current 15 mA

LED display LED (yellow)

Output

Switching time ON/OFF 3/10 ms

Switching voltage 5...48 V DC

Switching current per output 1 mA...2 A (without derating)

Saturation voltage (across output) max. 0.3 V DC

Leakage current (output is open) max. 0.3 mA

Switching frequency max. 10/1 Hz (resist./ind.)

General data

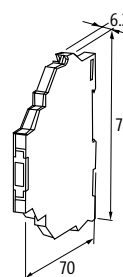
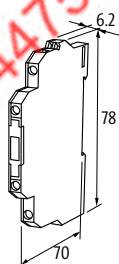
Test isolation voltage 2.5 kV

Mounting method DIN-rail mountable (EN 60715)

Housing Black plastic, flame retardant

Temperature range -20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

Approvals:  

MIRO 6.2

Transistor 2 A
Inrush current limiting
Screw terminals



MIRO 6.2

Transistor 2 A
Inrush current limiting
Spring clamp terminals



MIRO 6.2

Transistor 0.5 A
electr. NO/NC contact
Screw terminals

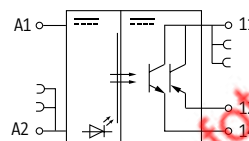
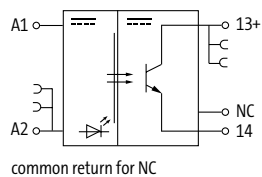


MIRO 6.2

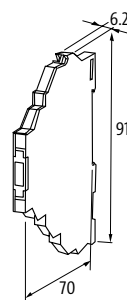
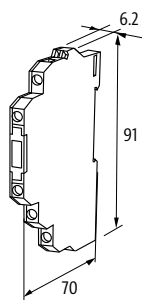
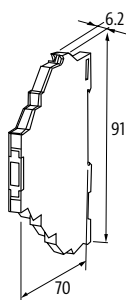
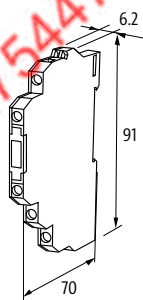
Transistor 0.5 A
electr. NO/NC contact
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	52512	6652512	52510	6652510
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...2 A (overload protected)		0.1 mA...0.5 A	
Saturation voltage (across output)	max. 0.35 V DC		max. 1.2 V DC	
Leakage current (output is open)	max. 0.1 mA			
Switching time ON/OFF	5/10 ms		40/150 µs	
Switching frequency	max. 10 Hz			
General data				
Test isolation voltage	2.5 kV		3.75 kV	
Housing	Black plastic, flame retardant			
Mounting method	DIN-rail mountable (EN 60715)			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

Terminal optocoupler

– with bridge system

Approvals: 

MIRO 6.2

Transistor 0.2 A
Control current 0.1 mA (5 V DC)
Screw terminals



MIRO 6.2

Transistor 0.2 A
Control current 0.1 mA (5 V DC)
Spring clamp terminals



MIRO 6.2

Transistor 2 A
short-circuit protected
Screw terminals

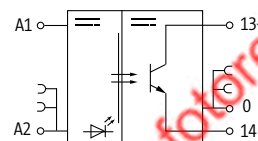
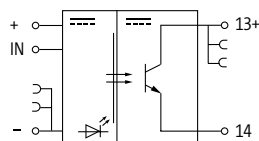


MIRO 6.2

Transistor 2 A
short-circuit protected
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/0.1 mA (5 V DC)

cCSAus

Art-No.

52511

cCSAus

Art-No.

6652511

24 V DC/6 mA

Art-No.

52503

Art-No.

6652503

Input

Voltage range ON

15...30 V DC

Voltage range OFF

0...2 V DC

Control current

0.1 mA (5 V)

LED display

LED (yellow)

Output

Switching voltage

5...48 V DC

Switching current per output

0.1 mA...0.2 A

Saturation voltage (across output)

max. 1.2 V DC

Leakage current (output is open)

max. 0.1 mA

Switching frequency

max. 20 kHz

Switching time ON/OFF

10/18 µs

General data

Test isolation voltage

3.75 kV

Mounting method

DIN-rail mountable (EN 60715)

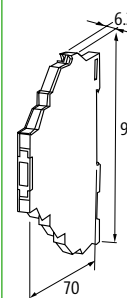
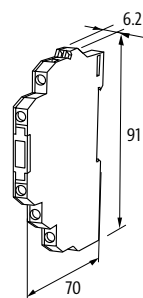
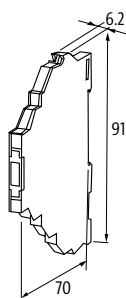
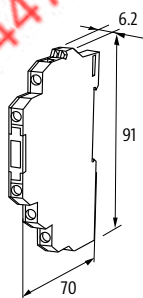
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPERS / SEMICONDUCTORS

Terminal optocoupler

– with bridge system

MIRO 6.2

Transistor 1 A
Multi voltage output
Screw terminals



MIRO 6.2

Transistor 1 A
Multi voltage output
Spring clamp terminals



MIRO 6.2

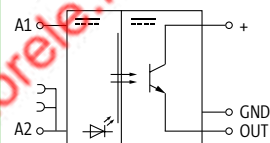
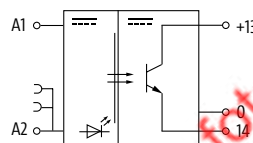
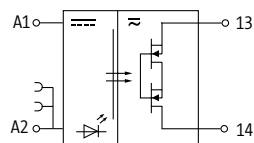
Transistor 0.2 A
Spring clamp terminals



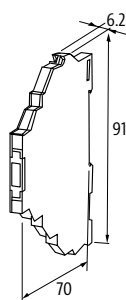
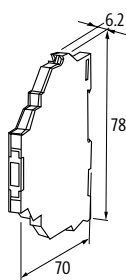
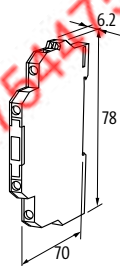
MIRO 6.2

Transistor 0.1 A
Spring clamp terminals

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
24 V DC/10 mA	52572	6652572	UR, cCSAus	526071
Input				
Voltage range ON	10...53 V DC		10...35 V DC	10...30 V DC
Voltage range OFF	0...5 V DC			0...7 V DC
Control current	10 mA		6 mA	5.5 mA
LED display	LED (yellow)		LED (green)	LED (yellow)
Output				
Switching time ON/OFF	3/6 ms		5/7 μs	0.4/0.1 μs
Switching voltage	5...250 V AC/5...350 V DC		10...30 V DC	5...48 V DC
Switching current per output	1 mA...1 A		1 mA...0.2 A	0...0.1 A
Saturation voltage (across output)	max. 0.7 V AC/DC		max. 0.3 V AC/DC	max. 1.2 V AC/DC
Leakage current (output is open)	max. 25 μA			max. 250 μA
Switching frequency	max. 10 Hz		max. 20 kHz/200 Hz (resist./ind.)	500 kHz (ohmic)
General data				
Test isolation voltage	2.75 kV		2.5 kV	2.75 kV
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal optocoupler

– Isolation function in output circuit

Approvals: 

MIRO 6.2

Transistor 2 A
Screw terminals

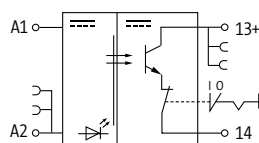


MIRO 6.2

Transistor 2 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/7 mA

Art-No.

52513

Art-No.

6652513

Input

Voltage range ON

10...48 V DC

Voltage range OFF

0...5 V DC

Control current

7 mA

LED display

LED (yellow)

Output

Switching time ON/OFF

1/5 ms

Switching voltage

5...48 V DC

Switching current per output

1 mA...2 A

Saturation voltage (across output)

max. 0.3 V DC

Leakage current (output is open)

max. 0.3 mA

Switching frequency

max. 10/1 Hz (resist./ind.)

General data

Housing

Black plastic, flame retardant

Test isolation voltage

2.5 kV

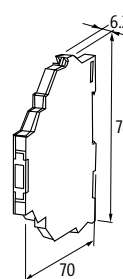
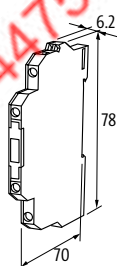
Mounting method

DIN-rail mountable (EN 60715)

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPERS / SEMICONDUCTORS

Optocouplers

- Inrush current limiting
- Screw terminals

AMMS

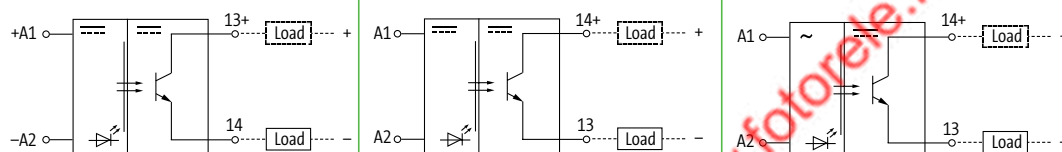
Transistor 1.2 A



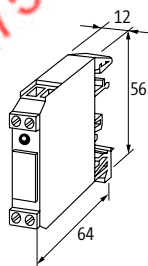
EMMS

Transistor 1.2 A

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
3.5...5.5 V DC/6 mA	50041		
24 V DC/6 mA		50040	
110/230 V AC/2.7 mA			50105
Input			
Voltage range ON	3.5...5.5 V DC	10...53 V DC	100...253 V AC
Voltage range OFF	0...0.8 V DC	0...3 V DC	0...40 V AC
Input current	6 mA		2.7 mA
LED display	LED (red)		
Output			
Leakage current (output is open)	max. 0.3 mA		
Switching current per output	1 mA...1.2 A		
Switching voltage	4.5...53 V DC		
Saturation voltage (across output)	max. 1.2 V DC		
Switching time ON/OFF	100/700 µs		20/50 ms
Switching frequency	max. 500 Hz (resist.) at max. 0.2 A/max. 30 Hz (ind.)		max. 5 Hz
General data			
Test isolation voltage	3.75 kV		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		
Dimension drawing			



Notes

Optocouplers

- Inrush current limiting
- Screw terminals

AMMS

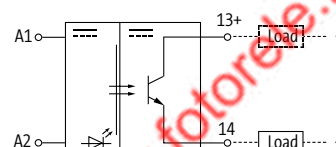
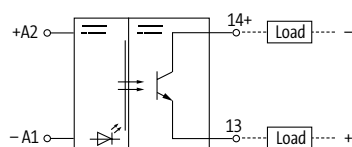
Transistor 0.5 A



AMMS

Transistor 2 A

Circuit diagram



Order Data

4...30 V DC/10 mA

Art-No.

50010

24 V DC/6 mA

Art-No.

50070

Input

Voltage range ON

4...30 V DC

10...53 V DC

Voltage range OFF

0...2 V DC

0...3 V DC

Input current

max. 10 mA

6 mA

LED display

LED (red)

Output

Switching voltage

4.5...44 V DC

4.5...40 V DC

Switching current per output

1 mA...0.5 A

10 mA...2 A

Saturation voltage (across output)

max. 1.2 V DC

max. 0.1 V DC

Leakage current (output is open)

max. 0.3 mA

max. 0.1 mA

Switching time ON/OFF

65 µs/20 ms

2/8 ms

Switching frequency

max. 7 kHz (resist.) at max. 0.1 A/max. 10 Hz (ind.)

max. 20/5 Hz (resist./ind.)

General data

Test isolation voltage

3.75 kV

2.5 kV

Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

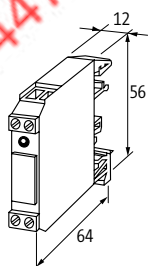
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Optocouplers

– Double terminals on the output side

– Screw terminals

AMMDS

Transistor 0.1 A
with minus plug link



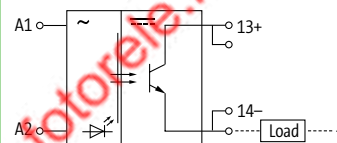
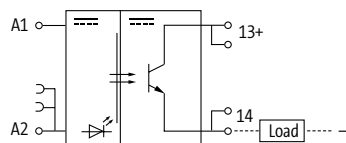
AMMDS

Transistor 2 A
with minus plug link

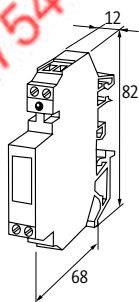
AMMDS

Transistor 0.1 A

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC/6 mA	50081	50080	
230 V AC - 10 mA			50110
Input			
LED display	LED (red)		
Input current	6 mA		7.5 mA
Plug link (supplied)	Art.-No. 90960		–
Voltage range ON	10...53 V DC		195...253 V AC
Voltage range OFF	0...3 V DC		0...110 V AC
Output			
Switching voltage	4...40 V DC	4...35 V DC	4...40 V DC
Switching current per output	1 mA...0.1 A	10 mA...2 A (short-circuit protected)	1 mA...0.1 A
Saturation voltage (across output)	max. 1.2 V DC	max. 0.5 V DC	max. 1.2 V DC
Leakage current (output is open)	max. 0.3 mA		
Switching time ON/OFF	1.5/2 ms	5/15 ms	50/120 ms
Switching frequency	max. 300/40 Hz (resist./ind.)	max. 10/1 Hz (resist./ind.)	
General data			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		
Test isolation voltage	3.75 kV	2.5 kV	3.75 kV
Dimension drawing			



Notes

Optocouplers

– with minus plug link

– Screw terminals

AMMDS

Transistor 0.2 A

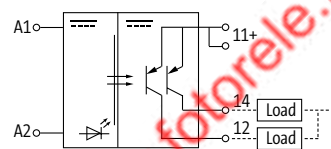
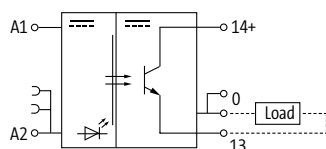
Double terminals on the output side
for rapid switching



AMMDS

Transistor 1 A

Circuit diagram



Order Data

24 V DC/15 mA

Art-No.

50082

24 V AC/DC - 10 mA

Art-No.

50085

Input

Voltage range ON

10...35 V DC

Voltage range OFF

0...5 V DC

Input current

10 mA

LED display

LED (red)

Plug link (supplied)

Art-No. 90960

Output

Switching voltage

5...35 V DC

Switching current per output

1 mA...0.2 A

Saturation voltage (across output)

max. 0.5 V DC

Leakage current (output is open)

max. 0.3 mA

Switching time ON/OFF

20/14 µs

Switching frequency

max. 20 kHz/200 Hz (resist./ind.)

General data

Test isolation voltage

2.5 kV

Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

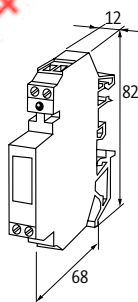
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Power opto-coupler modules

– Screw terminals

AMS

Transistor 4 A



AMS

Transistor 2 A (3-way)
3 NO contacts

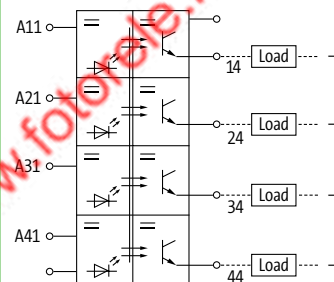
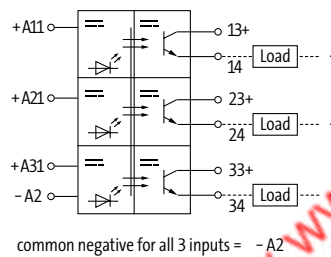
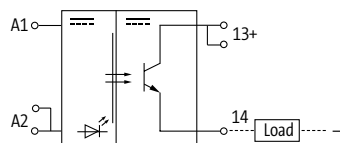


AMS

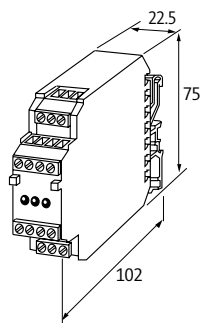
Transistor 2 A (4-way)
4 NO contacts



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC/10 mA	50044	50043	
24 V DC/3 mA			cCSAus 50015
Input			
Voltage range ON	10...53 V DC		20...30 V DC
Voltage range OFF	0...3 V DC		0...6 V DC
Input current	14.5 mA	10 mA	27 mA
LED display	LED (red)		LED (yellow)
Output			
Switching voltage	4.5...53 V DC	4.5...35 V DC	5...30 V DC
Switching current per output	10 mA...4 A	10 mA...2 A (short-circuit protected)	1 mA...2 A
Saturation voltage (across output)	max. 1.5 V DC	max. 0.5 V DC	max. 0.05 V DC
Switching time ON/OFF	4/7 µs	2/15 ms	1/5 ms
Leakage current (output is open)	–	max. 0.3 mA	max. 0.01 mA
Switching frequency	max. 2 kHz/4 Hz (resist./ind.)	max. 10/1 Hz (resist./ind.)	
General data			
Test isolation voltage	3.75 kV	2.5 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		-25...+50 °C
Dimension drawing			



Notes

OPTOCOUPERS / SEMICONDUCTORS

Optocouplers

– DC Motor control

– Over current / temperature monitoring

MIRO 12.4

Transistor 3 A
Screw terminals

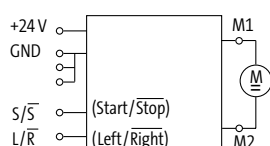


MIRO 12.4

Transistor 3 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/10 mA

Art-No.

50140

Art-No.

6650140

Input

Voltage range ON

15...30 V DC

Voltage range OFF

0...5 V DC

Input current

10 mA

LED display

LED (yellow): right running; LED (green): left running

Output

Switching voltage

19.2...30 V DC

Switching current per output

max. 3 A

Highest current

approx. 6 A for 100 ms

Saturation voltage (across output)

max. 1.4 V DC

Leakage current (output is open)

max. 10 mA

Switching time ON/OFF

1.2/10 ms

Switching frequency

max. 1 Hz (motor dependant)

Changing time

max. 50 ms

LED display

LED (red): error (over current/over heated)

General data

Test isolation voltage

no galvanic separation

Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

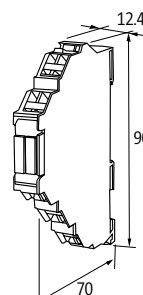
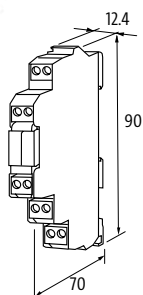
Housing

Black plastic, flame retardant

Temperature range

0...+50 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal triac

– Zero potential switch

Approvals:  

MIRO 6.2

Triac 0.5 A
Screw terminals



MIRO 6.2

Triac 0.5 A
Spring clamp terminals



MIRO 6.2

Triac 0.5 A
Screw terminals

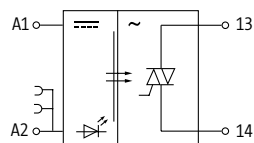


MIRO 6.2

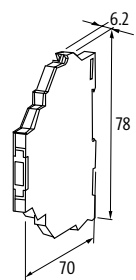
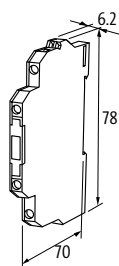
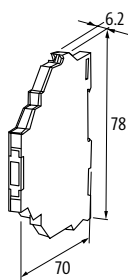
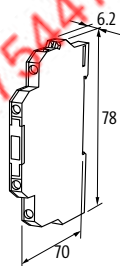
Triac 0.5 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
5 V DC/6 mA	52551	6652551		
24 V DC/6 mA			52550	6652550
Input				
Voltage range ON	4...5.5 V DC		10...53 V DC	
Voltage range OFF	0...2 V DC		0...5 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	24...250 V AC			
Switching current per output	2 mA...0.5 A		1.5 mA...0.5 A	
Saturation voltage (across output)	max. 1.5 V AC			
Leakage current (output is open)	max. 0.3 mA			
Switching time ON/OFF	10/10 ms			
Switching frequency	max. 20 Hz, depending on suppression			
General data				
Test isolation voltage	2.5 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal triac

– Zero potential switch

MIRO 6.2

Triac 1 A
Screw terminals

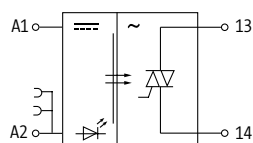


MIRO 6.2

Triac 1 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/9 mA

Art-No.

52571

Art-No.

6652571

Input

Voltage range ON

12...53 V DC

Voltage range OFF

0...3 V DC

Control current

12 mA (24 V DC)

LED display

LED (yellow)

Output

Switching voltage

12...250 V AC

Switching current per output

10 mA...1 A

Saturation voltage (across output)

max. 1.5 V AC

Leakage current (output is open)

max. 1 mA

Switching time ON/OFF

10/10 ms

Switching frequency

max. 2 Hz, depending on suppression

General data

Test isolation voltage

2.5 kV

Mounting method

DIN-rail mountable (EN 60715)

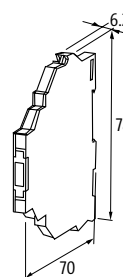
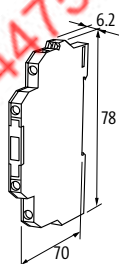
Housing

Black plastic, flame retardant

Temperature range

0...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Terminal triac

– Zero potential switch

Approvals: 

MIRO 6.2

Triac 0.5 A
Screw terminals



MIRO 6.2

Triac 0.5 A
Spring clamp terminals



MIRO 6.2

Triac 0.5 A
Screw terminals

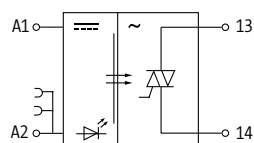


MIRO 6.2

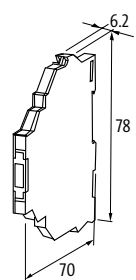
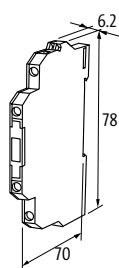
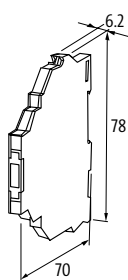
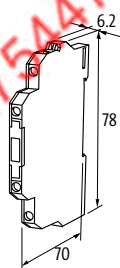
Triac 0.5 A
Spring clamp terminals



Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
110 V AC/DC (95...121 V AC/DC) - 3.5 mA	52556	6652556		
230 V AC - 7 mA			52557	6652557
Input				
Voltage range ON	70...130 V AC/DC		140...250 V AC	
Voltage range OFF	0...35 V AC/DC		0...80 V AC	
Control current	3.5 mA		7 mA	
LED display	LED (yellow)			
Output				
Switching voltage	12...250 V AC			
Switching current per output	2 mA...0.5 A			
Saturation voltage (across output)	max. 1.5 V AC			
Leakage current (output is open)	max. 0.3 A	max. 0.3 mA		
Switching time ON/OFF	10/10 ms			
Switching frequency	max. 20 Hz, depending on suppression			
General data				
Test isolation voltage	2.5 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				



Notes

OPTOCOUPERS / SEMICONDUCTORS

Terminal triac

– Zero potential switch

MIRO 6.2

Triac 0.5 A
Screw terminals

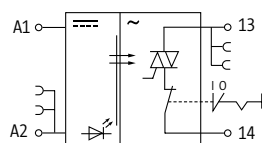


MIRO 6.2

Triac 0.5 A
Spring clamp terminals



Circuit diagram



Order Data

24 V DC/7 mA

Art-No.

52561

Art-No.

6652561

Input

Voltage range ON

10...53 V DC

Voltage range OFF

0...5 V DC

Control current

7 mA

LED display

LED (yellow)

Output

Switching voltage

24...250 V AC

Switching current per output

2 mA...0.5 A

Saturation voltage (across output)

max. 1.5 V AC

Leakage current (output is open)

max. 0.3 mA

Switching time ON/OFF

10/10 ms

Switching frequency

max. 20/1 Hz (resist./ind.)

General data

Test isolation voltage

2.5 kV

Mounting method

DIN-rail mountable (EN 60715)

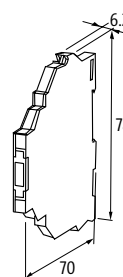
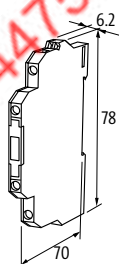
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

Triac modules

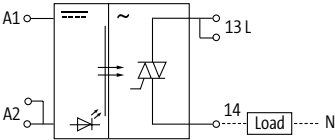
- Zero potential switch
- Screw terminals

AMS

Triac 4 A



Circuit diagram



Order Data

24 V DC/10 mA

Art-No.

50034

Input

Voltage range ON 10...53 V DC

Voltage range OFF 0...3 V DC

Input current 10 mA

LED display LED (red)

Output

Switching voltage 24...250 V AC

Switching current per output 10 mA...4 A

Saturation voltage (across output) max. 1.4 V AC

Leakage current (output is open) max. 10 mA

Switching time ON/OFF 10/10 ms

Switching frequency max. 30/5 Hz (resist./ind.)

General data

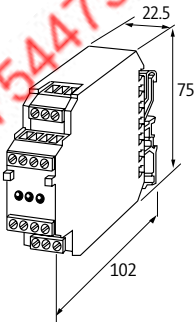
Test isolation voltage 6 kV

Mounting method DIN-rail mountable TH35 or G32 (EN 60715)

Housing Black plastic, flame retardant

Temperature range -20...+60 °C

Dimension drawing



Notes

OPTOCOUPLEDERS / SEMICONDUCTORS

Triac modules

- Zero potential switch
- Screw terminals

AMMS

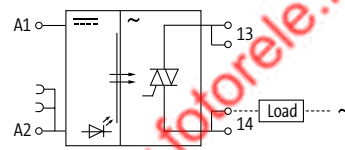
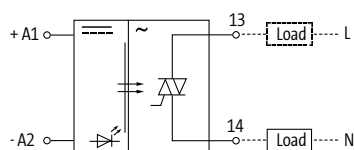
Triac 1 A



AMMDS

Triac 2 A
with minus plug link


Circuit diagram



Order Data

24 V DC/6.6 mA

Art-No.

50030

Art-No.

50092

24 V DC/6 mA

Input

Voltage range ON

10...53 V DC

Voltage range OFF

0...3 V DC

Input current

6.6 mA

LED display

LED (red)

Plug link (supplied)

–

Output

Switching voltage

24...253 V AC

Switching current per output

50 mA...1 A

Saturation voltage (across output)

max. 1.3 V AC

Leakage current (output is open)

max. 5 mA

Switching time ON/OFF

10/10 ms

Switching frequency

max. 20 Hz

General data

Test isolation voltage

2.5 kV

Mounting method

DIN-rail mountable TH35 or G32 (EN 60715)

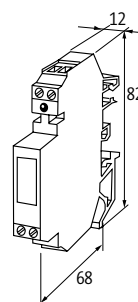
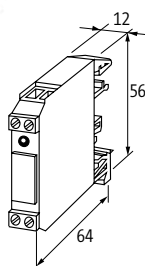
Housing

Black plastic, flame retardant

Temperature range

-20...+60 °C

Dimension drawing



Notes

OPTOCOUPERS / SEMICONDUCTORS

Labeling accessories			Art-No.
	ACS label plate (KM 5) for self marking (9 × 20 mm)		7000-99001-0000000
	Label plate (KM 4) 5 × 10 mm		90931
	ACS label plate (KM 6/18) for self marking with ADEMARK markers		7000-99003-0000000
	Label plate (KWI 5/15) (88 pieces per plate)		90901
Wiring accessories			Art-No.
	Potential plug link max. 50 V/2 A	MIRO	90961
	Potential plug link max. 48 V/2 A	RMM..., RMMD...	90960
	Potential rail blue 40-pole, spacing 12 mm	RMM..., RMMD...	90970
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	90975
	Potential rail red 40-pole, spacing 12 mm	RMM..., RMMD...	90971
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	90976
	End caps for potential rail blue	MIRO 6.2 RMM..., RMMD...	90980
	red	MIRO 6.2 RMM..., RMMD...	90982

Wiring accessories			Art-No.
	Wire chain 16-pole Connection cable left and right approx. 50 cm; bk; 1 mm ²	MIRO (spring clamp terminals)	90977

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net



SWITCHES

PERFECT CROSS-LINKING FOR YOUR APPLICATION

- Reduces the installation effort
- Switches for the control cabinet IP20, IP50, and the field IP67
- Compact and robust design

FROM SOLID BASIC FUNCTIONS TO AN ENORMOUS FUNCTIONAL VARIETY

Murrelektronik offers a broad portfolio of switches. Unmanaged switches are used to reliably cover basic functions at an advantageous price-performance ratio. Lite-managed switches offer a large scope of functions and variants such as the PROFINET managed switches are tailored perfectly to the possibilities of PROFINET environments.

- Optimization of wiring flexibility and reduction of the complexity of installation solutions
- Easy insights into the communication and uncomplicated connection to network analysis tools or integrated web servers
- Relocation of the coupling level to the field creating space in the control cabinet by using compact and robust IP67 variants

Unmanaged Switches



Unmanaged Switches

- IP20
- IP50
- IP67

Page 1.11.1

Managed Switches



Lite-Managed Switches

- IP20
- IP67

Page 1.11.4



PROFINET-Managed Switches

- IP20
- IP67



Page 1.11.6

SWITCHES

Unmanaged Switch

TREE 4TX Metal

IP50



TREE 8TX Metal

IP50



TREE 6TX Eco

IP20



TREE 8TX Metal

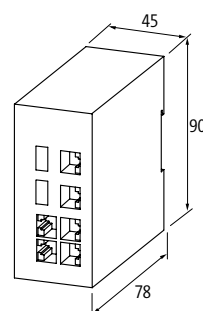
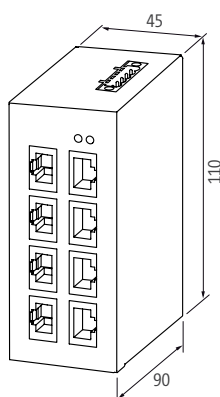
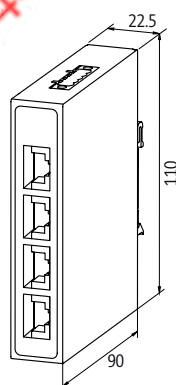
IP50



Approvals:  UL Listed

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
4 ports	58151			
8 ports		58152		58171
6 ports			58170	
Connections				
Fieldbus	4 × RJ45	8 × RJ45	6 × RJ45	8 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm²		Screw plug-in terminal: 0.2...1.5 mm²	
Technical Data				
Operating voltage	2 × 9...48 V DC, redundancy		2 × 9...30 V DC, redundancy	2 × 9...48 V DC, redundancy
Transfer rate	10/100 Mbit/s full duplex			
Operating modes	Autocrossing Autonegotiation			
Switch Management				
Switch Form	Unmanaged Switch			
Webserver	no			
VLAN (QoS) IEEE 802.p	yes			
Port Mirroring	no			
Protocols	no			
Remote maintenance	no			
Alarm contact	no			
Diagnostic				
Communication status	via LED			
Monitoring - no voltage	yes			
General data				
Protection	IP50		IP20	IP50
Housing	Metal black		Black plastic	Metal black
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-10...+70 °C (storage temperature -40...+85 °C)		0...+60 °C (storage temperature -10...+70 °C)	-10...+70 °C (storage temperature -40...+85 °C)
Dimension drawing				

Dimension drawing



Notes

SWITCHES

Unmanaged Switch

TREE 6TX Metal

IP50



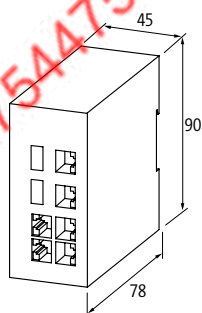
TREE 8TX Metal

8 ports Gigabit
IP50



Approvals:  Listed

Order Data	Art-No.	Art-No.
6 ports	58172	
8 ports Gigabit		58173
Connections		
Fieldbus	6 × RJ45	8 × RJ45
Supply	Screw plug-in terminal: 0.2...1.5 mm ²	
Technical Data		
Operating voltage	2 × 9...30 V DC, redundancy	2 × 9...48 V DC, redundancy
Transfer rate	10/100 Mbit/s full duplex	10/100/1 000 Mbit/s full duplex
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Unmanaged Switch	
Webserver	no	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	no	
Protocols	no	
Remote maintenance	no	
Alarm contact	no	
Diagnostic		
Communication status	via LED	
Monitoring - no voltage	yes	
General data		
Protection	IP50	
Housing	Metal black	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-10...+70 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

Unmanaged Switch

TREE 4TX IP67 M12

4 × M12 (female), D-coded
IP67



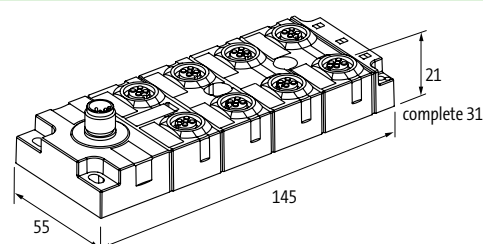
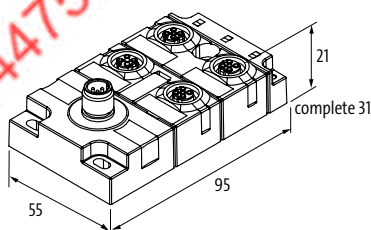
TREE 8TX IP67 M12

8 × M12 (female), D-coded
IP67



Approvals:  UL
Listed

Order Data	Art-No.	Art-No.
4 ports	58160	
8 ports		58161
Connections		
Fieldbus	4 × M12 (female), D-coded	8 × M12 (female), D-coded
Supply	1 × M12 (male), A-coded	
Technical Data		
Operating voltage	2 × 18...30 V DC, redundancy	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Unmanaged Switch	
Webserver	no	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	no	
Protocols	no	
Remote maintenance	no	
Alarm contact	no	
Diagnostic		
Communication status	via LED	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Housing	Zinc die casting, matte nickel plated	
Mounting method	4 hole screw mounting	
Temperature range	-25...+60 °C (storage temperature -40...+80 °C)	
Dimension drawing		



Notes

SWITCHES

Lite - Managed Switch

TREE M-4TX

IP20

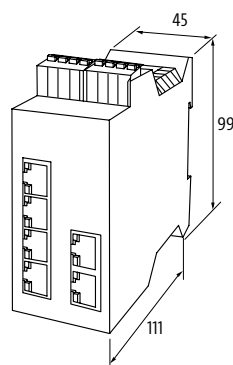
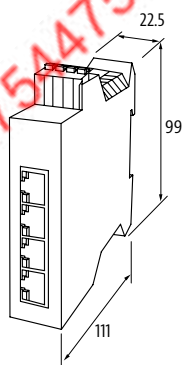


TREE M-6TX

IP20



Order Data	Art-No.	Art-No.
4 ports	58181	
6 ports		58182
Connections		
Fieldbus	4 × RJ45	6 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm ²	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Lite - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	DHCP, SNMP (v1, v2c, v3), RSTP, STP	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	yes
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Housing	Black plastic	
Mounting method	DIN-rail mountable (EN 50022)	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

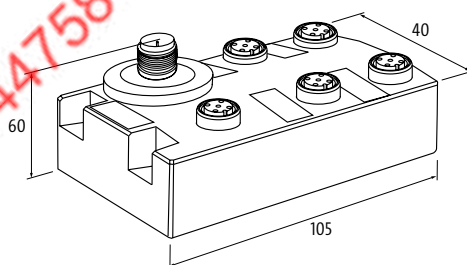
Lite - Managed Switch

TREE M-STX-PN IP67

IP67



Order Data		Art-No.
5 ports		58183
Connections		
Fieldbus	5 × M12 (female), D-coded	
Supply	1 × M12 (male), A-coded	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Lite - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	yes	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Housing	Black plastic	
Mounting method	3 hole screw mounting	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

SWITCHES

PROFINET - Managed Switch



TREE M-4TX

PROFINET - Managed Switch
IP20

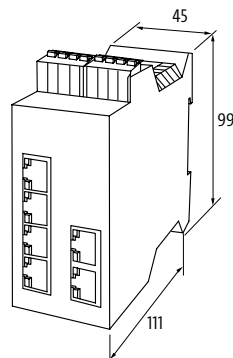
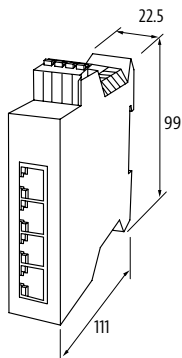


TREE M-6TX

PROFINET - Managed Switch
IP20



Order Data	Art-No.	Art-No.
4 ports	58185	
6 ports		58186
Connections		
Fieldbus	4 × RJ45	6 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm ²	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	PROFINET - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	yes	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	yes
PROFINET		
Addressing	DCP	
FSU (Fast-Start-Up)	no	
Shared Device/Input	no	
Profinet Netload Class	I	
Specification	V2.3, Conformance Class B	
MRP	yes	
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Housing	Black plastic	
Mounting method	DIN-rail mountable (EN 50022)	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

PROFINET - Managed Switch

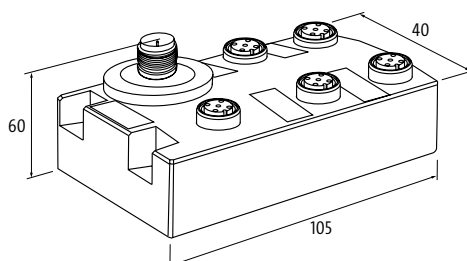


TREE M-STX-PN IP67

PROFINET - Managed Switch
IP67



Order Data		Art-No.
5 ports		58184
Connections		
Fieldbus	5 × M12 (female), D-coded	
Supply	1 × M12 (male), A-coded	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	PROFINET - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	yes	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	
PROFINET		
Addressing	DCP	
FSU (Fast-Start-Up)	no	
Shared Device/Input	no	
Profinet Netload Class	I	
Specification	V2.3, Conformance Class B	
MRP	yes	
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Housing	Black plastic	
Mounting method	3 hole screw mounting	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes



ACTIVE INTERFACE TECHNOLOGY ANALOG AND DIGITAL

- Solid state or relay outputs are short circuit protected
- LED display
- DIN-rail mounting

CONVERT MEASURED VALUES INTO SIGNALS

While measuring, positioning or checking systems, the status of the machine or installation should be monitored. The measured values have to be converted into digital or standard signals (0...20 mA, 4...20 mA or 0...10 V) so that PLCs and computers can process them.

