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ELECTRONICS IN THE CONTROL CABINET

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INTERFACES

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CONNECTION TECHNOLOGY

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I/O SYSTEMS

Cube67

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MVK Metal

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Impact20

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MASI00/20

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M8 Distribution Systems

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M12 Distribution Systems (Metal)

4.11

M12 Distribution Systems (Plastic)

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CUBE67 MODULAR I/O STATION IP67

- Open System
- Modular
- Flexible

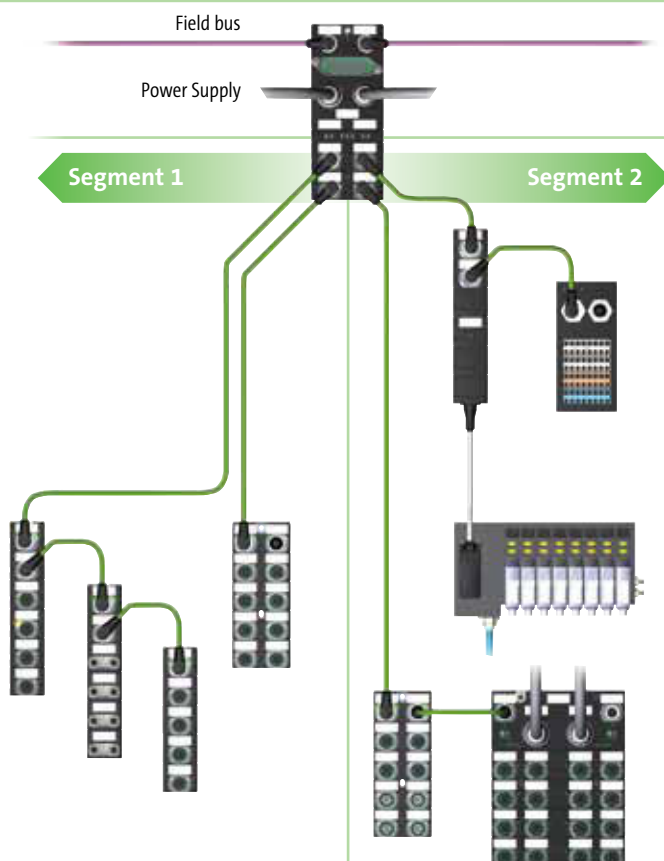
CHANGE THE BUS WITHOUT CHANGING THE SYSTEM

Cube67 brings you balanced and cost-effective solutions. Murrelektronik's innovative fieldbus system has simplified and modernized decentralized installations from the ground up. The machine installation is independent from the control and the fieldbus, which makes it possible to customize the control without having to modify the I/O peripherals.



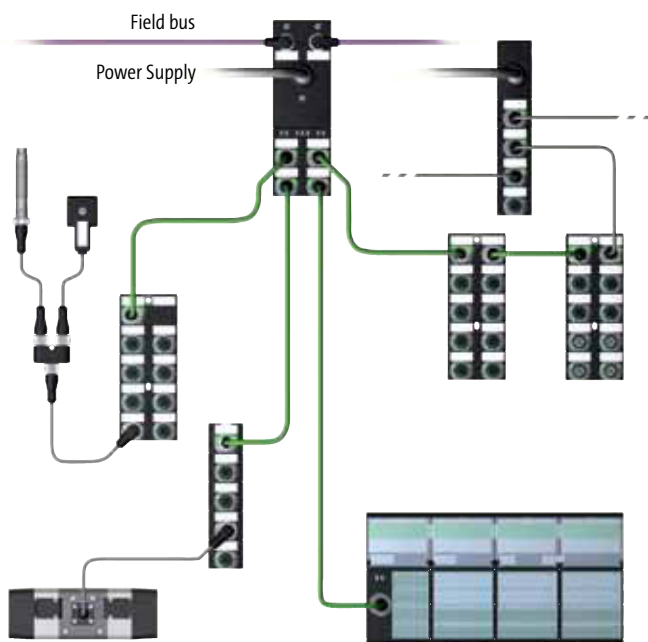
Cube67 I/O Modules

 <p>Bus Nodes • IP67 protection</p> <p>Page 4.1.1</p>	 <p>Digital Inputs • IP67 protection</p> <p>Page 4.1.5</p>
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cube67⁺

- 2 segments
- Per segment:
 - 16 modules
 - 30 meters cable length
- Pin Level Diagnostics
- LED Indicator per I/O
- Topology
 - Star/line
- Transfer type
 - Change of State
- System connection
 - Hybrid cable M12
- Addressing
 - Automatically

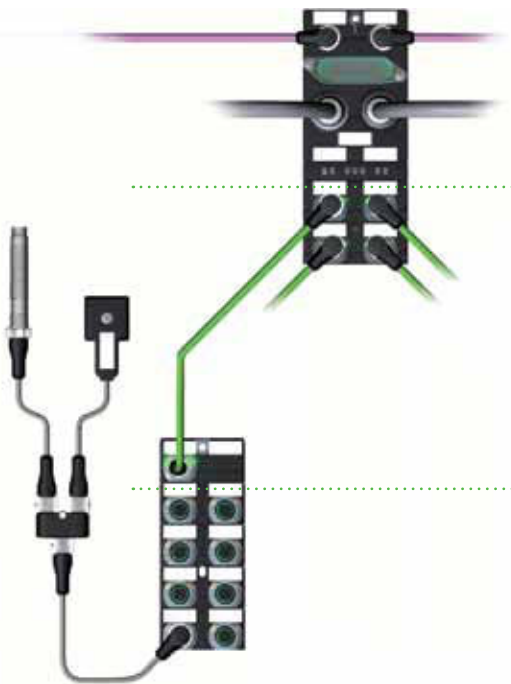


cube67

- 4 lines
- Per line:
 - 4 modules
 - 10 meters cable length
- Pin Level Diagnostics
- LED Indicator per I/O
- Topology
 - Star/line
- Transfer type
 - Change of State
- System connection
 - Hybrid cable M12
- Addressing
 - Automatically

CONSISTENT DIAGNOSTICS WITH cube67⁺

Cube67



BUS NODES

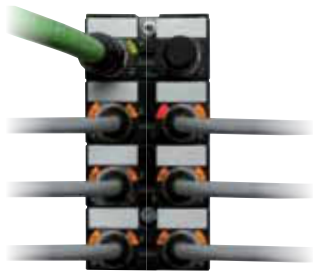
- Communication
- Module status
- Under voltage
- Overload

I/O MODULE

- Communication
- Under voltage
- Overload

PORT

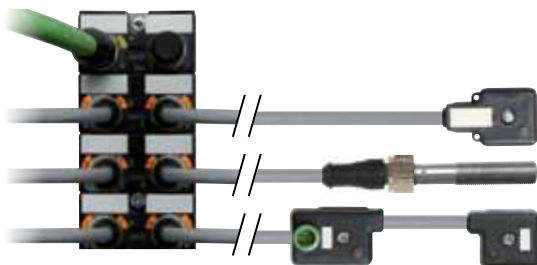
- Signal status
- Overflow and underflow (measured value)
- Short circuit
- Overload
- Cable break
- Actuator warning



DON'T LOOK FOR ERRORS, FIND THEM: COMPREHENSIVE DIAGNOSTICS

- Only the affected channel switches off
- Minimizes downtime
- Enables remote maintenance

HIGHLY FLEXIBLE WITH MULTIFUNCTIONAL I/Os



- Two signals per port, either input, diagnostics input or output, can all be independently configured
- Avoid unused reserves
- Double valves require only one port

Cube67 and Cube67+ are the new benchmark in automation. Small, multifunctional I/O modules and a variety of different interfaces are the keys to simplified installations. They can be installed close to sensors and loads. This saves installation time and offers benefits during service with easy trouble-shooting.

CUBE67

Bus Nodes, Cube67+

– up to 32 modules

– max. 2 × 30 m system expansion



EtherNet/IP[®]
conformance tested

Approvals:  

Cube67+ BN-P

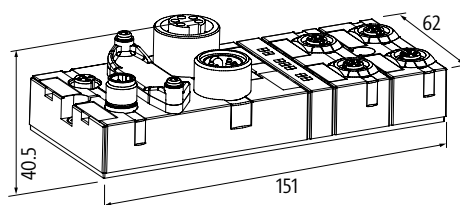


Cube67+ BN-PNIO



Cube67+ BN-E

Order Data	Art-No.	Art-No.	Art-No.
PROFIBUS DP	56521		
PROFINET IO		56526	
EtherNet/IP			56525
Fieldbus			
Operating modes	Sync- and freeze mode are supported	Autonegotiation/Auto MDI/MDI-X	
Transfer rate	to 12 Mbit/s	to 100 MBit/s Full Duplex	
Addressing	Rotary switch 0...99	DHCP, BOOTP or IP address by rotary switch	
Supply voltage			
Operating voltage	24 V DC (EN 61131-2)		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 8 A		
Current consumption	max. 120 mA	max. 200 mA	
Internal system connection	via M12, 6 pole; max. 4 A		
Diagnostic			
Communication status	per LED and BUS		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.

CUBE67

Bus Nodes, Cube67+

– up to 32 modules

– max. 2 × 30 m system expansion

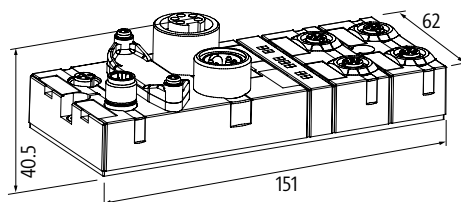
EtherCAT

Approvals:  

Cube67+ BN-EC



Order Data	Art-No.
EtherCAT	56527
Fieldbus	
Transfer rate	to 100 Mbit/s
Addressing	automatic
Supply voltage	
Operating voltage	24 V DC (EN 61131-2)
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 8 A
Current consumption	max. 200 mA
Internal system connection	via M12, 6 pole; max. 4 A
Diagnostic	
Communication status	per LED and BUS
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short circuit and overload	yes
General data	
Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Mounting method	2-hole screw mounting
Dimension drawing	



Notes
Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.

CUBE67

Bus Nodes, Cube67

- up to 16 modules
- max. 4×10 m system expansion



Approvals: 

Cube67 BN-P

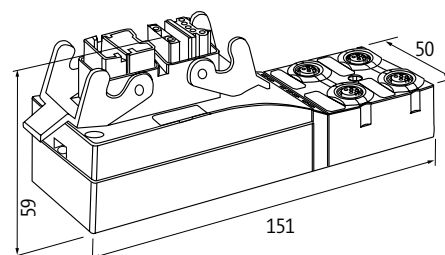
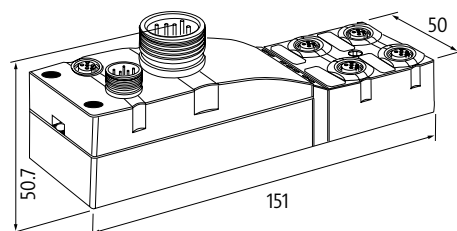


Cube67 BN-P

ECOFAST®



Order Data	Art-No.	Art-No.
PROFIBUS DP	cULus 56501	cULus 56531
PROFIBUS DP (expanded diagnostic)	566011	
Fieldbus		
Operating modes	Sync- and freeze mode are supported	
Transfer rate	to 12 Mbit/s	
Addressing	Rotary switch 0...99	
Supply voltage		
Operating voltage	24 V DC (EN 61131-2)	
Sensor-system/actuator supply	via 7/8" power; max. 9 A	via hybrid connector; max. 9 A
Current consumption	max. 120 mA	
Internal system connection	via M12, 6 pole; max. 4 A	
Diagnostic		
Communication status	per LED and BUS	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
General data		
Protection	IP67	IP65
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

CUBE67

Bus Nodes, Cube67

– up to 16 modules

– max. 4×10 m system expansion

EtherNet/IP
conformance tested

DeviceNet
conformance tested

CANopen
Approvals:  

Cube67 BN-E

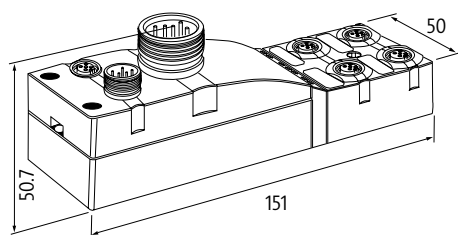


Cube67 BN-DN



Cube67 BN-C

Order Data	Art-No.	Art-No.	Art-No.
EtherNet/IP	56505		
DeviceNet		56507	
CANopen			56504
Fieldbus			
Operating modes	Autonegotiation/Auto MDI/MDI-X	Polling; change of state; Cyclic	
Transfer rate	to 100 Mbit/s	125, 250 and 500 Kbit/s	10, 20, 50, 125, 250, 500, 800, 1000 kbit/s
Addressing	DHCP, BOOTP or IP address by rotary switch	Rotary switch 0...63	Rotary switch 1...99
Supply voltage			
Operating voltage	24 V DC (EN 61131-2)		
Sensor-system/actuator supply	via 7/8" power; max. 9 A		
Current consumption	max. 70 mA	approx. 70 mA	
Internal system connection	via M12, 6 pole; max. 4 A		
Diagnostic			
Communication status	per LED and BUS		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

CUBE67

Compact module

– Digital inputs

Approvals:  

Cube67 DI16 C - 8×M12

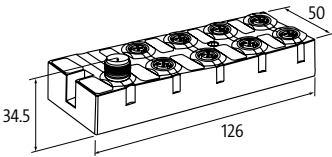
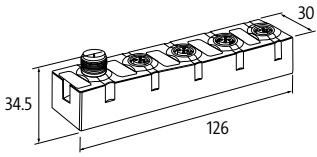
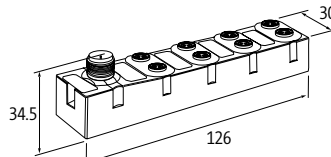


Cube67 DI8 C - 4×M12



Cube67 DI8 C - 8×M8



Order Data	Art-No.	Art-No.	Art-No.
DI16 - (C) 8×M12	56602		
DI8 - (C) 4×M12		56612	
DI8 - (C) 8×M8			56622
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Terminating resistor	integrated into the module		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		24 V DC, (EN 61131-2), max. 200 mA per M8 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/diagnostic		–
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

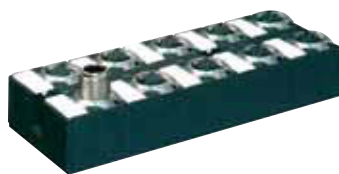
CUBE67

Expansion module

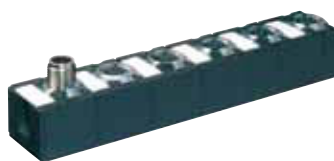
- Digital inputs

Approvals:  

Cube67 DI16 E - 8xM12



Cube67 DI8 E - 4xM12



Cube67 DI8 E - 8xM8



Order Data	Art-No.	Art-No.	Art-No.
DI16 - (E) p-switching (8xM12)	56603		
DI16 - (E) n-switching (8xM12)	56606		
DI8 - (E) p-switching (4xM12)		56613	
DI8 - (E) n-switching (4xM12)		56616	
DI8 - (E) p-switching (8xM8)			56623
DI8 - (E) n-switching (8xM8)			56626

Internal communication

Module supply	via internal system connection (max. 2x4 A)		
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		

Input

Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	24 V DC, (EN 61131-2), max. 200 mA per M8 female, (short-circuit and overload protected)
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Type	for 3-wire sensors or mechanical switches (EN 61131-2)		
Input filter	1 ms		

Parameterization

PIN 2	Input/diagnostic	-
PIN 4	Input	

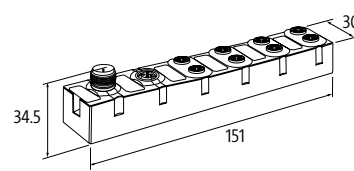
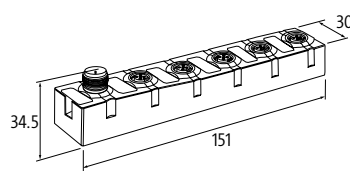
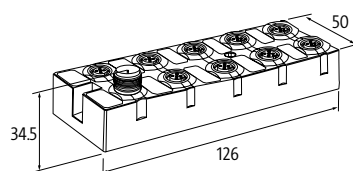
Diagnostic

Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		

General data

Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		

Dimension drawing



Notes

CUBE67

Compact module

– Multifunctional I/Os



Cube67 DIO16 C - 8×M12



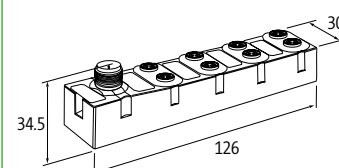
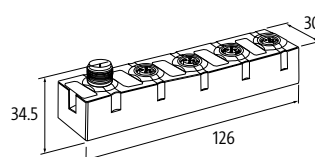
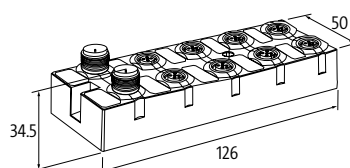
Cube67 DIO8 C - 4×M12



Cube67 DIO8 C - 8×M12



Order Data	Art-No.	Art-No.	Art-No.
DIO16 - 0.5 A (C) 8×M12	56600		
DIO16 - 1.6 A (C) 8×M12	56640		
DIO8 - 0.5 A (C) 4×M12		56610	
DIO8 - 0.5 A (C) 8×M8			56620
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Terminating resistor	integrated into the module		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	24 V DC, (EN 61131-2), max. 200 mA per M8 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/output/diagnostic		–
PIN 4	Input/output		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A) + right actuators via supply right (max. 4 A)	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Lamp load	10 W		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