Murrelektronik offers a wide range of intelligent interface modules that enable signal conversion or signal acquisition with galvanic separation.

Active Interface Technology



Converters

AD/DA converters, Analog converters,
Frequency converters, U/I converters

*An overview of this product range
can be found in our online shop*



Timer

MIRO 6.2 Timer

*An overview of this product range
can be found in our online shop*



Comparator modules

MAK

*An overview of this product range
can be found in our online shop*



Temperature converter

MTW

*An overview of this product range
can be found in our online shop*



Further

Brake rectifiers, Demagnetizer

*An overview of this product range
can be found in our online shop*



PASSIVE INTERFACE TECHNOLOGY INTERFACE MODULES

- Screw or spring clamp terminals
- LED displays
- DIN-rail mounting

FOR ANY APPLICATION

Murrelektronik's interface modules make the connections between the controls and the field.

They take over 3 major functions in the system:

- Signal transfer from the machine to the control
- Signal transfer inside the machine or control system
- Easy wiring in control systems

Murrelektronik has been an innovative partner in coming up with interface solutions for years. Their interface modules are fitted with different kinds of robust plugs like SUB-D connectors or ribbon cable connectors for strong signal or power transfers.

They are extremely compact. Individual terminal labels and status displays are integrated into the standard modules.

Interface Modules



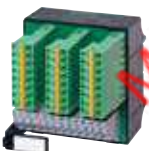
With ribbon cable connection
UFL

An overview of this product range can be found in our online shop



With SUB-D connector
UG SUB, SV

An overview of this product range can be found in our online shop



With pluggable terminals
UGS, PKB

An overview of this product range can be found in our online shop



EUROCARD HOLDERS / CONTROL MODULES

- Flexible applications
- Compact modules
- Connections with up to 96-poles

THE IDEAL CONTROL TECHNOLOGY FOR THE CABINET

Various electronic circuits are fitted onto 100×160 mm Eurocards and then placed in 19" system housings. Murrelektronik's Eurocard holders are designed to mount Eurocards on DIN rails in the cabinet.

In control systems, units are used which require analog control signals (i.e. 0...10 V DC). With these well designed MPOT potentiometer modules, it is simple, cheap and easy to solve your set-point problems. The diode modules of the MKS series are designed for decoupling and interference applications. The LED indicators are available with diameters of 3, 5, and 10 mm. With their compact design, they are suitable for installation in front panels or process flow diagrams.

Eurocard Holders



SKT

*An overview of this product range
can be found in our online shop*



SKP

*An overview of this product range
can be found in our online shop*

Control Modules



Potentiometer modules
MPOT

*An overview of this product range
can be found in our online shop*



Diode modules
MKS-D, MKS-LDP, MKS-BCD

*An overview of this product range
can be found in our online shop*



Assembly modules
MKS-M, ML 14, MP

*An overview of this product range
can be found in our online shop*



Минск +375447584780 viber zakaz@igbt.by www.fotorele.net

2

INTERFACES

2

INTERFACES

Front Panel Interfaces

2.1

Control Cabinet Interfaces / Cable Entry Systems

2.2

Hybrid Fieldbus Coupling

*An overview of this product range can be
found in our online shop*

2.3

Lighting Elements

2.4

Control Devices

2.5

Modular Connection Systems (Modlink Vario)

2.6

Heavy Duty Connectors (Modlink Heavy)

2.7

Минск +375447584780 viber zakaz@igb.by www.fotorele.net



MODLINK MSDD FRONT PANEL INTERFACES

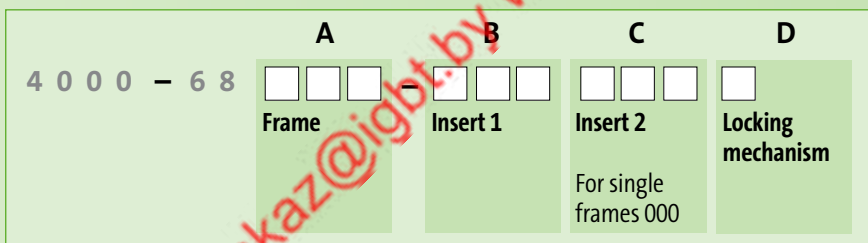
- PLC Service Port
- IP65 Protection; UL Type Rating 4, 4x, 12, 13
- Modular Inserts

DESIGN YOUR OWN PART – WITH OUR ARTICLE NUMBERS

The article numbers help you figure out whether you are ordering outlets, data connector inserts, individual frames or sets. The article numbers of the individual components can be found on the following pages. Both modules and sets can be ordered in quantities of 1 or more.

THE SET

The set article number is made up of A, B, C and D.



First select your components:

- Block A:** Frame (for example 4000-68**522**-000 0001 for transparent double frame)
- Block B:** Insert 1 (for example 4000-68000-**001** 0000 for Germany (VDE) gray)
- Block C:** Insert 2 (for example 4000-68000-**091** 0000 for 2× RJ45 + 2× USB)
- Block D:** Locking mechan. (for example 4000-68522-000 000**1** for 3 mm double-bit key)

The article number for this example set will be:

4 0 0 0 – 6 8 **5 2 2** – **0 0 1** **0 9 1** **1**

Modlink MSDD Front Panel Interfaces



Frames

- Single and double frames

Page 2.1.1



Inserts

- Power outlets
- Data connection inserts

Page 2.1.2



Built-in Sockets

- USB
- RJ45

Page 2.1.14

Modlink MSDD Front Panel Interfaces

An overview of this product range can be found in our online shop

FRONT PANEL INTERFACES

Frames (plastic)			Art-No.
	1-way transparent		
	Mounting frame plastic, PA black Lid: plastic, PC transparent	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68512-0000001
	Mounting frame plastic, PA black Lid: plastic, PC transparent	Closure: Daimler	4000-68512-0000003
	1-way metallic		
	Mounting frame plastic, PA black Lid: plastic, ABS gray	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68513-0000001
	Mounting frame plastic, PA black Lid: plastic, ABS gray	Closure: Daimler	4000-68513-0000003
	1-way gray		
	Mounting frame plastic, PA black Lid: plastic, PBT gray	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68514-0000001
	Mounting frame plastic, PA black Lid: plastic, PBT gray	Closure: Daimler	4000-68514-0000003
	2-way transparent		
	Mounting frame plastic, PA black Lid: plastic, PC transparent	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68522-0000001
	Mounting frame plastic, PA black Lid: plastic, PC transparent	Closure: Daimler	4000-68522-0000003
	2-way metallic		
	Mounting frame plastic, PA black Lid: plastic, ABS gray	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68523-0000001
	Mounting frame plastic, PA black Lid: plastic, ABS gray	Closure: Daimler	4000-68523-0000003
	2-way gray		
	Mounting frame plastic, PA black Lid: plastic, PBT gray	cURus Closure: 3 mm double bit with attachable rotation knob	4000-68524-0000001
	Mounting frame plastic, PA black Lid: plastic, PBT gray	Closure: Daimler	4000-68524-0000003

FRONT PANEL INTERFACES

Power outlets			Art-No.
	Germany (VDE) white Screw terminals: max. 6 mm ² Operating voltage: 250 V AC Operating current: 16 A	LED (yellow)	4000-68000-0010000
	Germany (VDE) white Spring clamp terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A		4000-68000-0160000
	Germany (VDE) yellow Screw terminals: max. 6 mm ² Operating voltage: 250 V AC Operating current: 16 A		4000-68000-0020000
	France (UTE-NF) gray Screw terminals: max. 6 mm ² Operating voltage: 250 V AC Operating current: 16 A	LED (yellow)	4000-68000-0050000
	France (UTE-NF) white Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A		4000-68000-3010000
	USA (NEMA 5-15) white Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 125 V AC Operating current: 15 A	cURus	4000-68000-3240000
	USA (2 × NEMA-GFCI 5-15) Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 125 V AC Operating current: 15 A	cURus	4000-68000-3220000

FRONT PANEL INTERFACES

Power outlets			Art-No.
	USA (2 x NEMA-GFCI 5-20) Screw terminals: max. 6 mm ² Operating voltage: 125 V AC Operating current: max. 20 A per socket	cURus	4000-68000-3280000
	England (BS) Screw terminals: max. 4 mm ² Operating voltage: 250 V AC Operating current: max. 13 A	with touch protection	4000-68000-0060000
	England (BS) orange Screw terminals: max. 4 mm ² Operating voltage: 250 V AC Operating current: max. 13 A		4000-68000-0190000
	Italy (CEI 23-16) Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A	Double	4000-68000-0070000
	Italy (CEI 23-16) Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A		4000-68000-0180000
	Denmark Spring clamp terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A		4000-68000-0170000
	Swiss Spring clamp terminals: max. 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A		4000-68000-0120000

FRONT PANEL INTERFACES

Power outlets			Art-No.
	Australia Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A		4000-68000-0090000
	India (IS 1293) Screw terminals: max. 4 mm ² Operating voltage: 240 V AC Operating current: max. 5 A		4000-68000-3210000
	China (CCC) Screw terminals: max. 4 mm ² Operating voltage: 250 V AC Operating current: max. 10 A		4000-68000-3250000
	Brazil Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A	Double	4000-68000-3290000
	Brazil Screw terminals: max. 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A	Single	4000-68000-3310000

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	SUB-D15 HD; RJ45; USB; USB (form A) 1 × SUB-D15 HD (female/male) VGA 1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	cURus shielded	4000-68000-1040000
	RJ45; RJ45; USB (form A) 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A	cURus shielded	4000-68000-0940000
	RJ45; USB (form A); DVI 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × DVI (female/female)		4000-68000-0820000
	RJ45; RJ45; USB; USB (form A) 2 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female/0.7 m cable) form A	shielded	4000-68000-0990000
	RJ45; RJ12; USB; USB (form A) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × RJ12, 6-pole plastic 2 × USB (female/female) form A	cURus shielded	4000-68000-0910000
	RJ45; USB; USB (form A) 1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	shielded	4000-68000-0960000
	RJ45; RJ45; USB; USB (form A) 2 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	shielded	4000-68000-0970000

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	RJ45; SUB-D9; SUB-D9 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female) 1 × SUB-D9 (male/male)	cURus	4000-68000-1110000
	RJ45; RJ45 2 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	4000-68000-1200000
	RJ45 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (blind plug)	cURus	4000-68000-1210000
	RJ45; RJ45; RJ45; RJ45 4 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	4000-68000-1220000
	USB (form A); RJ45 1 × USB (female/female), form A 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	4000-68000-1310000
	RJ45; SUB-D9 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)	cURus shielded	4000-68000-1410000
	SUB-D9; RJ45; USB (form A) 1 × SUB-D9 (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female/0.7 m cable) form A	shielded	4000-68000-1420000

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	RJ45; USB (form A); SUB-D9 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (female/male)	cURus shielded	4000-68000-1430000
	RJ45; USB (form A); SUB-D9 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (female/female)	cURus shielded	4000-68000-1440000
	RJ45; RJ45; SUB-D9 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male)	shielded	4000-68000-1620000
	RJ45; SUB-D9; SUB-D25 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male) 1 × SUB-D25 (female/male)	cURus	4000-68000-1700000
	BNC; RJ45; SUB-D9 1 × BNC (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male)	shielded	4000-68000-1800000
	BNC; RJ45; SUB-D9 1 × BNC (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)		4000-68000-1810000
	USB (form A); SUB-D25; RJ45 1 × USB (female/female) form A 1 × SUB-D25 (female/male) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	4000-68000-1450000

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	USB (form A); RJ45 1 × USB (female/female/0.7 m cable) form A 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	4000-68000-1300000
	USB (form A); SUB-D9; RJ45 1 × USB (female/female/0.7 m cable) form A 1 × SUB-D9 (female/male) 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	4000-68000-1400000
	USB; USB (form A) 2 × USB (female/female/0.7 m cable) form A	shielded	4000-68000-0900000
	USB (form A to A) 1 × USB (female/female) form A	cURus shielded	4000-68000-0920000
	USB (form A); USB (form A) 2 × USB (female/female) form A	cURus shielded	4000-68000-0930000
	USB; USB; USB; USB (form A) 4 × USB (female/female) form A		4000-68000-0950000
	USB (form A); DVI 2 × USB (female/female) form A 1 × DVI (female/female)		4000-68000-1280000

FRONT PANEL INTERFACES

Combinations			Art-No.
	Germany (VDE) 1 × Germany (VDE) white 2 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4500000
	Germany (VDE) white; RJ45 1 × Germany (VDE) white 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4500001
	Germany (VDE) white; RJ45 1 × Germany (VDE) white 2 × RJ45, 8-pole metal, CAT6A (female/female)	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4500004
	Germany (VDE) orange; RJ45 1 × Germany (VDE) orange 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4620001
	France (UTE-NF); RJ45 1 × France (UTE-NF) white 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4510001
	France (UTE-NF) 1 × France (UTE-NF) white 2 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4510000
	USA (NEMA 5-15); RJ45; USB (form A) 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A	cURus	4000-68000-4030000

FRONT PANEL INTERFACES

Combinations			Art-No.
	USA (NEMA 5-15); RJ45 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus	4000-68000-4040000
	England (BS) 1 × Great Britain (BS) 2 × data cut-out	Screw terminals: max. $2 \times 4 \text{ mm}^2$ (AWG 12) Operating voltage: 250 V AC Operating current: max. 13 A shielded	4000-68000-4520000
	Great Britain (BS); RJ45 1 × Great Britain (BS) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. $2 \times 4 \text{ mm}^2$ (AWG 12) Operating voltage: 250 V AC Operating current: max. 13 A shielded	4000-68000-4520001
	Italy (CEI 23-16) 1 × Italy (CEI 23-16) 2 × data cut-out	Screw terminals: max. $2 \times 4 \text{ mm}^2$ (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4530000
	Italy (CEI 23-16); RJ45 1 × Italy (CEI 23-16) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. $2 \times 4 \text{ mm}^2$ (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4530001
	Italy (CEI 23-16); SUB-D9 1 × Italy (CEI 23-16) 1 × SUB-D9 (male/female) 1 × SUB-D9 cut-out	Screw terminals: max. $2 \times 4 \text{ mm}^2$ (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	4000-68000-4530004
	Denmark 1 × Denmark (white) 2 × data cut-out	Spring clamp terminals: max. $2 \times 2.5 \text{ mm}^2$ (AWG 14) Operating voltage: 250 V AC Operating current: max. 13 A shielded	4000-68000-4550000

FRONT PANEL INTERFACES

Combinations			Art-No.
	Denmark 1 × Denmark (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm ² (AWG 14) Operating voltage: 250 V AC Operating current: max. 13 A shielded	4000-68000-4550001
	Swiss 1 × Swiss 2 × data cut-out	Spring clamp terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4540000
	Swiss; RJ45 1 × Swiss 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4540001
	India (IS 1293) 1 × India (white) 2 × data cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 240 V AC Operating current: max. 5 A shielded	4000-68000-4570000
	India (IS 1293); RJ45 1 × India (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 240 V AC Operating current: max. 5 A shielded	4000-68000-4570001
	China (CCC) 1 × China (white) 2 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4580000
	China (CCC); RJ45 1 × China (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm ² (AWG 12) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4580001

FRONT PANEL INTERFACES

Combinations			Art-No.
	Brazil 1 × Brazil 4 × data cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A	4000-68000-4610000
	Brazil; RJ45 1 × Brazil 1 × RJ45, 8-pole metal, CAT6A (female/female) 3 × data cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4610001
	Brazil; SUB-D9 1 × Brazil 1 × SUB-D9 (male/female) 1 × SUB-D9 cut-out	Screw terminals: max. 2 × 1.5 mm ² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	4000-68000-4610004
	Germany (VDE); RJ45; FI-cut-out 1 × VDE 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4300001
	Germany (VDE) yellow; RJ45; FI-cut-out 1 × VDE yellow 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4390001
	France (UTE-NF); RJ45; FI-cut-out 1 × France (UTE-NF) white 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		4000-68000-4310001
	USA (2 × NEMA-GFCI 5-15); RJ45; USB (form A); fuse 2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × fuse (3 A)	cURus with touch protection	4000-68000-4100000

FRONT PANEL INTERFACES

Combinations			Art-No.
	USA (2 x NEMA-GFCI 5-15); RJ45; fuse 2 x NEMA-GFCI 5-15 (screw terminals) 1 x RJ45, 8-pole metal, CAT5e (female/female) 1 x fuse (3 A)	cURus with touch protection	4000-68000-4110000
	USA (2 x NEMA-GFCI 5-15); RJ45; RJ45; fuse 2 x NEMA-GFCI 5-15 (screw terminals) 2 x RJ45, 8-pole metal, CAT5e (female/female) 1 x fuse (3 A)	cURus with touch protection	4000-68000-4120000
	USA (2 x NEMA-GFCI 5-15); RJ45; SUB-D9; fuse 2 x NEMA-GFCI 5-15 (screw terminals) 1 x RJ45, 8-pole metal, CAT5e (female/female) 1 x SUB-D9 (male/female) 1 x fuse (3 A)	cURus with touch protection	4000-68000-4130000
	USA (2 x NEMA-GFCI 5-15); fuse 2 x NEMA-GFCI 5-15 (screw terminals) 1 x fuse (3 A)	cURus with touch protection	4000-68000-4140000
	Great Britain (BS); RJ45; FI cut-out 1 x Great Britain (BS) 1 x RJ45, 8-pole metal, CAT5e (female/female) 1 x FI cut-out		4000-68000-4320001
	Italy (CEI 23-16); RJ45; FI cut-out 1 x Italy (CEI 23-16) 1 x RJ45, 8-pole metal, CAT5e (female/female) 1 x FI cut-out		4000-68000-4330001
	Swiss; RJ45; FI cut-out 1 x Swiss 1 x RJ45, 8-pole metal, CAT5e (female/female) 1 x FI cut-out		4000-68000-4340001
	Australia; RJ45; FI cut-out 1 x Australia 1 x RJ45, 8-pole metal, CAT5e (female/female) 1 x FI cut-out		4000-68000-4360001

FRONT PANEL INTERFACES

Pass-through			Art-No.
	Pass-through 1 × RJ45, 8-pole metal, CAT5e (female/female)	cULus	4000-73000-0010000
	Pass-through 1 × USB 3.0 (female/male) form A, 0.6 m cable	cULus	4000-73000-0150000
	1 × USB 3.0 (female/male) form A, 1.0 m cable	cULus	4000-73000-0160000
	1 × USB 3.0 (female/male) form A, 1.5 m cable	cULus	4000-73000-0170000
	1 × USB 3.0 (female/male) form A, 2.0 m cable	cULus	4000-73000-0180000

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net

FRONT PANEL INTERFACES

Connection accessories			Art-No.
	Gender Changer RJ45 (female /female)	cURus	4000-68000-9040010
	Gender Changer RJ12; (female/female)		4000-68000-9040011
	Gender Changer RJ45 (female /female) Zinc die casting, nickel-plated	cURus	4000-68000-9040012
	Gender Changer USB (form A) 3.0 (female/female)		4000-68000-9040022
	Gender Changer SUB-D9 (female/female)	cURus	4000-68000-9040030
	SUB-D9 (female/male)	cURus	4000-68000-9040031
	Gender Changer SUB-D9 (male/male)	cURus	4000-68000-9040032
	Gender Changer SUB-D15 (female/male)	cURus	4000-68000-9040040
	SUB-D15 (female/female)	cURus	4000-68000-9040041
	Gender Changer SUB-D15 (male/male)	cURus	4000-68000-9040042
	Gender Changer SUB-D15 HD (female/male) VGA	cURus	4000-68000-9040045

FRONT PANEL INTERFACES

Connection accessories			Art-No.
	Gender Changer		
	SUB-D25 (female/female)	cURus	4000-68000-9040050
	SUB-D25 (female/male)	cURus	4000-68000-9040051
	Cables		
	SUB-D9 (male/male); 2 m	shielded	4000-68000-9030010
	SUB-D9 (male/male); 5 m	shielded	4000-68000-9030011
	SUB-D9 (female/male); 2 m	shielded	4000-68000-9030020
	SUB-D9 (female/male); 5 m	shielded	4000-68000-9030021
	Cables		
	SUB-D25 (female/male); 1.8 m	shielded	4000-68000-9030040
	SUB-D25 (female/male); 5 m	shielded	4000-68000-9030041
	Cables		
	USB (form A to A); 2 m (male/male)	shielded	4000-68000-9030050
	USB (form A to A); 5 m (male/male)	shielded	4000-68000-9030051
	USB (form A to A); 2 m (male/male) PUR	shielded	4000-68000-9030052
	USB (form A to A); 5 m (male/male) PUR	shielded	4000-68000-9030053
	USB (form A to B); 2 m	shielded	4000-68000-9030054
	USB (form A to B); 5 m	shielded	4000-68000-9030055
	Cables		
	RJ45 (8/8-pole) metal, CAT6; 2 m	shielded	4000-68000-9030060
	RJ45 (8/8-pole) metal, CAT6; 5 m	shielded	4000-68000-9030061
	RJ45 (8/8-pole) metal, CAT6; 10 m	shielded	4000-68000-9030062
Mounting accessories			Art-No.
	Ground strap 6 mm²		
	100 mm for screw (M4)		4000-71001-0610004
	200 mm for screw (M4)		4000-71001-0620004
	300 mm for screw (M4)		4000-71001-0630004
	Blind plate (flat)		
	Self-installation available space: 45 × 75 mm	cURus	4000-68000-8900000
	Blind plate (depth)		
	Self-installation available space: 34 × 58 mm Cavity: 13 mm deep	cURus	4000-68000-8910000

FRONT PANEL INTERFACES

Mounting accessories			Art-No.
	Blind plates (pre-cut) 1 × USB, 1 × RJ45, SUB-D9	cURus shielded	4000-68000-8500000
	Blind plates (pre-cut) 1 × USB, 1 × RJ45, 1 × SUB-D25	cURus shielded	4000-68000-8510000
	Housing (1-way) with 4 blind plugs (M16 × 1.5) H × W × D: 180×94×81 mm		4000-68000-9060010
	Housing (2-way) with 6 blind plugs (M16 × 1.5) H × W × D: 182×180×90 mm		4000-68000-9060020
	Touch protection box for double frame H × W × D: 124×124×67 mm	cURus	4000-68000-9140000
	Touch protection box for single frame H × W × D: 115×87×66 mm	cURus	4000-68000-9180000
	Cable compression gland M16	Sealing range (cable Ø): 4...8 mm	4000-68000-9060030
	Label plate Frame: 20 pcs	cURus	4000-68000-9000000



CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

- Durable connections
- Modular system
- High protection degree

MODLINK MPV CABLE ENTRY SYSTEM

The article numbers help you figure out whether you are ordering inserts, individual frames or sets.
A set has one part number for up to three components.

THE MODLINK MPV SET

The set article number is made up of **A**, **B** and **C**.

										A			B			C			
4	0	0	0	-	6	9				-							0		
							Frame			Insert 1			Insert 2						
													For single frames 000						

First select your components:

- Block A:** Frame (e.g. 4000-69**122**-000 0000 for double frame)
Block B: Insert 1 (e.g. 4000-69000-**100** 0000 for M12 / SUB-D)
Block C: Insert 2 (e.g. 4000-69000-**200** 0000 for 7/8" / spring clamp terminal)

The article number for this example set will be:

4	0	0	0	-	6	9	1	2	2	-	1	0	0	2	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Control Cabinet Interfaces



Modlink MPV – modular

- Frames
- Inserts
- Accessories

Page 2.2.1

Cable Entry Systems



Cable entry system – modular

- Cable entry plate
- Inserts

Page 2.2.3



Cable entry system – predefined

- Rectangular
- Round

Page 2.2.4

MPV Frame			Art-No.
	Single for standard cut-out Size 6 (35 x 52 mm) IP65	cURus	4000-69112-0000000
	Double for standard cut-out Size 24 (35 x 112 mm) IP65	cURus	4000-69122-0000000
	Single (30°-angle) for standard cut-out Size 6 (35 x 52 mm) IP65	cURus	4000-69212-0000000
	Double (30°-angle) for standard cut-out Size 24 (35 x 112 mm) IP65	cURus	4000-69222-0000000
MPV Inserts			Art-No.
	M12 M12 (male/female) 5-pole IP65	cURus	4000-69000-1040000
	M12 (male/female) 5-pole, B-coded IP65	cURus	4000-69000-1060000
	M12 (male/female) 6-pole, Cube67 IP65	cURus	4000-69000-1080000
	M12; SUB-D9 M12 (female) B-coded SUB-D9 (female) IP65	cURus	4000-69000-1000000
	M12; terminators M12 (female) 5-pole, A-coded Spring clamp terminal connection IP65		4000-69000-1050000

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

MPV Inserts			Art-No.
	M12; terminators M12 (female) 5-pole, A-coded Screw terminal connection (yellow) Safety IP65		4000-69000-1090000
	M12; RJ45 M12 (female) 4-pole, D-coded RJ45 (8/8-pole) metal, CAT6 IP65		4000-69000-1100000
	7/8"; Spring clamp terminal 7/8" (female) Spring clamp terminal connection IP65	cURus	4000-69000-2000000
	7/8"; Spring clamp terminal 7/8" (male) Spring clamp terminal connection		4000-69000-2040000
	RJ45 RJ45 (8/8-pole) metal, CAT6 IP65	cURus	4000-69000-2500000
	LWL Fiber Optic (male/male) single mode IP65		4000-69000-5200000
MPV accessories			Art-No.
	Blind insert for sealing of unused openings IP65	cURus	4000-69000-9000000

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

MPV accessories			Art-No.
	RJ45 Male straight, 4-pole IP65		4000-69000-9500050
	RJ45 Male 90°, 4-pole IP65		4000-69000-9500060
	Control cabinet entry system M12 straight, A-coded, 5-pole, shielded	DeviceNet, CANopen	7000-42111-0000000
	straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus	7000-44111-0000000
	straight, A-coded, 6-pole, shielded	Cube67	7000-46111-0000000
	Control cabinet entry system M12 straight, D-coded, 4-pole, shielded (female/female)	Ethernet CAT5	7000-44611-0000000
Connectors			Art-No.
	Size 16 for 4 cables (0 large, 4 small)		4000-70103-0004000
	for 5 cables (1 large, 4 small)		4000-70103-0104000
	for 8 cables (0 large, 8 small)		4000-70103-0008000
	Size 24 for 4 cables (2 large, 2 small)		4000-70103-0202000
	for 7 cables (1 large, 6 small)		4000-70103-0106000
	for 10 cables (0 large, 10 small)		4000-70103-0010000

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

Cable entry glands			Art-No.
	with cable tie eye		
	Cable diameter (3...4 mm)		4000-70403-0001030
	Cable diameter (4...5 mm)		4000-70403-0001040
	Cable diameter (5...6 mm)		4000-70403-0001050
	Cable diameter (6...7 mm)		4000-70403-0001060
	Cable diameter (7...8 mm)		4000-70403-0001070
	Cable diameter (8...9 mm)		4000-70403-0001080
	Cable diameter (9...10 mm)		4000-70403-0001090
	Cable diameter (10...11 mm)		4000-70403-0001100
	Cable diameter (11...12 mm)		4000-70403-0001110
	Cable diameter (12...13 mm)		4000-70403-0001120
	Cable diameter (13...14 mm)		4000-70403-0001130
	Cable diameter (14...15 mm)		4000-70403-0001140
	Cable diameter (15...16 mm)		4000-70403-0001150
	Cable diameter (16...17 mm)		4000-70403-0100160
	Cable diameter (17...18 mm)		4000-70403-0100170
	Cable diameter (18...19 mm)		4000-70403-0100180
	Cable diameter (19...20 mm)		4000-70403-0100190
	Cable diameter (20...21 mm)		4000-70403-0100200
	Cable diameter (21...22 mm)		4000-70403-0100210
	Cable diameter (22...23 mm)		4000-70403-0100220
	Cable diameter (23...24 mm)		4000-70403-0100230
	Cable diameter (24...25 mm)		4000-70403-0100240
	Cable diameter (24...25 mm)		4000-70403-0100250
	Cable diameter (26...27 mm)		4000-70403-0100260
	Cable diameter (27...28 mm)		4000-70403-0100270
	Cable diameter (28...29 mm)		4000-70403-0100280
	Cable diameter (29...30 mm)		4000-70403-0100290
	Cable diameter (30...31 mm)		4000-70403-0100300
	Special		
	Blind plug (plugs) single		4000-70503-0001010
	Blind plug (plugs) double		4000-70503-0100010
	Adapter		4000-70503-0100020
	for 1 AS-Interface cable		4000-70503-0001020
	for 2 AS-Interface cables		4000-70503-0001030
	for 2 cables (Ø 6 mm)		4000-70503-0001060
	for 2 cables (Ø 5 mm)		4000-70503-0001050
Plates			Art-No.
	Size 24		
	Cable diameter (12) × 8...12 mm		4000-70603-0240120
	Cable diameter (6) × 3...6.5 mm, (4) × 5...9.2 mm, (4) × 9.6...15.9 mm		4000-70603-0240140
	Cable diameter (17) × 5...9.2 mm		4000-70603-0240170
	Cable diameter (16) × 3...6.5 mm, (4) × 5...9.2 mm, (2) × 8...12.5 mm		4000-70603-0240220
	Cable diameter (23) × 4.3...8.1 mm		4000-70603-0240230
	Cable diameter (29) × 3...6.5 mm		4000-70603-0240290
	M50		
	Cable diameter (3) × 6...10 mm, (1) × 9.6...15.9 mm		4000-70703-0500040
	Cable diameter (1) × 3...5.5 mm, (5) × 5...9.2 mm		4000-70703-0500060
	Cable diameter (7) × 3...6.5 mm, (1) × 6...10 mm		4000-70703-0500080
	Locknut		4000-70704-0500000

Plates			Art-No.
	M63		
	Cable diameter (2) × 3...6.5 mm, (4) × 5...9.2 mm, (2) × 9.6...15.9 mm		4000-70703-0630080
	Cable diameter (6) × 3...5.5 mm, (6) × 3...6.5 mm, (1) × 6...10 mm		4000-70703-0630130
	Cable diameter (19) × 3...5 mm		4000-70703-0630190
	Locknut		4000-70704-0630000
Accessories			Art-No.
	Blind plate		
	Size 16		4000-70202-0001000
	Blind plate		
	Size 24		4000-70202-0002000
	Adapter		
	from size 24 to 16		4000-70203-0100000
	Cable strain relief		
	for 1 cable		4000-70302-0000010
	for 5 cables		4000-70302-0000050
	for 9 cables		4000-70302-0000090
	Label plate		
	20 × 9 mm		4000-70920-0000000
	Cable tie		
	for small glands L = 75 mm		4000-70902-0075220
	for large glands L = 160 mm		4000-70902-0160450
	for large glands L = 180 mm		4000-70902-0180800



HYBRID FIELDBUS COUPLING

- For durable connections
- A high degree of protection
- Repeater included

EASILY CONNECTED – QUICKLY AND SAFELY

MSDD hybrid fieldbus couplers transfer data and power from the cabinet into the industrial field. A repeater function amplifies and processes signals.

Active hybrid fieldbus coupling offers many benefits:

- Repeater and control cabinet interface in one module
- PROFIBUS FMS/DP galvanically separated
- Three independent PROFIBUS ports
- All three PROFIBUS segments are galvanically separated
- Baud rate change during operation – automatic and continuous Baud rate detection
- 3 × segment length – 200 m at 1.5 Mbit/s and 100 m at 12 Mbit/s
- Cascading capabilities for 31 modules per PROFIBUS segment
- Integrated terminating resistor

MSDD Hybrid Fieldbus Coupling



Active Hybrid Fieldbus Coupling

Active connection between control cabinet and fieldbus area (incl. repeater)

An overview of this product range can be found in our online shop



Passive Hybrid Fieldbus Coupling

Passive connection between control cabinet and fieldbus area

An overview of this product range can be found in our online shop



LIGHTING ELEMENTS MAXIMUM FLEXIBILITY

- High light yield
- Long life
- Plug-in solutions

DISTINCT SIGNALS AND PERFECT ILLUMINATION IN DAYLIGHT QUALITY

Modlight Pro LED signal towers

The signal towers are characterized by maximum flexibility in color selection and color composition. The elements of the signal towers with diameters of 50 and 70 millimeters are connected by bayonet locks, making for easy and quick assembly. The signal towers can be flexibly mounted.

Modlight Illumix LED machine light

The machine lights of the Modlight Illumix series ensure optimal illumination of machines and systems based on maintenance-free and durable LED technology in daylight quality. Rotatable mounting brackets provide flexibility in attaching the lights.

Signal lights



Modlight50 Pro / Modlight70 Pro

- 50/70 mm
- Connecting elements
- Buzzer modules
- LED modules

Page 2.4.1



Sets – Modlight30 / Modlight50 Pro / Modlight70 Pro

- 30/50/70 mm
- LED signal towers

Page 2.4.2



Comlight57

- 57 mm
- Single lights
- LED

Page 2.4.3

Machine lights



Modlight Illumix Slim Line

- Machine light (LED)
- Degree of protection IP54

Modlight Illumix Classic Line

- Machine light (LED)
- Degree of protection IP67

Page 2.4.5



Modlight Illumix Xtreme

- Machine light (LED)
- Degree of protection IP69K

Page 2.4.6

Connection modules			Art-No.
	Base for floor mount Modlight50 Pro	Spring clamp terminals cURus	4000-76050-1100002
	Base for floor mount Modlight70 Pro	Spring clamp terminals cURus	4000-76070-1100002
	Basic for tube mounting Modlight50 Pro	Spring clamp terminals cURus	4000-76050-1100003
	Basic for tube mounting Modlight70 Pro	Spring clamp terminals cURus	4000-76070-1100003
	Basic Modlight70 Pro	M12 (8-pole), down	4000-76070-1300002
	Basic Modlight70 Pro	M12 (8-pole), sideways	4000-76070-1400002
	Basic with magnet base Modlight70 Pro	M12 (8-pole), sideways	4000-76070-1500002
Buzzer modules			Art-No.
	Buzzer module Modlight50 Pro		4000-76050-1100004
	Buzzer module Modlight70 Pro		4000-76070-1100004
LED modules			Art-No.
	LED module Modlight50 Pro	red	4000-76050-1011000
	LED module Modlight70 Pro	red	4000-76070-1011000
	LED module Modlight50 Pro	yellow	4000-76050-1012000
	LED module Modlight70 Pro	yellow	4000-76070-1012000

LIGHTING ELEMENTS

LED modules			Art-No.
	LED module Modlight50 Pro	green	4000-76050-1013000
	LED module Modlight70 Pro	green	4000-76070-1013000
	LED module Modlight50 Pro	blue	4000-76050-1014000
	LED module Modlight70 Pro	blue	4000-76070-1014000
	LED module Modlight50 Pro	clear	4000-76050-1015000
	LED module Modlight70 Pro	clear	4000-76070-1015000
Sets			Art-No.
	Modlight30 (green/yellow/red)		
	Connection module + LED modules	Connection cable L = 300 mm	4000-75324-5310000
	Connection module + LED modules	Connection M12 (on bottom)	4000-75330-5310000
	Modlight50 Pro (green/yellow/red)		
	Basic + LED modules		4000-76501-5310000
	Basic, buzzer + LED modules		4000-76502-5310000
	Modlight70 Pro (green/yellow/red)		
	Basic + LED modules + M12 (down)		4000-76704-5310000
	Basic, buzzer + LED modules + M12 (down)		4000-76705-5310000
	Modlight70 Pro (green/yellow/red)		
	Basic + LED modules + M12 (side)		4000-76712-5310000
	Basic, buzzer + LED modules + M12 (side)		4000-76713-5310000

Compact status lights			Art-No.
	Comlight57 red	Spring clamp terminal connection	4000-75057-1111000
	red	Connection M12 (on bottom)	4000-75057-1311000
	Comlight57 yellow	Spring clamp terminal connection	4000-75057-1112000
	yellow	Connection M12 (on bottom)	4000-75057-1312000
	Comlight57 green	Spring clamp terminal connection	4000-75057-1113000
	green	Connection M12 (on bottom)	4000-75057-1313000
	Comlight57 blue	Spring clamp terminal connection	4000-75057-1114000
	blue	Connection M12 (on bottom)	4000-75057-1314000
	Comlight57 clear	Spring clamp terminal connection	4000-75057-1115000
	clear	Connection M12 (on bottom)	4000-75057-1315000

LIGHTING ELEMENTS

Accessories Modlight30			Art-No.
	Adapter for wall assembly		4000-75030-0000903
Accessories Modlight50/70 Pro			Art-No.
	Bottom adapter for tube mounting	for Modlight50/70 Pro	4000-76070-0000901
	Adapter for tube/wall mounting	for Modlight50/70 Pro	4000-76070-0000902
	Adapter for wall assembly	for Modlight70 Pro	4000-76070-0000903
	Adapter for wall assembly Cable outlet (on the bottom)	for Modlight70 Pro	4000-75070-0000904
	Aluminum tube 300 mm	for Modlight50/70 Pro	4000-76070-0000913
	800 mm	for Modlight50/70 Pro	4000-76070-0000918
	Magnet base with M16 × 1.5 gland	Sideways cable entry point for Modlight50/70 Pro	4000-75070-0000920
	Magnet base with M12 flange plug connector (8-pole)	Sideways connection for Modlight50/70 Pro	4000-75070-0000921

Accessories Modlight50/70 Pro			Art-No.
	Mounting adapter for strain relief	bottom or side exit	4000-75070-0000922
	Label plate transparent	for Modlight50 Pro	4000-76050-0000923
	transparent	for Modlight70 Pro	4000-76070-0000923
LED machine lights			Art-No.
	Modlight Illumix Slim Line		
	4 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715004
	8 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715008
	16 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715016
	24 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715024
	32 W - 24 V DC Connection M8	IP54 cULus	4000-75800-1715032
	Modlight Illumix Slim Line C		
	4 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715004
	8 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715008
	16 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715016
	24 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715024
	32 W - 24 V DC Connection M8 expandability	IP54 cULus	4000-75900-1715032
	Modlight Illumix Classic Line		
	6 W - 24 V DC Connection M12	IP67 cULus	4000-75801-1415006
	12 W - 24 V DC Connection M12	IP67 cULus	4000-75801-1415012
	18 W - 24 V DC Connection M12	IP67 cULus	4000-75801-1415018
	24 W - 24 V DC Connection M12	IP67 cULus	4000-75801-1415024

LIGHTING ELEMENTS

LED machine lights			Art-No.
	Modlight Illumix Classic Line C 6 W - 24 V DC Connection M12 expandability 12 W - 24 V DC Connection M12 expandability 18 W - 24 V DC Connection M12 expandability 24 W - 24 V DC Connection M12 expandability	IP67 cULus IP67 cULus IP67 cULus IP67 cULus	4000-75901-1415006 4000-75901-1415012 4000-75901-1415018 4000-75901-1415024
	Modlight Illumix Xtreme 27 W - 24 V DC Connection M12	IP69K cULus	4000-75827-1315000
	Modlight Illumix Xtreme Joint coupling		4000-75800-0000900



CONTROL DEVICES EMERGENCY STOP AND RESET PUSHBUTTONS

- Easy mounting
- Error-free connection
- Suitable for applications in the safety technology

FAST AND ERROR-FREE WIRING WITH STANDARD CABLES

The **EMERGENCY STOP** and **RESET** buttons from Murrelektronik can be integrated very easily in electronic installations

These control and monitoring devices can be connected via preconfigured M12 cables (4-, 5-, or 8-pole). A time-saving solution excluding the risk of faulty wirings. The 'Plug & Play' feature makes integrating the control devices in machines and systems faster.

42 mm variants



E-Stop button

- With M12 connection
- 4-, 5-, or 8-pole variants

Page 2.5.1



R-Button

- With M12 connection
- 4- or 8-pole variants

Page 2.5.1

72 mm variants



E-Stop button

- With M12 connection
- 4-, 5-, or 8-pole variants
- With/without protective collar

Page 2.5.1

Control devices			Art-No.
	E-Stop 42 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening)	69000
	E-Stop 42 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening)	69001
	E-Stop 42 2NC L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) LED-Ring can be lit	69002
	E-Stop / R-B 42 2NC 1NO M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) 1 button (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69003
	E-Stop / R-B 42 2NC 1NO L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) 1 button can be lit (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69004
	R-Button / 42 1NO M12(4) M12 (4-pole)	1 button (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69010
	R-Button / 42 1NO L M12(4) M12 (4-pole)	1 button can be lit (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69013
	R-Button / 42 2NO M12(4) M12 (4-pole)	2 buttons (each 1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69011
	R-Button / 42 2NO L M12(8) M12 (8-pole)	2 buttons can be lit (each 1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	69012
	E-Stop 72 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening)	55550
	E-Stop 72 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening)	69041
	E-Stop 72 2NC L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) LED-Ring can be lit	69043
	E-Stop 72P 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening) with protection shroud	69040
	E-Stop 72P 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening) with protection shroud	69042

CONTROL DEVICES

Accessories control devices			Art-No.
	T-coupler (SlimLine) M12 - M12 Male straight - female/male straight	for 8-pole Emergency-Stop button	7030-42622-0000000

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net



MODLINK VARIO MEDIA CONNECTOR

- Easy mounting and dismounting without the need of tools
- Maximum robustness, all components being made of solid metal
- Electronics and media in one coupling

MAXIMUM MODULARITY IN INDUSTRIAL ENVIRONMENT

Modlink Vario is a modular media connector to couple and decouple pneumatics, fluids and electronics with just one system.

It is suitable for uncomplicated use on switch cabinets, tools and machine parts. Its unique feature is that it allows simultaneous non-drip coupling under pressure of electrical connections and media. The basic modules are available in 4, 6, 8 or 10 different models.

For each bore, the type of application, pneumatics, fluids or electronics, can be freely selected. This gives almost unlimited equipment options.

Base body



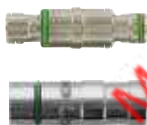
Round or rectangular

- Different locking types (union nut, lever)
- Connections made of aluminum or stainless steel
- Different types (e.g. 4, 6, 8, and 10 connections)

Page 2.6.1

An overview of this product range can be found in our online shop

Inserts



Inserts

- Inserts for power and media supply
- Inserts for the connection of different M12 connecting cables
- Pneumatics and fluid inserts for a variety of hose diameters

Page 2.6.2

MODULAR CONNECTION SYSTEMS (MODLINK VARIO)

Stationary housing (round)			Art-No.
	4-way	Aluminium	M1850-040601
		Stainless Steel 1.4404 (V4A)	M1851-040601
	6-way	Aluminium	M1850-060601
		Stainless Steel 1.4404 (V4A)	M1851-060601
	8-way	Aluminium	M1850-080601
		Stainless Steel 1.4404 (V4A)	M1851-080601
	10-way	Aluminium	M1850-100601
		Stainless Steel 1.4404 (V4A)	M1851-100601
Mobile housing (round)			Art-No.
	4-way	Aluminium	M1850-040602
		Stainless Steel 1.4404 (V4A)	M1851-040602
	6-way	Aluminium	M1850-060602
		Stainless Steel 1.4404 (V4A)	M1851-060602
	8-way	Aluminium	M1850-080602
		Stainless Steel 1.4404 (V4A)	M1851-080602

MODULAR CONNECTION SYSTEMS (MODLINK VARIO)

Mobile housing (round)			Art-No.
	10-way	Aluminium	M1850-100602
		Stainless Steel 1.4404 (V4A)	M1851-100602
Stationary housing (rectangular)			Art-No.
	8-way	Aluminium	M1856-24080611
Mobile housing (rectangular)			Art-No.
	8-way	Aluminium	M1856-24080612
Inserts Media (Stationary housing)			Art-No.
	AD4 without shut-off	Brass, nickel plated	MVT1821-062406021
	AD6 without shut-off	Brass, nickel plated	MVT1821-062406041
	AD8 without shut-off	Brass, nickel plated	MVT1821-062406061
	AD4 with shut-off	Brass, nickel plated	MVT1820-062406021
	AD6 with shut-off	Brass, nickel plated	MVT1820-062406041
	AD8 with shut-off	Brass, nickel plated	MVT1820-062406061
	AD6 drip-free	Brass, dezincification-resistant	MVT1825-262406041
	AD8 drip-free	Brass, dezincification-resistant	MVT1825-262406061

MODULAR CONNECTION SYSTEMS (MODLINK VARIO)

Inserts Media (Mobile housing)			Art-No.
	AD4 without shut-off	Brass, nickel plated	MVT1821-062406022
	AD6 without shut-off	Brass, nickel plated	MVT1821-062406042
	AD8 without shut-off	Brass, nickel plated	MVT1821-062406062
	AD4 with shut-off	Brass, nickel plated	MVT1820-062406022
	AD6 with shut-off	Brass, nickel plated	MVT1820-062406042
	AD8 with shut-off	Brass, nickel plated	MVT1820-062406062
	AD6 drip-free	Brass, dezincification-resistant	MVT1825-262406042
	AD8 drip-free	Brass, dezincification-resistant	MVT1825-262406062
Inserts Electro (Stationary housing)			Art-No.
	M12, 5-pole	A-coded	7000-42114-0000000
	M12, 4-pole	B-coded	7000-44114-0000000
	M12, 6-pole	A-coded	7000-46114-0000000
	M12, 8-pole	A-coded	7000-48114-0000000
	M12, 4-pole	D-coded	7000-44624-0000000
Inserts Electro (Mobile housing)			Art-No.
	M12, 5-pole	A-coded	7000-42116-0000000
	M12, 4-pole	B-coded	7000-44116-0000000
	M12, 6-pole	A-coded	7000-46116-0000000
	M12, 4-pole	A-coded	7000-48116-0000000
	M12, 4-pole	D-coded	7000-44586-0000000



MODLINK HEAVY HEAVY DUTY CONNECTOR

- Maximum variety
- High tightness
- Worldwide use

MAXIMUM MODULARITY IN INDUSTRIAL ENVIRONMENT

The heavy-duty plug connectors of the Modlink Heavy series from Murrelektronik guarantee secure transmission of signals, energy, data and pneumatics - even in the roughest of industrial environments. They consistently protect interfaces from water, dirt and high mechanical loads.

We provide a broad range of products. For our customers, we offer a matching connector for every requirement - Flexibility in the configuration of the plug connectors is our great strength. Thus, for housings, we offer as many as four different types, each in seven different sizes. They can be locked, as needed, by three different methods. As for contact inserts, you can choose from a large number of fixed-pole or modular versions. Our offer of accessories is exactly tuned to the heavy-duty plug connectors from Murrelektronik and rounded off to the last detail.

Housings



- 4 housing types
- 7 different sizes
- 3 locking types
- Outgoing cables in all directions

Page 2.7.1

An overview of this product range can be found in our online shop

Inserts



- Series A, D, E, EE, K, HSE, HV and Q
- 3 different connection types

Page 2.7.3

An overview of this product range can be found in our online shop

Frames and modules



- 4 frame sizes
- Modules for signals, energy, data and pneumatics

Page 2.7.5

An overview of this product range can be found in our online shop

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Hood			Art-No.
	B6 Form Looking techniques Cable outlet Threaded hole	low Single locking lever straight M20	70MH-GTDNL-A01B000
	B6 Form Looking techniques Cable outlet Threaded hole	low Single locking lever laterally M20	70MH-GTDNL-A02B000
	B10 Form Looking techniques Cable outlet Threaded hole	low Double locking lever straight M25	70MH-GTENQ-A01C000
	B10 Form Looking techniques Cable outlet Threaded hole	low Double locking lever laterally M25	70MH-GTENQ-A02C000
	B16 Form Looking techniques Cable outlet Threaded hole	high Double locking lever straight M32	70MH-GTFHQ-A01D000
	B16 Form Looking techniques Cable outlet Threaded hole	high Double locking lever laterally M32	70MH-GTFHQ-A02D000
	B24 Form Looking techniques Cable outlet Threaded hole	high Double locking lever straight M32	70MH-GTGHQ-A01D000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Hood			Art-No.
	B24		
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever laterally M32	70MH-GTGHQ-A02D000
Bulkhead mounted housing			Art-No.
	B6		
	Looking techniques Protection	Single locking lever IP65	70MH-GADNL-B000000
	B10		
	Looking techniques Protection	Double locking lever IP65	70MH-GAENQ-B000000
	B16		
	Looking techniques Protection	Double locking lever IP65	70MH-GAFNQ-B000000
	B24		
	Looking techniques Protection	Double locking lever IP65	70MH-GAGNQ-B000000
Surface mounted housing			Art-No.
	B6		
	Form Looking techniques Cable outlet Threaded hole	low Single locking lever laterally M20	70MH-GSDNL-B01B000
	B10		
	Form Looking techniques Cable outlet Threaded hole	low Single locking lever double-sided M20	70MH-GSDNL-B02B000
	B10		
	Form Looking techniques Cable outlet Threaded hole	low Double locking lever laterally M25	70MH-GSENL-B01C000
	B10		
	Form Looking techniques Cable outlet Threaded hole	high Double locking lever double-sided M25	70MH-GSEHQ-B02C000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Surface mounted housing			Art-No.
	B16		
	Form Locking techniques Cable outlet Threaded hole	high Double locking lever laterally M32	70MH-GSFHQ-B01D000
	B24		
	Form Locking techniques Cable outlet Threaded hole	high Double locking lever laterally M32	70MH-GSGHQ-B01D000
	Form Locking techniques Cable outlet Threaded hole	high Double locking lever double-sided M32	70MH-GSGHQ-B02D000
Coupling housing			Art-No.
	B10		
	Form Locking techniques Cable outlet Threaded hole	low Double locking lever straight M25	70MH-GKENQ-B01C000
	B16		
	Form Locking techniques Cable outlet Threaded hole	high Double locking lever straight M32	70MH-GKFHQ-B01D000
	B24		
	Form Locking techniques Cable outlet Threaded hole	high Double locking lever straight M32	70MH-GKGHQ-B01D000
Fixed-pole inserts			Art-No.
	B6		
	Type No. of poles Connection E-Series	Male 6 Push-In terminals	70MH-ES006-DP03020

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Fixed-pole inserts			Art-No.
	B10 Type No. of poles Connection E-Series	Male 10 Push-In terminals	70MH-ES010-EP03020
	B16 Type No. of poles Connection E-Series	Male 16 Push-In terminals	70MH-ES016-FP03020
	B24 Type No. of poles Connection E-Series	Male 24 Push-In terminals	70MH-ES024-GP03020
	B6 Type No. of poles Connection E-Series	Female 6 Push-In terminals	70MH-EB006-DP03020
	B10 Type No. of poles Connection E-Series	Female 10 Push-In terminals	70MH-EB010-EP03020
	B16 Type No. of poles Connection E-Series	Female 16 Push-In terminals	70MH-EB016-FP03020
	B24 Type No. of poles Connection E-Series	Female 24 Push-In terminals	70MH-EB024-GP03020

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Frame			Art-No.
	Male B6	for 2 modules	70MH-RD02S-0000000
	Male B10	for 3 modules	70MH-RE03S-0000000
	Male B16	for 4 modules	70MH-RF04S-0000000
	Male B24	for 6 modules	70MH-RG06S-0000000
	Female B6	for 2 modules	70MH-RD02B-0000000
	Female B10	for 3 modules	70MH-RE03B-0000000
	Female B16	for 4 modules	70MH-RF04B-0000000
	Female B24	for 6 modules	70MH-RG06B-0000000
Blind module			Art-No.
	Male/female		70MH-MAA10-0000000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Module 1-pole (axial screw connection)		Art-No.	
	Male		
	Operating voltage	1 000 V AC/DC	70MH-MAB2A-0010707
	Operating current	200 A	
	No. of poles	1	
	Female		
	Operating voltage	1 000 V AC/DC	70MH-MAC2A-0010707
	Operating current	200 A	
	No. of poles	1	
PE modules 1-pole (axial screw connection)		Art-No.	
	Male		
	Operating current	200 A	70MH-MAQ2A-0010707
	No. of poles	1 (PE)	
	Female		
	Operating current	200 A	70MH-MAR2A-0010707
	No. of poles	1 (PE)	
Module 2-pole (axial screw connection)		Art-No.	
	Male		
	Operating voltage	1 000 V AC/DC	70MH-MAB1A-0020703
	Operating current	40 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	70MH-MAB1A-0020706
	Operating current	70 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	70MH-MAB2A-0020704
	Operating current	100 A	
	No. of poles	2	
	Female		
	Operating voltage	1 000 V AC/DC	70MH-MAC1A-0020703
	Operating current	40 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	70MH-MAC1A-0020706
	Operating current	70 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	70MH-MAC2A-0020704
	Operating current	100 A	
	No. of poles	2	

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules 2-pole (Crimp)			Art-No.
	Male		
	Operating voltage Operating current No. of poles	1 000 V AC/DC 100 A 2	70MH-MAF2C-0020704
	Female		
	Operating voltage Operating current No. of poles	1 000 V AC/DC 100 A 2	70MH-MAG2C-0020704
Modules 2-pole shielded (Crimp)			Art-No.
	Male		
	No. of poles for coax- and 4-pole contact carrier	2	70MH-MAD2C-0020101
	Female		
	No. of poles for coax- and 4-pole contact carrier	2	70MH-MAE2C-0020101
Modules 3 pole (crimp)			Art-No.
	Male		
	Operating voltage Operating current No. of poles	690 V AC/DC (PIN - PIN); 400 V AC/DC (PIN - PE) 40 A 3	70MH-MAB1C-0030903
	Female		
	Operating voltage Operating current No. of poles	690 V AC/DC (PIN - PIN); 400 V AC/DC (PIN - PE) 40 A 3	70MH-MAC1C-0030903
Modules 4 pole (crimp)			Art-No.
	Male		
	Operating voltage Operating current No. of poles	830 V AC/DC 40 A 4	70MH-MAB1C-0040603

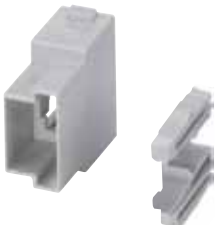
HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules 4 pole (crimp)			Art-No.
	Female		
	Operating voltage	830 V AC/DC	70MH-MAC1C-0040603
	Operating current	40 A	
	No. of poles	4	
Modules 5 pole (push-in)			Art-No.
	Male		
	Operating voltage	400 V AC/DC	70MH-MAB1P-0050402
	Operating current	16 A	
	No. of poles	5	
	Female		
	Operating voltage	400 V AC/DC	70MH-MAC1P-0050402
	Operating current	16 A	
	No. of poles	5	
Modules 6 pole (crimp)			Art-No.
	Male		
	Operating voltage	500 V AC/DC	70MH-MAB1C-0060502
	Operating current	16 A	
	No. of poles	6	
	Female		
	Operating voltage	500 V AC/DC	70MH-MAC1C-0060502
	Operating current	16 A	
	No. of poles	6	
Modules 8-pole (Crimp)			Art-No.
	Male		
	Operating voltage	400 V AC/DC	70MH-MAB1C-0080402
	Operating current	16 A	
	No. of poles	8	
	Female		
	Operating voltage	400 V AC/DC	70MH-MAC1C-0080402
	Operating current	16 A	
	No. of poles	8	

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules 12 pole (crimp)			Art-No.
	Male		
	Operating voltage	400 V AC/DC (PIN - PIN); 250 V AC/DC (PIN - PE)	70MH-MAB1C-0120801
	Operating current	10 A	
	No. of poles	12	
	Female		
	Operating voltage	400 V AC/DC (PIN - PIN); 250 V AC/DC (PIN - PE)	70MH-MAC1C-0120801
	Operating current	10 A	
	No. of poles	12	
Modules 17-pole (Crimp)			Art-No.
	Male		
	Operating voltage	160 V AC/DC	70MH-MAB1C-0170201
	Operating current	10 A	
	No. of poles	17	
	Female		
	Operating voltage	160 V AC/DC	70MH-MAC1C-0170201
	Operating current	10 A	
	No. of poles	17	
Modules 20-pole (Crimp)			Art-No.
	Male		
	Operating voltage	500 V AC/DC	70MH-MAB1C-0200502
	Operating current	16 A	
	No. of poles	20	
	Female		
	Operating voltage	500 V AC/DC	70MH-MAC1C-0200502
	Operating current	16 A	
	No. of poles	20	
Modules GIGABIT			Art-No.
	Male		
	Transfer parameters	CAT6A	70MH-MAH1C-0000000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules GIGABIT			Art-No.
	Female		
	Transfer parameters	CAT6A	70MH-MAL1C-0000000
Modules RJ45			Art-No.
	Male		
	Transfer parameters	CAT6A (IEC 60512-27-100:2008, TIA-568-C.2:2009)	70MH-MAL10-0000000
	Male		
	Transfer parameters	CAT5e	70MH-MAL10-0010000
	Male		
	Insert Transfer parameters	for 70MH-MAL10-0010000 CAT5	70MH-ZRJ45-1000000
	Male		
	Insert Transfer parameters	for 70MH-MAL10-0010000 CAT5	70MH-ZRJ45-2000000
	Female		
	Transfer parameters	CAT6A (IEC 60512-27-100:2008, TIA-568-C.2:2009)	70MH-MAM10-0000000
Modules pneumatic			Art-No.
	Male/female		
	2-pole	Internal hose Ø 6 mm	70MH-MAP10-0020000
	3-pole	Internal hose Ø 1.6, 3, 4 mm	70MH-MAP10-0030000



Минск +375447584780 viber zakaz@igbt.by www.fotorele.net

3

CONNECTION TECHNOLOGY

3

CONNECTION TECHNOLOGY

M8 Round Plug Connectors	3.1
M12 Round Plug Connectors	3.2
T-couplers M8, M12, 7/8"	3.3
Flange Connectors	3.4
MQ12 Round Plug Connectors	3.5
Fieldbus Connectors	3.6
Plug Connectors for Food & Beverage	3.7
Mobile Applications	3.8
M23 Round Plug Connectors	3.9
Round Plug Connectors Power	3.10
TPE Series – The North American standard	3.11
Valve Connectors	3.12
Technical Appendix Cables	3.13

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net



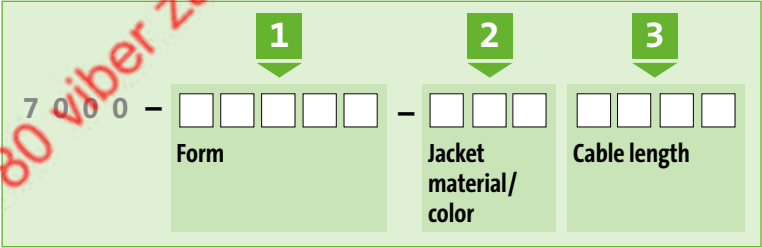
MURRELEKTRONIK'S CONNECTORS

ORDERING SYSTEM

Our concept for your individual application solutions.
Our connector range is a modular system that you can customize for your application.

ARTICLE NUMBER SYSTEM

The article number consists of three blocks: form, jacket material/color and cable length.



EXAMPLE

Block 1:	Form	1 2 4 0 1	M12 female 90° with LED, 4-pole
Block 2:	Jacket material/color	0 3 3	PUR (UL/CSA), yellow
Block 3:	Cable length	0 3 0 0	3 m

The resulting part number is how you will order your connector.

7 0 0 0 - 1 2 4 0 1 - 0 3 3 0 3 0 0 0

INTERNATIONAL APPROVALS FOR FLEXIBLE USE WORLDWIDE



DID YOU KNOW?

Every Murrelektronik connector is 100% tested.

This means:

- Electrically tested
- High voltage tested
- Performance tested
- Pin assignment tested
- Short circuit tested
- Visually controlled

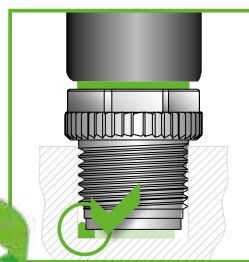
YOUR BENEFITS

- **Modular connector program**
 - Find your connector quickly
- **International approvals**
 - Products approved for your market
- **Guaranteed quality**
 - 100% tested
 - All contacts gold-plated
 - High IP67 protection as standard
 - Shock and vibration resistant
- **Worldwide and industry wide**
 - Benefit from our expertise and our cross-industry expertise



AUDIBLY SEALED – SIMPLE AND SAFE

Our torque wrench connects Murrelektronik M8-, M12-, 7/8" and M23 connectors simply and tightly, leaving no room for error.



M8	0.4 Nm
M12	0.6 Nm
7/8"	1.5 Nm
M23	2.0 Nm

Just turn until
you hear the
click.

No more
sore fingers!

STANDARD CABLE TYPES FOR YOUR APPLICATION



WIDE RANGE MEETS YOUR REQUIREMENTS

- **4 standard cable types for your application solution**
 - Always the right cable
- **3 cable colors (yellow, gray and black)**
 - The color you need for your industry
- **Meets the highest quality requirements**
 - Certified, application approved and successfully tested with many aggressive media (oil and lubricants)



Cable Types		PVC	PUR/PVC	PUR	PUR Welding Spark Resistant
Cable Standard		★	★★	★★★★	★★★★★★
Properties*	Flame retardant	■	■	■	■
	Resistant to chemicals	■	■	■	■
	Resistant to cleaning agents (Ecolab)	■			
	Resistant to oil and lubricants		■	■	■
	Suitable for use in C-tracks**		2 million	5 million	10 million
	Suitable for robotic applications			±180°	±360°
	Welding spark resistant				■
	UV resistant			■	■
	Halogen-free			■	■
	Varying temperatures	-5...+80 °C	-5...+80 °C	-25...+80 °C	-25...+90 °C
	UL/CSA approvals	■		■	■
	Compliant with NFPA 79 Edition 2012	■		■	
Application Examples		Packaging machines Food & Beverage Assembly lines Production lines	Packaging machines Handling machines Assembly lines Production lines	Machine tools Swivel tables Metal cutting	Machine tools Industrial robots Metal cutting High performance C-tracks

* The properties of some cable types may differ from this data.

** Max. 3.3 m/s at 5 m horizontal travel distance and max. acceleration of 5 m/s².



M8 ROUND PLUG CONNECTORS

SMALL, LIGHT, MEETS YOUR NEEDS

- Extensive selection
- Tested technology
- Modern design

M8 REDESIGN – MORE MODELS, & NEW DESIGN

M8's redesign introduces new innovations. We completely redesigned all Murrelektronik's molded M8 connectors. They now have a new look and have been upgraded. We also significantly expanded our range of shielded M8 connectors.

Features:

- Durable PUR molding
- Gold plated contacts
- Small dimensions and improved feel
- Corrugated tubing connection
- Hex screw with thread (SW9)

Huge Variety:

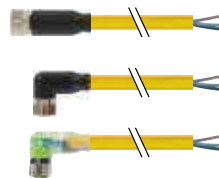
- Male/female, straight/90°, 3-pole/4-pole
- Shielded and unshielded connectors
- 3 standard colors, 4 standard cable types
- Cables, open ended wires, T-couplers, adapters, models with LED

With Open Ended Wires



M8 male
• Straight
• 90°

Page 3.1.1



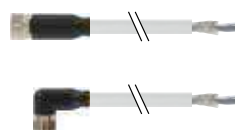
M8 female
• Straight
• 90°
• 90° with LED

Page 3.1.3



M8 male (shielded)
• Straight
• 90°

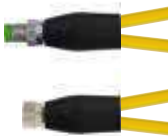
Page 3.1.6



M8 female (shielded)
• Straight
• 90°

Page 3.1.8

Connection Cables

		M8 male • Straight	M8 female • Straight • 90° • 90° with LED
		Y connector M8 • Male straight Y connector M8 • Female straight	M8 female • Straight M8 male • Straight
		M8 male (shielded) • Straight	M8 female (shielded) • Straight • 90°

Field-Wireable

	Insulation Displacement Technology (IDC) 0.14...0.34 mm ²	M8 male/female • Straight
	Screw terminals	M8 male/female • Straight
	Screw terminals (shielded)	M8 male/female • Straight

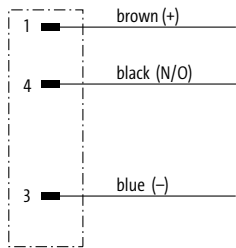
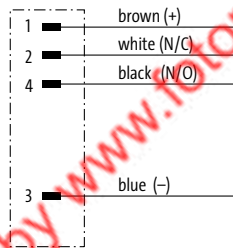
M8 ROUND PLUG CONNECTORS

With open ended wires

Male
straight



Approvals:  
 * only for products with UL/CSA approved cable

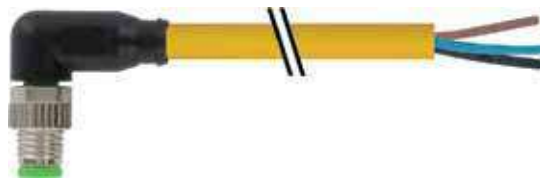
1	Form	08001	me	08011	me		
	Type	3-pole		4-pole			
	Circuit diagram						
	Contact layout						
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	010	210	610	011	211	611
	PUR/PVC (UL/CSA)	020	220	620	021	221	621
	PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631
	PUR (UL/CSA), welding spark	050	250	650	051	251	651
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
Technical Data							
	Operating voltage	max. 50 V AC/60 V DC					
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
Article No.							
	The composition of your article number is explained on page 3.1.i	7000 - -					
		7005 M8 Lite (plastic hexagonal screw) on request					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M8 ROUND PLUG CONNECTORS

With open ended wires

Male

90°



* only for products with UL/CSA approved cable

1	Form	08 021			me✖			08 031			me✖		
Type		3-pole						4-pole					
Circuit diagram		1 4 3 brown (+) black (N/O) blue (-)						1 2 4 3 brown (+) white (N/C) black (N/O) blue (-)					
Contact layout		Male 4 1 3						Male 2 4 3 1					
2	Cable Type	Jacket Color						Jacket Color					
Wire diameter 0.25 mm²		yellow	gray	black	yellow	gray	black						
PVC (UL/CSA)		010	210	610	011	211	611						
PUR/PVC (UL/CSA)		020	220	620	021	221	621						
PUR (UL/CSA), robots/C-tracks		030	230	630	031	231	631						
PUR (UL/CSA), welding spark		050	250	650	051	251	651						
3	Cable Length												
1.5 m		0150											
3.0 m		0300											
5.0 m		0500											
7.5 m		0750											
10.0 m		1000											
Technical Data													
Operating voltage		max. 50 V AC/60 V DC											
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)											
Temperature range		-25...+85 °C, depending on cable quality											
Article No.													
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —			— — — — —		
		7 0 0 5			M8 Lite (plastic hexagonal screw) on request								
					1			Form			2		
								Cable Type			3		
											Cable Length		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

With open ended wires

Female

straight



* only for products with UL/CSA approved cable

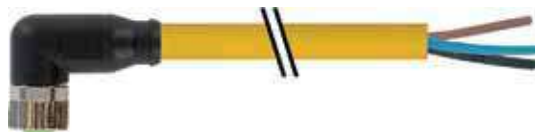
1	Form	08041	me	08061	me			
	Type	3-pole			4-pole			
	Circuit diagram							
	Contact layout							
2	Cable Type	Jacket Color			Jacket Color			
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black	
	PVC (UL/CSA)	010	210	610	011	211	611	
	PUR/PVC (UL/CSA)	020	220	620	021	221	621	
	PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631	
	PUR (UL/CSA), welding spark	050	250	650	051	251	651	
3	Cable Length							
	1.5 m	0150						
	3.0 m	0300						
	5.0 m	0500						
	7.5 m	0750						
	10.0 m	1000						
Technical Data								
Operating voltage		max. 50 V AC/60 V DC						
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)						
Temperature range		-25...+85 °C, depending on cable quality						
Article No.								
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — —		— — — —	
		7 0 0 5			M8 Lite (plastic hexagonal screw) on request			
		1 Form		2 Cable Type		3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.						

M8 ROUND PLUG CONNECTORS

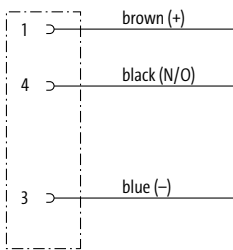
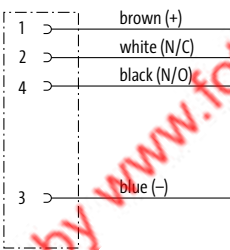
With open ended wires

Female

90°



* only for products with UL/CSA approved cable

1	Form	08081			me×			08101			me×											
Type		3-pole						4-pole														
Circuit diagram																						
Contact layout																						
2	Cable Type	Jacket Color						Jacket Color														
	Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black															
	PVC (UL/CSA)	010	210	610	011	211	611															
	PUR/PVC (UL/CSA)	020	220	620	021	221	621															
	PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631															
	PUR (UL/CSA), welding spark	050	250	650	051	251	651															
3	Cable Length																					
	1.5 m	0150																				
	3.0 m	0300																				
	5.0 m	0500																				
	7.5 m	0750																				
	10.0 m	1000																				
Technical Data																						
	Operating voltage	max. 50 V AC/60 V DC																				
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)																				
	Temperature range	-25...+85 °C, depending on cable quality																				
Article No.																						
The composition of your article number is explained on page 3.1.i		7 0 0 0			-				-													
		7 0 0 5			M8 Lite (plastic hexagonal screw) on request																	
					1			Form			2			Cable Type			3			Cable Length		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

With open ended wires

Female

90° with LED



* only for products with UL/CSA approved cable

1 Form		08121	me	08141
Type		3-pole with 2 × LED (PNP) (NPN) on request		4-pole with 3 × LED (PNP) (NPN) on request
Circuit diagram				
Contact layout				
2 Cable Type		Jacket Color		
Wire diameter 0.25 mm²		yellow	gray	black
PVC (UL/CSA)		010	210	610
PUR/PVC (UL/CSA)		020	220	620
PUR (UL/CSA), robots/C-tracks		030	230	630
PUR (UL/CSA), welding spark		050	250	650
3 Cable Length		Jacket Color		
1.5 m		0150		
3.0 m		0300		
5.0 m		0500		
7.5 m		0750		
10.0 m		1000		
Technical Data		Operating voltage		
		24 V DC ±25%		
		Protection		
		IP65, IP66K, IP67 inserted and tightened (EN 60529)		
		Temperature range		
		-25...+85 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		7 0 0 0	-	
		7 0 0 5	-	
		M8 Lite (plastic hexagonal screw) on request		
		1 Form	2 Cable Type	3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M8 ROUND PLUG CONNECTORS

With open ended wires

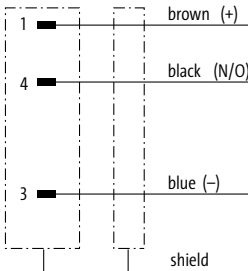
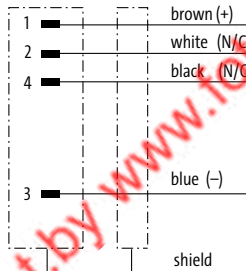
Male

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form	08701	08711
Type	3-pole, shielded	4-pole, shielded
Circuit diagram		
Contact layout	Male 	Male 
2 Cable Type	Jacket Color	
Wire diameter 0.34 mm ²	gray	black
PVC (UL/CSA)	200	600
PUR (UL/CSA), robots/C-tracks	240	640
3 Cable Length	Jacket Color	
1.5 m	0150	
3.0 m	0300	
5.0 m	0500	
7.5 m	0750	
10.0 m	1000	
Technical Data		
Operating voltage	max. 50 V AC/60 V DC	
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - -	
	1 Form	2 Cable Type
		3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

With open ended wires

Male
90°



Approvals:

* only for products with UL/CSA approved cable

1 Form		08721	08731
Type		3-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout		Male	Male
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm ²		gray	black
PVC (UL/CSA)		200	600
PUR (UL/CSA), robots/C-tracks		240	640
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M8 ROUND PLUG CONNECTORS

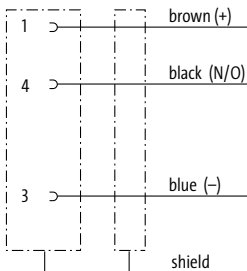
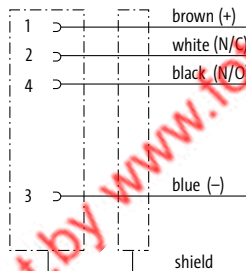
With open ended wires

Female
straight



Approvals:  

* only for products with UL/CSA approved cable

1	Form	08741		08761											
	Type	3-pole, shielded		4-pole, shielded											
	Circuit diagram														
	Contact layout	Female 		Female 											
2	Cable Type	Jacket Color		Jacket Color											
	Wire diameter 0.34 mm² PVC (UL/CSA) PUR (UL/CSA), robots/C-tracks	<table><tr><td>gray</td><td>black</td></tr><tr><td>200</td><td>600</td></tr><tr><td>240</td><td>640</td></tr></table>	gray	black	200	600	240	640	<table><tr><td>gray</td><td>black</td></tr><tr><td>201</td><td>601</td></tr><tr><td>241</td><td>641</td></tr></table>	gray	black	201	601	241	641
gray	black														
200	600														
240	640														
gray	black														
201	601														
241	641														
3	Cable Length														
	1.5 m 3.0 m 5.0 m 7.5 m 10.0 m	<table><tr><td>0150</td><td>0300</td><td>0500</td><td>0750</td><td>1000</td></tr></table>				0150	0300	0500	0750	1000					
0150	0300	0500	0750	1000											
Technical Data															
Operating voltage		max. 50 V AC/60 V DC													
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)													
Temperature range		-25...+85 °C, depending on cable quality													
Article No.															
The composition of your article number is explained on page 3.1.i		<table><tr><td>7</td><td>0</td><td>0</td><td>0</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr></table>				7	0	0	0	-	-	-	-	-	-
7	0	0	0	-	-	-	-	-	-						

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

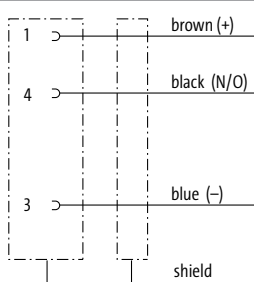
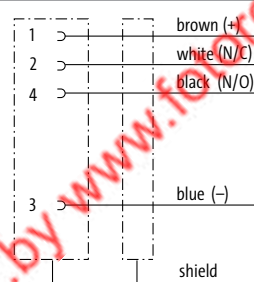
M8 ROUND PLUG CONNECTORS

With open ended wires

Female
90°

Approvals:  

* only for products with UL/CSA approved cable

1 Form		08781	08801
Type		3-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout		Female 	Female 
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm ²		gray	black
PVC (UL/CSA)		200	600
PUR (UL/CSA), robots/C-tracks		240	640
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	- - - - -
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Jacket Color	
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8