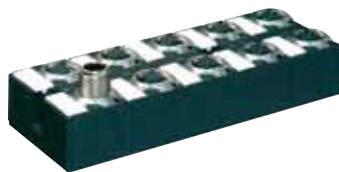
CUBE67

Expansion module

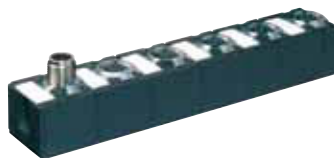
– Multifunctional I/Os

Approvals:  

Cube67 DIO16 E - 8×M12

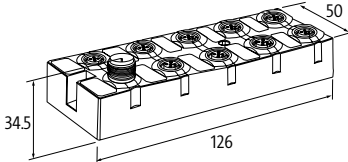
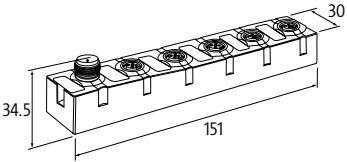
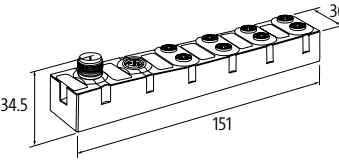


Cube67 DIO8 E - 4×M12



Cube67 DIO8 E - 8×M8



Order Data	Art-No.	Art-No.
DIO16 - 0.5 A (E) 8×M12	10 W 56601	
DIO8 - 0.5 A (E) 4×M12	10 W 56611	
DIO8 - 1.0 A (E) 4×M12	20 W 56631	
DIO8 - 0.5 A (E) 8×M8		10 W 56621
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	24 V DC, (EN 61131-2), max. 200 mA per M8 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input filter	1 ms	
Parameterization		
PIN 2	Input/output/diagnostic	–
PIN 4	Input/output	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		
		
		
Notes		

Expansion module

- Multifunctional I/Os
- Multifunctional I/Os and digital outputs

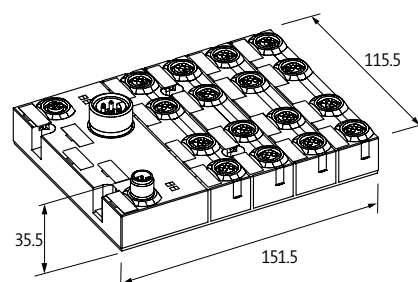
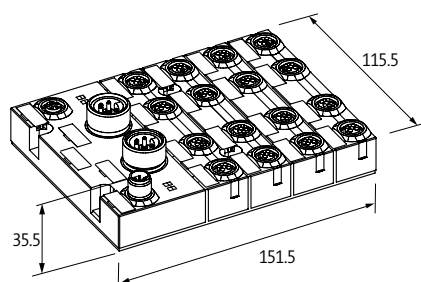
Cube67 DIO16 DO16 E - 1.6/2 A 16×M12



Cube67 DIO32 E - 16×M12



Order Data	Art-No.		Art-No.
DIO16 - 1.6 A DO16 - 2 A (E) 16×M12	56641		
DIO32 - 0.5 A (E) 16×M12			56642
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA	max. 60 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2 (8 × M12 left side)	Input/output/diagnostic		
PIN 4 (8 × M12 left side)	Input/output		
PIN 2 (8 × M12 right side)	Output	Input/output/diagnostic	
PIN 4 (8 × M12 right side)	Output	Input/output	
Output			
Actuator supply (8 × M12 left side)	24 V DC, (EN 61131-2), via 7/8" male (max. 2 × 9 A)	24 V DC, (EN 61131-2), via 7/8" male (max. 1 × 9 A)	
Actuator supply (8 × M12 right side)	24 V DC, (EN 61131-2), via 7/8" male (max. 2 × 9 A)	24 V DC, (EN 61131-2), via 7/8" male (max. 1 × 9 A)	
Switching current per output (8×M12 left)	max. 1.6 A, (short-circuit and overload protected), coincidence factor 50 % per port	max. 0.5 A (short-circuit and overload protected)	
Switching current per output (8×M12 right)	max. 2 A, (short-circuit and overload protected), coincidence factor 50 % per port	max. 0.5 A (short-circuit and overload protected)	
Lamp load (8 × M12 left side)	30 W	10 W	
Lamp load (8 × M12 right side)	40 W	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	4 hole screw mounting		
Dimension drawing			



Notes

CUBE67

Expansion module

– Multifunctional I/Os

– Digital inputs and outputs

Cube67 DIO8 E - Cable

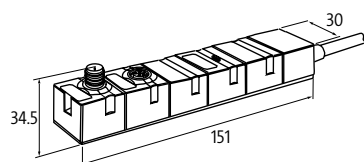
Cube67 DIO8 E - Cable M12

Cube67 DIO16 E - Cable

Cube67 DI16 DO16 E - Cable



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DIO8 - 1.6 A (E) 0.5 m (open cable)	cULus, GOST	56661		
DIO8 - 1.6 A (E) 2 m (open cable)	5666100			
DIO8 - 0.5 A (E) 0.5 m (M12)		cULus, GOST	5666201	
DIO16 - 0.5 A (E) 0.5 m (open cable)			cULus, GOST	56662
DIO16 - 0.5 A (E) 1.5 m (open cable)			5666200	
DI16/DO16 - 0.2 A (E) 0.5 m (open cable)				56671
Internal communication				
Module supply	via internal system connection (max. 2x4 A)			
Current consumption	max. 30 mA	max. 50 mA	max. 30 mA	max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 1.6 A	24 V DC (EN 61131-2), max. 0.5 A		24 V DC (EN 61131-2), max. 0.2 A
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)			
Input filter	1 ms			
Cable				
No./diameter of wires	10 × 0.34 mm²	8 × 0.25 mm²	20 × 0.14 mm²	36 × 0.14 mm²
Jacket	PVC	PUR	PVC	
Parameterization				
I/O channels	Input/output			–
Output				
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)			
Switching current per output	max. 60 mA, (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)	
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
Actuator warning	per channel via BUS			
General data				
Protection	IP67			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Mounting method	2-hole screw mounting			
Dimension drawing				



Notes

CUBE67

Expansion module

– Multifunctional I/Os

– Digital outputs

Approvals: 

Cube67 D07 - E Cable M12 (0.5 m)

for Modlight70 basic



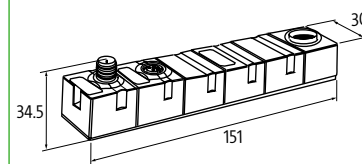
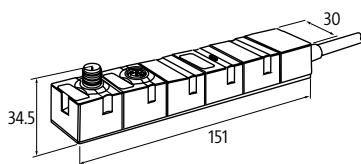
Cube67 DIO8 - E Cable M12 ID(0.2m)

for EUCHNER ID Sensor

Cube67 DIO8 - M16 female (0.5 A)



Order Data	Art-No.	Art-No.	Art-No.
D07 - (E) 0.5 m (M12)	5665503		
DIO8 - (E) 0.2 m (M12)		5666500	
DIO8 - 0.5 A (E) 1×M16			cULus56663
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA	max. 30 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor supply US	–	24 V DC, (EN 61131-2), max. 200 mA	
Type	–	EUCHNER Type CIT 3PL1M30-STR	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Input filter	–	1 ms	
Cable			
No./diameter of wires	8 × 0.25 mm²	–	
Jacket	PUR	–	
Parameterization			
I/O channels	7 outputs	Input/output	
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)	EUCHNER Type CIT 3PL1M30-STR	max. 0.5 A (short-circuit and overload protected)
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

CUBE67

Expansion module

– Digital outputs

Cube67 DO8 - Valve

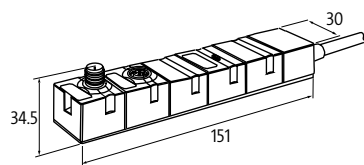
Cube67 DO16 - Valve

Cube67 DO32 - Valve



Approvals:  

Order Data	Art-No.	Art-No.	Art-No.
with open ended wires (0.5 A)	56655		56656
with open ended wires (70 mA)		56651	
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Cable			
No./diameter of wires	10 × 0.34 mm²	18 × 0.25 mm²	36 × 0.14 mm²
Jacket	PUR	PVC	
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	short-circuit and overload protected		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

CUBE67

Compact module

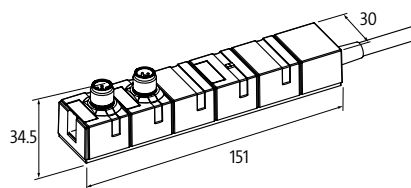
– Digital outputs

Cube67 DO16 - Valve

(4 × actuator supply UA)



Order Data		Art-No.
Multipole plug (0.5 A)	SMC (SUB-D25)	5665000
	SMC - Series SV/VQ	5665002
	FESTO - MPA (SUB-D25)	5665001
	FESTO - CPV (SUB-D25) – GOST	5665004
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Cable		
No./diameter of wires	4 × 4 × 0.14 mm²	
Jacket	PVC, cross-link safe	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 4 × 2 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes


Cube67

CUBE67

Compact module - Safety

– Passive

– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

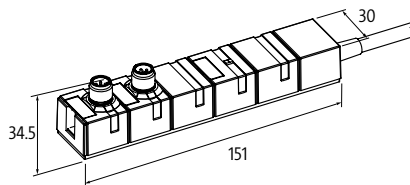
Approvals: 

Cube67 DO16 - C Valve (K3)

Cube67 DO8 - C Valve (K3)



Order Data	Art-No.	Art-No.
Multipole plug (0.5 A)	FESTO - CPV (SUB-D25) – cULus, Tüv Süd	FESTO - CPV (SUB-D9)
Internal communication	56650	5665003
Module supply	via internal system connection (max. 2x4 A)	
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Cable		
No./diameter of wires	4 x 4 x 0.14 mm ²	
Jacket	PVC, cross-link safe	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 4 x 2 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

CUBE67

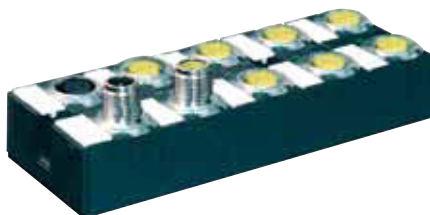
Expansion module - Safety

– Passive

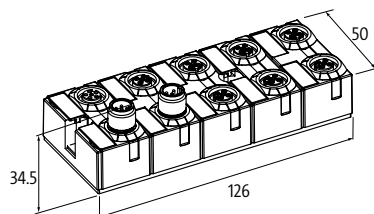
- output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

Approvals:   

Cube67 DO6/DO6 - E 6×M12 (K3)



Order Data	Art-No.
DO6/DO6 - (E) 6×M12 (K3)	56605
Internal communication	
Module supply	via internal system connection (max. 2×4 A)
Current consumption	max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)
Output	
Actuator supply UA	24 V DC (EN 61131-2), 2 circuits, (max. 2 × 4 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Mounting method	2-hole screw mounting
Dimension drawing	



Notes

CUBE67

Expansion module

– IO-Link Master, function module and multifunctional I/Os

– IO-Link V1.0

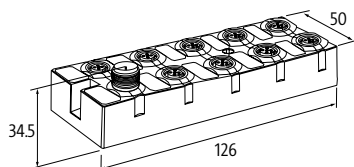
IO-Link

Approvals: 

Cube67+ DIO12 IOL4 - E 8×M12



Order Data	Art-No.
DIO12/IOL4 - (E) 8×M12	56765
Internal communication	
Module supply	via internal system connection (max. 2×4 A)
Current consumption	max. 100 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)
Input	
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA (female 0...3); max. 700 mA (female 4...7)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Input filter	1 ms
Parameterization	
PIN 2	Input/output/diagnostic
PIN 4	Input/output (female 0...3); input/IO-Link master (female 4...7)
Output	
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	30 W
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Mounting method	2-hole screw mounting
Dimension drawing	



Notes

Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.

Function modules

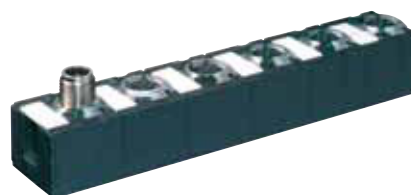
Cube67 CNT2 - C 4×M12

Counter module with preprocessing



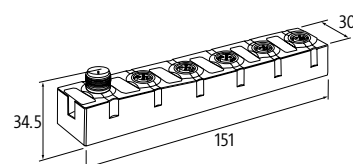
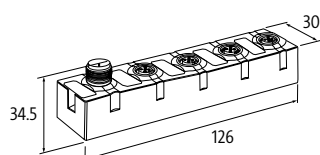
Cube67 Logic - DI6 DO2 E 4×M12

Logic module



Approvals:  

Order Data	Art-No.	Art-No.
Compact module	56750	
Expansion module		56771
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input filter	1 ms	
Logic module		
Inputs	–	6
Outputs	–	2
Logic function	–	AND, NOR; AND; XOR parameters definable
Counter		
Counter frequency	max. 300 kHz	–
Counter input	(EN 61131-2)	–
Counter depth	32 Bit (31 Bit + sign)	–
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Lamp load	30 W	10 W
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		




Notes

CUBE67

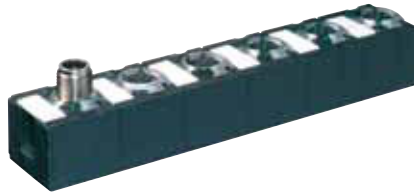
Function modules

– Multifunctional I/Os

Approvals: 

Cube67+ DIO4 RS232/485 - E 4×M12

Serial interface

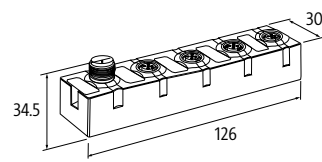
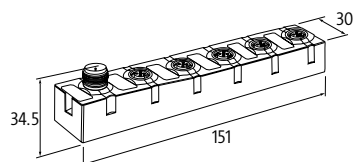


Cube67 DIO4 RS485 - E 3×M12

Serial interface



Order Data	Art-No.		Art-No.
DIO4 - RS232/485 (E) 4×M12	56761		
DIO4 - RS485 (E) 3×M12			cULus56760
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 80 mA	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Technical Data			
Transfer parameters	RS232: 230.4 kBaud, full duplex; RS485: 230.4 kBaud, half duplex	9600 Baud, half duplex	
RS232-Type	galvanically separated, M12 female 5-pole, B-coded	–	
RS485-Type	galvanically separated, M12 female 5-pole, B-coded		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/output/diagnostic		
PIN 4	Input/output		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Lamp load	10 W		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.

Analog inputs

– Voltage/current

Cube67 AI4 C - 4×M12

Compact module
Voltage

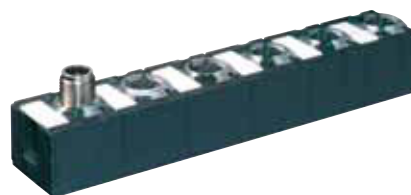
Cube67 AI4 C - 4×M12

Compact module
Current

Cube67 AI4 E - 4×M12

Expansion module
Voltage

Cube67 AI4 E - 4×M12

Expansion module
CurrentApprovals: 

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
AI4 - (C) 4×M12 (U)	cULus	56700		
AI4 - (C) 4×M12 (I)		cULus	56730	
AI4 - (E) 4×M12 (U)			cULus	56701
AI4 - (E) 4×M12 (I)				56731

Internal communication

Module supply	via internal system connection (max. 2×4 A)			
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			

Input

Conversion time (analog)	approx. 2 ms (per channel)			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)			
Resolution (analog)	15 Bit + sign	15 Bit	15 Bit + sign	15 Bit
Accuracy	max. ±0.5 % (of range limit)			

Voltage inputs

Input resistor	approx. 1 MOhm, differential input	–	approx. 1 MOhm, differential input	–
Input range	±10 V DC, 0...10 V DC	–	±10 V DC, 0...10 V DC	–

Current input signals

Load	–	approx. 300 Ohm, differential input	–	approx. 300 Ohm, differential input
Input range	–	0...20 mA, 4...20 mA	–	0...20 mA, 4...20 mA

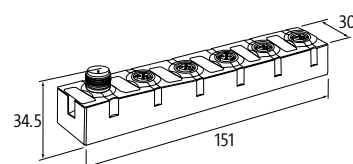
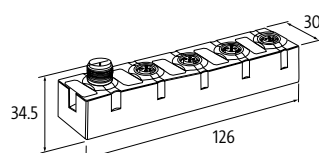
Diagnostic

Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			

General data

Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Mounting method	2-hole screw mounting

Dimension drawing




Notes

CUBE67

Analog inputs

– for resistors and temperature

– for thermo elements

Approvals: 

Cube67 AI4 C (RTD) - 4×M12

Compact module
for resistors and temperature

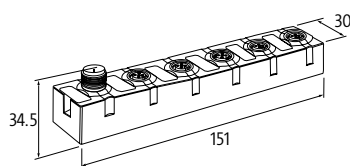
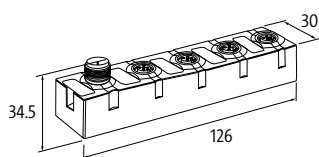


Cube67 AI4 E (RTD) - 4×M12

Expansion module
for resistors and temperature



Order Data	Art-No.	Art-No.
AI4 - (C) 4×M12 (RTD)	cULus	56740
AI4 - (E) 4×M12 (RTD)		56741
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Input		
Sensor type	Pt 100, 200, 500, 1000; Ni 100, 120, 200, 500, 1000; R 0...3000 Ohm	
Conversion time (analog)	approx. 58 ms per channel	
Resolution (analog)	15 Bit + sign	
Accuracy	max. ±0.5 % (of range limit)	
Accuracy (Ni)	max. ±1 % (of range limit)	
Connection	2-, 3-, 4-wire technology	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