* only for products with UL/CSA approved cable

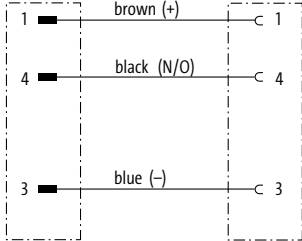
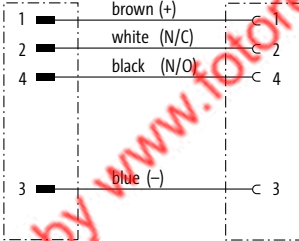
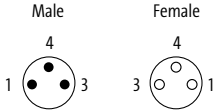
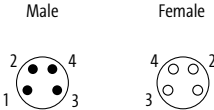
Male

straight

Female

straight



1	Form	88001			meX			88011			meX		
Type		3-pole						4-pole					
Circuit diagram													
Contact layout													
2	Cable Type	Jacket Color						Jacket Color					
Wire diameter 0.25 mm²		yellow	gray	black	yellow	gray	black						
PVC (UL/CSA)		010	210	610	011	211	611						
PUR/PVC (UL/CSA)		020	220	620	021	221	621						
PUR (UL/CSA), robots/C-tracks		030	230	630	031	231	631						
PUR (UL/CSA), welding spark		050	250	650	051	251	651						
3	Cable Length												
0.3 m		0030											
0.6 m		0060											
1.0 m		0100											
1.5 m		0150											
2.0 m		0200											
Technical Data													
Operating voltage		max. 50 V AC/60 V DC											
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)											
Temperature range		-25...+85 °C, depending on cable quality											
Article No.													
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —			— — — — —		
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request								

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Male

straight

Female

90°



Approvals:

* only for products with UL/CSA approved cable

1 Form		88021		me×		88031		me×					
Type		3-pole				4-pole							
Circuit diagram													
Contact layout													
2 Cable Type		Jacket Color				Jacket Color							
Wire diameter 0.25 mm²		yellow		gray		black		yellow		gray		black	
PVC (UL/CSA)		010		210		610		011		211		611	
PUR/PVC (UL/CSA)		020		220		620		021		221		621	
PUR (UL/CSA), robots/C-tracks		030		230		630		031		231		631	
PUR (UL/CSA), welding spark		050		250		650		051		251		651	
3 Cable Length													
0.3 m		0030											
0.6 m		0060											
1.0 m		0100											
1.5 m		0150											
2.0 m		0200											
Technical Data													
Operating voltage		max. 50 V AC/60 V DC											
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)											
Temperature range		-25...+85 °C, depending on cable quality											
Article No.													
The composition of your article number is explained on page 3.1.i		7 0 0 0		-		-							
		7 0 0 5				M8 Lite (plastic hexagonal screw) on request							
		1		Form		2		Cable Type		3		Cable Length	
Notes													

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Approvals:  

* only for products with UL/CSA approved cable

Male

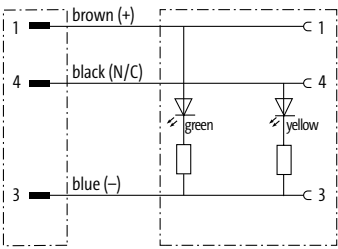
straight

Female

90° with LED



1 Form 88041 me

Type	3-pole with 2 × LED (PNP) (NPN) on request
Circuit diagram	
Contact layout	Male  Female 

2 Cable Type Jacket Color

Wire diameter 0.25 mm²	yellow	gray	black
PVC (UL/CSA)	010	210	610
PUR/PVC (UL/CSA)	020	220	620
PUR (UL/CSA), robots/C-tracks	030	230	630
PUR (UL/CSA), welding spark	050	250	650

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i	7 0 0 0 - 8 8 0 4 1 - - - -
	7 0 0 5 M8 Lite (plastic hexagonal screw) on request

1 Form 2 Cable Type 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Y connector

Male straight

Females

straight



1 Form		87001			87011		
Type		4-/3-pole			3-pole		
Circuit diagram							
Contact layout							
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.25 mm²		yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		010	210	610	010	210	610
PUR/PVC (UL/CSA)		020	220	620	020	220	620
PUR (UL/CSA), robots/C-tracks		030	230	630	030	230	630
PUR (UL/CSA), welding spark		050	250	650	050	250	650
3 Cable Length							
0.3 m		0030					
0.6 m		0060					
1.0 m		0100					
1.5 m		0150					
2.0 m		0200					
Technical Data							
Operating voltage		max. 50 V AC/60 V DC					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		7005 M8 Lite (plastic hexagonal screw) on request					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Y connector

Male straight

Females

straight

Y connector

Female straight

Male

straight



1 Form

87061

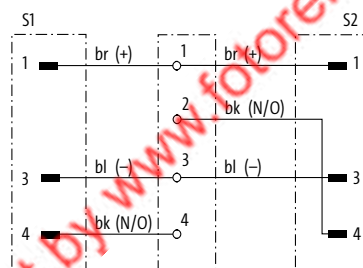
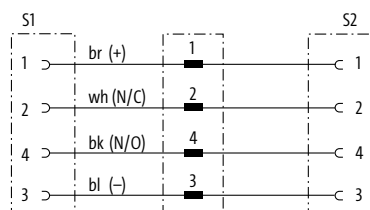
87251

Type

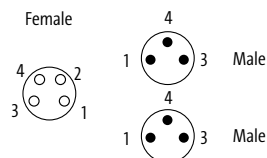
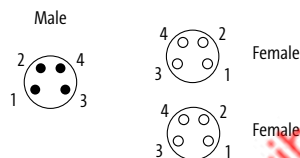
4-pole

4-/3-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.25 mm²

yellow

gray

black

yellow

gray

black

PVC (UL/CSA)

011

211

611

010

210

610

PUR/PVC (UL/CSA)

021

221

621

020

220

620

PUR (UL/CSA), robots/C-tracks

031

231

631

030

230

630

PUR (UL/CSA), welding spark

051

251

651

050

250

650

3 Cable Length

0.3 m

0030

0.6 m

0060

1.0 m

0100

1.5 m

0150

2.0 m

0200

Technical Data

Operating voltage

max. 50 V AC/60 V DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

7 0 0 5

M8 Lite (plastic hexagonal screw) on request

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Male

straight

Female

straight



Approvals:

* only for products with UL/CSA approved cable

1 Form		89501	89511
Type		3-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout		Male Female	Male Female
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm ²		gray	black
PVC (UL/CSA)		200	600
PUR (UL/CSA), robots/C-tracks		240	640
3 Cable Length		Jacket Color	
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data		Jacket Color	
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Jacket Color	
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8



* only for products with UL/CSA approved cable

Male

straight

Female

90°



1 Form	89521	89531
Type	3-pole, shielded	4-pole, shielded
Circuit diagram		
Contact layout	Male Female	Male Female
2 Cable Type	Jacket Color	
Wire diameter 0.34 mm ²	gray	black
PVC (UL/CSA)	200	600
PUR (UL/CSA), robots/Ctracks	240	640
3 Cable Length	Jacket Color	
0.3 m	0030	
0.6 m	0060	
1.0 m	0100	
1.5 m	0150	
2.0 m	0200	
Technical Data		
Operating voltage	max. 50 V AC/60 V DC	
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 0 0	
	1 Form	2 Cable Type
		3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Male

straight



Female

straight



Approvals: **us**

1	Form	08331 me×	08351 me×	08371 me×	08391 me×
Type	3-pole	4-pole	3-pole	4-pole	
Circuit diagram					
Connection cross section	0.14...0.34 mm²				
Contact layout	Male 	Male 	Female 	Female 	
Technical Data					
Operating voltage	max. 32 V AC/DC				
Rated surge voltage	0.8 kV				
Operating current per contact	max. 4 A				
Configuration	fully used				
Material group	IEC 60664-1, category I				
Over voltage category	3				
Isolation resistance	≥ 10^8 Ohm				
Contact resistance	≤ 10 mOhm				
Connection cross section	0.14...0.34 mm² (conductor diameter min. 0.1 mm)				
Sealing range (cable Ø)	2.5...5.1 mm (gasket included)				
Outer wire Ø	1.0...1.6 mm				
Locking of ports	Screw thread M8 × 1 mm (recommended torque 0.4 Nm) self-securing				
Compression gland	M8 (SW9)				
Protection	IP67 inserted and tightened (EN 60529)				
Wire isolation	PVC, PP, TPE				
Material	PA				
Locking material	Zinc die casting, matte nickel plated				
Mating cycles	≥ 100				
Reconnection (cable)	10				
Temperature range	-25...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0		0 0 0		0 0 0 0
	1		Form		
Notes					
Other versions on request.					

M8 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals: 

Male

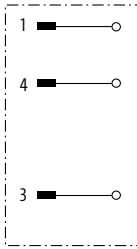
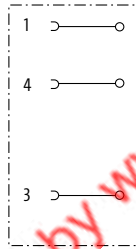
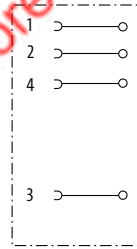
straight



Female

straight



1 Form	08601 me×	08611 me×	08621 me×	08631 me×
Type	3-pole	4-pole	3-pole	4-pole
Circuit diagram				
Connection cross section	0.14...0.5 mm ²			
Contact layout	Male 	Male 	Female 	Female 
Technical Data				
Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Rated surge voltage	1.5 kV	0.8 kV	1.5 kV	0.8 kV
Operating current per contact	max. 4 A			
Connection cross section	0.14...0.5 mm ²			
Sealing range (cable Ø)	2.5...5.0 mm			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	<u>7</u> <u>0</u> <u>0</u> <u>0</u>	- - - - -	<u>0</u> <u>0</u> <u>0</u>	<u>0</u> <u>0</u> <u>0</u> <u>0</u>
		1 Form		

Notes

Other versions on request.

Field-wireable

- Screw terminals

Male

straight



Female

straight



M8 Round Plug Connectors

1	Form	08641 me×	08651 me×	08661 me×	08671 me×
Type	3-pole, shielded	4-pole, shielded	3-pole, shielded	4-pole, shielded	
Circuit diagram					
Connection cross section	0.14...0.5 mm²				
Contact layout	Male	Male	Female	Female	
Technical Data					
Operating voltage	max. 50 V AC/60 V DC		max. 30 V AC/DC		max. 60 V AC/DC
Rated surge voltage	1.5 kV		0.8 kV		1.5 kV
Operating current per contact	max. 4 A				
Material group	IEC 60664-1, category III				
Connection cross section	0.14...0.5 mm²				
Sealing range (cable Ø)	3.5...5.5 mm				
Locking of ports	Screw thread M8 × 1 mm (recommended torque 0.4 Nm) self-securing				
Protection	IP67 inserted and tightened (EN 60529)				
Locking material	Brass, nickel plated				
Temperature range	-25...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0		0 0 0		0 0 0 0
	1 Form				
Notes					
Other versions on request.					

M8 ROUND PLUG CONNECTORS

Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000
	Snap-on cable sleeve for ACS label plates (4 × 18 mm) for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm) Cable diameter (5...7 mm)	7000-99005-0000000 7000-99006-0000000
	ACS label plate for self marking (4 × 18 mm)		7000-99002-0000000
	Colored ring M8/M12 sandy yellow	for unshielded molding	7000-99301-V011002
	zinc yellow	for unshielded molding	7000-99301-V011018
	redorange	for unshielded molding	7000-99301-V012008
	red	for unshielded molding	7000-99301-V013020
	violet	for unshielded molding	7000-99301-V014003
	purple	for unshielded molding	7000-99301-V014006
	blue	for unshielded molding	7000-99301-V015005
	green	for unshielded molding	7000-99301-V016018
	gray	for unshielded molding	7000-99301-V017035
	white	for unshielded molding	7000-99301-V019003
	black	for unshielded molding	7000-99301-V019004
Mounting accessories			Art-No.
	Torque wrench set M8 (0.4 Nm, SW9)	M8 data connectors	7000-99101-0000000
	Torque wrench M8 (0.4 Nm, SW9)	M8 data connectors	7000-99091-0000000
End fitting accessories			Art-No.
	Tube adapter snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000
	Gasket MOSA M8		7000-99008-0000000

M8 ROUND PLUG CONNECTORS

Connection accessories			Art-No.
	Universal holder modular	M8 M12	7000-99801-0000000
	Flange M8 male, pre-wired 0.2 m suitable for mounting with wall thickness suitable for mounting with wall thickness	max. 4.5 mm max. 4.5 mm	7000-08552-9700020 7000-08562-9690020
	Flange M8 female, pre-wired 0.2 m straight, A-coded, 3-pole		7000-08571-9700020 7000-08581-9710020

МИНСК +375447584780 viber zakaz@igbt.by www.fotorele.net



M12 ROUND PLUG CONNECTORS COMPREHENSIVE AND VERSATILE

- The right model for any application
- Shock and vibration resistant with integrated fastening
- Reliable – 100% tested

M12 CONNECTORS – DESIGNED FOR MANY DIFFERENT CUSTOMER APPLICATIONS

Murrelektronik offers one of the most comprehensive M12 connector ranges on the market. Reliable, quick and easy assembly, a clear LED indicator: these are only a few of the features that make this product range one of the best.

Features

- Combined hex screw with thread for secure connections
- Highly resistant, halogen-free PUR molding guarantees IP67/68 seal
- Wide range of cable material and color – always the right choice for your application

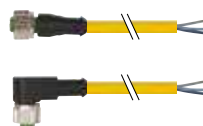
With Open Ended Wires



M12 male

- Straight
- 90°

Page 3.2.1



M12 female

- Straight
- 90°

Page 3.2.7



M12 female with LED

- Straight
- 90°

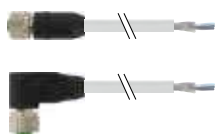
Page 3.2.13



M12 male (shielded)

- Straight
- 90°

Page 3.2.17



M12 female (shielded)

- Straight
- 90°

Page 3.2.23

Connection Cables



M12 male

- Straight
- 90°

M12 female

- Straight
- 90°
- 90° with LED

Page 3.2.29



M12 Y connector male

- Straight

M12 female

- Straight
- 90°
- 90° with LED

Page 3.2.35



M12 male (shielded)

- Straight

M12 female (shielded)

- Straight

Page 3.2.38

Field-Wireable



Insulation Displacement Technology (IDC)

M12 male/female

- Straight
- 90°
- M12 female**
- 90° with LED

Page 3.2.41



Screw terminals

M12 male/female

- Straight
- 90°

Screw terminals

M12 Y connector male

- Straight

Page 3.2.47



Screw terminals (shielded)

M12 male/female

- Straight
- 90°

Page 3.2.54

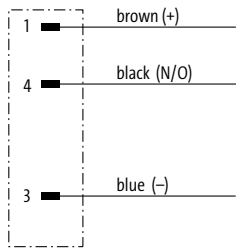
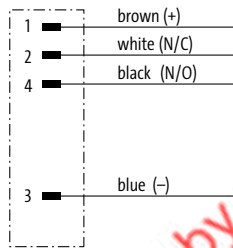
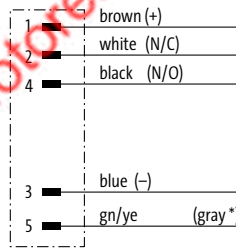
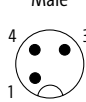
M12 ROUND PLUG CONNECTORS

With open ended wires

Male
straight



Approvals:  
* only for products with UL/CSA approved cable

1	Form	12 0 0 1	me x	12 0 2 1	me x	12 0 4 1	me x
Type		3-pole		4-pole		5-pole	
Circuit diagram						 (* for cable type 126, 732, 219, 619)	
Contact layout							
2	Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	014	214	614
PUR/PVC (UL/CSA)		023	223	623	024	224	624
PUR (UL/CSA), robots/C-tracks		033	233	633	034	234	634
PUR (UL/CSA), welding spark		053	253	653	054	254	654
3	Cable Length						
1.5 m		0150					
3.0 m		0300					
5.0 m		0500					
7.5 m		0750					
10.0 m		1000					
Technical Data							
Operating voltage		max. 250 V AC/DC				max. 125 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -					
		7 0 0 5 M12 Lite (plastic hexagonal screw) on request					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

With open ended wires

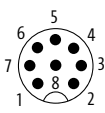
Male

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form	170 01			170 01		
Type	8-pole			8-pole		
Circuit diagram	1 2 3 4 5 6 7 8 white brown green yellow gray pink blue red			1 2 3 4 5 6 7 8 brown white blue black gray pink violet orange		
Contact layout	Male 					
2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm ²	gray	black	yellow		gray	black
PVC (UL/CSA)	207	607			208	608
PUR (UL/CSA), robots/Ctracks	292	722	114		295	
3 Cable Length						
1.5 m	0150					
3.0 m	0300					
5.0 m	0500					
7.5 m	0750					
10.0 m	1000					
Technical Data						
Operating voltage	max. 30 V AC/DC					
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range	-25...+85 °C, depending on cable quality					
Article No.						
The composition of your article number is explained on page 3.1.i	7 0 0 0					
	7 0 0 5			M12 Lite (plastic hexagonal screw) on request		
	1	Form		2	Cable Type	
				3	Cable Length	

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

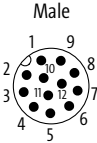
Male

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		19001																																					
Type	12-pole																																						
Circuit diagram	<table><tr><td>1</td><td>—</td><td>brown</td></tr><tr><td>2</td><td>—</td><td>blue</td></tr><tr><td>3</td><td>—</td><td>white</td></tr><tr><td>4</td><td>—</td><td>green</td></tr><tr><td>5</td><td>—</td><td>pink</td></tr><tr><td>6</td><td>—</td><td>yellow</td></tr><tr><td>7</td><td>—</td><td>black</td></tr><tr><td>8</td><td>—</td><td>gray</td></tr><tr><td>9</td><td>—</td><td>red</td></tr><tr><td>10</td><td>—</td><td>violet</td></tr><tr><td>11</td><td>—</td><td>gray/pink</td></tr><tr><td>12</td><td>—</td><td>red/blue</td></tr></table>			1	—	brown	2	—	blue	3	—	white	4	—	green	5	—	pink	6	—	yellow	7	—	black	8	—	gray	9	—	red	10	—	violet	11	—	gray/pink	12	—	red/blue
1	—	brown																																					
2	—	blue																																					
3	—	white																																					
4	—	green																																					
5	—	pink																																					
6	—	yellow																																					
7	—	black																																					
8	—	gray																																					
9	—	red																																					
10	—	violet																																					
11	—	gray/pink																																					
12	—	red/blue																																					
Contact layout	Male 																																						
2 Cable Type		Jacket Color																																					
Wire diameter 0.14 mm²		gray	black																																				
PVC (UL/CSA)		209	609																																				
PUR (UL/CSA), robots/C-tracks			705																																				
Wire diameter 0.25 mm²																																							
PUR (UL/CSA), robots/C-tracks		301																																					
PUR (UL/CSA), welding spark		302																																					
3 Cable Length																																							
1.5 m	0150																																						
3.0 m	0300																																						
5.0 m	0500																																						
7.5 m	0750																																						
10.0 m	1000																																						
Technical Data																																							
Operating voltage	max. 30 V AC/DC																																						
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)																																						
Temperature range	-25...+85 °C, depending on cable quality																																						
Article No.																																							
The composition of your article number is explained on page 3.1.i	<table><tr><td><u>7</u></td><td><u>0</u></td><td><u>0</u></td><td><u>0</u></td></tr><tr><td colspan="4">—</td></tr></table>			<u>7</u>	<u>0</u>	<u>0</u>	<u>0</u>	—																															
	<u>7</u>	<u>0</u>	<u>0</u>	<u>0</u>																																			
—																																							
	<table><tr><td><u>7</u></td><td><u>0</u></td><td><u>0</u></td><td><u>5</u></td></tr><tr><td colspan="4">—</td></tr></table>			<u>7</u>	<u>0</u>	<u>0</u>	<u>5</u>	—																															
<u>7</u>	<u>0</u>	<u>0</u>	<u>5</u>																																				
—																																							
	M12 Lite (plastic hexagonal screw) on request																																						
	1 Form	2 Cable Type	3 Cable Length																																				
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.																																						

M12 ROUND PLUG CONNECTORS

With open ended wires

Male
90°



Approvals:

* only for products with UL/CSA approved cable

1	Form	12081	me	12101	me	12121	me
Type		3-pole		4-pole		5-pole	
Circuit diagram							
Contact layout		Male		Male		Male	
2	Cable Type	Jacket Color			Jacket Color		
	Wire diameter 0.34 mm ²	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	013	213	613	014	214	614
	PUR/PVC (UL/CSA)	023	223	623	024	224	624
	PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634
	PUR (UL/CSA), welding spark	053	253	653	054	254	654
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
	Technical Data						
	Operating voltage	max. 250 V AC/DC			max. 125 V AC/DC		
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7 0 0 0 7 0 0 5			M12 Lite (plastic hexagonal screw) on request		
		1 Form			2 Cable Type		
					3 Cable Length		
	Notes						
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

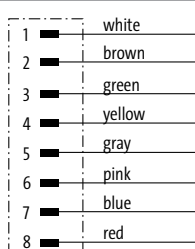
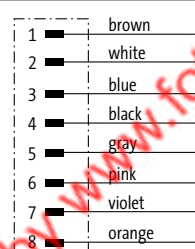
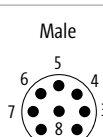
M12 ROUND PLUG CONNECTORS

With open ended wires

Male
90°

Approvals:  

* only for products with UL/CSA approved cable

1 Form		17 021	17 021
Type		8-pole	8-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 0.25 mm²		gray	black
PVC (UL/CSA)		207	607
PUR (UL/CSA), robots/C-tracks		292	722
			114
			295
			608
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		7 0 0 5	M12 Lite (plastic hexagonal screw) on request
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

90°



Approvals: 

* only for products with UL/CSA approved cable

1 Form

19021

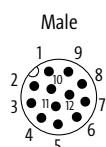
Type

12-pole

Circuit diagram

1	brown
2	blue
3	white
4	green
5	pink
6	yellow
7	black
8	gray
9	red
10	violet
11	gray/pink
12	red/blue

Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.14 mm²

PVC (UL/CSA)

PUR (UL/CSA), robots/C-tracks

Wire diameter 0.25 mm²

PUR (UL/CSA), robots/C-tracks

PUR (UL/CSA), welding spark

gray	black
209	609
	705
301	
302	

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

- 1 9 0 2 1 -

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight



Approvals:

* only for products with UL/CSA approved cable

1	Form	12181	me	12221	me	12241
	Type	3-pole			4-pole	
	Circuit diagram					
	Contact layout					
					 (* for cable type 126, 732, 219, 619)	
2	Cable Type	Jacket Color			Jacket Color	
	Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray
	PVC (UL/CSA)	013	213	613	014	214
	PUR/PVC (UL/CSA)	023	223	623	024	224
	PUR (UL/CSA), robots/C-tracks	033	233	633	034	234
	PUR (UL/CSA), welding spark	053	253	653	054	254
3	Cable Length					
	1.5 m	0150				
	3.0 m	0300				
	5.0 m	0500				
	7.5 m	0750				
	10.0 m	1000				
	Technical Data					
	Operating voltage	max. 250 V AC/DC				max. 125 V AC/DC
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)				
	Temperature range	-25...+85 °C, depending on cable quality				
	Article No.					
	The composition of your article number is explained on page 3.1.i	7000 - -				
		7005 M12 Lite (plastic hexagonal screw) on request				
		1 Form		2 Cable Type		3 Cable Length
	Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.				

M12 ROUND PLUG CONNECTORS

With open ended wires

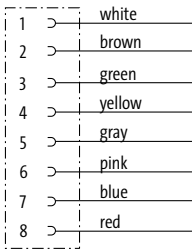
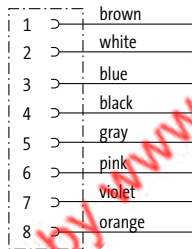
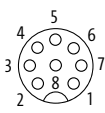
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form	17041	17041
Type	8-pole	8-pole
Circuit diagram		
Contact layout	Female 	
2 Cable Type	Jacket Color	
Wire diameter 0.25 mm ²	gray	black
PVC (UL/CSA)	207	607
PUR (UL/CSA), robots/C-tracks	292	722
		114
3 Cable Length	Jacket Color	
1.5 m	0150	
3.0 m	0300	
5.0 m	0500	
7.5 m	0750	
10.0 m	1000	
Technical Data		
Operating voltage	max. 30 V AC/DC	
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 0 0	
	7 0 0 5	M12 Lite (plastic hexagonal screw) on request
	1 Form	2 Cable Type
		3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		19041	
Type	12-pole		
Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 ↪ ↪ ↪ ↪ ↪ ↪ ↪ ↪ ↪ ↪ ↪ ↪ brown blue white green pink yellow black gray red violet gray/pink red/blue		
Contact layout	Female 9 1 2 3 4 5 6 7 8 10 11 12		
2 Cable Type		Jacket Color	
Wire diameter 0.14 mm²		gray	black
PVC (UL/CSA)		209	609
PUR (UL/CSA), robots/C-tracks			705
Wire diameter 0.25 mm²			
PUR (UL/CSA), robots/C-tracks		301	
PUR (UL/CSA), welding spark		302	
3 Cable Length			
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 30 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 9 0 4 1 - 7 0 0 5 M12 Lite (plastic hexagonal screw) on request		
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

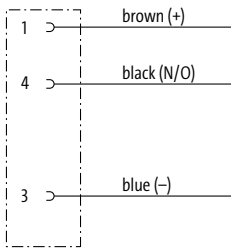
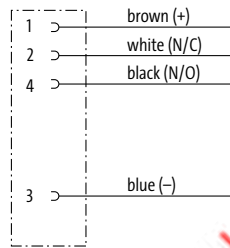
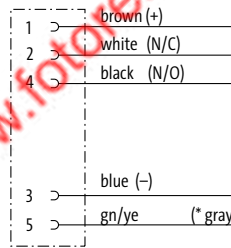
With open ended wires

Female
90°



Approvals:  

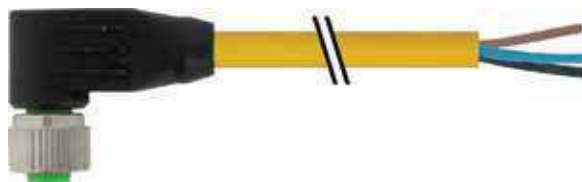
* only for products with UL/CSA approved cable

1	Form	12321			12341			12361		
	Type	3-pole			4-pole			5-pole		
	Circuit diagram									
	Contact layout									
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	Wire diameter 0.34 mm ²	yellow	gray	black	yellow	gray	black	yellow	gray	black
	PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)
	PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625
	PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)
	PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
Operating voltage		max. 250 V AC/DC							max. 125 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7 0 0 0			— — — — —			— — — — —		
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request					
		1 Form			2 Cable Type			3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.								

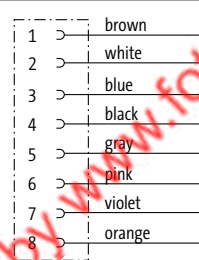
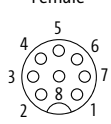
M12 ROUND PLUG CONNECTORS

With open ended wires

Female
90°



Approvals:  
* only for products with UL/CSA approved cable

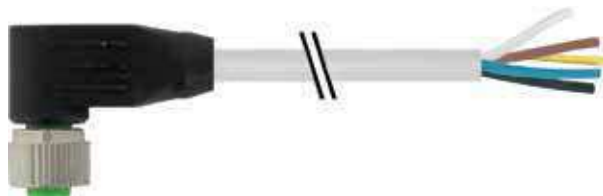
1 Form		170 61	170 61
Type		8-pole	8-pole
Circuit diagram			
Contact layout		Female 	
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.25 mm²		gray black yellow	gray black
PVC (UL/CSA)		207 607	208 608
PUR (UL/CSA), robots/Ctracks		292 722 114	295
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	- - - - -
		7 0 0 5 M12 Lite (plastic hexagonal screw) on request	
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

90°



Approvals: 

* only for products with UL/CSA approved cable

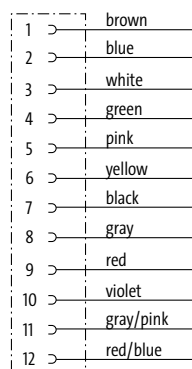
1 Form

19061

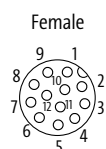
Type

12-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.14 mm²

PVC (UL/CSA)

PUR (UL/CSA), robots/C-tracks

Wire diameter 0.25 mm²

PUR (UL/CSA), robots/C-tracks

PUR (UL/CSA), welding spark

gray	black
209	609
	705
301	
302	

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

1 9 0 6 1

-

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1

Form

2

Cable Type

3

Cable Length

Notes

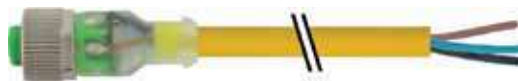
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight, with LED



Female

90° with LED



* only for products with UL/CSA approved cable

1 Form		12261			12381		
Type		3-pole with 2 × LED (PNP) (NPN) on request			3-pole with 2 × LED (PNP) (NPN) on request		
Circuit diagram							
Contact layout							
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	013	213	613
PUR/PVC (UL/CSA)		023	223	623	023	223	623
PUR (UL/CSA), robots/C-tracks		033	233	633	033	233	633
PUR (UL/CSA), welding spark		053	253	653	053	253	653
3 Cable Length							
1.5 m		0150					
3.0 m		0300					
5.0 m		0500					
7.5 m		0750					
10.0 m		1000					
Technical Data							
Operating voltage		24 V DC ±25%					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 7 0 0 5 M12 Lite (plastic hexagonal screw) on request					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight, with LED



Female

90° with LED



Approvals:  

* only for products with UL/CSA approved cable

1 Form

12281

12401

Type

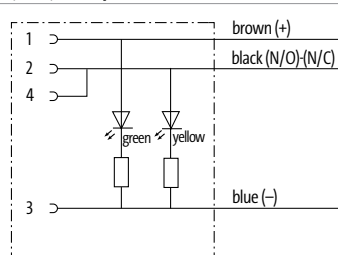
4-pole with 2 × LED (PNP)

4-pole with 2 × LED (PNP)

(NPN) on request

(NPN) on request

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

yellow

gray

black

yellow

gray

black

PVC (UL/CSA)

013

213

613

013

213

613

PUR/PVC (UL/CSA)

023

223

623

023

223

623

PUR (UL/CSA), robots/C-tracks

033

233

633

033

233

633

PUR (UL/CSA), welding spark

053

253

653

053

253

653

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

24 V DC ±25%

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1

Form

2

Cable Type

3

Cable Length

Notes

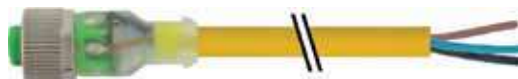
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight, with LED


Female

90° with LED


Approvals:

* only for products with UL/CSA approved cable

1 Form		12231		12421			
Type		4-pole with 3 × LED (PNP) (NPN) on request		4-pole with 3 × LED (PNP) (NPN) on request			
Circuit diagram							
Contact layout							
2 Cable Type		Jacket Color		Jacket Color			
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		014	214	614	014	214	614
PUR/PVC (UL/CSA)		024	224	624	024	224	624
PUR (UL/CSA), robots/C-tracks		034	234	634	034	234	634
PUR (UL/CSA), welding spark		054	254	654	054	254	654
3 Cable Length							
1.5 m		0150					
3.0 m		0300					
5.0 m		0500					
7.5 m		0750					
10.0 m		1000					
Technical Data							
Operating voltage		24 V DC ±25%					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0		— — — —		— — — —	
		7 0 0 5		M12 Lite (plastic hexagonal screw) on request			
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight, with LED



Female

90° with LED



Approvals: 

* only for products with UL/CSA approved cable

1 Form

12251

12441

Approvals

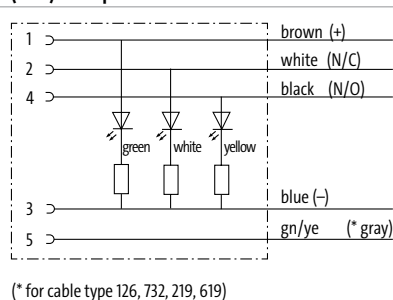
Type

5-pole with 3 × LED (PNP)
(NPN) on request

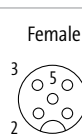
cULus *

5-pole with 3 × LED (PNP)
(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

PVC (UL/CSA)

PUR/PVC (UL/CSA)

PUR (UL/CSA), robots/C-tracks

PUR (UL/CSA), welding spark

yellow	gray	black	yellow	gray	black
015	215 (219)	615 (619)	015	215 (219)	615 (619)
025	225	625	025	225	625
035 (126)	235	635 (732)	035 (126)	235	635 (732)
055	255	655	055	255	655

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

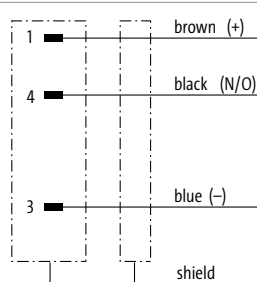
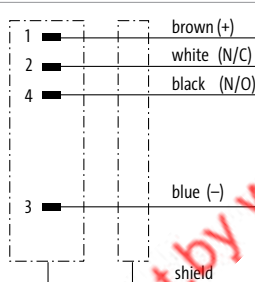
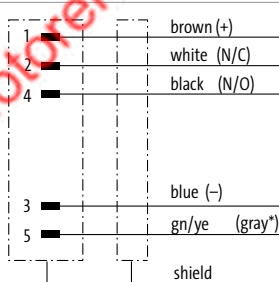
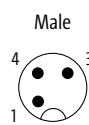
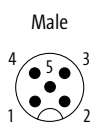
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Male
straight


Approvals:  
* only for products with UL/CSA approved cable

1 Form		13061		13081		13101																			
Type		3-pole, shielded		4-pole, shielded		5-pole, shielded																			
Circuit diagram																									
Contact layout																									
2 Cable Type		Jacket Color		Jacket Color		Jacket Color																			
Wire diameter 0.34 mm ²		<table><tr><td>gray</td><td>black</td></tr><tr><td>200</td><td>600</td></tr><tr><td>240</td><td>640</td></tr></table>		gray	black	200	600	240	640	<table><tr><td>gray</td><td>black</td></tr><tr><td>201</td><td>601</td></tr><tr><td>241</td><td>641</td></tr></table>		gray	black	201	601	241	641	<table><tr><td>gray</td><td>black</td></tr><tr><td>202 (203)</td><td>602 (603)</td></tr><tr><td>242 (243)</td><td>642 (643)</td></tr></table>		gray	black	202 (203)	602 (603)	242 (243)	642 (643)
gray	black																								
200	600																								
240	640																								
gray	black																								
201	601																								
241	641																								
gray	black																								
202 (203)	602 (603)																								
242 (243)	642 (643)																								
3 Cable Length																									
1.5 m		0150																							
3.0 m		0300																							
5.0 m		0500																							
7.5 m		0750																							
10.0 m		1000																							
Technical Data																									
Operating voltage		max. 60 V AC/DC																							
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)																							
Temperature range		-25...+85 °C, depending on cable quality																							
Article No.																									
The composition of your article number is explained on page 3.1.i		<table><tr><td>7</td><td>0</td><td>0</td><td>0</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr></table>						7	0	0	0	-	-	-	-	-	-								
7	0	0	0	-	-	-	-	-	-																
		1 Form		2 Cable Type		3 Cable Length																			
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.																							