Analog inputs

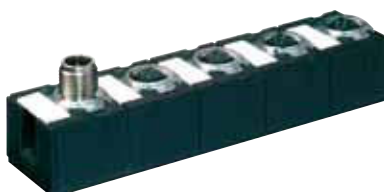
– for resistors and temperature

– for thermo elements

Approvals: 

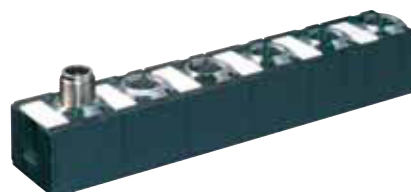
Cube67 AI4 C (TH) - 4xM12

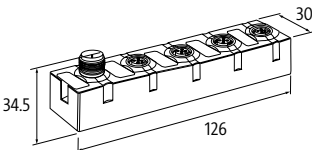
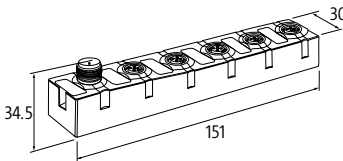
Compact module
for thermo elements



Cube67 AI4 E (TH) - 4xM12

Expansion module
for thermo elements



Order Data		Art-No.	Art-No.
AI4 - (C) 4xM12 (TH)	cULus	56748	
AI4 - (E) 4xM12 (TH)			56749
Internal communication			
Module supply	via internal system connection (max. 2x4 A)		
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor type	K, N, J, E, R		
Conversion time (analog)	approx. 65 ms per channel		
Resolution (analog)	15 Bit + sign		
Accuracy	max. ±0.5 % (of range limit)		
Connection	2-wire technology		
Cold junction compensation	inside M12 connector		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes	—	
Actuator warning	per channel via LED and BUS		
Wire break upper /lower limit overload	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

CUBE67

Analog outputs

– Voltage/current

Cube67 AO4 C 4×M12

Compact module
Voltage

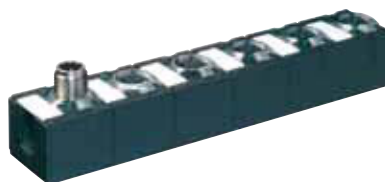


Cube67 AO4 C 4×M12

Compact module
Current

Cube67 AO4 E 4×M12

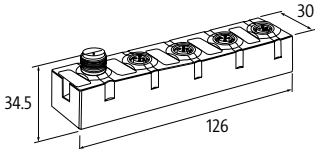
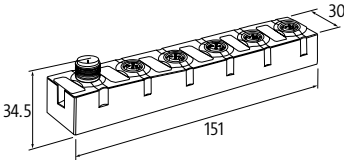
Expansion module
Voltage



Cube67 AO4 E - 4×M12

Expansion module
Current

Approvals:

Order Data	Art-No.	Art-No.	Art-No.
AO4 - (C) 4×M12 (U)	cULus	56710	
AO4 - (C) 4×M12 (I)		cULus	56720
AO4 - (E) 4×M12 (U)			56711
AO4 - (E) 4×M12 (I)			56721
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Output			
Supply voltage	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Conversion time (analog)	approx. 1 ms (per channel)		
Actuator supply UA	24 V DC (EN 61131-2), max. 1.6 A per M12 female, (short-circuit and overload protected)		
Resolution (analog)	11 Bit + sign	11 Bit	11 Bit + sign
Accuracy	max. ±0.5 % (of range limit)		
Voltage output signals			
Load	min. 500 Ohm	–	min. 500 Ohm
Input range	±10 V DC, 0...10 V DC	–	±10 V DC, 0...10 V DC
Current outputs			
Load	–	max. 500 Ohm	–
Input range	–	0...20 mA, 4...20 mA	–
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Wire break upper / lower limit overload	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

Terminal modules

– Multifunctional I/Os

– Digital inputs

Cube67 DIO8/DI8 E (TB-Box)

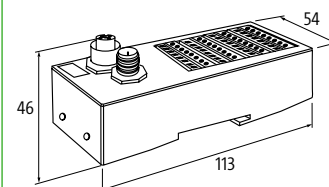
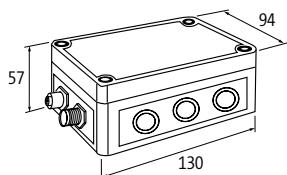
Cube67 DIO8/DI8 E (TB-Box)

with additional potential terminals

Cube67 DIO8/DI8 E (TB-Rail)



Order Data	Art-No.	Art-No.	Art-No.
DIO8/DI8 - (E) TB-Box	GOST	56681	5668100
DIO8/DI8 - (E) TB-Rail			cULus, GOST
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 8 × 200 mA		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
Terminal row X 0 (8 channels)	Input		
Terminal row X 1 (8 channels)	Input/output		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Lamp load	10 W		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP66		IP20
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	screw fixing		DIN-rail mountable (EN 60715)
Dimension drawing			



Notes

CUBE67

Versions			Art-No.
	based of: Art.-No. 56655		
	Multipole plug (70 mA)	FESTO - CPV	5665500
	Multipole plug (70 mA)	FESTO - CPV (SUB-D9)	5665501
	Multipole plug (70 mA)	FESTO - MPA	5665502
	based of: Art.-No. 56651		
	Multipole plug (70 mA)	FESTO - CPV (cULus-Listed)	5665100
	Multipole plug (70 mA)	PARKER - Series V	5665101
	Multipole plug (70 mA)	NORGREN - V20/22	5665110
	Multipole plug (70 mA)	NORGREN - VM10	5665111
	Multipole plug (70 mA)	NORGREN - V20/22	5665112
	Multipole plug (70 mA)	SMC - Series SV/VQ	5665113
	Multipole plug (70 mA)	SMC - Series VQC	5665114
	Multipole plug (70 mA)	NORGREN - V20/220	5665115
	Multipole plug (0.5 A)	MAC Valves	5665116
	Multipole plug (70 mA)	FESTO - MPA	5665118
	Multipole plug (70 mA)	FESTO - VTSA	5665105
	Multipole plug (70 mA)	FESTO - CPV-SC (SUB-D15)	5665102
	Multipole plug (70 mA)	FESTO - CPV-SC (SUB-D26)	5665103
	based of: Art.-No. 56656		
	Multipole plug (0.5 A)	NORGREN - VM10	5665600
	Multipole plug (0.5 A)	FESTO - MPA	5665601
	Multipole plug (0.5 A)	BOSCH - HF03	5665602
	Multipole plug (0.5 A)	NORGREN - VM10	5665603
	Multipole plug (0.5 A)	SMC - Series SV	5665604
	Multipole plug (0.5 A)	FESTO - CPA	5665605
	Multipole plug (0.5 A)	BOSCH - HF02/03-LG	5665606
	Multipole plug (0.5 A)	SMC - Series VQC	5665607
	Multipole plug (0.5 A)	MAC Valves (UL-Listed)	5665609
	Multipole plug (0.5 A)	VESTA (SUB-D37)	5665610
	Multipole plug (0.5 A)	VESTA (SUB-D25)	5665611
	Multipole plug (0.5 A)	FESTO - VTSA	5665613
	Multipole plug (0.5 A)	SMC - Series VQC	5665614
	Multipole plug (0.5 A)	FESTO - CPA-SC	5665615
	Multipole plug (0.5 A)	FESTO - MPA-L	5665616
	Multipole plug (0.5 A)	BOSCH - HF02/03-LG	5665617
	Multipole plug (0.5 A)	Numatics Generation 2000 (UL-Listed)	5665618
	based of: Art.-No. 56671		
	DI16/DO16 - 0.5 A (E) AMP (0.5 m)	With AMP connector 32-pole (female)	5667100
	DI16/DO16 - 0.5 A (E) SUB-D37 (0.5 m)	with SUB-D37 (female)	5667101
Labeling accessories			Art-No.
	Label plates 20 × 8 mm		
	(20 pieces per plate)		55318

Blind Plug/caps		Art-No.	
	Screw plug M8 × 1 mm (for female)		
	Plastic, hex	Quantity: 10 pcs.	3858627
	Screw plug M12 × 1 mm (for female)		
	Plastic, hex	Quantity: 10 pcs.	58627
	Screw plug M12 × 1 mm (for male)		
	Plastic	Quantity: 4 pcs.	56951
	Screw plug 7/8" (for male)		
	Plastic		55385
	Blind plug diagnostic M12 × 1 mm		
	Bridge PIN 1 and PIN 2		7000-13481-0000000
Connection accessories		Art-No.	
	Ground strap 4 mm²	100 mm for screw (M4)	4000-71001-0410004
	T-coupler M12/M12, female/male		
	straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	7000-46101-0000000
	Terminator M12		
	straight, A-coded, 6-pole	Cube67	7000-15041-0000000
	Control cabinet entry system M12		
	straight, A-coded, 6-pole, shielded	Cube67	7000-46111-0000000

CUBE67

Connection accessories

Art-No.



DIN-rail adapter

for bus nodes

56961



DIN-rail adapter

50 mm

for extension modules

56962



DIN-rail adapter

30 mm

for extension modules

56963



Power distributor 4 x M12

for additional actuator supply

56955



Repeater PROFIBUS DP + PROFIsafe

2 segments

56960

3 segments

56965



Male M12, straight

Internal system connection

56947



Female M12, straight

Internal system connection
with mounting socket

56948




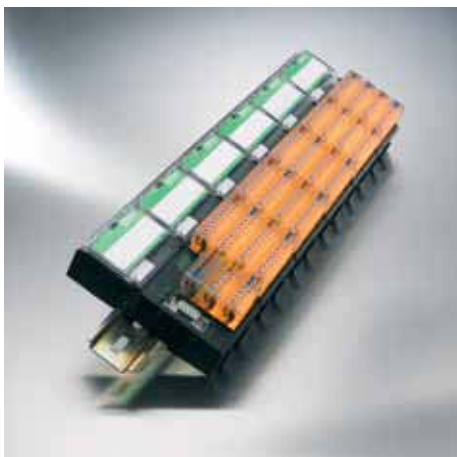
Female M12, straight

Internal system connection

56949

CUBE67

Connection accessories		Art-No.
	T-coupler 7/8"-7/8", female/male 5-pole	7000-50061-0000000



CUBE20

MODULAR I/O STATION IP20

- High channel density due to compact design
- Modular structure
- I/O connections with maintenance-free terminals

INNOVATIVE INSTALLATION TECHNOLOGY

Cube20 is a modular fieldbus I/O station that's expandable and can be integrated into the Cube67 I/O system. The modules are designed for modern wiring requirements in control cabinets. Using Cube20 reduces unnecessary costs from dealing with many individual components. This is because of its compact design which includes a high channel density of 32 channels per I/O module.



Cube20 I/O Modules



Bus Nodes

- PROFIBUS
- PROFINET
- Ethernet/IP
- IP20 protection

Page 4.2.1



System Connection to Cube67

- IP20 protection

Page 4.2.2



Digital Inputs

- IP20 protection

Page 4.2.3



Digital Inputs/Outputs

- IP20 protection

Page 4.2.3



Digital Outputs

- IP20 protection

Page 4.2.3



Analog Inputs

- IP20 protection

Page 4.2.4



Analog Outputs

- IP20 protection

Page 4.2.6



Accessories

Page 4.2.7

Bus Nodes

– Digital inputs



Cube20 BN-P DI8

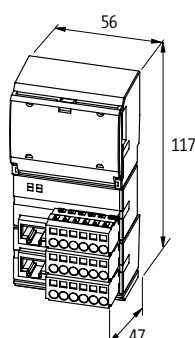
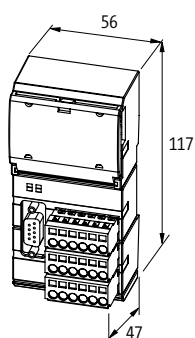


Cube20 BN-E DI8



Cube20 BN-PNIO DI8

Order Data	Art-No.	Art-No.	Art-No.
PROFIBUS DP	56001		
EtherNet-IP		56005	
PROFINET IO			56006
Fieldbus			
Operating modes	Sync- and freeze mode are supported	Autonegotiation/Auto MDI/MDI-X	
Transfer rate	to 12 Mbit/s	10/100 MBit/s full duplex	to 100 MBit/s Full Duplex
Addressing	Rotary switch 1...99	DHCP, BOOTP or IP address by rotary switch	Name assignment via PROFINET
Connector	SUB-D9	2 × RJ45	
I/O capacity	with modular expandability by up to 15 Cube20/67 I/O modules		
Input			
Galvanic isolation	500 V DC between I/O and system electronics		
Supply voltage			
Operating voltage	24 V DC (EN 61131-2)		
Sensor-system/actuator supply	via terminal UB		
Current consumption	max. 150 mA		
Diagnostic			
Communication status	per LED and BUS		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	no		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+85 °C)		
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (max. 12 A)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes	
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CUBE20

Bus Nodes

- Multifunctional I/Os
- Cube67

Approvals:  

Cube20 BN-67 DIO8

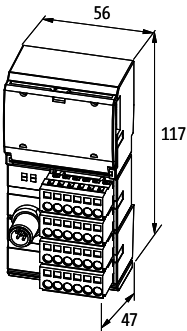
Power external



Cube20 BN-67 DIO8

Power via M12

Order Data	Art-No.	Art-No.
Cube67 system connection	56450	564501
Internal communication		
Module supply	via system connection	
Current consumption	max. 100 mA	
Cube67 System supply		
I/O capacity	with modular expandability by up to 3 Cube20 I/O modules	
Inputs/outputs (multifunctional)		
Operating voltage	24 V DC (EN 61131-2)	
Galvanic isolation	500 V DC between I/O and system electronics	
Multifunctional I/Os	8 channels alternatively inputs/outputs (EN 61131-2), load of outputs up to 0.5 A/channel, short-circuit and overload protected	
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)	
Actuator supply UA	24 V DC, (EN 61131-2), max. 12 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel (only outputs)	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes

CUBE20

Expansion module

- Digital inputs
- Digital outputs
- Digital inputs and outputs

Approvals: 

Cube20 DI32 E



Cube20 DI16 DO16 E



Cube20 DO16 E



Cube20 DO32 E



Cube20

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI32 - (E)	cULus	56112		
DI16/DO16 - (E)		56168		
DO16 - (E)		cULus	56117	
DO32 - (E)			cULus	56118

Internal communication

Module supply	via system connection
Current consumption	max. 25 mA

Input

Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module	–
Type	p-switching (EN 61131-2)	–
Input filter	1 ms	–
Galvanic isolation	500 V DC between inputs and internal communication	–

Output

Actuator supply UA	–	24 V DC, (EN 61131-2), max. 12 A	
Galvanic isolation	–	500 V DC between outputs and internal communication	
Switching current per output	–	max. 0.5 A (short-circuit and over-load protected)	max. 2 A
Lamp load	–	10 W	40 W

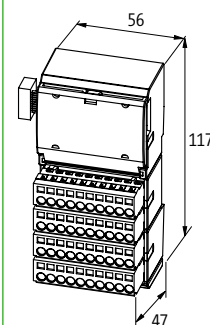
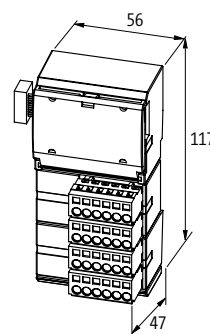
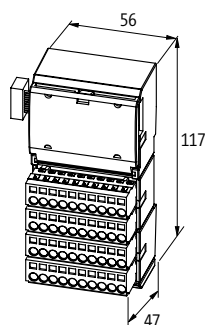
Diagnostic

Communication status	via LED		
Diagnostic via LED	per module	per module and channel (only outputs)	per module and channel
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	no		
Short circuit and overload	yes		

General data

Protection	IP20
Temperature range	0...+55 °C (storage temperature -20...+85 °C)
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



Notes

CUBE20

Analog inputs

– Voltage/current

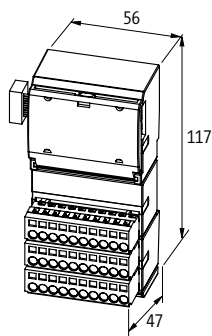
Cube20 AI4 E

Voltage/current



Approvals:  

Order Data	Art-No.
AI4 - (E)	56200
Internal communication	
Module supply	via system connection
Current consumption	max. 25 mA from system, max. 60 mA externally (UI)
Technical Data	
Operating voltage	24 V DC (EN 61131-2)
Input	
Conversion time (analog)	max. 2 ms (per channel)
Resolution (analog)	15 Bit + sign
Accuracy	max. 0.3 %
Connection	Differential voltage/current input
Voltage inputs	
Input resistor	min. 1 MOhm, (EN 61131-2)
Input range	±10 V DC, 0...10 V DC
Current input signals	
Load	max. 300 Ohm (20 mA), (EN 61131-2)
Input range	0...20 mA, 4...20 mA
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	no
Short circuit and overload	yes
Wire break upper/lower limit overload	per channel via LED and BUS
General data	
Protection	IP20
Temperature range	0...+55 °C (storage temperature -40...+85 °C)
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)
Mounting method	DIN-rail mountable (EN 60715)
Dimension drawing	



Notes

Analog inputs

– Temperature converter

Approvals:  