M12 ROUND PLUG CONNECTORS

With open ended wires

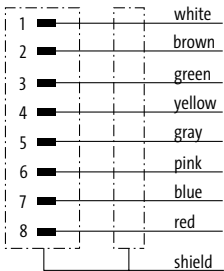
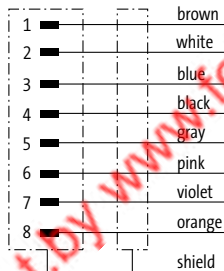
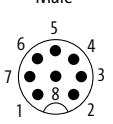
Male

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form		17081	17081
Type		8-pole, shielded	8-pole, shielded
Circuit diagram			
Contact layout		Male 	
2 Cable Type		Jacket Color	
Wire diameter 0.25 mm ²		gray	black
PVC (UL/CSA)		204	205
PUR (UL/CSA), robots/C-tracks		291	717
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		19301	
Type	12-pole, shielded		
Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue shield		
Contact layout	Male 1 2 3 4 5 6 7 8 9 10 11 12		
2 Cable Type		Jacket Color	
Wire diameter 0.14 mm²			black
PVC (UL/CSA)			703
PUR (UL/CSA), robots/C-tracks			706
3 Cable Length			
1.5 m			0150
3.0 m			0300
5.0 m			0500
7.5 m			0750
10.0 m			1000
Technical Data			
Operating voltage			max. 30 V AC/DC
Protection			IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range			-25...+85 °C, depending on cable quality
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 9 3 0 1 -		
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

90°



Approvals:  

* only for products with UL/CSA approved cable

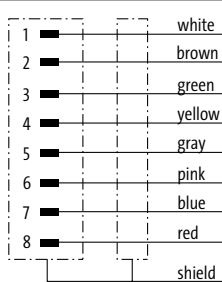
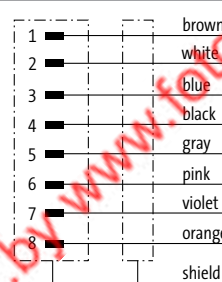
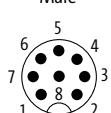
1	Form	13121	13141	13161
	Type	3-pole, shielded	4-pole, shielded	5-pole, shielded
	Circuit diagram			 (* for cable type 203, 603, 243, 643)
	Contact layout			
2	Cable Type	Jacket Color	Jacket Color	Jacket Color
	Wire diameter 0.34 mm²	grayblack	grayblack	grayblack
	PVC (UL/CSA)	200600	201601	202 (203)602 (603)
	PUR (UL/CSA), robots/C-tracks	240640	241641	242 (243)642 (643)
3	Cable Length			
	1.5 m	0150		
	3.0 m	0300		
	5.0 m	0500		
	7.5 m	0750		
	10.0 m	1000		
	Technical Data			
Operating voltage	max. 60 V AC/DC			
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i		7000 - -		
		1 Form 2 Cable Type 3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

With open ended wires

Male
90°


Approvals:  
* only for products with UL/CSA approved cable

1 Form		17101	17101
Type		8-pole, shielded	8-pole, shielded
Circuit diagram			
Contact layout		Male 	
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.25 mm²		gray	black
PVC (UL/CSA)		204	205
PUR (UL/CSA), robots/C-tracks		291	717
			294
			715
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type
			3 Cable Length
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

90°



Approvals: 

* only for products with UL/CSA approved cable

1	Form	19321	
Type		12-pole, shielded	
Circuit diagram		1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue shield	
Contact layout		Male 1 2 3 4 5 6 7 8 9 10 11 12	
2	Cable Type	Jacket Color	
Wire diameter 0.14 mm ²		black	
PVC (UL/CSA)		703	
PUR (UL/CSA), robots/Ctracks		706	
3	Cable Length		
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 — 1 9 3 2 1 — — — — — — — — —	
		1	Form
		2	Cable Type
		3	Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight



* only for products with UL/CSA approved cable

1 Form	13181	13201	13221
Type	3-pole, shielded	4-pole, shielded	5-pole, shielded
Circuit diagram			
Contact layout			
2 Cable Type	Jacket Color		Jacket Color
Wire diameter 0.34 mm ²	gray	black	gray
PVC (UL/CSA)	200	600	201
PUR (UL/CSA), robots/C-tracks	240	640	241
3 Cable Length	Jacket Color		Jacket Color
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data	Jacket Color		Jacket Color
Operating voltage	max. 60 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.	Jacket Color		Jacket Color
The composition of your article number is explained on page 3.1.i	7 0 0 0	-	-
	1 Form	2 Cable Type	3 Cable Length
Notes	Jacket Color		Jacket Color
	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

With open ended wires

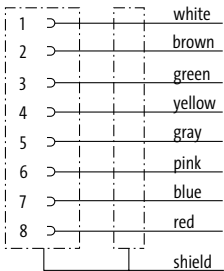
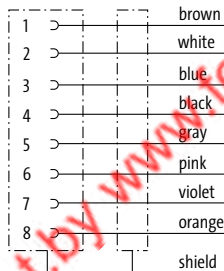
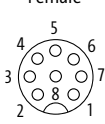
Female

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		17121	17121
Type		8-pole, shielded	8-pole, shielded
Circuit diagram			
Contact layout		Female 	
2 Cable Type		Jacket Color	
Wire diameter 0.25 mm ²		gray	black
PVC (UL/CSA)		204	205
PUR (UL/CSA), robots/Ctracks		291	717
			294
			715
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0	- - - - -
		1 Form	2 Cable Type
		3 Cable Length	

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		19341	
Type	12-pole, shielded		
Circuit diagram	1 2 3 4 5 6 7 8 9 10 11 12 brown blue white green pink yellow black gray red violet gray/pink red/blue shield		
Contact layout	Female 9 1 2 3 4 5 6 7 8		
2 Cable Type		Jacket Color	
Wire diameter 0.14 mm²		black	
PVC (UL/CSA)		703	
PUR (UL/CSA), robots/C-tracks		706	
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - 1 9 3 4 1 -	
		1	Form
		2	Cable Type
		3	Cable Length
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M12 ROUND PLUG CONNECTORS

With open ended wires

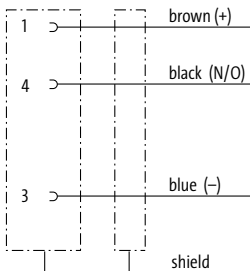
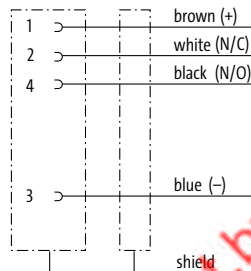
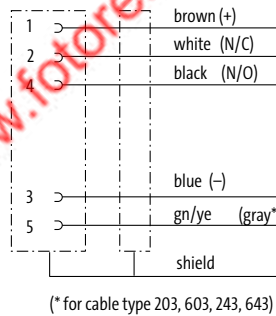
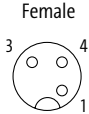
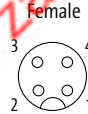
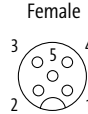
Female

90°



Approvals:  

* only for products with UL/CSA approved cable

1	Form	13241	13261	13281		
Type	3-pole, shielded	4-pole, shielded	5-pole, shielded			
Circuit diagram						
Contact layout						
2	Cable Type	Jacket Color	Jacket Color	Jacket Color		
Wire diameter 0.34 mm²		gray	black	gray	black	
PVC (UL/CSA)		200	600	201	601	
PUR (UL/CSA), robots/C-tracks		240	640	241	641	
3	Cable Length					
1.5 m	0150					
3.0 m	0300					
5.0 m	0500					
7.5 m	0750					
10.0 m	1000					
Technical Data						
Operating voltage	max. 60 V AC/DC					
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range	-25...+85 °C, depending on cable quality					
Article No.						
The composition of your article number is explained on page 3.1.i	7 0 0 0 - -					
	1	Form	2	Cable Type	3	Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

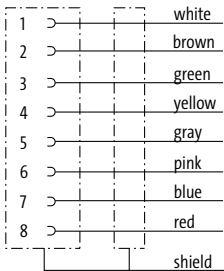
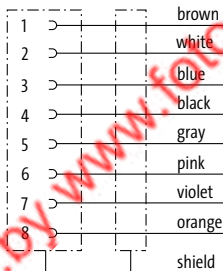
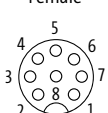
M12 ROUND PLUG CONNECTORS

With open ended wires

Female
90°



Approvals:  
* only for products with UL/CSA approved cable

1 Form		17141	17141
Type		8-pole, shielded	8-pole, shielded
Circuit diagram			
Contact layout		Female 	
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.25 mm²		gray	black
PVC (UL/CSA)		204	205
PUR (UL/CSA), robots/C-tracks		291	717
			294 715
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

90°



Approvals: 

* only for products with UL/CSA approved cable

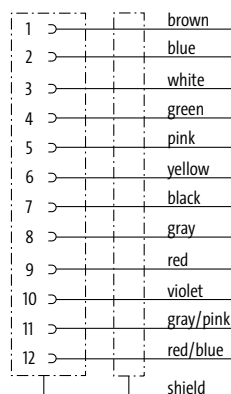
1 Form

19361

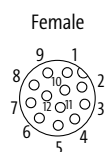
Type

12-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.14 mm²

PVC (UL/CSA)

PUR (UL/CSA), robots/C-tracks

black

703

706

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 30 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

1 9 3 6 1

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

Female

straight



Approvals:

* only for products with UL/CSA approved cable

1 Form	40001	40021	40041
Type	3-pole	4-pole	5-pole
Circuit diagram			(* for cable type 126, 732, 219, 619)
Contact layout	Male Female	Male Female	Male Female
2 Cable Type	Jacket Color		
Wire diameter 0.34 mm ²	yellow	gray	black
PVC (UL/CSA)	013	213	613
PUR/PVC (UL/CSA)	023	223	623
PUR (UL/CSA), robots/C-tracks	033	233	633
PUR (UL/CSA), welding spark	053	253	653
3 Cable Length	Jacket Color		
0.3 m	0030		
0.6 m	0060		
1.0 m	0100		
1.5 m	0150		
2.0 m	0200		
Technical Data	Jacket Color		
Operating voltage	max. 250 V AC/DC		max. 125 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.	Jacket Color		
The composition of your article number is explained on page 3.1.i	7 0 0 0	–	–
	7 0 0 5	M12 Lite (plastic hexagonal screw) on request	
	1 Form	2 Cable Type	3 Cable Length
Notes	Jacket Color		
	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

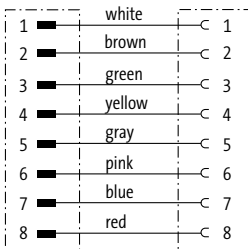
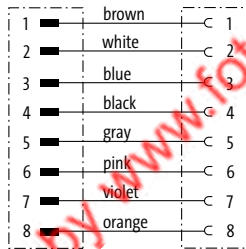
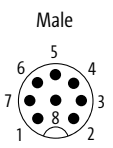
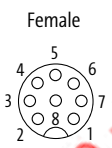
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form	48001	48001
Type	8-pole	8-pole
Circuit diagram		
Contact layout	 	
2 Cable Type	Jacket Color	
Wire diameter 0.25 mm ²	gray	black
PVC (UL/CSA)	207	607
PUR (UL/CSA), robots/C-tracks	292	722
3 Cable Length	Jacket Color	
0.3 m	0030	
0.6 m	0060	
1.0 m	0100	
1.5 m	0150	
2.0 m	0200	
Technical Data		
Operating voltage	max. 30 V AC/DC	
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 0 0	
	7 0 0 5	M12 Lite (plastic hexagonal screw) on request
	1 Form	2 Cable Type
		3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

Female
straight



Approvals: 

* only for products with UL/CSA approved cable

1 Form		53001																																																													
Type	12-pole																																																														
Circuit diagram	<table><tr><td>1</td><td>■</td><td>brown</td><td>└</td><td>1</td></tr><tr><td>2</td><td>■</td><td>blue</td><td>└</td><td>2</td></tr><tr><td>3</td><td>■</td><td>white</td><td>└</td><td>3</td></tr><tr><td>4</td><td>■</td><td>green</td><td>└</td><td>4</td></tr><tr><td>5</td><td>■</td><td>pink</td><td>└</td><td>5</td></tr><tr><td>6</td><td>■</td><td>yellow</td><td>└</td><td>6</td></tr><tr><td>7</td><td>■</td><td>black</td><td>└</td><td>7</td></tr><tr><td>8</td><td>■</td><td>gray</td><td>└</td><td>8</td></tr><tr><td>9</td><td>■</td><td>red</td><td>└</td><td>9</td></tr><tr><td>10</td><td>■</td><td>violet</td><td>└</td><td>10</td></tr><tr><td>11</td><td>■</td><td>gray/pink</td><td>└</td><td>11</td></tr><tr><td>12</td><td>■</td><td>red/blue</td><td>└</td><td>12</td></tr></table>			1	■	brown	└	1	2	■	blue	└	2	3	■	white	└	3	4	■	green	└	4	5	■	pink	└	5	6	■	yellow	└	6	7	■	black	└	7	8	■	gray	└	8	9	■	red	└	9	10	■	violet	└	10	11	■	gray/pink	└	11	12	■	red/blue	└	12
1	■	brown	└	1																																																											
2	■	blue	└	2																																																											
3	■	white	└	3																																																											
4	■	green	└	4																																																											
5	■	pink	└	5																																																											
6	■	yellow	└	6																																																											
7	■	black	└	7																																																											
8	■	gray	└	8																																																											
9	■	red	└	9																																																											
10	■	violet	└	10																																																											
11	■	gray/pink	└	11																																																											
12	■	red/blue	└	12																																																											
Contact layout	<table><tr><td>Male</td><td>Female</td></tr><tr><td></td><td></td></tr></table>			Male	Female																																																										
Male	Female																																																														
2 Cable Type		Jacket Color																																																													
Wire diameter 0.14 mm²		gray	black																																																												
PVC (UL/CSA)		209	609																																																												
PUR (UL/CSA), robots/C-tracks			705																																																												
Wire diameter 0.25 mm²																																																															
PUR (UL/CSA), robots/C-tracks		301																																																													
PUR (UL/CSA), welding spark		302																																																													
3 Cable Length																																																															
0.3 m	0030																																																														
0.6 m	0060																																																														
1.0 m	0100																																																														
1.5 m	0150																																																														
2.0 m	0200																																																														
Technical Data																																																															
Operating voltage	max. 30 V AC/DC																																																														
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)																																																														
Temperature range	-25...+85 °C, depending on cable quality																																																														
Article No.																																																															
The composition of your article number is explained on page 3.1.i	<table><tr><td>7</td><td>0</td><td>0</td><td>0</td><td>-</td><td>5</td><td>3</td><td>0</td><td>0</td><td>1</td><td>-</td><td></td><td></td><td></td></tr><tr><td>7</td><td>0</td><td>0</td><td>5</td><td></td><td colspan="7">M12 Lite (plastic hexagonal screw) on request</td><td></td><td></td></tr></table>			7	0	0	0	-	5	3	0	0	1	-				7	0	0	5		M12 Lite (plastic hexagonal screw) on request																																								
	7	0	0	0	-	5	3	0	0	1	-																																																				
7	0	0	5		M12 Lite (plastic hexagonal screw) on request																																																										
		1 Form	2 Cable Type	3 Cable Length																																																											
Notes																																																															
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.																																																													

M12 ROUND PLUG CONNECTORS

Connection cables

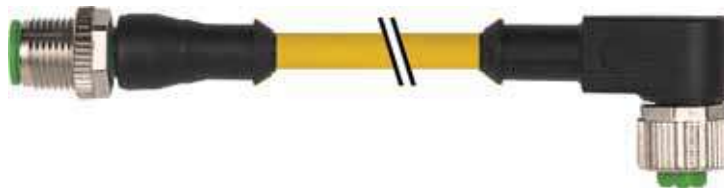
– M12 - M12

Male

straight

Female

90°



Approvals:  

* only for products with UL/CSA approved cable

1	Form	40101			40121			40141		
Type		3-pole			4-pole			5-pole		
Circuit diagram										
Contact layout										
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)		023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks		033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark		053	253	653	054	254	654	055	255	655
3	Cable Length									
0.3 m		0030								
0.6 m		0060								
1.0 m		0100								
1.5 m		0150								
2.0 m		0200								
Technical Data										
Operating voltage		max. 250 V AC/DC						max. 125 V AC/DC		
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7000 - - 7005 M12 Lite (plastic hexagonal screw) on request								
		1 Form			2 Cable Type			3 Cable Length		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

Female

90° with LED



* only for products with UL/CSA approved cable

1 Form	4 0 3 2 1	4 0 3 4 1	4 0 3 6 1
Type	3-pole with 2 × LED (PNP) (NPN) on request	4-pole with 3 × LED (PNP) (NPN) on request	5-pole with 3 × LED (PNP) (NPN) on request
Circuit diagram			(* for cable type 126, 732, 219, 619)
Contact layout			
2 Cable Type	Jacket Color		
Wire diameter 0.34 mm ²	yellow	gray	black
PVC (UL/CSA)	013	213	613
PUR/PVC (UL/CSA)	023	223	623
PUR (UL/CSA), robots/C-tracks	033	233	633
PUR (UL/CSA), welding spark	053	253	653
3 Cable Length	Jacket Color		
0.3 m	0030	014	214
0.6 m	0060	024	224
1.0 m	0100	034	234
1.5 m	0150	054	254
2.0 m	0200	064	264
Technical Data	Jacket Color		
Operating voltage	24 V DC ±25%	015	215 (219)
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	025	225
Temperature range	-25...+85 °C, depending on cable quality	035 (126)	235
Article No.	Jacket Color		
The composition of your article number is explained on page 3.1.i	7 0 0 0	7 0 0 5	M12 Lite (plastic hexagonal screw) on request
	1 Form	2 Cable Type	3 Cable Length
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.		

M12 ROUND PLUG CONNECTORS

Connection cables

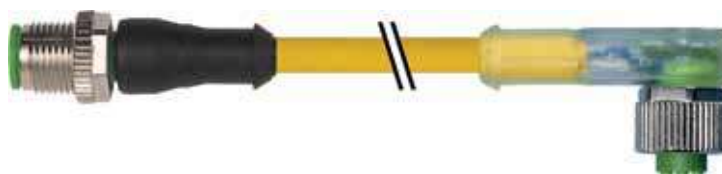
– M12 - M12

Male

straight

Female

90° with LED



Approvals:  

* only for products with UL/CSA approved cable

1 Form

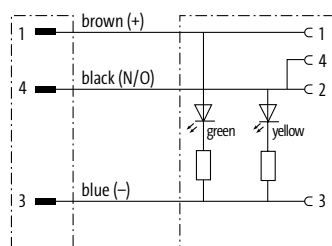
40381

Type

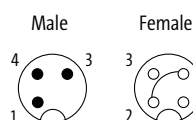
3-pole with 2 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.34 mm ²	yellow	gray	black
PVC (UL/CSA)	013	213	613
PUR/PVC (UL/CSA)	023	223	623
PUR (UL/CSA), robots/C-tracks	033	233	633
PUR (UL/CSA), welding spark	053	253	653

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

- 4 0 3 8 1 -

— — —

— — — —

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Y connector

Male straight

Females

straight



Approvals:  
* only for products with UL/CSA approved cable

1 Form		4 0 7 0 1			4 0 7 2 1		
Type		4-/3-pole			4-pole		
Circuit diagram							
Contact layout							
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow	gray	black	yellow	gray	black
PVC (UL/CSA)		013	213	613	013	213	613
PUR/PVC (UL/CSA)		023	223	623	023	223	623
PUR (UL/CSA), robots/C-tracks		033	233	633	033	233	633
PUR (UL/CSA), welding spark		053	253	653	053	253	653
3 Cable Length							
0.3 m		0030					
0.6 m		0060					
1.0 m		0100					
1.5 m		0150					
2.0 m		0200					
Technical Data							
Operating voltage		max. 250 V AC/DC					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0					
		7 0 0 5			M12 Lite (plastic hexagonal screw) on request		
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Y connector

Male straight

Females

90°



Approvals:

* only for products with UL/CSA approved cable

1 Form

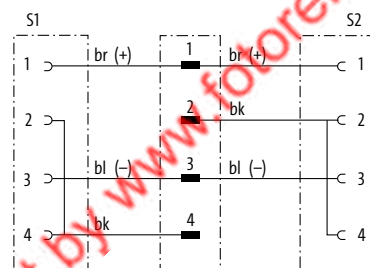
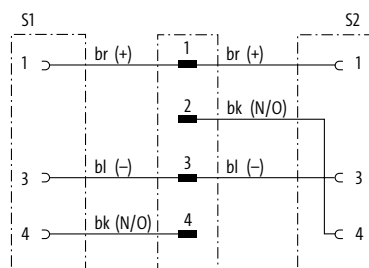
40741

40761

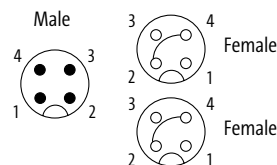
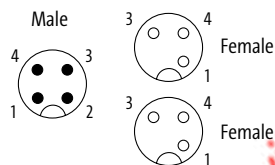
Type
Circuit diagram

4-/3-pole

4-pole



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

PVC (UL/CSA)

PUR/PVC (UL/CSA)

PUR (UL/CSA), robots/C-tracks

PUR (UL/CSA), welding spark

yellow	gray	black	yellow	gray	black
013	213	613	013	213	613
023	223	623	023	223	623
033	233	633	033	233	633
053	253	653	053	253	653

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12



* only for products with UL/CSA approved cable

Y connector

Male straight

Females

90° with LED



1 Form		40781			40801		
Type		4-/3-pole LED (yellow/green)			4-pole LED (yellow/green)		
Circuit diagram							
Contact layout							
2 Cable Type		Jacket Color			Jacket Color		
Wire diameter 0.34 mm²		yellow gray black			yellow gray black		
PVC (UL/CSA)		013 213 613			013 213 613		
PUR/PVC (UL/CSA)		023 223 623			023 223 623		
PUR (UL/CSA), robots/C-tracks		033 233 633			033 233 633		
PUR (UL/CSA), welding spark		053 253 653			053 253 653		
3 Cable Length							
0.3 m		0030					
0.6 m		0060					
1.0 m		0100					
1.5 m		0150					
2.0 m		0200					
Technical Data							
Operating voltage		24 V DC ±25%					
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)					
Temperature range		-25...+85 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -			- - - - -		
		7 0 0 5 M12 Lite (plastic hexagonal screw) on request					
		1 Form		2 Cable Type		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

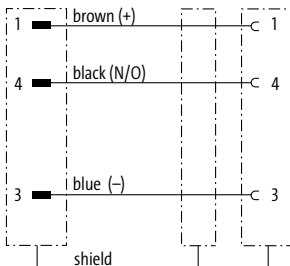
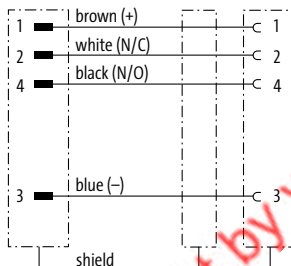
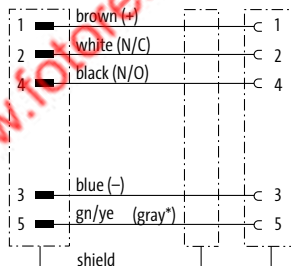
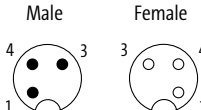
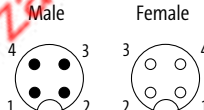
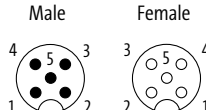
straight

straight



Approvals:  

* only for products with UL/CSA approved cable

1	Form	4 0 4 8 1		4 0 5 0 1		4 0 5 2 1	
	Type	3-pole, shielded		4-pole, shielded		5-pole, shielded	
	Circuit diagram					 (* for cable type 203, 603, 243, 643)	
Contact layout							
2	Cable Type	Jacket Color		Jacket Color		Jacket Color	
	Wire diameter 0.34 mm ²		gray	black		gray	black
	PVC (UL/CSA)		200	600		201	601
	PUR (UL/CSA), robots/C-tracks		240	640		241	641
3	Cable Length						
	0.3 m	0030					
	0.6 m	0060					
	1.0 m	0100					
	1.5 m	0150					
	2.0 m	0200					
	Technical Data						
Operating voltage	max. 60 V AC/DC						
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)						
Temperature range	-25...+85 °C, depending on cable quality						
Article No.							
	The composition of your article number is explained on page 3.1.i						
		7 0 0 0		-		-	

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

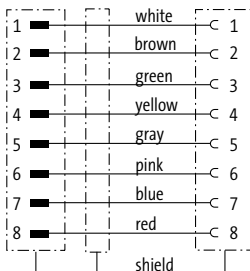
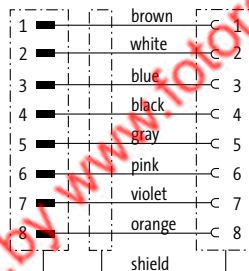
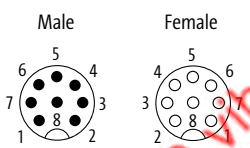
Female

straight



Approvals:  

* only for products with UL/CSA approved cable

1 Form		48041		48041	
Type		8-pole, shielded		8-pole, shielded	
Circuit diagram					
Contact layout					
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 0.25 mm²		gray		black	
PVC (UL/CSA)		204		205	
PUR (UL/CSA), robots/C-tracks		291		717	
3 Cable Length					
0.3 m		0030			
0.6 m		0060			
1.0 m		0100			
1.5 m		0150			
2.0 m		0200			
Technical Data					
Operating voltage		max. 30 V AC/DC			
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0		- - - - -	
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

Female

straight



Approvals: 

* only for products with UL/CSA approved cable

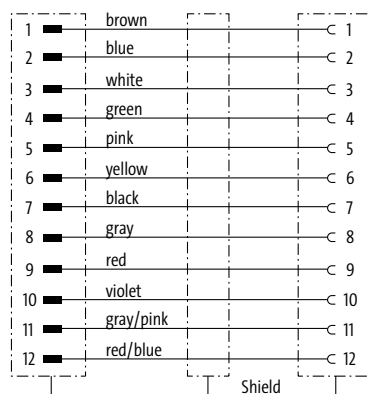
1 Form

533 01

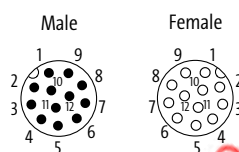
Type

12-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.14 mm²

PVC (UL/CSA)

PUR (UL/CSA), robots/C-tracks

black

703

706

3 Cable Length

0.3 m

0030

0.6 m

0060

1.0 m

0100

1.5 m

0150

2.0 m

0200

Technical Data

Operating voltage

max. 30 V AC/DC

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

5 3 3 0 1

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Male

straight



Female

straight



1	Form	12461 me×	12481 me×	12581 me×	12601 me×
Type		3-pole	4-pole	3-pole	4-pole
Circuit diagram					
Connection cross section		0.25...0.5 mm ²			
Contact layout		Male 	Male 	Female 	Female
Technical Data					
Operating voltage		max. 32 V AC/DC			
Operating current per contact		max. 4 A			
Connection cross section		0.25...0.5 mm ² (conductor diameter min. 0.1 mm)			
Sealing range (cable Ø)		4...5.1 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		1.2...1.6 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Reconnection (cable)		10			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0		0 0 0	
		7 0 0 5		M12 Lite (plastic hexagonal screw) on request	
		1 Form			
Notes		Other versions on request.			

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Male

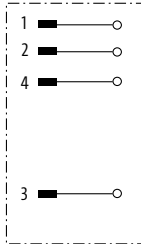
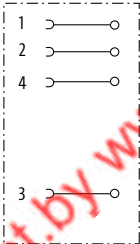
straight, compact



Female

straight, compact



1	Form	12491	me✖	12611	me✖
Approvals		cURus			
Type		4-pole		4-pole	
Circuit diagram					
Connection cross section		0.14...0.34 mm²			
Contact layout		Male 		Female 	
Technical Data					
Operating voltage		max. 32 V AC/DC			
Operating current per contact		max. 4 A			
Connection cross section		0.14...0.34 mm² (conductor diameter min. 0.1 mm)			
Sealing range (cable Ø)		2.9...5.1 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		1.0...1.6 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Reconnection (cable)		10			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 — 1 Form — 0 0 0 0 0 0 0			

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Male

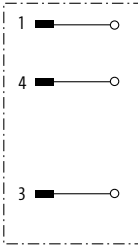
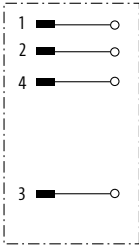
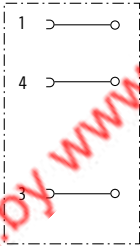
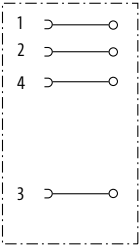
90°



Female

90°



1	Form	12541 me×	12561 me×	12661 me×	12681 me×
	Approvals		cURus		
	Type	3-pole	4-pole	3-pole	4-pole
	Circuit diagram				
	Connection cross section	0.25...0.5 mm ²			
	Contact layout	Male 	Male 	Female 	Female 
Technical Data					
	Operating voltage	max. 32 V AC/DC			
	Operating current per contact	max. 4 A			
	Connection cross section	0.25...0.5 mm ² (conductor diameter min. 0.1 mm)			
	Sealing range (cable Ø)	4...5.1 mm			
	Wire isolation	PVC, PP, TPE			
	Outer wire Ø	1.2...1.6 mm			
	Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
	Protection	IP67 inserted and tightened (EN 60529)			
	Reconnection (cable)	10			
	Temperature range	-25...+85 °C			
Article No.					
	The composition of your article number is explained on page 3.1.i	7000 — <			

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Female

90° with LED



1	Form	12671	me	12691	me
Type		3-pole with 2 × LED (PNP)		4-pole with 3 × LED (PNP)	
Circuit diagram					
Connection cross section		0.25...0.5 mm²			
Contact layout		Female		Female	
Technical Data					
Operating voltage		24 V DC ±25%			
Operating current per contact		max. 4 A			
Connection cross section		0.25...0.5 mm² (conductor diameter min. 0.1 mm)			
Sealing range (cable Ø)		4...5.1 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		1.2...1.6 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Reconnection (cable)		10			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7000 - - 000 0000			
		7005 M12 Lite (plastic hexagonal screw) on request			
		1		Form	
Notes		Other versions on request.			

M12 ROUND PLUG CONNECTORS

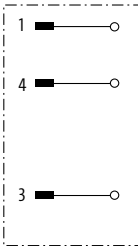
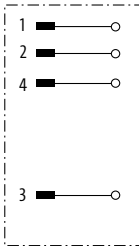
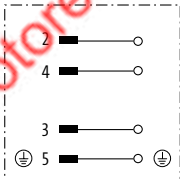
Field-wireable

– IDC terminals

Male

straight



1	Form	12501	me×	12521	me×	12515	me×	
Type		3-pole		4-pole		4-pole		
Circuit diagram								
Connection cross section		0.5...1.0 mm²						
Contact layout		Male 		Male 		Male 		
Technical Data								
Operating voltage		max. 32 V AC/DC						
Operating current per contact		max. 4 A						
Connection cross section		0.5...1.0 mm² (conductor diameter min. 0.1 mm)						
Sealing range (cable Ø)		5.5...8 mm						
Wire isolation		PVC, PP, TPE						
Outer wire Ø		1.6...2.0 mm						
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing						
Protection		IP67 inserted and tightened (EN 60529)						
Reconnection (cable)		10						
Temperature range		-25...+85 °C						
Article No.								
The composition of your article number is explained on page 3.1.i		7 0 0 0		— — — — —		0 0 0		
		7 0 0 5		M12 Lite (plastic hexagonal screw) on request				
		1		Form				
Notes								
		Other versions on request.						

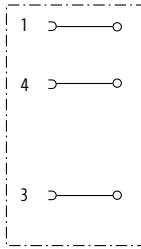
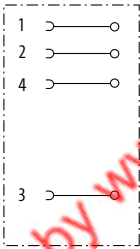
M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

Female
straight



1	Form	12621	me✕	12641	me✕
Type		3-pole		4-pole	
Circuit diagram					
Connection cross section		0.5...1.0 mm²			
Contact layout		Female 		Female 	
Technical Data					
Operating voltage		max. 32 V AC/DC			
Operating current per contact		max. 4 A			
Connection cross section		0.5...1.0 mm² (conductor diameter min. 0.1 mm)			
Sealing range (cable Ø)		5.5...8 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		1.6...2.0 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Reconnection (cable)		10			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7000 - - 000 0000			
		7005 M12 Lite (plastic hexagonal screw) on request			
		1 Form			
Notes		Other versions on request.			

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

straight



Female

straight



Approvals:

1	Form	12701 me×	12721 me×	12901 me×	12921 me×
Type		4-pole	5-pole	4-pole	5-pole
Circuit diagram					
Sealing range (cable Ø)		4...6 mm			
Contact layout		Male	Male	Female	Female
Technical Data					
Operating voltage		max. 250 V AC/DC	max. 60 V AC/DC	max. 250 V AC/DC	max. 60 V AC/DC
Operating current per contact		max. 4 A			
Connection cross section		max. 0.75 mm ²			
Sealing range (cable Ø)		4...6 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -		0 0 0	0 0 0 0
		1 Form			
Notes					
Other versions on request.					

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

straight



Female

straight



Approvals:

1	Form	12741 me✖	12761 me✖	12941 me✖	12961 me✖
Type		4-pole	5-pole	4-pole	5-pole
Circuit diagram					
Sealing range (cable Ø)	6...8 mm				
Contact layout		Male 	Male 	Female 	Female
Technical Data					
Operating voltage	max. 250 V AC/DC		max. 60 V AC/DC		max. 250 V AC/DC
Operating current per contact	max. 4 A		max. 60 V AC/DC		max. 60 V AC/DC
Connection cross section	max. 0.75 mm²				
Sealing range (cable Ø)	6...8 mm				
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-40...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i					
		7 0 0 0 - _ _ _ _ - 0 0 0		0 0 0 0	
		1 Form			

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male
straight



Female
straight



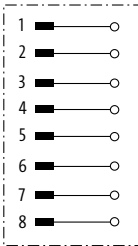
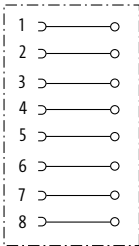
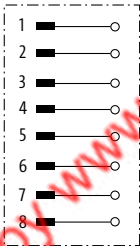
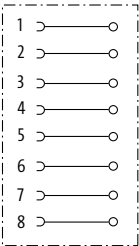
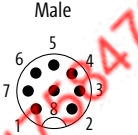
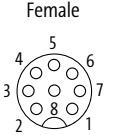
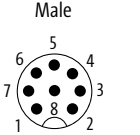
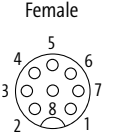
Male
90°



Female
90°



Approvals:

1	Form	17301 me×	17321 me×	17311 me×	17331 me×
Type		8-pole	8-pole	8-pole	8-pole
Circuit diagram					
Sealing range (cable Ø)		6...8 mm			
Contact layout		Male 	Female 	Male 	Female 
Technical Data					
Operating voltage		max. 30 V AC/DC			
Operating current per contact		max. 2 A			
Connection cross section		max. 0.5 mm ²			
Sealing range (cable Ø)		6...8 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0		0 0 0	
		— — — —		— — — —	
		1 Form			
Notes					
		Other versions on request.			

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

90°



Female

90°



Approvals: 

1	Form	12821 me✕	12841 me✕	12981 me✕	13001 me✕
Type		4-pole	5-pole	4-pole	5-pole
Circuit diagram					
Sealing range (cable Ø)	4...6 mm				
Contact layout		Male	Male	Female	Female
Technical Data					
Operating voltage	max. 250 V AC/DC		max. 60 V AC/DC		max. 250 V AC/DC
Operating current per contact	max. 4 A				max. 60 V AC/DC
Connection cross section	max. 0.75 mm²				
Sealing range (cable Ø)	4...6 mm				
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-40...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i					
		7 0 0 0		0 0 0	
		— — — —		0 0 0 0	
		1 Form			

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals:

Male
90°



Female
90°



1	Form	12861 me×	12881 me×	13021 me×	13041 me×
Type		4-pole	5-pole	4-pole	5-pole
Circuit diagram					
Sealing range (cable Ø)		6...8 mm			
Contact layout		Male	Male	Female	Female
Technical Data					
Operating voltage		max. 250 V AC/DC	max. 60 V AC/DC	max. 250 V AC/DC	max. 60 V AC/DC
Operating current per contact		max. 4 A			
Connection cross section		max. 0.75 mm²			
Sealing range (cable Ø)		6...8 mm			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -		0 0 0	0 0 0 0
		1 Form			
Notes					
Other versions on request.					

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

straight



Female

straight



Male

90°

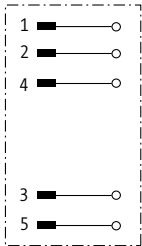
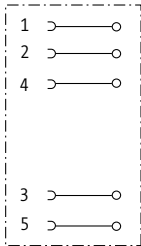
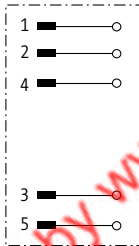
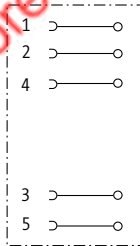


Female

90°



Approvals: UL US
Listed

1	Form	12731 me	12931 me	12851 me	13011 me
Type		5-pole	5-pole	5-pole	5-pole
Circuit diagram					
Sealing range (cable Ø)		2.5...8.0 mm			
Contact layout		Male 	Female 	Male 	Female 
Technical Data					
Operating voltage	max. 60 V AC/DC				
Operating current per contact	max. 7.5 A (+40 °C; 1.5 mm²)				
Connection cross section	max. 1.5 mm²				
Sealing range (cable Ø)	2.5...8.0 mm				
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm)				
Protection	IP67 inserted and tightened (EN 60529)				
Temperature range	-30...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0 - 1 2 3 4 - 0 0 0 0 0 0 0				
	1 Form				

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

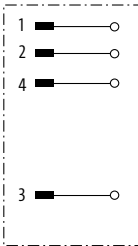
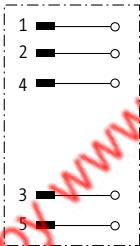
Field-wireable

– Screw terminals

Y connector

Male straight



1	Form	12781	me✖	12801	me✖
Type		4-pole		5-pole	
Circuit diagram					
Sealing range (cable Ø)		2.1...3/4...5 mm			
Contact layout		Male 		Male 	
Technical Data					
Operating voltage		max. 250 V AC/DC		max. 125 V AC/DC	
Operating current per contact		max. 4 A			
Connection cross section		max. 0.75 mm²			
Sealing range (cable Ø)		2.1...3/4...5 mm (2 cable entries)			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -		0 0 0 0	
		1 Form			
Notes					
Other versions on request.					

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

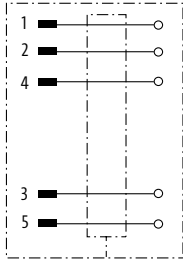
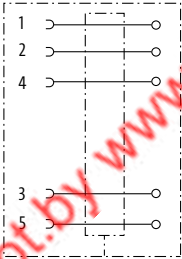
straight



Female

straight



1	Form	13301 me✖	13321 me✖	13381 me✖	13401 me✖
Approvals			cURus		cURus
Type		5-pole, shielded	5-pole, shielded	5-pole, shielded	5-pole, shielded
Circuit diagram					
Sealing range (cable Ø)		4...6 mm	6...8 mm	4...6 mm	6...8 mm
Contact layout		Male 		Female 	
Technical Data					
Operating voltage		max. 60 V AC/DC			
Operating current per contact		max. 4 A			
Connection cross section		max. 0.75 mm²			
Sealing range (cable Ø)		4...6 mm	6...8 mm	4...6 mm	6...8 mm
Protection		IP67 inserted and tightened (EN 60529)			
Housing		Brass, nickel plated			
Temperature range		-40...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - 0 0 0 - 0 0 0 0			
		1 Form			

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male
straight



Female
straight



Male
90°



Female
90°



Approvals:

1 Form		17341 me×	17361 me×	17351 me×	17371 me×
Type	8-pole, shielded				
Circuit diagram					
Sealing range (cable Ø)	6...8 mm				
Contact layout	Male Female Male Female				
Technical Data					
Operating voltage	max. 30 V AC/DC				
Operating current per contact	max. 2 A				
Connection cross section	max. 0.5 mm ²				
Sealing range (cable Ø)	6...8 mm				
Protection	IP67 inserted and tightened (EN 60529)				
Housing	Brass, nickel plated				
Temperature range	-40...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - 0 0 0 0 0 0 0				
	1 Form				
Notes					
Other versions on request.					