Cube20 AI4 E RTD

for resistors and temperature

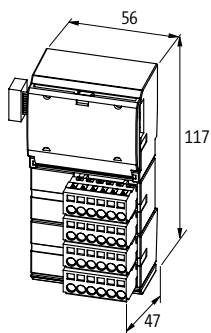


Cube20 AI4 E TH

for thermo elements



Order Data	Art-No.	Art-No.
AI4 - (E) RTD	56230	
AI4 - (E) TH		56240
Internal communication		
Module supply	via system connection	
Current consumption	max. 25 mA from system, max. 70 mA externally (UI)	max. 25 mA from system, max. 45 mA externally (UI)
Technical Data		
Operating voltage	24 V DC (EN 61131-2)	
Input		
Conversion time (analog)	max. 600 ms (per channel)	max. 300 ms (per channel)
Type	Pt100, 200, 500; Ni100, 120, 200, 500, 1000, R 0...3000 Ohm	K, N, E, J, R
Resolution (analog)	15 Bit + sign	
Accuracy	0.7...1.4 %	max. ±2 %, cold junction compensation
Connection	2-wire input: +Rx, -Rx / 3-wire input: +Rx, RLx, -Rx	2-wire input; TH+x, TH-x
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes

CUBE20

Analog outputs

– Voltage/current

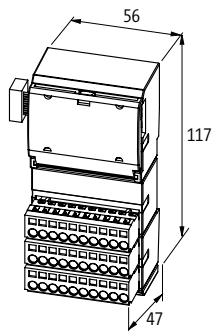
Cube20 AO4 E

Expansion module
Voltage/current

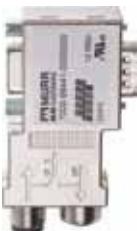


Approvals:  


Order Data	Art-No.
AO4 - (E) U/I	56220
Internal communication	
Module supply	via system connection
Current consumption	max. 25 mA from system, max. 90 mA externally (UI), idle load max. 20 mA externally (UA)
Technical Data	
Operating voltage	24 V DC (EN 61131-2)
Output	
Conversion time (analog)	max. 1 ms (per channel)
Resolution (analog)	15 Bit + sign
Accuracy	max. 0.5 %
Galvanic isolation	500 V DC between inputs and internal communication
Voltage output signals	
Load	min. 1 kOhm, (EN 61131-2)
Input range	±10 V DC, 0...10 V DC
Current outputs	
Load	max. 600 Ohm, (EN 61131-2)
Input range	0...20 mA, 4...20 mA
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	no
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
Wire break upper/lower limit overload	per channel via LED and BUS
General data	
Protection	IP20
Temperature range	0...+55 °C (storage temperature -20...+85 °C)
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)
Mounting method	DIN-rail mountable (EN 60715)
Dimension drawing	



Notes

Connection accessories			Art-No.
	Bus Connection Plug 90°		
	SUB-D9 (male), screw terminals	PROFIBUS	55762
	SUB-D9 (female), screw terminals	CANopen	55760
	Bus Connection Plug 180°		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	55584
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	55583
	Bus Connection Plug 90°		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	55585
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	55587
	Bus Connection Plug 90°		
	SUB-D9 (male), cut clamps, rigid cable, programming device conn.	PROFIBUS	55586
	SUB-D9 (male), cut clamps, flexible cable, programming device conn.	PROFIBUS	55588
	Bus Connection Plug 90°		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99441-0000000
	Label-sheet		
	Quantity: 40 pcs.		56113
	Potential terminal block		
	gray/gray/brown/blue		56078
	gray/gray/yellow/blue		56079
	yellow/blue/yellow/blue		56080
	brown/blue/brown/blue		56081
	brown/brown/blue/blue		56109
	blue/yellow		56110
	blue/yellow/brown/blue		56111

CUBE20

Connection accessories			Art-No.
	Potential terminal block		
	SlimLine		56082

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CUBE20S

SMALL, SPEEDY, SAFE

- Extremely modular
- Up to 64 modules per bus node
- Quick reaction time: up to 20 μ s

A NEW MEMBER OF THE CUBE FAMILY

Murrelektronik's modular Cube20S I/O system expands the field-tested Cube family with another product line that is extremely useful. Designed in the same compact shape, it's highly flexible like all our Cube modules.

The small modules are only 12.9 millimeters wide and modularly designed, which saves space. Connections are also quick and easy to make thanks to the integrated backplane with power supply.

Bus nodes for Cube20S are available for all standard fieldbus protocols.



Cube20S I/O Modules



Bus Nodes / Power Modules
• IP20 protection

Page 4.3.1



Function Modules
• IP20 protection

Page 4.3.3



Digital Inputs
• IP20 protection

Page 4.3.4



Digital Outputs
• IP20 protection

Page 4.3.5



Analog Inputs
• IP20 protection

Page 4.3.7



Analog Outputs
• IP20 protection

Page 4.3.9



Accessories

Page 4.3.10

CUBE20S

Bus Nodes

– Power module included

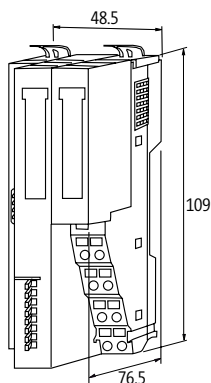


Approvals:  UL US Listed

Cube20S



Order Data	Art-No.	Art-No.	Art-No.
PROFIBUS DP	57101		
DeviceNet		57107	
CANopen			57104
Fieldbus			
Operating modes	Sync- and freeze mode are supported		
Transfer rate	max. 12 Mbit/s	max. 500 kBit/s	max. 1 Mbit/s
Addressing	DIP switch		
Connector	SUB-D9	5 pin Open-Style Connector	SUB-D9
I/O capacity	with modular expandability by up to 64 Cube20S I/O modules and function modules		
Output			
Output voltage (I/Os / Backplane)	24 V DC/5 V DC		
Output current (I/Os / Backplane)	10 A/3 A		
Supply voltage			
Operating voltage	24 V DC (EN 61131-2)		
Sensor-system/actuator supply	via terminal		
Current consumption	max. 95 mA		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module		
Monitoring - under voltage	no		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	no		
General data			
Protection	IP20		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (max. 10 A)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

CUBE20S

Bus Nodes

– Power module included

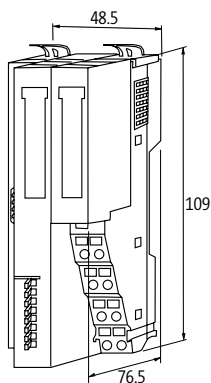


Approvals: US Listed

Cube20S



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
PROFINET IO	57106			
EtherNet-IP		57105		
EtherCAT			57103	
Modbus TCP				57108
Fieldbus				
Operating modes	Sync- and freeze mode are supported			
Transfer rate	max. 100 Mbit/s			
Addressing	DIP/DCP	DIP/DHCP	automatic	
Connector	2 × RJ45			1 × RJ45
I/O capacity	with modular expandability by up to 64 Cube20S I/O modules and function modules			
Output				
Output voltage (I/Os /Backplane)	24 V DC/5 V DC			
Output current (I/Os /Backplane)	10 A/3 A			
Supply voltage				
Operating voltage	24 V DC (EN 61131-2)			
Sensor-system/actuator supply	via terminal			
Current consumption	max. 95 mA			
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module			
Monitoring - under voltage	no			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
Actuator warning	no			
General data				
Protection	IP20			
Temperature range	0...+60 °C (storage temperature -25...+70 °C)			
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (max. 10 A)			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				



Notes

CUBE20S

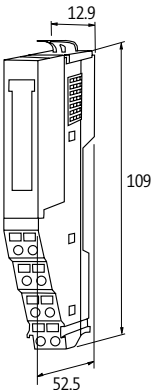
Power supplies

Cube20S
Potential distributor



Approvals: 

Order Data	Art-No.	Art-No.	Art-No.
8 × 24 V DC	57120		
8 × 0 V DC		57121	
4×24 + 4×0 V DC			57122
Supply voltage			
Operating voltage	max. 30 V DC	max. 0 V DC	max. 30 V DC
Total current	max. 10 A		
General data			
Protection	IP20		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Connection	Spring clamp terminals: 0.08...2.5 mm² (AWG 28...12)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

Cube20S

CUBE20S

Power supplies

Approvals:  UL US
Listed

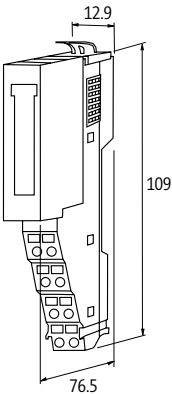
Cube20S
for external voltage supply



Cube20S
for external voltage supply and internal backplane

Cube20S

Order Data		Art-No.	Art-No.
Power module		57130	57131
Technical Data			
Operating voltage	–		max. 28.8 V DC
Total current	–		max. 10 A
Output			
Output current (I/Os /Backplane)	10/0 A		4 A/2 A
Output voltage (I/Os /Backplane)	24 V AC		24 V DC/5 V DC
Supply voltage			
Operating voltage	max. 28.8 V DC		
Total current	max. 10 A		max. 6 A
General data			
Protection	IP20		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Connection	Spring clamp terminals: 0.08...2.5 mm² (AWG 28...12)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