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Male

90°



Female

90°



1	Form	13341 me×	13361 me×	13421 me×	13441 me×
---	------	-----------	-----------	-----------	-----------

Approvals

Type

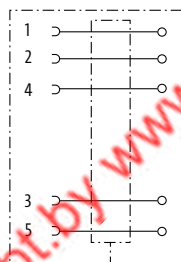
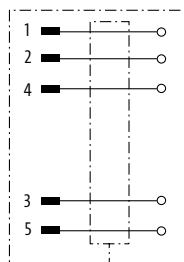
Circuit diagram

5-pole, shielded

5-pole, shielded

5-pole, shielded

5-pole, shielded



Sealing range (cable Ø)

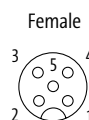
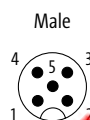
4...6 mm

6...8 mm

4...6 mm

6...8 mm

Contact layout



Technical Data

Operating voltage

max. 60 V AC/DC

Operating current per contact

max. 4 A

Connection cross section

max. 0.75 mm²

Sealing range (cable Ø)

4...6 mm

6...8 mm

4...6 mm

6...8 mm

Protection

IP67 inserted and tightened (EN 60529)

Housing

Brass, nickel plated

Temperature range

-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

0 0 0

0 0 0 0

1 Form

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000
	Snap-on cable sleeve for ACS label plates (4 × 18 mm) for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm) Cable diameter (5...7 mm)	7000-99005-0000000 7000-99006-0000000
	ACS label plate for self marking (4 × 18 mm)		7000-99002-0000000
	Colored ring M8/M12		
	sandy yellow	for unshielded molding	7000-99301-V011002
	zinc yellow	for unshielded molding	7000-99301-V011018
	redorange	for unshielded molding	7000-99301-V012008
	red	for unshielded molding	7000-99301-V013020
	violet	for unshielded molding	7000-99301-V014003
	purple	for unshielded molding	7000-99301-V014006
	blue	for unshielded molding	7000-99301-V015005
	green	for unshielded molding	7000-99301-V016018
	gray	for unshielded molding	7000-99301-V017035
	white	for unshielded molding	7000-99301-V019003
	black	for unshielded molding	7000-99301-V019004
Mounting accessories			Art-No.
	Torque wrench set M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
	Torque wrench M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99109-0000000
	Torque wrench M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	7000-99094-0000000
	Torque wrench M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	7000-99103-0000000
	Hold clip M12 Plastic		7000-99045-0000000

M12 ROUND PLUG CONNECTORS

End fitting accessories			Art-No.
	Tube adapter		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000
Connection accessories			Art-No.
	Universal holder		
	modular	M8 M12	7000-99801-0000000
	Universal holder		
	modular	M12 Y-connector M12	7000-99811-0000000
	Flange M12 male, pre-wired 0.2 m		
	straight, A-coded, 4-pole		7000-13501-9710020
	straight, A-coded, 5-pole	DeviceNet, CANopen	7000-13521-9720020
	Flange M12 female, pre-wired 0.2 m		
	straight, A-coded, 4-pole		7000-13541-9710020
	straight, A-coded, 5-pole	DeviceNet, CANopen	7000-13561-9720020
	straight, A-coded, 8-pole		7000-17181-9730020



T-COUPLERS VERSATILE ADAPTERS

- Slimline saves space
- Minimizes wiring efforts
- Many different configurations

T-COUPLERS FOR PERFECT SYSTEM INSTALLATIONS

Increasingly, automation requires a large number of sensors and with each sensor comes more wiring.

By using T-couplers you reduce the number of cables required and you can combine inputs and outputs depending on the application. Thanks to the slim design, you can connect several M12 ports to our Cube module. The handy torque wrench makes installation easy even in tight spaces and guarantees IP67 seals.

The slimline T-couplers feature a new female screw connection which makes the connection even safer and easier.

T-couplers



M8 male
T-coupler
T-coupler (Nano)

M8 female
T-coupler
T-coupler (Nano)

Page 3.3.1



M12 male
T-coupler

M12 female
T-coupler

Page 3.3.2



M12 female
T-coupler
• Industrial Ethernet

M12 male/M12 female
T-coupler

Page 3.3.4



7/8" male
T-coupler

7/8" female
T-coupler

Page 3.3.5

T-COUPPLERS M8, M12, 7/8"

M8 - M8

T-coupler

Male straight - female straight



T-coupler (Nano)

Male straight - female straight



1 Form	88611	88621	88602
Approvals	cULus	cULus	
Type	3-pole	3-pole	3-/4-pole
	Parallel circuit	Series connection	Distribution function (NO)
Circuit diagram			
Contact layout			
Technical Data			
Operating voltage	max. 50 V AC/60 V DC		max. 32 V AC/DC
Rated surge voltage	1.5 kV		0.8 kV
Operating current per contact	max. 4 A		max. 2 A
Locking of ports	Screw thread M8 x 1 mm (recommended torque 0.4 Nm) self-securing		Screw thread M8 x 1 mm, self-securing
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C		-30...+80 °C
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0	- - - - -	0 0 0 0
	1 Form		
Notes	Other versions on request.		

T-couplers M8, M12, 7/8"

T-COUPPLERS M8, M12, 7/8"

M12 - M12

T-coupler
Male straight - female straight



Approvals:  US
Listed

T-couplers M8, M12, 7/8"

1	Form	41121	41141	41161	41181
Type		5-pole	5-pole	4-pole	5-pole
Circuit diagram		Distribution function (NO)	Parallel circuit	Series connection	Distribution function (NO)
Contact layout					
Technical Data					
Operating voltage		max. 60 V AC/DC			
Operating voltage (only UL listed)		30 V AC/DC			
Rated surge voltage		1.5 kV			
Operating current per contact		max. 4 A			
Material group		IEC 60664-1, category I			
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection		IP67 inserted and tightened (EN 60529)			
Locking material		Zinc die casting, matte nickel plated			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i					
		1 Form			
Notes		Other versions on request.			

T-coupler (Slim Line)

Male straight - female straight with LED



M12 - M12

T-coupler (Slim Line)

Male straight - female straight



Approvals:

1 Form	41131	41151	41191	41135
Type	5-pole	5-pole	5-pole	5-pole with 3 × LED (PNP)
Distribution function (NO)		Parallel circuit	Distribution function (NO)	Distribution function (NO)
Circuit diagram	1. Female M12 2. Female Male M12	1. Female M12 2. Female Male M12	1. Female M12 2. Female Male M12	1. Female M12 2. Female Male M12
Contact layout				
Technical Data				
Operating voltage	max. 60 V AC/DC			24 V DC ±25%
Operating voltage (only UL listed)	30 V AC/DC			30 V DC
Rated surge voltage	1.5 kV			0.8 kV
Operating current per contact	max. 4 A			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - - 0 0 0 0 0 0 0 0			
	1 Form			
Notes	Other versions on request.			

T-couplers M8, M12, 7/8"

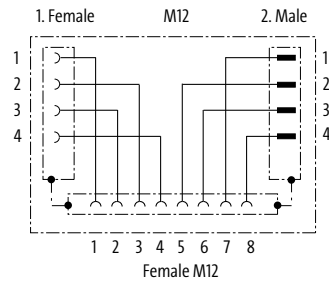
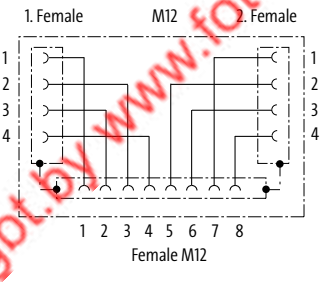
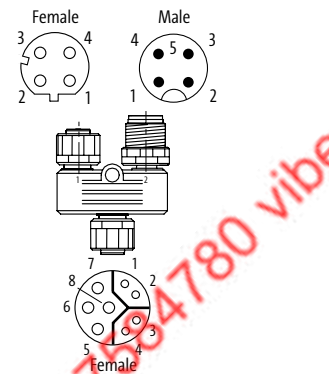
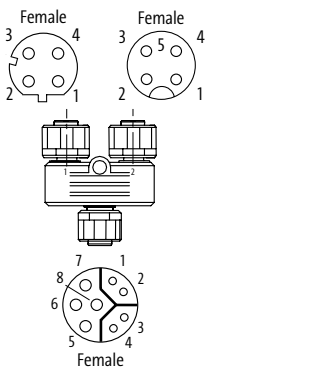
– M12 - M12

Female straight - male/female straight



Female straight - female straight



1	Form	47301	47311
Type		4-/8-pole, shielded Y-coded, D-coded Distribution function (NO)	4-/8-pole, shielded Y-coded, D-coded Distribution function (NO)
Circuit diagram			
Contact layout			
Technical Data			
Operating voltage		max. 30 V DC	
Rated surge voltage		0.8 kV	
Operating current per contact		4 A (Power), 0.5 A (Data)	
Material group		IEC 60664-1, category I	
Transfer parameters		CAT5, Class D (ISO/IEC 11801:2002), (EN 50173-1)	
Transfer rate		to 100 Mbit/s Full Duplex	
Locking of ports		Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing	
Protection		IP54 inserted and tightened (EN 60529)	
Locking material		Zinc die casting, matte nickel plated	
Temperature range		-25...+85 °C	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - 0 0 0 0 0 0 0	
		1 Form	

Notes

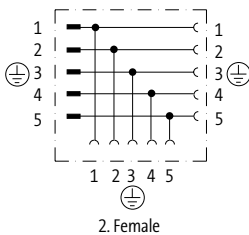
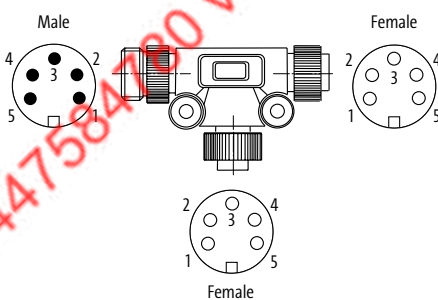
Other versions on request.

T-COUPPLERS M8, M12, 7/8"

7/8"- 7/8"

T-coupler
Female straight - male/female straight



1	Form	50061		
Type		5-pole Parallel circuit		
Circuit diagram		Male7/8"1. Female  2. Female		
Contact layout		MaleFemale  Female		
Technical Data				
Operating voltage		max. 50 V AC/DC		
Operating current per contact		max. 8 A		
Protection		IP67 inserted and tightened (EN 60529)		
Locking material		Zinc die casting		
Temperature range		-20...+80 °C		
Article No.				
The composition of your article number is explained on page 3.1.i		7000 - 50061 - 000 0000		
		1Form		
Notes		Other versions on request.		

T-couplers M8, M12, 7/8"

T-COUPLERS M8, M12, 7/8"

Mounting accessories			Art-No.
	Holding plate for T-couplers M12 (SlimLine)	with mounting set	7000-99062-0000000
	Mounting clamp		7000-99063-0000000

T-couplers M8, M12, 7/8"

Минск +375447584780 viber zakaz@igbt.by www.fotorele.net



FLANGE CONNECTORS READY FOR ANYTHING

- Molded PVC or PP wires
- Anti-twist protection ensures convenient assembly
- Front and rear mounting

COMPREHENSIVE RANGE TO CUSTOMER NEEDS

Murrelektronik has a wide range of M12 flange plug connectors and offers solutions for all kinds of applications. Encapsulated components guarantee a high level of short-circuit protection. In addition, the integrated anti-rotation protection makes installation very easy.

Don't see what you needed? Visit shop.murrelektronik.com for other styles including V4A Stainless Steel for Food & Beverage applications.

M8



- Male/female**
- 3-pole
 - 4-pole

Page 3.4.1

M12



- Male/female**
- 3-pole
 - 4-pole
 - 5-pole
 - 8-pole

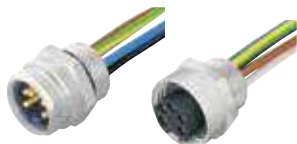
Page 3.4.2



- Control Cabinet Entry System
Male/female (shielded)**
- 5-pole
 - 6-pole
 - 8-pole

Page 3.4.12

Power



- 7/8"**
Male/female
- 5-pole

Page 3.4.4



- M12 Power
Male/female**
- 4-pole
 - 5-pole

Page 3.4.5



- MQ15 X-Power
Male/female**
- 4-pole
 - 6-pole

Page 3.4.8



- MQ15 X-Power
Male/female (shielded housing)**
- 4-pole
 - 6-pole

Page 3.4.10

FLANGE CONNECTORS

With multi-strand wire

– M8

Flange male

Front mounting



Flange female

Front mounting



Approvals:

1	Form	08552	08562	08571	08581
Type		3-pole	4-pole	3-pole	4-pole
Circuit diagram					
Contact layout		Male	Male	Female	Female
2	Wires				
Wire diameter 0.25 mm²		multi-colored	multi-colored	multi-colored	multi-colored
PP		970	969	970	969
PVC		910	911	910	911
Hexagonal nut M8 × 0.5		7000-08591-0000000			
3	Wires Length				
0.2 m		0020			
0.5 m		0050			
1.0 m		0100			
Technical Data					
Operating voltage		max. 50 V AC/60 V DC			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0	-	-	-
		1	Form	2	Wires
		3	Wires Length		
Notes		Other versions on request.			

FLANGE CONNECTORS

With multi-strand wire

– M12

Approvals: 

Flange male

Front mounting



1	Form	13501	13521	17161
Type	4-pole	5-pole	8-pole	
Circuit diagram	1 2 4 brown (+) white (N/C) black (N/O) 3 blue (-)	1 2 4 brown(+) white (N/C) black (N/O) 3 blue (-) 5 gn/ye (gray*) (* for cable type 902 and 972)	1 2 3 4 5 6 7 8 white brown green yellow gray pink blue red	
Contact layout	Male 4 3 1 2	Male 4 3 1 2	Male 6 5 4 3 1 8 2 7	
2	Wires			
Wire diameter 0.34 mm²	multi-colored	multi-colored	multi-colored	
PUR		975 (972)		
PVC	901	902		
PP	971			
Wire diameter 0.25 mm²				
PP			973	
PVC			903	
Hexagonal nut M16 × 1.5	7000-13581-0000000			
3	Wires Length			
0.2 m	0020			
0.5 m	0050			
1.0 m	0100			
Technical Data				
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 30 V AC/DC	
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0 - -			
	1	Form	2	Wires
	3	Wires Length		
Notes	Other versions on request.			

FLANGE CONNECTORS

With multi-strand wire

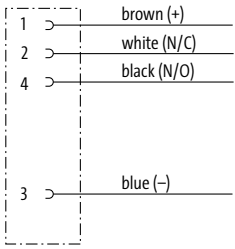
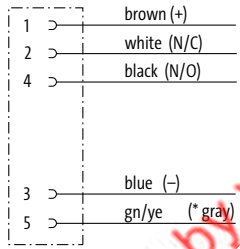
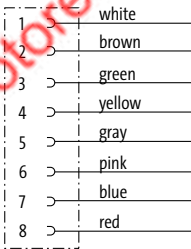
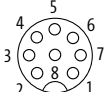
– M12

Flange female

Front mounting



Approvals: 

1 Form	13541	13561	17181
Type	4-pole	5-pole	8-pole
Circuit diagram		 (* for cable type 902, 972)	
Contact layout	Female 	Female 	Female 
2 Wires			
Wire diameter 0.34 mm²	multi-colored	multi-colored	multi-colored
PUR		975 (972)	
PVC	901	902	
PP	971		
Wire diameter 0.25 mm²			
PP			973
PVC			903
3 Wires Length			
0.2 m	0020		
0.5 m	0050		
1.0 m	0100		
Technical Data			
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 30 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - -		
	1 Form	2 Wires	3 Wires Length
Notes	Other versions on request.		

FLANGE CONNECTORS

With multi-strand wire

– 7/8"

Flange male

Front mounting



Flange female

Front mounting



1 Form

78341

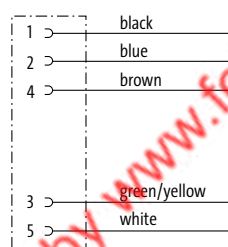
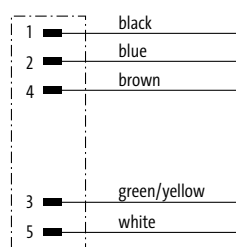
78381

Type

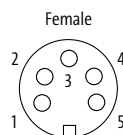
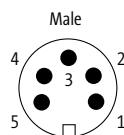
5-pole

5-pole

Circuit diagram



Contact layout



2 Wires

5 × AWG18

multi-colored

multi-colored

PVC

978

978

Hexagonal nut PG 13.5

7000-78391-0000000

3 Wires Length

0.2 m

0020

0.5 m

0050

1.0 m

0100

Technical Data

Operating voltage

max. 300 V AC/DC

Protection

IP68 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Wires

3 Wires Length

Notes

Other versions on request.

FLANGE CONNECTORS

With multi-strand wire

– M12 Power

Approvals:

Flange male

Front mounting



Flange female

Front mounting



1 Form		P 4281	P 4291
Type		5-pole L-coded	5-pole L-coded
Circuit diagram			
Contact layout			
2 Wires		multi-colored 980	
Wire diameter 1.5 mm ² PUR		multi-colored 980	
3 Wires Length		0020 0050 0100	
0.2 m		0020	
0.5 m		0050	
1.0 m		0100	
Technical Data		max. 63 V AC/DC	
Operating voltage		IP65 and IP67 when plugged and screwed down (EN 60529)	
Protection		-25...+85 °C, depending on cable quality	
Temperature range			
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	
		1 Form	2 Wires
		3 Wires Length	
Notes		Other versions on request.	

FLANGE CONNECTORS

With multi-strand wire

– M12 Power

Approvals: 

Flange male

Front mounting



Flange female

Front mounting



1 Form

P 6281

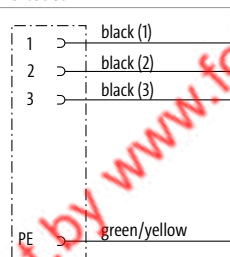
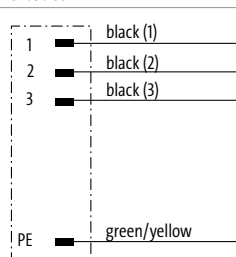
P 6291

Type

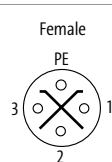
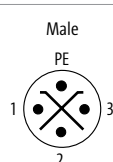
4-pole

4-pole

Circuit diagram



Contact layout



2 Wires

Wire diameter 1.5 mm²

multi-colored

multi-colored

mPPE

940

940

3 Wires Length

0.2 m

0020

0.5 m

0050

1.0 m

0100

1.5 m

0150

Technical Data

Operating voltage

max. 630 V AC/DC

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Wires

3 Wires Length

Notes

Other versions on request.

FLANGE CONNECTORS

With multi-strand wire

– M12 Power

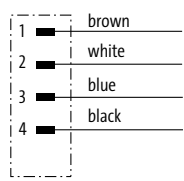
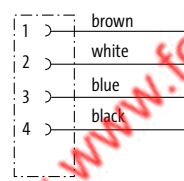
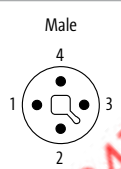
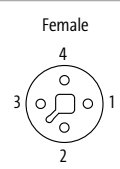
Flange male

Front mounting


Flange female

Front mounting


Approvals: 

1 Form		P7281	P7291
Type		4-pole T-coded	4-pole T-coded
Circuit diagram			
Contact layout			
2 Wires		multi-colored 941	multi-colored 941
3 Wires Length		0.2 m 0.5 m 1.0 m	0020 0050 0100
Technical Data		Operating voltage Protection Temperature range	max. 63 V AC/DC IP67 inserted and tightened (EN 60529) -40...+85 °C, depending on cable quality
Article No.		7 0 0 0 – – –	
The composition of your article number is explained on page 3.1.i		1 Form	2 Wires
		3 Wires Length	
Notes		Other versions on request.	

FLANGE CONNECTORS

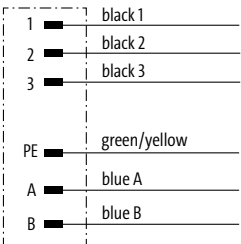
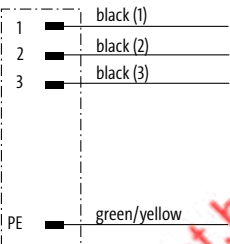
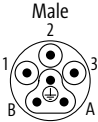
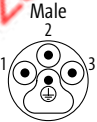
With multi-strand wire

– MQ15 X-Power

Flange male

Front mounting



1	Form	P 8181		P 8081		P 8081	
	Type	6-pole max. 16 A (Power); max. 10 A (Signal)		4-pole Operating current: max. 13 A		4-pole Operating current: max. 16 A	
	Circuit diagram						
	Contact layout						
2	Wires						
	Wire diameter 2.5 mm²	multi-colored		multi-colored		multi-colored	
	PVC (UL)	P80				P82	
	Wire diameter 1.5 mm²						
	PVC (UL)			P81			
3	Wires Length						
	0.25 m	0025					
	0.5 m	0050					
	1.0 m	0100					
Technical Data							
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)		max. 600 V AC			
Protection		IP67 inserted and tightened (EN 60529)					
Temperature range		-40...+70 °C, depending on cable quality					
Article No.							
The composition of your article number is explained on page 3.1.i		7000 - -					
		1 Form		2 Wires		3 Wires Length	
Notes		Other versions on request.					

FLANGE CONNECTORS

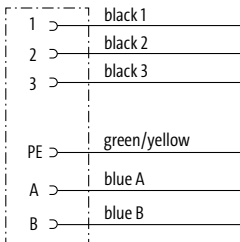
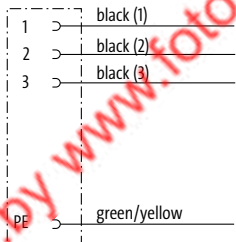
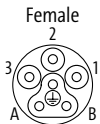
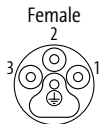
With multi-strand wire

– MQ15 X-Power

Flange female

Front mounting



1 Form		P8191	P8091
Type		6-pole max. 16 A (Power); max. 10 A (Signal)	4-pole Operating current: max. 13 A
Circuit diagram			
Contact layout			
2 Wires			
Wire diameter 2.5 mm ²		multi-colored	multi-colored
PVC (UL)		P80	
Wire diameter 1.5 mm ²			
PVC (UL)			P81
3 Wires Length			
0.25 m		0025	
0.5 m		0050	
1.0 m		0100	
Technical Data			
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-40...+70 °C, depending on cable quality	-40...+90 °C, depending on cable quality
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 — — — — —	— — — — —
		1 Form	2 Wires
			3 Wires Length
Notes		Other versions on request.	

FLANGE CONNECTORS

With multi-strand wire

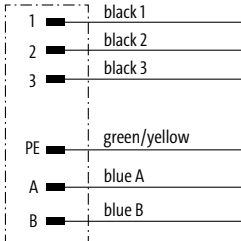
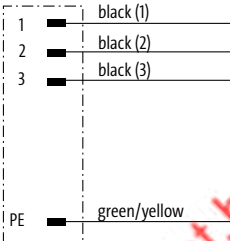
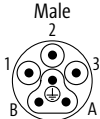
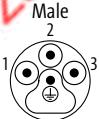
– MQ15 X-Power

– shielded housing

Flange male

Front mounting



1	Form	P 8381		P 8281	P 8281
	Type	6-pole max. 16 A (Power); max. 10 A (Signal)		4-pole Operating current: max. 13 A	4-pole Operating current: max. 16 A
	Circuit diagram				
2	Contact layout				
	Wires				
	Wire diameter 2.5 mm²	multi-colored		multi-colored	multi-colored
PVC (UL)	P80			P82	
Wire diameter 1.5 mm²					
PVC (UL)			P81		
3	Wires Length				
	0.25 m	0025			
	0.5 m	0050			
	1.0 m	0100			
Technical Data					
Operating voltage		max. 600 V AC (Power); max. 63 V AC/DC (Signal)		max. 600 V AC	
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-40...+90 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7000 - -			
		1 Form		2 Wires	
				3 Wires Length	
Notes		Other versions on request.			

FLANGE CONNECTORS

With multi-strand wire

– MQ15 X-Power

– shielded housing

Flange female

Front mounting



1	Form	P 8391	P 8291	P 8291
Type	6-pole	4-pole	4-pole	4-pole
	max. 16 A (Power); max. 10 A (Signal)	Operating current: max. 13 A	Operating current: max. 16 A	Operating current: max. 16 A
Circuit diagram				
Contact layout				
2	Wires			
Wire diameter 2.5 mm ²	multi-colored	multi-colored	multi-colored	multi-colored
PVC (UL)	P80			P82
Wire diameter 1.5 mm ²				
PVC (UL)		P81		
3	Wires Length			
0.25 m	0025			
0.5 m	0050			
1.0 m	0100			
Technical Data				
Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC		
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-40...+90 °C, depending on cable quality	-40...+70 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0	-	-	-
	1	Form	2	Wires
	3	Wires Length		
Notes				
	Other versions on request.			

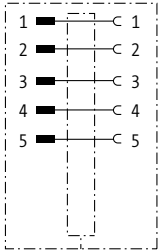
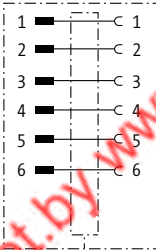
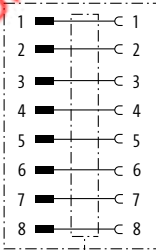
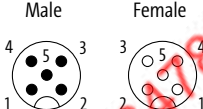
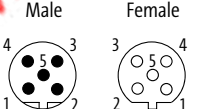
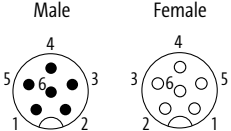
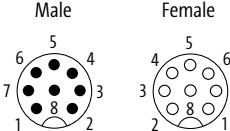
FLANGE CONNECTORS

Control cabinet entry system

– M12 – M12

Male/female



1	Form	4 2 1 1 1	4 4 1 1 1	4 6 1 1 1	4 8 1 1 1
Type		5-pole, shielded	5-pole, shielded B-coded	6-pole, shielded	8-pole, shielded
Circuit diagram					
Contact layout					
Technical Data					
Operating voltage	max. 60 V AC/DC			max. 30 V AC/DC	
Rated surge voltage	1.5 kV			0.8 kV	
Operating current per contact	max. 4 A				max. 2 A
Material group	IEC 60664-1, category I				
Coding	A-coded		B-coded	A-coded	
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing				
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)				
Material	Brass, nickel plated				
Temperature range	-25...+85 °C				
Article No.					
The composition of your article number is explained on page 3.1.i					
	7 0 0 0		0 0 0		0 0 0 0
	1 Form				
Notes	Other versions on request.				

FLANGE CONNECTORS

Control cabinet entry system

– M12 - M12

EtherCAT EtherNet/IP

PROFINET

Male/female



Female/female



1 Form	47281	44611	51521
Type	8-pole, shielded Y-coded	4-pole, shielded D-coded	8-pole, shielded X-coded
Circuit diagram			
Contact layout	Male Female	Female Female	Female Female
Technical Data			
Operating voltage	max. 30 V DC	max. 60 V AC/DC	max. 50 V AC/60 V DC
Rated surge voltage	0.8 kV		
Operating current per contact	max. 6 A	max. 4 A	max. 0.5 A
Operating current per contact (Signal)	max. 0.5 A	–	
Material group	IEC 60664-1, category I	–	IEC 60664-1, category III
Transfer parameters	CAT5, Class D (ISO/IEC 11801:2002), (EN 50173-1)		CAT6, Class EA (ISO/IEC 11801:2002), (EN 50173-1)
Transfer rate	to 100 Mbit/s Full Duplex		GIGABIT
Coding	Y-coded	D-coded	X-coded
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing		Screw thread M12 × 1 mm
Compression gland	M16 (SW19)		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	IP67 inserted and tightened (EN 60529)	
Material	Brass, nickel plated		
Temperature range	-25...+85 °C		-40...+85 °C
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - - 0 0 0 0 0 0 0 0		
	1 Form		
Notes	Other versions on request.		

FLANGE CONNECTORS

Connection accessories			Art-No.
	Shielding plate		
		Quantity: 1 000 pcs.	7000-99951-0000000
	Protection cap		
	Flange M8 male	Quantity: 10 pcs.	7000-99901-0000000
	Flange M12 male	Quantity: 10 pcs.	7000-99921-0000000
	Protection cap		
	Flange M8 female	Quantity: 10 pcs.	7000-99911-0000000
	Flange M12 female	Quantity: 10 pcs.	7000-99931-0000000



THE MQ12 SYSTEM THE CLEVER SOLUTION

- Effective quick connection system
- Saves installation time – up to 80%
- Plug in, ¼ turn – done!

COMPATIBLE, QUICK AND SAFE

Simply clever – it's our quick connection system that doesn't require any changes on the sensor side. MQ12 is completely compatible and interchangeable with all standard systems.

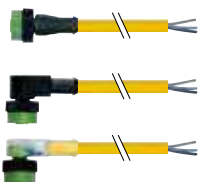
More features:

- Fits on all existing sensor and distributor systems
- High resistance to shock and vibration
- IP67 sealed



Murrelektronik's Efficient
Quick Connection System

With Open Ended Wires



MQ12 female

- Straight
- 90°
- 90° with LED

Page 3.5.1

Connection Cables



MQ12 male

- Straight

MQ12 female

- Straight
- 90°
- 90° with LED

Page 3.5.3

Field-Wireable



Insulation Displacement Technology (IDC)

MQ12 male/female

- Straight

Page 3.5.5

MQ12 ROUND PLUG CONNECTORS

With open ended wires

– M12

Approvals:

* only for products with UL/CSA approved cable

Female

straight



Female

90°



1 Form		12221	12341
Type		4-pole	4-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm²		yellow	gray
PVC (UL/CSA)		014	214
PUR/PVC (UL/CSA)		024	224
PUR (UL/CSA), robots/Ctracks		034	234
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 250 V AC/DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 5 0 - - - - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

MQ12 ROUND PLUG CONNECTORS

With open ended wires

– M12



* only for products with UL/CSA approved cable

Female

90° with LED



1 Form

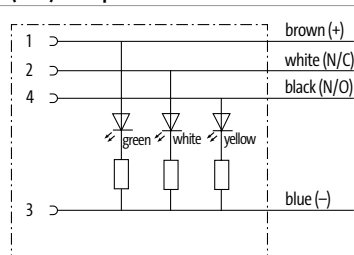
12421

Type

4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²

yellow

gray

black

PVC (UL/CSA)

014

214

614

PUR/PVC (UL/CSA)

024

224

624

PUR (UL/CSA), robots/Ctracks

034

234

634

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

24 V DC ±25%

Protection

IP65 and IP67 when plugged and screwed down (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0

-

1 2 4 2 1

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MQ12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

Female

straight

Male

straight

Female

90°



1 Form

40 021

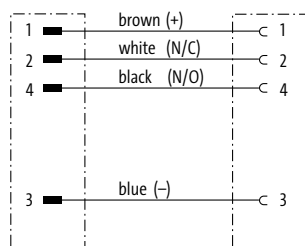
40 121

Type

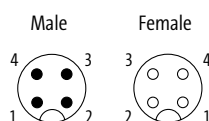
4-pole

4-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²

yellow

gray

black

yellow

gray

black

PVC (UL/CSA)

014

214

614

014

214

614

PUR/PVC (UL/CSA)

024

224

624

024

224

624

PUR (UL/CSA), robots/Ctracks

034

234

634

034

234

634

3 Cable Length

0.3 m

0030

0.6 m

0060

1.0 m

0100

1.5 m

0150

2.0 m

0200

Technical Data

Operating voltage

max. 250 V AC/DC

Protection

IP65 and IP67 when plugged and screwed down (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MQ12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male

straight

Female

90° with LED



1	Form	4 0 3 4 1		
	Type	4-pole with 3 × LED (PNP) (NPN) on request		
	Circuit diagram			
	Contact layout	Male Female		
2	Cable Type	Jacket Color		
	Wire diameter 0.34 mm ²	yellow	gray	black
	PVC (UL/CSA)	014	214	614
	PUR/PVC (UL/CSA)	024	224	624
	PUR (UL/CSA), robots/C-tracks	034	234	634
3	Cable Length			
	0.3 m	0030		
	0.6 m	0060		
	1.0 m	0100		
	1.5 m	0150		
	2.0 m	0200		
	Technical Data			
	Operating voltage	24 V DC ±25%		
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
	Temperature range	-25...+85 °C, depending on cable quality		
	Article No.			
	The composition of your article number is explained on page 3.1.i	7050 – 40341 – – – – – – – –		
		1	Form	2 Cable Type
		3	Cable Length	
Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			

MQ12 ROUND PLUG CONNECTORS

Field-wireable

– M12

– IDC terminals

Male

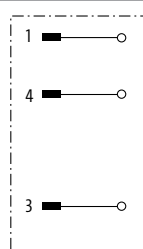
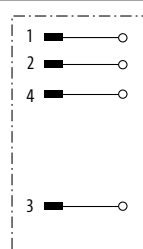
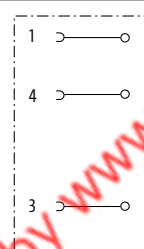
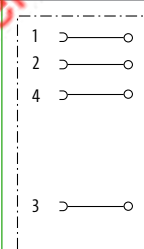
straight



Female

straight



1	Form	12461	12481	12581	12601
Type		3-pole	4-pole	3-pole	4-pole
Circuit diagram					
Connection cross section		0.25...0.5 mm ²			
Contact layout		Male 	Male 	Female 	Female 
Technical Data					
Operating voltage		max. 32 V AC/DC			
Rated surge voltage		0.8 kV			
Operating current per contact		max. 4 A			
Material group		IEC 60664-1, category II			
Connection cross section		0.25...0.5 mm ² (conductor diameter min. 0.1 mm)			
Sealing range (cable Ø)		4...5.1 mm			
Wire isolation		PVC, PP, TPE			
Outer wire Ø		1.2...1.6 mm			
Protection		IP67 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 5 0 - - - - - - - - 0 0 0 - 0 0 0 0			
		1 Form			
Notes					
		Other versions on request.			

MQ12 ROUND PLUG CONNECTORS

Field-wireable

– M12

– IDC terminals

Male

straight



Female

straight



1 Form

12521

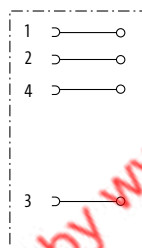
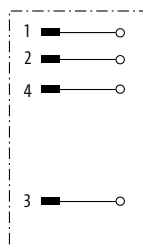
12641

Type

4-pole

4-pole

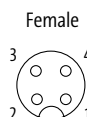
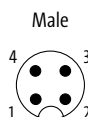
Circuit diagram



Connection cross section

0.5...1.0 mm²

Contact layout



Technical Data

Operating voltage max. 250 V AC/DC

Rated surge voltage 2.5 kV

Operating current per contact max. 4 A

Material group IEC 60664-1, category III

Connection cross section 0.5...1.0 mm² (conductor diameter min. 0.1 mm)

Sealing range (cable Ø) 5.5...8 mm

Wire isolation PVC, PP, TPE

Outer wire Ø 1.6...2.0 mm

Protection IP67 inserted and tightened (EN 60529)

Temperature range -25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0

–

–

0 0 0

0 0 0 0

1

Form

Notes

Other versions on request.

MQ12 ROUND PLUG CONNECTORS

Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000
	Snap-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	7000-99005-0000000
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	7000-99006-0000000
	ACS label plate for self marking (4 × 18 mm)		7000-99002-0000000
	Colored ring M8/M12		
	sandy yellow	for unshielded molding	7000-99301-V011002
	zinc yellow	for unshielded molding	7000-99301-V011018
	redorange	for unshielded molding	7000-99301-V012008
	red	for unshielded molding	7000-99301-V013020
	violet	for unshielded molding	7000-99301-V014003
	purple	for unshielded molding	7000-99301-V014006
	blue	for unshielded molding	7000-99301-V015005
	green	for unshielded molding	7000-99301-V016018
	gray	for unshielded molding	7000-99301-V017035
	white	for unshielded molding	7000-99301-V019003
	black	for unshielded molding	7000-99301-V019004
End fitting accessories			Art-No.
	Tube adapter snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000



CONNECTORS FOR FIELD BUS

- Wide range of M8, M12 and RJ45 connectors
- 360° shielding
- Flex rated cables

FROM AS-INTERFACE TO ETHERNET TO PROFIBUS AND MORE...

Murrelektronik offers connection accessories for the fieldbus products. In addition to both field-wireable M12 and RJ45 connectors we have a wide range of pre-wired, molded models. Both the 15° locking mechanism and the PUR molding ensure an IP65/67 rated connection which make the connectors suitable for many rough industrial environments.



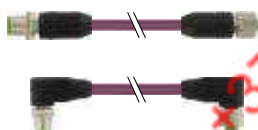
PROFIBUS



With open ended wires

M12 male/female (shielded)
• Straight/90°

Page 3.6.1



Connection Cables

M12 male – M12 female (shielded)
• Straight/90°

Page 3.6.3

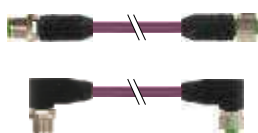
DeviceNet, CANopen



With open ended wires

M12 male/female
• Straight/90°

Page 3.6.4

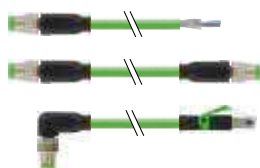


Connection Cables

M12 male – M12 female
• Straight/90°

Page 3.6.6

EtherNet, EtherCAT, PROFINET



With open ended wires

M8 male/female (shielded)
• Straight/90°

Connection Cables

M8 male – M8 male/M8 female/RJ45 male (shielded)
• Straight/90°

Page 3.6.7



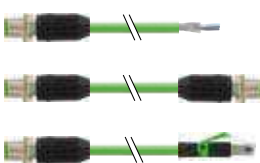
With open ended wires

M8 female
• Straight/90°

Connection Cables

M8 male – M8 female
• Straight/90°

Page 3.6.10



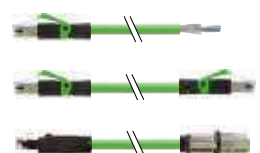
With open ended wires

M12 male/female (shielded)
• Straight/90°

Connection Cables

M12 male – M12 male/M12 female/RJ45 male (shielded)
• Straight/90°

Page 3.6.12



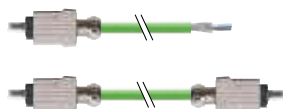
With open ended wires

RJ45 male (shielded)
• Straight/90°

Connection Cables

RJ45 male – RJ45 male/M12 female flange plug (shielded)
• Straight/90°

Page 3.6.21



With open ended wires

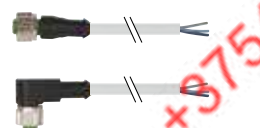
RJ45 male Push Pull Power
• Straight

Connection Cables

RJ45 male Push Pull Power – RJ45 male Push Pull Power
• Straight

Page 3.6.26

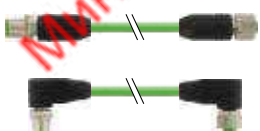
Cube67



With open ended wires

M12 female
• Straight/90°

Page 3.6.28



Connection Cables

M12 male – M12 female (shielded)
• Straight/90°

Page 3.6.29

AS-Interface



Connection Cables
for MASI68

M12 male – M12 female
• Straight

Page 3.6.30

FIELD BUS CONNECTORS

PROFIBUS

– with open ended wires M12



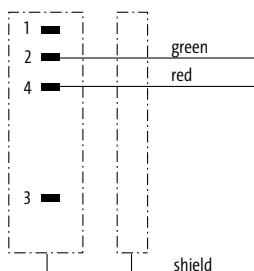
* only for products with UL/CSA approved cable

Male
straight



Male
90°



1 Form		14051	14081
Type		2-pole, shielded B-coded	2-pole, shielded B-coded
Circuit diagram			
Contact layout		Male 	
2 Cable Type		Jacket Color	Jacket Color
1x2x0.25 mm ²		violet	violet
PUR (UL/CSA), C-tracks		841	841
PUR (UL/CSA), Highspeed C-track		840	840
PUR (UL/CSA), Torsion		843	843
PVC (UL), C-tracks		850	850
Terminator M12 (male)		7000-14041-0000000	
Control cabinet entry system M12		7000-44111-0000000	
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 60 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type
			3 Cable Length
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELDBUS CONNECTORS

PROFIBUS

– with open ended wires M12



* only for products with UL/CSA approved cable

Female

straight



Female

90°



1 Form

14061

14071

Type

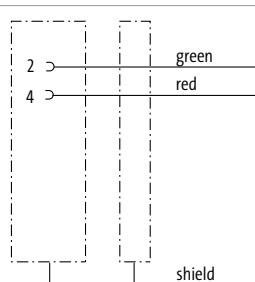
2-pole, shielded

2-pole, shielded

B-coded

B-coded

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

1x2x0.25 mm²

PUR (UL/CSA), C-tracks

PUR (UL/CSA), Highspeed C-track

PUR (UL/CSA), Torsion

PVC (UL), C-tracks

violet

841

840

843

850

violet

841

840

843

850

Terminator M12 (male)

7000-14041-0000000

Control cabinet entry system M12

7000-44111-0000000

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

PROFIBUS

– Connection cables M12 - M12



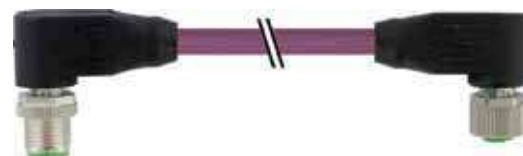
* only for products with UL/CSA approved cable

Male
straight

Female
straight

Male
90°

Female
90°



1 Form		44001	44021
Type		2-pole, shielded B-coded	2-pole, shielded B-coded
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
1x2x0.25 mm ²		violet	violet
PUR (UL/CSA), C-tracks		841	841
PUR (UL/CSA), Highspeed C-track		840	840
PUR (UL/CSA), Torsion		843	843
PVC (UL), C-tracks		850	850
Terminator M12 (male)		7000-14041-0000000	
Control cabinet entry system M12		7000-44111-0000000	
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 60 V AC/DC	
Protection		IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type
			3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELDBUS CONNECTORS

DeviceNet, CANopen

– with open ended wires M12

DeviceNet CANopen

Approvals:  

* only for products with UL/CSA approved cable

Male

straight



Male

90°



1 Form

13105

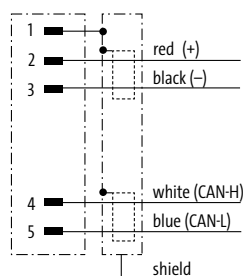
13125

Type

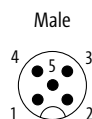
5-pole

5-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2×0.25 + 2×0.34 mm²

PUR (UL/CSA), C-tracks

black

violet

black

violet

838

803

838

803

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

DeviceNet, CANopen

– with open ended wires M12

DeviceNet CANopen



* only for products with UL/CSA approved cable

Female

straight



Female

90°



1 Form		13225	13251
Type		5-pole	5-pole
Circuit diagram			
Contact layout	Female		
2 Cable Type		Jacket Color	
2×0.25 + 2×0.34 mm ²		black	violet
PUR (UL/CSA), C-tracks		838	803
Control cabinet entry system M12	7000-42111-0000000		
3 Cable Length			
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 60 V AC/DC		
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - -		
	1 Form	2 Cable Type	3 Cable Length
Notes			
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.			

FIELDBUS CONNECTORS

DeviceNet, CANopen

– Connection cables M12 - M12

DeviceNet CANopen



* only for products with UL/CSA approved cable

Male

straight

Female

straight

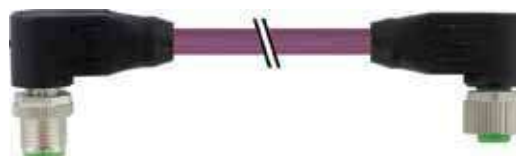


Male

90°

Female

90°



1 Form

40531

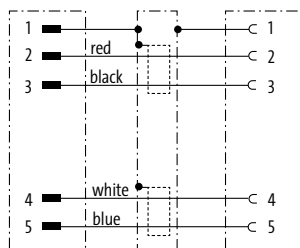
40551

Type

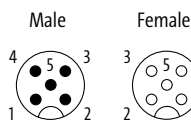
5-pole

5-pole

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2×0.25 + 2×0.34 mm²

PUR (UL/CSA), C-tracks

black

violet

838

803

black

violet

838

803

Control cabinet entry system M12

7000-42111-0000000

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V AC/DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires M8

EtherCAT[®]

Approvals:  

* only for products with UL/CSA approved cable

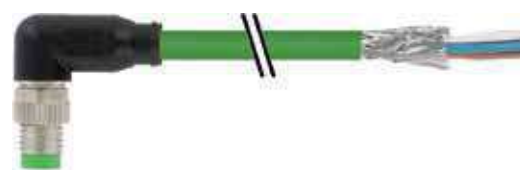
Male

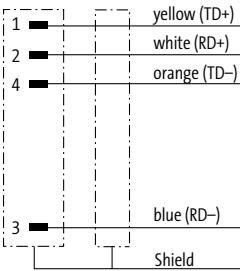
straight



Male

90°



1 Form		08811	08821
Type		4-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout		Male 	
2 Cable Type		Jacket Color	
1×4×0.15 mm ²		green	green
PUR (UL/CSA), C-tracks		791	791
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 30 V AC/DC	
Protection		IP67 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELDBUS CONNECTORS

Industrial Ethernet

– Connection cables M8 - M8

EtherCAT[®]

Approvals:  

* only for products with UL/CSA approved cable

Male

straight

Male

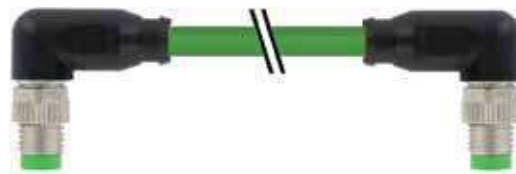
straight

Male

90°

Male

90°



1 Form

89701

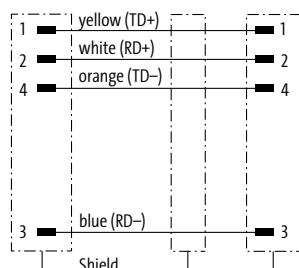
89771

Type

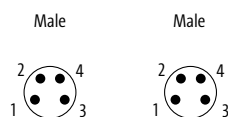
4-pole, shielded

4-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1x4x0.15 mm²

green

green

PUR (UL/CSA), C-tracks

791

791

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 50 V AC/60 V DC

Protection

IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M8 - RJ45

EtherCAT[®]

Approvals: ^{*}
Listed

^{*} only for products with UL/CSA approved cable

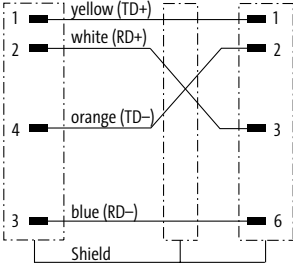
Male
straight

Male
straight

Male
90°

Male
straight



1 Form		89721		89781	
Type		4-pole, shielded		4-pole, shielded	
Circuit diagram					
Contact layout		Male  Male 			
2 Cable Type		Jacket Color		Jacket Color	
1x4x0.15 mm ²		green		green	
PUR (UL/CSA), Ctracks		791		791	
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 60 V DC			
Protection		IP67 (M8) - IP20 (RJ45)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7000 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.			

FIELDBUS CONNECTORS

Industrial Ethernet

– with open ended wires M8

– EtherCAT Power

EtherCAT 

Approvals: 

* only for products with UL/CSA approved cable

Female

straight



Female

90°



1 Form

08871

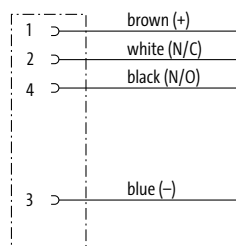
08881

Type

4-pole

4-pole

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
PUR (UL/CSA), robots/C-tracks

black
634

black
634

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

7 0 0 5

M8 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M8 - M8

– EtherCAT Power

EtherCAT

Approvals:

* only for products with UL/CSA approved cable

Male
straight

Female
straight

Male
90°

Female
90°



1 Form		89401	89431
Type		4-pole	4-pole
Circuit diagram			
Contact layout		Male Female	
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.34 mm ²		black	black
PUR (UL/CSA), robots/C-tracks		634	634
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 50 V AC/60 V DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	
		7 0 0 5 M8 Lite (plastic hexagonal screw) on request	
		1 Form	2 Cable Type
			3 Cable Length
Notes			
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELDBUS CONNECTORS

Industrial Ethernet

– with open ended wires M12

EtherNet/IP EtherCAT

PROFI
NET

Approvals:  

* only for products with UL/CSA approved cable

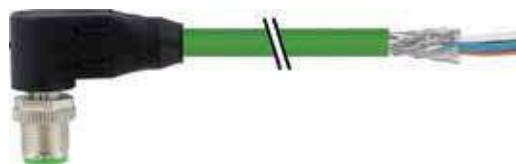
Male

straight



Male

90°



1 Form

14541

14561

Type

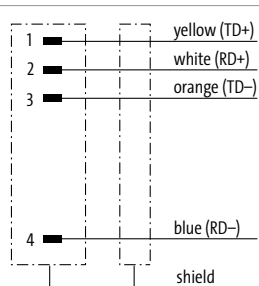
4-pole, shielded

4-pole, shielded

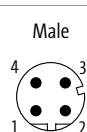
D-coded

D-coded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1x4x0.34 mm ²	green	black	red	green	black	red
PVC (UL/CSA), C-tracks	800			800		
PUR (UL/CSA), Torsion	793			793		
2x2x0.34 mm ²						
PUR (UL/CSA)	794			794		
PUR (UL/CSA), robots/C-tracks	796	851	792	796	851	792
PUR (UL/CSA), C-tracks, 600 V	659			659		

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires M12

– Hybrid cable

Male

straight



Female

straight



Approvals: ^{*}
Listed

^{*} only for products with UL/CSA approved cable

1	Form	15501	15551
Type	8-pole, shielded Y-coded	8-pole, shielded Y-coded	8-pole, shielded Y-coded
Circuit diagram			
Contact layout	Male 	Female 	
2	Cable Type	Jacket Color	Jacket Color
	4×0.5 + 1×4×0.14 mm ² PUR (UL/CSA), robots/C-tracks	black 805	green 831
3	Cable Length		
	1.5 m	0150	
	3.0 m	0300	
	5.0 m	0500	
	7.5 m	0750	
	10.0 m	1000	
Technical Data			
Operating voltage	max. 50 V AC/DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 - - - - -	- - - - -	- - - - -
	1 Form	2 Cable Type	3 Cable Length
Notes			
	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.		

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires M12

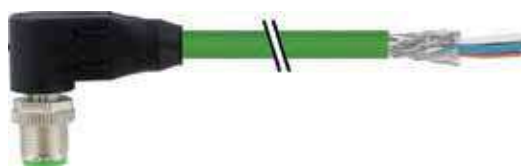
– Hybrid cable

Approvals: 
 Listed

* only for products with UL/CSA approved cable

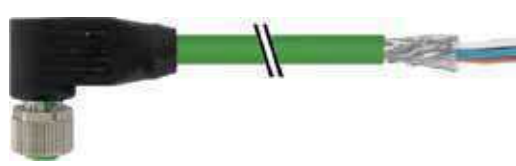
Male

90°



Female

90°



1 Form

15521

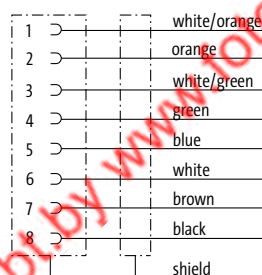
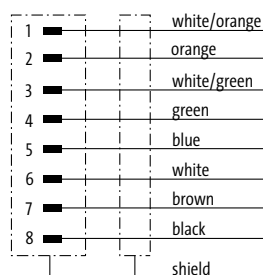
15571

Type

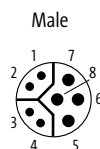
8-pole, shielded

8-pole, shielded

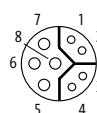
Circuit diagram



Contact layout



Female



2 Cable Type

Jacket Color

Jacket Color

4×0.5 + 1×4×0.14 mm²
PUR (UL/CSA), robots/Ctracks

black green
805 831

black green
805 831

3 Cable Length

1.5 m 0150
3.0 m 0300
5.0 m 0500
7.5 m 0750
10.0 m 1000

Technical Data

Operating voltage max. 50 V AC/DC
Protection IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range -25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires M12

– Gigabit Ethernet CAT6A

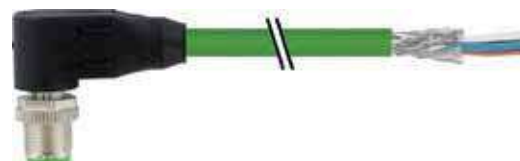
Male

straight

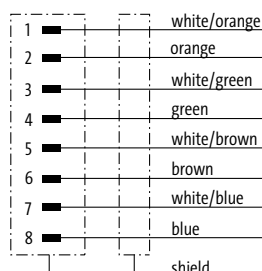
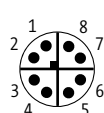


Male

90°



* only for products with UL/CSA approved cable

1	Form	210 01		210 21	
Approvals		cULus *			
Type		8-pole, shielded		8-pole, shielded	
		X-coded		X-coded	
Circuit diagram					
Contact layout		Male 			
2	Cable Type	Jacket Color		Jacket Color	
4×2×0.14 mm²		green		green	
PUR (UL/CSA)		790		790	
3	Cable Length				
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 50 V AC/60 V DC			
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7 0 0 0 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes					
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.			

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - M12

EtherNet/IP EtherCAT

PROFI
NET

Approvals:  

* only for products with UL/CSA approved cable

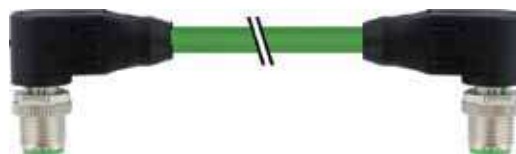
Male
straight



Male
straight

Male
90°

Male
90°



1 Form

4 4 5 1 1

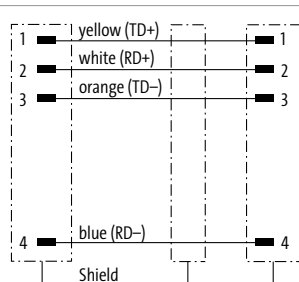
4 4 5 6 1

Type

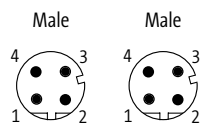
4-pole, shielded

4-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1×4×0.34 mm²

green

black

red

green

black

red

PVC (UL/CSA), C-tracks

800

800

PUR (UL/CSA), Torsion

793

793

2×2×0.34 mm²

794

794

PUR (UL/CSA)

796

851

792

796

851

792

PUR (UL/CSA), robots/C-tracks

659

659

PUR (UL/CSA), C-tracks, 600 V

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP65, IP66K, IP67 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - RJ45

EtherNet/IP EtherCAT



Approvals:

* only for products with UL/CSA approved cable

Male
straight



Male
straight

Male
straight



Male
45° on bottom

1 Form

4 4 7 1 1

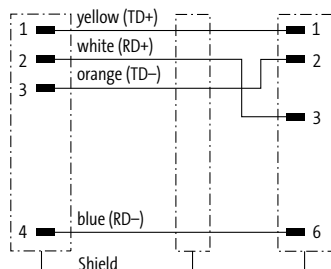
4 4 7 3 1

Type

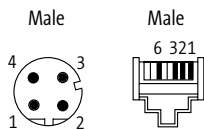
4-pole, shielded

4-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1×4×0.34 mm²

green

black

red

green

black

red

PVC (UL/CSA), C-tracks

800

800

PUR (UL/CSA), Torsion

793

793

2×2×0.34 mm²

794

794

PUR (UL/CSA)

796

851

792

796

851

792

PUR (UL/CSA), robots/C-tracks

659

659

PUR (UL/CSA), C-tracks, 600 V

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP67 (M12) - IP20 (RJ45)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELDBUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - M12

– Hybrid cable

Approvals:  ^{*}
Listed

* only for products with UL/CSA approved cable

Male
straight

Male
straight

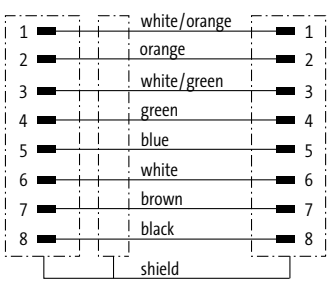
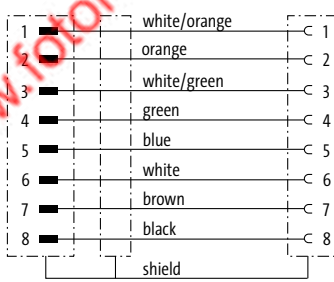
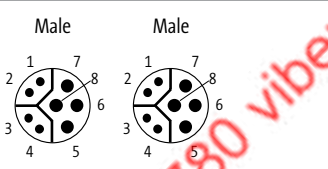
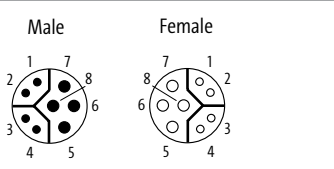
Male
90°

Male
90°

Male
straight

Female
straight



1 Form	47001	47021	47051
Type	8-pole, shielded Y-coded	8-pole, shielded Y-coded	8-pole, shielded Y-coded
Circuit diagram			
Contact layout			
2 Cable Type	Jacket Color		Jacket Color
4×0.5 + 1×4×0.14 mm ² PUR (UL/CSA), robots/Ctracks	black 805	green 831	green 831
3 Cable Length	1.5 m 0150 3.0 m 0300 5.0 m 0500 7.5 m 0750 10.0 m 1000		
Technical Data	Operating voltage max. 50 V AC/DC Protection IP65 and IP67 when plugged and screwed down (EN 60529) Temperature range -25...+85 °C, depending on cable quality		
Article No.	The composition of your article number is explained on page 3.1.i 7 0 0 0 - - - - -		
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - M12

– Gigabit Ethernet CAT6A

Male

straight

Male

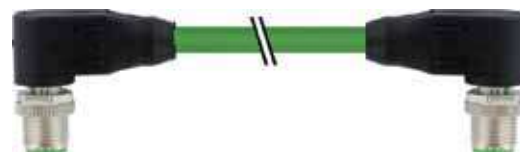
straight

Male

90°

Male

90°



* only for products with UL/CSA approved cable

1	Form	51001	51021
Approvals	cULus *		
Type	8-pole, shielded	8-pole, shielded	8-pole, shielded
	X-coded	X-coded	X-coded
Circuit diagram			
Contact layout			
2	Cable Type	Jacket Color	Jacket Color
4x2x0.14 mm ²	green	green	green
PUR (UL/CSA)	790	790	790
3	Cable Length		
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 50 V AC/60 V DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0	-	-
	1	Form	2
	2	Cable Type	3
	3	Cable Length	
Notes			
	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.		

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables M12 - RJ45

– Gigabit Ethernet CAT6A

Male

straight

Male

straight

Male

straight

Flange female

straight



1 Form

51101

51551

Type

8-pole, shielded

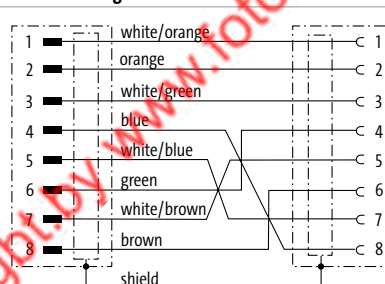
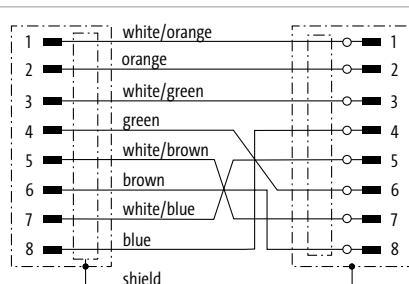
8-pole, shielded

X-coded

X-coded

X-coded

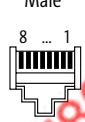
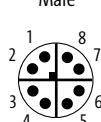
Circuit diagram



Contact layout

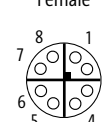
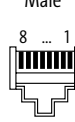
Male

Male



Male

Female



2 Cable Type

Jacket Color

Jacket Color

4×2×0.14 mm²

PUR (UL/CSA)

green

790

green

790

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP67 (M12) - IP20 (RJ45)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– with open ended wires RJ45

EtherNet/IP EtherCAT



Approvals:  ^{*}
Listed

^{*} only for products with UL/CSA approved cable

Male

straight



Male

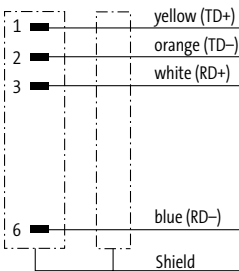
45° on top



Male

45° on bottom



1	Form	74101	74121	74141						
	Type	4-pole, shielded								
	Circuit diagram									
Contact layout										
2	Cable Type	Jacket Color			Jacket Color			Jacket Color		
	1×4×0.34 mm²	green	black	red	green	black	red	green	black	red
	PVC (UL/CSA), C-tracks	800			800			800		
	PUR (UL/CSA), Torsion	793			793			793		
	2×2×0.34 mm²									
	PUR (UL/CSA)	794			794			794		
	PUR (UL/CSA), robots/C-tracks	796	851	792	796	851	792	796	851	792
PUR (UL/CSA), C-tracks, 600 V	659			659			659			
3	Cable Length									
	1.5 m	0150								
	3.0 m	0300								
	5.0 m	0500								
	7.5 m	0750								
	10.0 m	1000								
Technical Data										
Operating voltage		max. 60 V DC								
Protection		IP20 inserted and tightened (EN 60529)								
Temperature range		-25...+85 °C, depending on cable quality								
Article No.										
The composition of your article number is explained on page 3.1.i		7000 - -								
		1 Form			2 Cable Type			3 Cable Length		
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.								

FIELDBUS CONNECTORS

Industrial Ethernet

– with open ended wires RJ45

EtherNet/IP EtherCAT

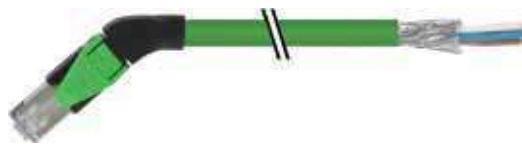
PROFI
NET

Approvals: 
Listed

* only for products with UL/CSA approved cable

Male

45° left



Male

45° right



1 Form

74161

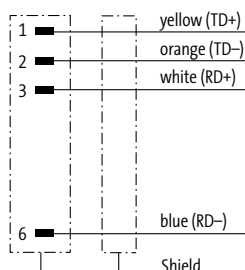
74181

Type

4-pole, shielded

4-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Jacket Color

1×4×0.34 mm²

green

black

red

green

black

red

PVC (UL/CSA), C-tracks

800

800

PUR (UL/CSA), Torsion

793

793

2×2×0.34 mm²

794

794

PUR (UL/CSA)

796

851

792

796

851

792

PUR (UL/CSA), robots/C-tracks

659

659

PUR (UL/CSA), C-tracks, 600 V

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP20 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Industrial Ethernet

– Connection cables RJ45 - RJ45

EtherNet/IP EtherCAT

PROFI
NET

Approvals: ^{*}
Listed

* only for products with UL/CSA approved cable

Male
straight



Male
straight

Male
45° on bottom



Male
45° right

1 Form		743 01	745 21
Type		4-pole, shielded	4-pole, shielded
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	
1×4×0.34 mm ²		green	black
PVC (UL/CSA), C-tracks		800	red
PUR (UL/CSA), Torsion		793	
2×2×0.34 mm ²			green
PUR (UL/CSA)		794	black
PUR (UL/CSA), robots/C-tracks		796	red
PUR (UL/CSA), C-tracks, 600 V		659	
3 Cable Length		Jacket Color	
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data		Jacket Color	
Operating voltage		max. 60 V DC	
Protection		IP20 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.		Jacket Color	
The composition of your article number is explained on page 3.1.i		7 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELDBUS CONNECTORS

Industrial Ethernet

– Connection cables RJ45 - RJ45

– Gigabit Ethernet CAT6A

Male

straight

Male

straight



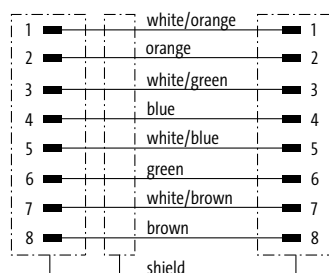
1 Form

74311

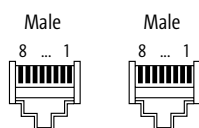
Type

8-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

4×2×0.14 mm²

PUR (UL/CSA)

green

790

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP20 inserted and tightened (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

7 4 3 1 1

-

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Cabinetline

– Connection cables RJ45 - RJ45

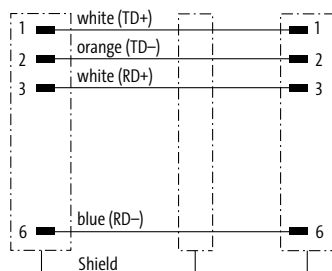
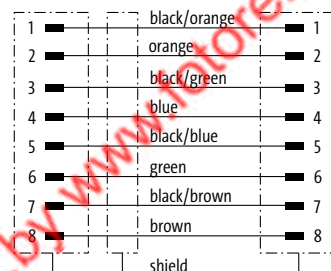
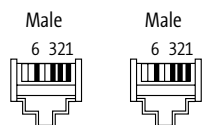
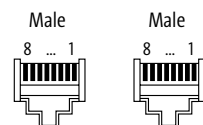
Male
straight

Male
straight

Male
straight

Male
straight



1	Form	74701		74711		
Type		4-pole, shielded		8-pole, shielded		
Circuit diagram						
Contact layout						
2	Cable Type	Jacket Color		Jacket Color		
4×2×0.14 mm²		gray		green	black	red
FRNC				478	380	578
2×2×0.14 mm²		777				
FRNC, Ctracks						
3	Cable Length					
1.5 m		0150				
3.0 m		0300				
5.0 m		0500				
7.5 m		0750				
10.0 m		1000				
Technical Data						
Operating voltage		max. 60 V DC				
Protection		IP20 inserted and tightened (EN 60529)				
Temperature range		-25...+85 °C, depending on cable quality				
Article No.						
The composition of your article number is explained on page 3.1.i		7000 - -				
		1 Form		2 Cable Type		3 Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.				

FIELD BUS CONNECTORS

Ethernet CAT5e

– Push Pull RJ45

– AIDA conform



Approvals: ^{*}
Listed

^{*} only for products with UL/CSA approved cable

Male

straight



Male

straight

Male

straight



1 Form

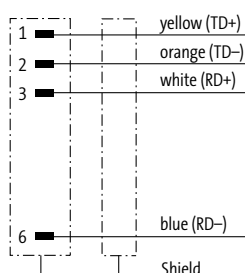
74601

74641

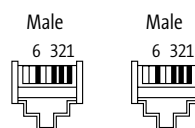
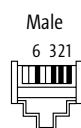
Type
Circuit diagram

4-pole, shielded

4-pole, shielded



Contact layout



2 Cable Type

Jacket Color

Jacket Color

2x2x0.34 mm²

PUR (UL/CSA)

PUR (UL/CSA), robots/Ctracks

green

794

796

green

794

796

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

max. 60 V DC

Protection

IP65 and IP67 when plugged and screwed down (EN 60529)

Temperature range

-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Push Pull Power

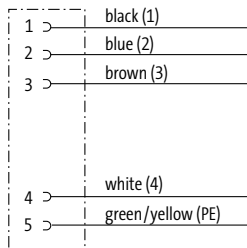
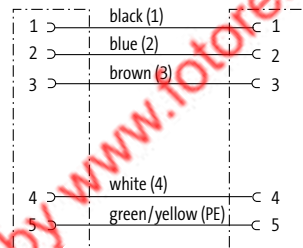
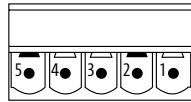
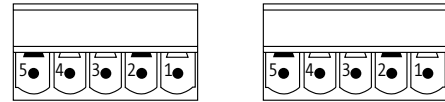
Male
straight



Male
straight



Male
straight

1 Form		99621	99641
Type		5-pole	5-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 2.5 mm ²		gray	gray
PUR (UL/CSA), robots/C-tracks		962	962
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 24 V AC/DC	
Protection		IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 0 0 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes			
		Other versions on request. Further cable lengths on request. Connection accessories and general accessories can be found at the end of chapter 3.6.	

FIELDBUS CONNECTORS

Cube67

- with open ended wires M12
- Actuator supply external



* only for products with UL/CSA approved cable

Female
straight



Female
90°



1 Form

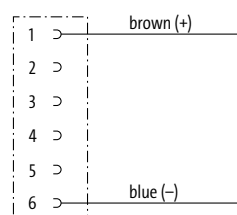
150 01

150 21

Type
Circuit diagram

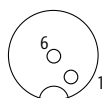
2-pole

2-pole



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.5 mm²
PUR (UL/CSA), robots/C-tracks

gray
414

gray
414

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0

7 0 0 5

M12 Lite (plastic hexagonal screw) on request

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELD BUS CONNECTORS

Cube67

– Connection cables M12 - M12

– Hybrid cable



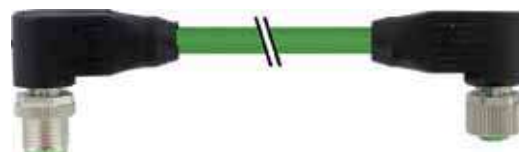
* only for products with UL/CSA approved cable

Male
straight

Female
straight

Male
90°

Female
90°



1	Form	46041	46061
Type	6-pole, shielded	6-pole, shielded	6-pole, shielded
Circuit diagram			
Contact layout			
2	Cable Type	Jacket Color	Jacket Color
4x0.5 + 2x0.25 mm ²		green	green
PUR (UL/CSA), robots/C-tracks		802	802
Terminator M12 (male)	7000-15041-00000000		
Control cabinet entry system M12	7000-46111-00000000		
T-coupler M12/M12, female/male	7000-46101-00000000		
3	Cable Length		
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 30 V AC/DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0	-	-
	1	Form	2
		Cable Type	3
		Cable Length	
Notes			
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps. Connection accessories and general accessories can be found at the end of chapter 3.6.			

FIELDBUS CONNECTORS

AS-Interface

– Connection cables M12 - M12

– for MASI68



Approvals:

* only for products with UL/CSA approved cable

Male

straight

Female

straight



1 Form	40005	40021
Type	2-pole	4-pole
Circuit diagram		
Contact layout	Male Female	Male Female
2 Cable Type	Jacket Color	Jacket Color
Wire diameter 1.5 mm ² PUR (UL/CSA), robots/C-tracks	gray 588	gray
Wire diameter 0.75 mm ² PUR (UL/CSA), robots/C-tracks		862
3 Cable Length		
1.5 m	0150	
3.0 m	0300	
5.0 m	0500	
7.5 m	0750	
10.0 m	1000	
Technical Data		
Operating voltage	max. 250 V AC/DC	
Protection	IP67/IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 6 0 - - - - -	
	1 Form	2 Cable Type
		3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Connection accessories			Art-No.
	T-coupler M12 – M12 Male straight - female/male straight straight, B-coded, 5-pole, shielded	PROFIBUS	7000-44151-0000000
	T-coupler M12 – M12 Female straight - male/female straight straight, B-coded, 5-pole, shielded	PROFIBUS	7000-44161-0000000
	T-coupler M12 – M12 Male straight - female straight straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	7000-46101-0000000
	T-coupler M12 – M12 Female straight - male/male straight straight, A-coded, 4-pole	MAS168 additional actuator power supply	7060-42701-0000000
	Male M12, field-wireable, screw terminals straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	7000-14001-0000000
	Female M12, field-wireable, screw terminals straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	7000-14021-0000000
	Male M12, field-wireable, screw terminals 90°, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	7000-14011-0000000
	Male M12, field-wireable, screw terminals 90°, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 6...8 mm	7000-14581-0000000
	Female M12, field-wireable, screw terminals 90°, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	7000-14031-0000000
	Male M12, field-wireable, IDC terminals straight, B-coded, 3-pole, shielded	PROFIBUS Sealing range (cable Ø): 7...8.8 mm	7000-14201-0000000
	Male M12, field-wireable, IDC terminals straight, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...8.8 mm	7000-14521-0000000
	Female M12, field-wireable, IDC terminals straight, B-coded, 3-pole, shielded	PROFIBUS Sealing range (cable Ø): 7...8.8 mm	7000-14221-0000000
	Female M12, field-wireable, IDC terminals straight, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...8.8 mm	7000-14621-0000000

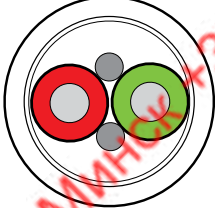
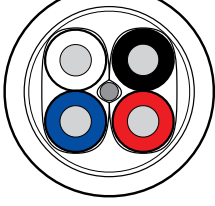
FIELDBUS CONNECTORS

Connection accessories			Art-No.
	Male M12, field-wireable, screw terminals straight, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	7000-12761-0000000
	Female M12, field-wireable, screw terminals straight, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	7000-12961-0000000
	Male M12, field-wireable, screw terminals 90°, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	7000-12881-0000000
	Female M12, field-wireable, screw terminals 90°, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	7000-13041-0000000
	Male RJ45, field-wireable, IDC terminals straight, IP20, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...9 mm	7000-74001-0000000
	straight, IP20, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 4.5...9 mm	7000-74011-0000000
	straight, IP20, 8-pole, shielded	PROFINET Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	7000-74071-0000000
	straight, IP20, 8-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	7000-74075-0000000
	Male RJ45, field-wireable, IDC terminals 45°, IP20, 4-pole, shielded	Ethernet CAT5e Sealing range (cable Ø): 4.5...8 mm	7000-74021-0000000
	45°, IP20, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 4.5...8 mm	7000-74031-0000000
	Male RJ45, field-wireable, IDC terminals 90°, IP20, 8-pole, shielded on top	Ethernet CAT5 PROFINET Sealing range (cable Ø): 5...9 mm	7000-74081-0000000
	90°, IP20, 8-pole, shielded on top	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	7000-74085-0000000
	90°, IP20, 8-pole, shielded on bottom	Ethernet CAT5 PROFINET Sealing range (cable Ø): 5...9 mm	7000-74091-0000000
	90°, IP20, 8-pole, shielded on bottom	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	7000-74095-0000000

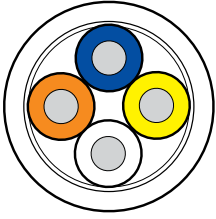
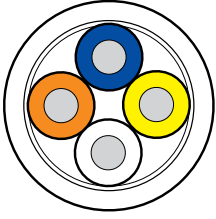
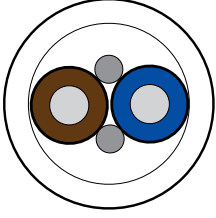
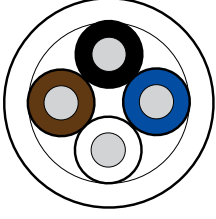
Connection accessories			Art-No.
	Adapter M12/RJ45 (female/female) straight, D-coded, 4-pole, shielded	Ethernet CAT5	7000-44671-0000000
	Adapter M12/RJ45 (female/female) 90°, D-coded, 4-pole, shielded	Ethernet CAT5	7000-44681-0000000
	Adapter M12/RJ45 (female/female) straight, X-coded, 8-pole, shielded	Ethernet CAT6A	7000-51531-0000000
	Adapter M12/RJ45 (female/female) 90°, X-coded, 8-pole, shielded	Ethernet CAT6A	7000-51541-0000000
	Terminator M12 (male) straight, A-coded, 5-pole	DeviceNet, CANopen	7000-13461-0000000
	straight, B-coded, 4-pole	PROFIBUS	7000-14041-0000000
	straight, A-coded, 6-pole	Cube67	7000-15041-0000000
	Terminator 7/8" (male) straight, screw fixing, 5-pole	DeviceNet, CANopen	7000-78301-0000000
	Male M12, field-wireable, IDC terminals straight, X-coded, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 5.5...9 mm	7000-21101-0000000
	M12 Flange female straight straight, X-coded, 8-pole, shielded Front mounting	Ethernet CAT6A	7000-21151-0000000
	straight, X-coded, 8-pole, shielded Rear mounting	Ethernet CAT6A	7000-21161-0000000
	M12 Flange female straight straight, Y-coded, 8-pole, shielded Front mounting	Ethernet CAT5	7000-15701-0000000

FIELDBUS CONNECTORS

Connection accessories			Art-No.
	M12 Flange female 90° 90°, Y-coded, 8-pole, shielded Front mounting	Ethernet CAT5	7000-15711-0000000
	Control cabinet entry system M12 straight, A-coded, 5-pole, shielded straight, B-coded, 5-pole, shielded straight, A-coded, 6-pole, shielded	DeviceNet, CANopen PROFIBUS, Interbus Cube67	7000-42111-0000000 7000-44111-0000000 7000-46111-0000000
	Control cabinet entry system M12 straight, D-coded, 4-pole, shielded (female/female)	Ethernet CAT5	7000-44611-0000000
	Flange M12 male, pre-wired 0.2 m straight, B-coded, 5-pole straight, A-coded, 5-pole	PROFIBUS, Interbus DeviceNet, CANopen	7000-14121-9750020 7000-13521-9720020
	Flange M12 female, pre-wired 0.2 m straight, B-coded, 5-pole straight, A-coded, 5-pole	PROFIBUS, Interbus DeviceNet, CANopen	7000-14161-9750020 7000-13561-9720020
	Flange M12 female, CAT 5, pre-wired 0.2 m straight, D-coded, 4-pole, shielded	Ethernet CAT5	7000-14501-9760020
	Push Pull Power connector, spring clamp terminals straight, IP65/67, 5-pole	Sealing range (cable Ø): 9...13 mm	7000-99601-0000000
	Push Pull RJ45 data connector, IDC terminals straight, IP65/67, 8-pole	Ethernet CAT5 Sealing range (cable Ø): 5.5...10 mm	7000-99591-0000000
	Push Pull RJ45 data connector, IDC terminals straight, IP65/67, 4-pole	PROFINET IO Sealing range (cable Ø): 4...11 mm	7000-74041-0000000

Connection accessories			Art-No.
	Push Pull RJ45 data connector, IDC terminals 45°, IP65/67, 4-pole	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	7000-74061-0000000
	Push Pull SCRJ POF male, field-wireable straight, IP65/67, for POF 1 mm	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	7000-99701-0000000
	Push Pull SCRJ POF male, field-wireable straight, IP65/67, for POF 1 mm Connection Crimp	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	7000-99691-0000000
	Push Pull SCRJ POF male, field-wireable straight Connection Crimp		7000-99695-0000000
	Protective cover Push Pull Power		7000-99661-0000000
	Protective cover Push Pull RJ45		7000-99671-0000000
	Cable drum (100 m) 1 × 2 × 0.64 mm², violet suitable for C-tracks	PROFIBUS	7000-C0201-8400000
	Cable drum (100 m) 2 × 0.25 + 2 × 0.34 mm², violet suitable for C-tracks	DeviceNet, CANopen	7000-C0201-8030000

FIELDBUS CONNECTORS

Connection accessories			Art-No.
	Cable drum (100 m) 2 × 2 × 0.34 mm², green suitable for C-tracks	Ethernet CAT5, PROFINET IO, EtherCAT	7000-C0201-7960000
	Cable drum (100 m) 2 × 2 × 0.34 mm², violet suitable for C-tracks	Ethernet CAT5, PROFINET IO, EtherCAT	7000-C0201-7980000
	Cable drum (100 m) 2 × 1.5 mm², gray suitable for C-tracks	AS-Interface, MASI68	7000-C0201-5880000
	Cable drum (100 m) 4 × 0.75 mm², gray suitable for C-tracks	AS-Interface, MASI68	7000-C0201-8620000
	Bus Connection Plug 90° SUB-D9 (female), screw terminals	CANopen	55760
	SUB-D9 (male), screw terminals	PROFIBUS	55762
	Bus Connection Plug 180° SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	55584
	Bus Connection Plug 90° SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	55585

Connection accessories			Art-No.
	Bus Connection Plug 90° SUB-D9 (male), IDC terminals, rigid cable, programming device conn.	PROFIBUS	55586
	Bus Connection Plug 90° SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99441-0000000
	Bus Connection Plug 35° SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99401-0000000
	Bus Connection Plug 90° SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99411-0000000
	Bus Connection Plug 180° SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99421-0000000
	Bus Connection Plug 90° SUB-D9 (male); M12 × 1, B-coded Zinc die casting	PROFIBUS	7000-99431-0000000
Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000

FIELDBUS CONNECTORS

Labeling accessories		Art-No.	
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	7000-99005-0000000
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	7000-99006-0000000
			
	ACS label plate		
	for self marking (4 × 18 mm)		7000-99002-0000000
Mounting accessories		Art-No.	
	Torque wrench set		
	M8 (0.4 Nm, SW9)	M8 data connectors	7000-99101-0000000
	Torque wrench set		
	M12 (0.6 Nm, SW13)	M12 data connector molded (standard)	7000-99102-0000000
End fitting accessories		Art-No.	
	Tube adapter		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000



CONNECTORS FOR FOOD & BEVERAGE

- Made with stainless steel
- Resistant to cleaning substances
- High protection degree

MEETS DEMANDING HYGIENIC STANDARDS

The food and beverage industry needs an extremely clean environment – perfect hygiene is required. Products and components have to be highly resistant and handle tough environments. Murrelektronik offers a wide connector range for this industry and each product meets the tough requirements. All metal parts are made of stainless steel and the cables feature a PVC or TPE-S jacket.

Murrelektronik is closely connected to this industry and can fulfill all the important requirements of the food and beverage industry. And Murrelektronik offers even more:

- Complete system solutions
- Comprehensive diagnostic options
- Vibration-proof products
- Excellent logistics for fast deliveries
- Specialists with industry-specific knowledge

ECOLAB



STAINLESS STEEL

With Open Ended Wires



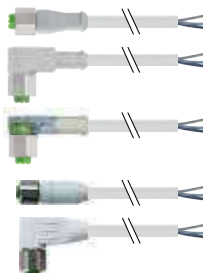
M12 F&B Pro male

- Straight
- 90°

M12 F&B Pro female

- Straight
- 90°
- 90° with LED

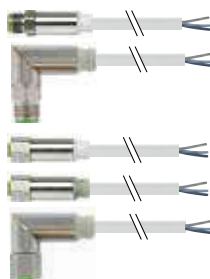
Page 3.7.1



M12 F&B female

- Straight
- 90°
- 90° with LED
- Straight (shielded)
- 90° (shielded)

Page 3.7.10



M12 Steel male

- Straight
- 90°

M12 Steel female

- Straight
- Straight with LED
- 90°

Page 3.7.15

Connection Cables



M12 F&B Pro male

- Straight
- 90°

M12 F&B Pro female

- Straight
- 90°

Page 3.7.19



M12 F&B male

- Straight

M12 F&B female

- Straight
- 90°
- 90° with LED

Page 3.7.14



M12 Steel male

- Straight
- 90°

M12 Steel female

- Straight
- Straight with LED
- 90°

Page 3.7.16

Минск +375447584780 viber zakaz@igbt.by www.fotorela.net

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

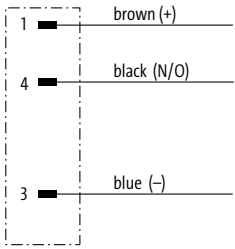
Approvals: **ECOLAB**

Male
straight



Male
90°



1 Form		12001	12081
Type		3-pole	3-pole
Circuit diagram			
Contact layout	Male 		
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.34 mm²		pastel blue	pastel blue
TPE-S (UL) robots/C-tracks		315	315
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 250 V AC/DC	
Protection		IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+105 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 2 4 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Male

straight



Male

90°



1 Form

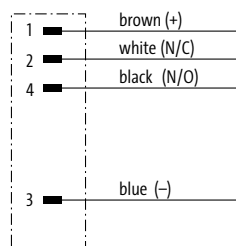
12021

12101

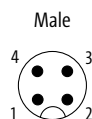
Type
Circuit diagram

4-pole

4-pole



Contact layout



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
TPE-S (UL) robots/C-tracks

pastel blue
321

pastel blue
321

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 2 4

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: 

Male

straight



Male

90°



1	Form	12041	12121
Type	5-pole	5-pole	
Circuit diagram	1 2 4 3 5 brown (+) white (N/C) black (N/O) blue (-) green/yellow (PE)		
Contact layout	Male 4 5 3 1 2		
2	Cable Type	Jacket Color	Jacket Color
Wire diameter 0.34 mm²	pastel blue	pastel blue	pastel blue
TPE-S (UL) robots/C-tracks	339	339	339
3	Cable Length		
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 125 V AC/DC		
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)		
Temperature range	-40...+105 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 2 4 - -		
	1	Form	2
		Cable Type	3
		Cable Length	
Notes	Other versions on request. Further cable lengths on request.		

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Female
straight



Female
90°



1 Form

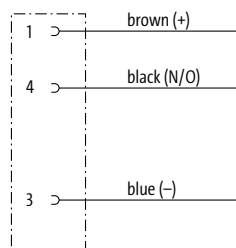
12181

12321

Type
Circuit diagram

3-pole

3-pole



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
TPE-S (UL) robots/C-tracks

pastel blue
315

pastel blue
315

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 2 4

–

–

–

–

–

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

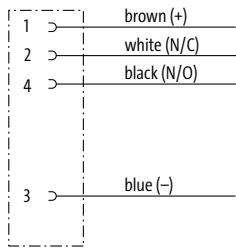
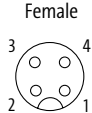
Approvals: 

Female
straight



Female
90°



1	Form	12221	12341
Type	4-pole	4-pole	
Circuit diagram			
Contact layout			
2	Cable Type	Jacket Color	Jacket Color
Wire diameter 0.34 mm²	pastel blue	pastel blue	pastel blue
TPE-S (UL) robots/C-tracks	321	321	321
3	Cable Length		
1.5 m	0150		
3.0 m	0300		
5.0 m	0500		
7.5 m	0750		
10.0 m	1000		
Technical Data			
Operating voltage	max. 250 V AC/DC		
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)		
Temperature range	-40...+105 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i			
	7 0 2 4	-	-
	1	Form	2
		Cable Type	3
		Cable Length	
Notes			
	Other versions on request. Further cable lengths on request.		

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

Female
straight



Female
90°



1 Form

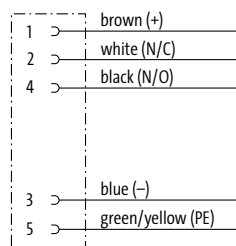
12241

12361

Type
Circuit diagram

5-pole

5-pole



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
TPE-S (UL) robots/C-tracks

pastel blue
339

pastel blue
339

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 125 V AC/DC
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 2 4

– — — — —

– — — — —

– — — — —

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

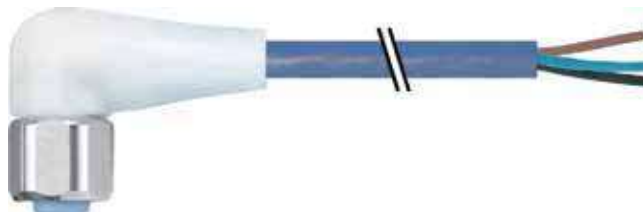
PLUG CONNECTORS FOR FOOD & BEVERAGE

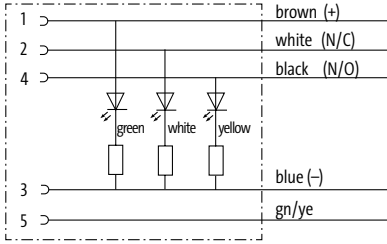
M12 F&B Pro

- with open ended wires M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: 

Female
90° with LED



1 Form		12441	
Type	5-pole with 3 × LED (PNP) (NPN) on request		
Circuit diagram			
Contact layout	Female 		
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm² TPE-S (UL) robots/C-tracks		pastel blue 339	
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		24 V DC ±25%	
Protection		IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 2 4 - 1 2 4 4 1 - - - -	
		1 Form2 Cable Type3 Cable Length	
Notes			
		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- Connection cables M12 - M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals: **ECOLAB**

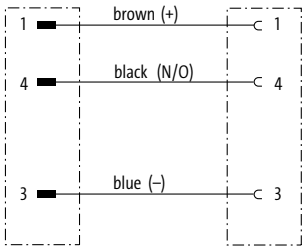
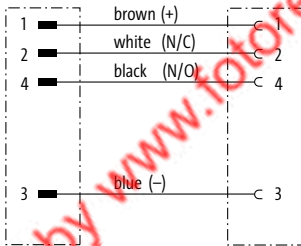
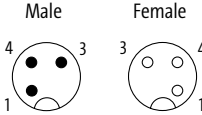
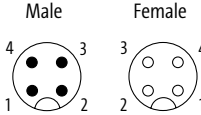
Male

straight

Female

straight



1	Form	4 0 0 0 1		4 0 0 2 1	
Type		3-pole		4-pole	
Circuit diagram					
Contact layout					
2	Cable Type	Jacket Color		Jacket Color	
Wire diameter 0.34 mm² TPE-S (UL) robots/C-tracks		pastel blue 315		pastel blue 321	
3	Cable Length				
0.3 m		0030			
0.6 m		0060			
1.0 m		0100			
1.5 m		0150			
2.0 m		0200			
Technical Data					
Operating voltage		max. 250 V AC/DC			
Protection		IP65/IP68/IP69K inserted and tightened (EN 60529)			
Temperature range		-40...+105 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7024 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Further cable lengths on request.			

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

- Connection cables M12 - M12
- high resistance PP materials
- Screw, Stainless Steel 1.4404 (V4A)

Approvals:

Male
straight

Female
straight

Male
90°

Female
90°


1 Form	40041	40281
Type	5-pole	5-pole
Circuit diagram		
Contact layout		
2 Cable Type	Jacket Color	Jacket Color
Wire diameter 0.34 mm² TPE-S (UL) robots/C-tracks	pastel blue 339	pastel blue 339
3 Cable Length		
0.3 m	0030	
0.6 m	0060	
1.0 m	0100	
1.5 m	0150	
2.0 m	0200	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range	-40...+105 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 2 4 - - - - -	
	1 Form	2 Cable Type
		3 Cable Length
Notes	Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

with open ended wires M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals:   
* only for products with UL/CSA approved cable

Female
straight



Female
90°



1 Form

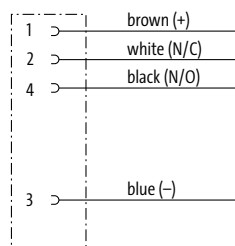
12221

12341

Type
Circuit diagram

4-pole

4-pole



Contact layout

Female



2 Cable Type

Jacket Color

Jacket Color

Wire diameter 0.34 mm²
PVC (UL/CSA)

gray
214

gray
214

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 1 4 - - - - -

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

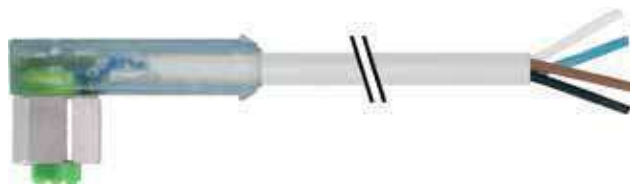
with open ended wires M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: **ECOLAB**  
* only for products with UL/CSA approved cable

Female
90° with LED



1	Form	12421					
	Type	4-pole with 3 × LED (PNP) (NPN) on request					
	Circuit diagram						
	Contact layout						
2	Cable Type	Jacket Color					
	Wire diameter 0.34 mm² PVC (UL/CSA)	gray 214					
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
	Technical Data						
	Operating voltage	24 V DC ±25%					
	Protection	IP65, IP68 inserted and tightened (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	7 0 1 4 - 1 2 4 2 1 -					
		1	Form	2	Cable Type	3	Cable Length
	Notes	Other versions on request. Further cable lengths on request.					

PLUG CONNECTORS FOR FOOD & BEVERAGE

- with open ended wires M12
- Stainless Steel 1.4404 (V4A)
 - Profile gasket

Approvals:   

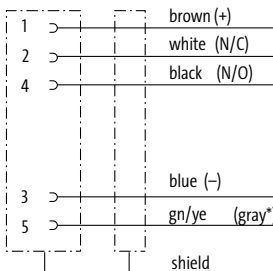
* only for products with UL/CSA approved cable

Female
straight



Female
90°



1 Form		13221		13281	
Type		5-pole, shielded		5-pole, shielded	
Circuit diagram		 (* for cable type 203)			
Contact layout		Female 			
2 Cable Type		Jacket Color		Jacket Color	
Wire diameter 0.34 mm²			gray		gray
PVC (UL/CSA)			202 (203)		202 (203)
			black		black
			602 (603)		602 (603)
3 Cable Length					
1.5 m		0150			
3.0 m		0300			
5.0 m		0500			
7.5 m		0750			
10.0 m		1000			
Technical Data					
Operating voltage		max. 60 V AC/DC			
Protection		IP65, IP68 inserted and tightened (EN 60529)			
Temperature range		-25...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7014 - -			
		1 Form 2 Cable Type 3 Cable Length			
Notes		Other versions on request. Further cable lengths on request.			

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables M12 - M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Male

straight

Female

straight

Male

straight

Female

90°



Approvals:

* only for products with UL/CSA approved cable

1 Form		40021	40121
Type		4-pole	4-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.34 mm ²		gray	gray
PVC (UL/CSA)		214	214
3 Cable Length			
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data			
Operating voltage		max. 250 V AC/DC	
Protection		IP65, IP68 inserted and tightened (EN 60529)	
Temperature range		-25...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 1 4 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables M12 - M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals:   

* only for products with UL/CSA approved cable

Male

straight

Female

90° with LED



1 Form

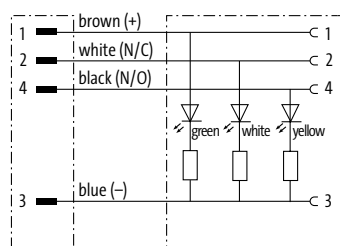
40341

Type

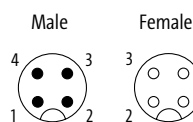
4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²
PVC (UL/CSA)

gray
214

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 1 4

–

4 0 3 4 1

–

– – –

– – – –

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

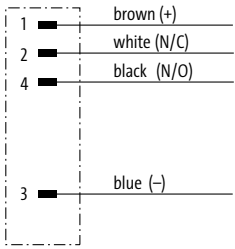
Approvals:  
* only for products with UL/CSA approved cable

Male
straight



Male
90°



1 Form		12021	12101
Type		4-pole	4-pole
Circuit diagram			
Contact layout	Male 		
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.34 mm²		gray	gray
PVC (UL/CSA)		214	214
TPE-S		336	336
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 32 V AC/DC	
Protection		IP68, IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 4 4 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes	Other versions on request. Further cable lengths on request.		

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

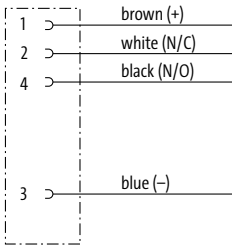
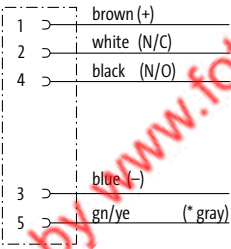
- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals:  

* only for products with UL/CSA approved cable

Female
straight



1 Form		12221	12241
Type		4-pole	5-pole
Circuit diagram			 (* for cable type 219)
Contact layout		Female 	Female 
2 Cable Type		Jacket Color	
Wire diameter 0.34 mm ²		gray	gray
PVC (UL/CSA)		214	215
TPE-S		336	615
3 Cable Length			
1.5 m		0150	
3.0 m		0300	
5.0 m		0500	
7.5 m		0750	
10.0 m		1000	
Technical Data			
Operating voltage		max. 32 V AC/DC	
Protection		IP68, IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 4 4	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals: 

* only for products with UL/CSA approved cable

Female
90°



1 Form		12341																																																																																	
Type	4-pole																																																																																		
Circuit diagram	1 2 4 3 brown (+) white (N/C) black (N/O) blue (-) <tr><td>Contact layout</td><td colspan="3"> Female 3 2 4 1 <tr><td colspan="2">2 Cable Type</td><td colspan="2">Jacket Color</td></tr><tr><td>Wire diameter 0.34 mm²</td><td></td><td>gray</td><td></td></tr><tr><td>PVC (UL/CSA)</td><td></td><td>214</td><td></td></tr><tr><td>TPE-S</td><td></td><td>336</td><td></td></tr><tr><td colspan="2">3 Cable Length</td><td colspan="2"></td></tr><tr><td>1.5 m</td><td></td><td>0150</td><td></td></tr><tr><td>3.0 m</td><td></td><td>0300</td><td></td></tr><tr><td>5.0 m</td><td></td><td>0500</td><td></td></tr><tr><td>7.5 m</td><td></td><td>0750</td><td></td></tr><tr><td>10.0 m</td><td></td><td>1000</td><td></td></tr><tr><td colspan="2">Technical Data</td><td colspan="2"></td></tr><tr><td>Operating voltage</td><td></td><td colspan="2">max. 32 V AC/DC</td></tr><tr><td>Protection</td><td></td><td colspan="2">IP68, IP69K inserted and tightened (EN 60529)</td></tr><tr><td>Temperature range</td><td></td><td colspan="2">-40...+85 °C, depending on cable quality</td></tr><tr><td colspan="2">Article No.</td><td colspan="2"></td></tr><tr><td>The composition of your article number is explained on page 3.1.i</td><td colspan="3"> 7 0 4 4 - 1 2 3 4 1 - </td></tr><tr><td></td><td>1</td><td>Form</td><td>2 Cable Type</td></tr><tr><td></td><td>3</td><td>Cable Length</td><td></td></tr><tr><td>Notes</td><td colspan="3">Other versions on request. Further cable lengths on request.</td></tr></td></tr>			Contact layout	Female 3 2 4 1 <tr><td colspan="2">2 Cable Type</td><td colspan="2">Jacket Color</td></tr> <tr><td>Wire diameter 0.34 mm²</td><td></td><td>gray</td><td></td></tr> <tr><td>PVC (UL/CSA)</td><td></td><td>214</td><td></td></tr> <tr><td>TPE-S</td><td></td><td>336</td><td></td></tr> <tr><td colspan="2">3 Cable Length</td><td colspan="2"></td></tr> <tr><td>1.5 m</td><td></td><td>0150</td><td></td></tr> <tr><td>3.0 m</td><td></td><td>0300</td><td></td></tr> <tr><td>5.0 m</td><td></td><td>0500</td><td></td></tr> <tr><td>7.5 m</td><td></td><td>0750</td><td></td></tr> <tr><td>10.0 m</td><td></td><td>1000</td><td></td></tr> <tr><td colspan="2">Technical Data</td><td colspan="2"></td></tr> <tr><td>Operating voltage</td><td></td><td colspan="2">max. 32 V AC/DC</td></tr> <tr><td>Protection</td><td></td><td colspan="2">IP68, IP69K inserted and tightened (EN 60529)</td></tr> <tr><td>Temperature range</td><td></td><td colspan="2">-40...+85 °C, depending on cable quality</td></tr> <tr><td colspan="2">Article No.</td><td colspan="2"></td></tr> <tr><td>The composition of your article number is explained on page 3.1.i</td><td colspan="3"> 7 0 4 4 - 1 2 3 4 1 - </td></tr> <tr><td></td><td>1</td><td>Form</td><td>2 Cable Type</td></tr> <tr><td></td><td>3</td><td>Cable Length</td><td></td></tr> <tr><td>Notes</td><td colspan="3">Other versions on request. Further cable lengths on request.</td></tr>			2 Cable Type		Jacket Color		Wire diameter 0.34 mm²		gray		PVC (UL/CSA)		214		TPE-S		336		3 Cable Length				1.5 m		0150		3.0 m		0300		5.0 m		0500		7.5 m		0750		10.0 m		1000		Technical Data				Operating voltage		max. 32 V AC/DC		Protection		IP68, IP69K inserted and tightened (EN 60529)		Temperature range		-40...+85 °C, depending on cable quality		Article No.				The composition of your article number is explained on page 3.1.i	7 0 4 4 - 1 2 3 4 1 -				1	Form	2 Cable Type		3	Cable Length		Notes	Other versions on request. Further cable lengths on request.		
Contact layout	Female 3 2 4 1 <tr><td colspan="2">2 Cable Type</td><td colspan="2">Jacket Color</td></tr> <tr><td>Wire diameter 0.34 mm²</td><td></td><td>gray</td><td></td></tr> <tr><td>PVC (UL/CSA)</td><td></td><td>214</td><td></td></tr> <tr><td>TPE-S</td><td></td><td>336</td><td></td></tr> <tr><td colspan="2">3 Cable Length</td><td colspan="2"></td></tr> <tr><td>1.5 m</td><td></td><td>0150</td><td></td></tr> <tr><td>3.0 m</td><td></td><td>0300</td><td></td></tr> <tr><td>5.0 m</td><td></td><td>0500</td><td></td></tr> <tr><td>7.5 m</td><td></td><td>0750</td><td></td></tr> <tr><td>10.0 m</td><td></td><td>1000</td><td></td></tr> <tr><td colspan="2">Technical Data</td><td colspan="2"></td></tr> <tr><td>Operating voltage</td><td></td><td colspan="2">max. 32 V AC/DC</td></tr> <tr><td>Protection</td><td></td><td colspan="2">IP68, IP69K inserted and tightened (EN 60529)</td></tr> <tr><td>Temperature range</td><td></td><td colspan="2">-40...+85 °C, depending on cable quality</td></tr> <tr><td colspan="2">Article No.</td><td colspan="2"></td></tr> <tr><td>The composition of your article number is explained on page 3.1.i</td><td colspan="3"> 7 0 4 4 - 1 2 3 4 1 - </td></tr> <tr><td></td><td>1</td><td>Form</td><td>2 Cable Type</td></tr> <tr><td></td><td>3</td><td>Cable Length</td><td></td></tr> <tr><td>Notes</td><td colspan="3">Other versions on request. Further cable lengths on request.</td></tr>			2 Cable Type		Jacket Color		Wire diameter 0.34 mm²		gray		PVC (UL/CSA)		214		TPE-S		336		3 Cable Length				1.5 m		0150		3.0 m		0300		5.0 m		0500		7.5 m		0750		10.0 m		1000		Technical Data				Operating voltage		max. 32 V AC/DC		Protection		IP68, IP69K inserted and tightened (EN 60529)		Temperature range		-40...+85 °C, depending on cable quality		Article No.				The composition of your article number is explained on page 3.1.i	7 0 4 4 - 1 2 3 4 1 -				1	Form	2 Cable Type		3	Cable Length		Notes	Other versions on request. Further cable lengths on request.						
2 Cable Type		Jacket Color																																																																																	
Wire diameter 0.34 mm²		gray																																																																																	
PVC (UL/CSA)		214																																																																																	
TPE-S		336																																																																																	
3 Cable Length																																																																																			
1.5 m		0150																																																																																	
3.0 m		0300																																																																																	
5.0 m		0500																																																																																	
7.5 m		0750																																																																																	
10.0 m		1000																																																																																	
Technical Data																																																																																			
Operating voltage		max. 32 V AC/DC																																																																																	
Protection		IP68, IP69K inserted and tightened (EN 60529)																																																																																	
Temperature range		-40...+85 °C, depending on cable quality																																																																																	
Article No.																																																																																			
The composition of your article number is explained on page 3.1.i	7 0 4 4 - 1 2 3 4 1 -																																																																																		
	1	Form	2 Cable Type																																																																																
	3	Cable Length																																																																																	
Notes	Other versions on request. Further cable lengths on request.																																																																																		

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals: 

* only for products with UL/CSA approved cable

Female

straight, with LED



1 Form

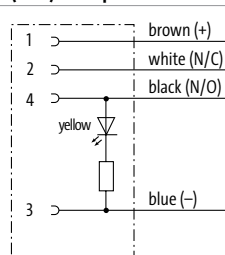
12292

Type

4-pole with 1 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²

PVC (UL/CSA)

TPE-S

gray

214

336

3 Cable Length

1.5 m

0150

3.0 m

0300

5.0 m

0500

7.5 m

0750

10.0 m

1000

Technical Data

Operating voltage

24 V AC/DC ±25%

Protection

IP68, IP69K inserted and tightened (EN 60529)

Temperature range

-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 4 4

–

1 2 2 9 2

–

– – –

– – – –

1

Form

2

Cable Type

3

Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals:

* only for products with UL/CSA approved cable

Male
straight

Female
straight

Male
straight

Female
90°



1 Form		40021	40121
Type		4-pole	4-pole
Circuit diagram			
Contact layout			
2 Cable Type		Jacket Color	Jacket Color
Wire diameter 0.34 mm²		gray	gray
PVC (UL/CSA)		214	214
TPE-S		336	336
3 Cable Length			
0.3 m		0030	
0.6 m		0060	
1.0 m		0100	
1.5 m		0150	
2.0 m		0200	
Technical Data			
Operating voltage		max. 32 V AC/DC	
Protection		IP68, IP69K inserted and tightened (EN 60529)	
Temperature range		-40...+85 °C, depending on cable quality	
Article No.			
The composition of your article number is explained on page 3.1.i		7 0 4 4 - - - - -	- - - - -
		1 Form	2 Cable Type 3 Cable Length
Notes		Other versions on request. Further cable lengths on request.	

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals: 

* only for products with UL/CSA approved cable

Male
90°

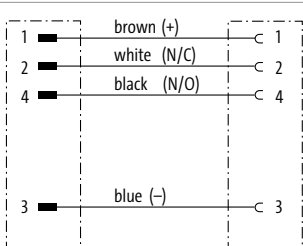
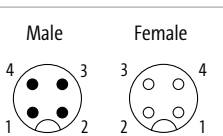


Female
straight

Male
90°



Female
90°

1	Form	4 0 2 0 1		4 0 2 6 1	
Type		4-pole		4-pole	
Circuit diagram					
Contact layout					
2	Cable Type	Jacket Color		Jacket Color	
Wire diameter 0.34 mm²		gray		gray	
PVC (UL/CSA)		214		214	
TPE-S		336		336	
3	Cable Length				
0.3 m		0030			
0.6 m		0060			
1.0 m		0100			
1.5 m		0150			
2.0 m		0200			
Technical Data					
Operating voltage		max. 32 V AC/DC			
Protection		IP68, IP69K inserted and tightened (EN 60529)			
Temperature range		-40...+85 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		7044 - -			
		1 Form		2 Cable Type	
				3 Cable Length	
Notes		Other versions on request. Further cable lengths on request.			

PLUG CONNECTORS FOR FOOD & BEVERAGE

Connection cables

- M12-Steel
- Stainless Steel 1.4404 (V4A)
- Permanently IP69K

Approvals:  
 * only for products with UL/CSA approved cable

Male
straight

Female
straight, with LED



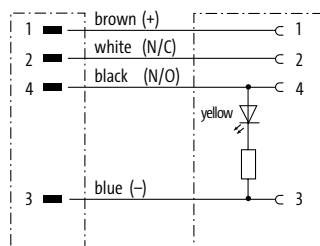
1 Form

4 0 3 1 2

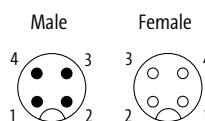
Type

4-pole with 1 × LED (PNP)
(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²
PVC (UL/CSA)
TPE-S

gray
214
336

3 Cable Length

0.3 m 0030
0.6 m 0060
1.0 m 0100
1.5 m 0150
2.0 m 0200

Technical Data

Operating voltage 24 V AC/DC ±25%
Protection IP68, IP69K inserted and tightened (EN 60529)
Temperature range -40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 4 4

- 4 0 3 1 2

- - -

- - - -

1 Form

2 Cable Type

3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

Labeling accessories			Art-No.
	Slip-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	7000-99004-0000000
	Snap-on cable sleeve for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	7000-99005-0000000
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	7000-99006-0000000
	ACS label plate for self marking (4 × 18 mm)		7000-99002-0000000
	Colored ring M8/M12		
	sandy yellow	for unshielded molding	7000-99301-V011002
	zinc yellow	for unshielded molding	7000-99301-V011018
	redorange	for unshielded molding	7000-99301-V012008
	red	for unshielded molding	7000-99301-V013020
	violet	for unshielded molding	7000-99301-V014003
	purple	for unshielded molding	7000-99301-V014006
	blue	for unshielded molding	7000-99301-V015005
	green	for unshielded molding	7000-99301-V016018
	gray	for unshielded molding	7000-99301-V017035
	white	for unshielded molding	7000-99301-V019003
	black	for unshielded molding	7000-99301-V019004
Mounting accessories			Art-No.
	Torque wrench set M8 (0.4 Nm, SW9)	M8 data connectors	7000-99101-0000000
	Torque wrench set M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	7000-99102-0000000
	Torque wrench set M12 (0.6 Nm, SW14)		7000-99107-0000000
	Torque wrench M12 (0.6 Nm, SW14)	M12 data connenctor moulded (Xtreme)	7000-99108-0000000
	Torque wrench M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	7000-99094-0000000
	Torque wrench M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	7000-99103-0000000

PLUG CONNECTORS FOR FOOD & BEVERAGE

Mounting accessories			Art-No.
	Hold clip M12		
	Plastic		7000-99045-0000000
End fitting accessories			Art-No.
	Tube adapter		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	7000-99081-0000000
Connection accessories			Art-No.
	Universal holder		
	modular	M8 M12	7000-99801-0000000
	Universal holder		
	modular	M12 Y-connector M12	7000-99811-0000000



MOBILE APPLICATIONS FOR ROUGH APPLICATIONS

- Robust
- Resistant
- Sealed

KEEP YOUR MOBILE EQUIPMENT GOING STRONG WITH OUR FULLY POTTED CONNECTORS

Many leading mobile hydraulic valve manufacturers are currently updating their connection concepts. Instead of the old-fashioned (rectangular) valve connectors compliant with DIN EN 175301-803, they are increasingly recommending alternatives with Junior Power Timer, Deutsch or SuperSeal connectors.

MDC – MURRELEKTRONIK DEUTSCH CONNECTOR

Murrelektronik MDC connectors are pre-wired valve connectors, which are 100% compatible with Deutsch DT connectors. Even though the cables are connected to the housing and fully sealed, the connector is as compact as possible.

MSC – MURRELEKTRONIK SUPERSEAL CONNECTOR

Murrelektronik MSC cordsets are pre-wired valve connectors that are 100% compatible with the size 1.5 SuperSeal connectors. Even though the cables are connected to the housing and fully sealed, the connector is as compact as possible.

With Open Ended Wires



AMP Junior Power Timer

- Female straight
- Female 90°

Page 3.8.1



Deutsch MDC

- Male straight
- Y connector male
- Female straight

Page 3.8.3



SuperSeal MSC1.5

- Male straight
- Female straight

Page 3.8.8

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- AMP Junior Power Timer

Female
straight



1	Form	70001	70021	70061			
	Type	max. 230 V AC/DC without components	12...24 V AC/DC LED	12...24 V AC/DC LED and VDR			
	Circuit diagram						
	Contact layout						
2	Cable Type	Jacket Color	Jacket Color	Jacket Color			
	Wire diameter 0.75 mm²	black	black	black			
	PUR/PVC	750	750	750			
	PUR (UL/CSA), robots/C-tracks	754	754	754			
	Wire diameter 0.5 mm²						
PUR, C-tracks	740	740	740				
3	Cable Length						
	1.5 m	0150					
	3.0 m	0300					
	5.0 m	0500					
	7.5 m	0750					
	10.0 m	1000					
Technical Data							
Operating voltage	max. 230 V AC/DC	12...24 V AC/DC					
Protection	IP65 inserted and tightened						
Temperature range	-25...+85 °C, depending on cable quality						
Article No.							
The composition of your article number is explained on page 3.1.i		7072 - -					
		1	Form	2	Cable Type	3	Cable Length
Notes		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.					

MOBILE APPLICATIONS

Xtreme - Mobile Applications

- with open ended wires
- compatible with:
- AMP Junior Power Timer

Female
90°



1 Form	70301	70321	70361
	max. 230 V AC/DC without components	12...24 V AC/DC LED	12...24 V AC/DC LED and VDR
Circuit diagram			
Contact layout			
2 Cable Type	Jacket Color	Jacket Color	Jacket Color
	black	black	black
	750	750	750
	754	754	754
	740	740	740
3 Cable Length	1.5 m	0150	
	3.0 m	0300	
	5.0 m	0500	
	7.5 m	0750	
	10.0 m	1000	
Technical Data			
Operating voltage	max. 230 V AC/DC	12...24 V AC/DC	
Protection	IP65 inserted and tightened		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i			
7 0 7 2 - - - - -			
1 Form		2 Cable Type	3 Cable Length
Notes			
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.			