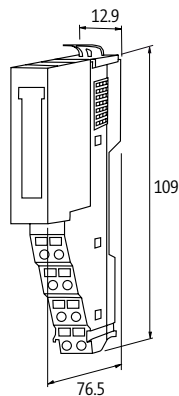
Digital inputs

Cube20S



Approvals:  **UL** US
Listed

Order Data		Art-No.
DI2 (E)		57220
DI4 - (E)		57240
DI8 - (E)		57280
Internal communication		
Module supply	via system connection	
Current consumption	max. 55 mA	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 500 mA per module	
Type	n-switching (EN 61131-2)	
Input filter	3 ms	
Galvanic isolation	500 V DC between inputs and internal communication	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -20...+70 °C)	
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	

CUBE20S

Digital outputs

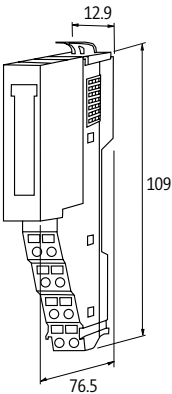
Cube20S



Approvals:  US
Listed

Cube20S

Order Data		Art-No.
D02 - (E)		57320
D04 - (E)		57340
D08 - (E)		57380
Internal communication		
Module supply	via system connection	
Current consumption	max. 55 mA	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 1 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	5 W	
Output delay time	175 ns	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes

Digital outputs

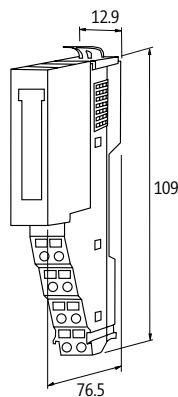
Cube20S - 2A

Cube20S - 230VAC (Relays)

Approvals:  **UL** US
Listed



Order Data	Art-No.	Art-No.
DO2 - (E)	57325	57327
DO4 - (E)	57345	
Internal communication		
Module supply	via system connection	
Current consumption	max. 60 mA	max. 130 mA
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 4 A	max. 30 V DC/230 V AC
Switching current per output	max. 2 A (short-circuit and overload protected)	max. 3 A (short-circuit and overload protected)
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	10 W	–
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	
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CUBE20S

Analog inputs

Cube20S

Voltage




Cube20S

Current

Cube20S

Voltage

Approvals:  US
Listed

Order Data	Art-No.	Art-No.	Art-No.
AI2 - (E)	57231	57232	57233
AI4 - (E)	57261		57263

Internal communication

Module supply	via system connection		
Current consumption	max. 60 mA from system, max. 25 mA externally (UI)	max. 60 mA from system, max. 15 mA externally (UI)	max. 60 mA from system, max. 25 mA externally (UI)

Technical Data

Operating voltage	24 V DC (20.4...28.8 V DC) EN 61131-2		
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Input

Conversion time (analog)	480 ms (all channels)		
Resolution (analog)	15 Bit + sign		
Accuracy	max. $\pm 0.2\%$	max. 0.3%	max. $\pm 0.2\%$
Connection	Differential voltage input	Differential current input	Differential voltage input

Voltage inputs

Input resistor	200 kOhm	–	200 kOhm
Input range	0...10 V DC	–	-10 V DC...+10 V DC

Current input signals

Load	–	max. 60 Ohm, (EN 61131-2)	–
Input range	–	0...20 mA, 4...20 mA	–

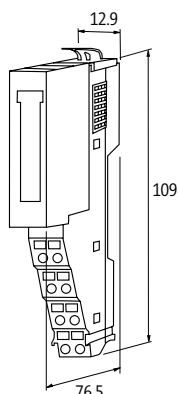
Diagnostic

Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module		
Monitoring - under voltage	yes		
Monitoring - no voltage	no		
Short circuit and overload	yes		
Wire break upper/lower limit overload	per module via LED and BUS		

General data

Protection	IP20		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16)		
Mounting method	DIN-rail mountable (EN 60715)		

Dimension drawing



Notes

Analog inputs

Cube20S (TH)

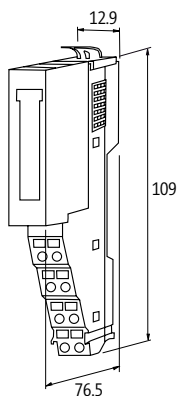
for thermo elements

Cube20S (RTD)

for resistors and temperature

 Approvals: 


Order Data	Art-No.	Art-No.
AI2 - (E)	57230	
AI4 - (E)		57265
Internal communication		
Module supply	via system connection	
Current consumption	max. 75 mA from the system, max. 30 mA externally (UI)	max. 75 mA
Technical Data		
Operating voltage	24 V DC (20.4...28.8 V DC) EN 61131-2	24 V DC (EN 61131-2)
Input		
Conversion time (analog)	max. 4.2...324.1 ms (per channel)	max. 330 ms (per channel)
Type	B, C, E, J, K, L, N, R, S, T	Pt100, Pt1000, Ni100, Ni1000, R 0...3000 Ohm
Resolution (analog)	15 Bit + sign	
Accuracy	max. ±0.3 %, cold junction compensation	0.7...1.4 %
Connection	2-wire input; TH+x, TH-x	2-wire (4 input); 3-, 4-wire (2 input)
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	0...+60 °C (storage temperature -25...+70 °C)
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes


CUBE20S

Analog outputs

Cube20S

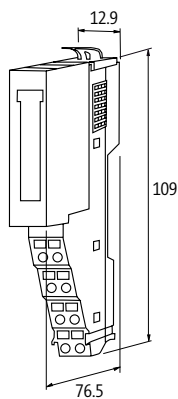
Voltage










Approvals:  US
Listed

Cube20S

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
AO2 - (E)	57331		57333	
AO4 - (E)		57361		57363
Internal communication				
Module supply	via system connection			
Current consumption	max. 60 mA from system, max. 25 mA externally (UI), idle load			
Technical Data				
Operating voltage	24 V DC (20.4...28.8 V DC) EN 61131-2			
Output				
Conversion time (analog)	200 ms (all channels)			
Resolution (analog)	15 Bit + sign			
Accuracy	max. 0.5 %		max. 0.2 %	
Galvanic isolation	500 V DC between inputs and internal communication			
Voltage output signals				
Load	5 kOhm			
Input range	0...10 V DC		-10 V DC...+10 V DC	
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module			
Monitoring - under voltage	yes			
Monitoring - no voltage	no			
Short circuit and overload	yes			
Actuator warning	per module via LED and BUS			
Wire break upper/lower limit overload	per module via LED and BUS			
General data				
Protection	IP20			
Temperature range	0...+60 °C (storage temperature -25...+70 °C)			
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				



Notes

Connection accessories			Art-No.
	Bus cover		
	Black plastic		57190
	Shield bus carrier		
	Black plastic	Quantity: 10 pcs.	57191
	Bus Connection Plug 90°		
	SUB-D9 (male), screw terminals	PROFIBUS	55762
	SUB-D9 (female), screw terminals	CANopen	55760
	Bus Connection Plug 180°		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	55584
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	55583
	Bus Connection Plug 90°		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	55585
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	55587
	Bus Connection Plug 90°		
	SUB-D9 (male), cut clamps, rigid cable, programming device conn.	PROFIBUS	55586
	SUB-D9 (male), cut clamps, flexible cable, programming device conn.	PROFIBUS	55588
	Bus Connection Plug 90°		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	7000-99441-0000000

MVK METAL COMPACT I/O MODULES FOR DEMANDING REQUIREMENTS

- Tough and reliable
- Safe (safety circuits according to EN 13849-1 up to PL e)
- PROFINET – versions compliant with AIDA

MAXIMUM FLEXIBILITY

MVK Metal features a robust metal housing and is extremely resistant to vibration, media, and weld splatter.

- Double valves occupy only one M12 port.
- PROFINET versions with Fast Start Up (< 500 ms)
- Models with multi-functional I/Os
- Fewer variations required, minimizes inventory costs
- Maximum flexibility for expansions

DON'T LOOK FOR ERRORS, FIND THEM




MVK Metal's diagnostic options offer detailed information about the type and location of the failure or the error.

- Only the affected port shuts down, not the whole module
- Detailed message sent to controls and device LED
- Minimizes downtime – failures are fixed faster



CANopen

MVK Metal I/O Modules

 <p>MVK-MP</p> <ul style="list-style-type: none"> • Multi-functional I/Os • I/O link • Safety outputs • Analog I/Os <p><i>Page 4.4.1</i></p>	 <p>MVK-MPNIO</p> <ul style="list-style-type: none"> • Multi-functional I/Os • Digital I/Os • AIDA Push Pull • Safety inputs/outputs • Fast Start Up <p><i>Page 4.4.8</i></p>
 <p>MVK-MC</p> <ul style="list-style-type: none"> • Multi-functional I/Os <p><i>Page 4.4.13</i></p>	<p>CANopen</p>

Expanded diagnostic

– 7/8"

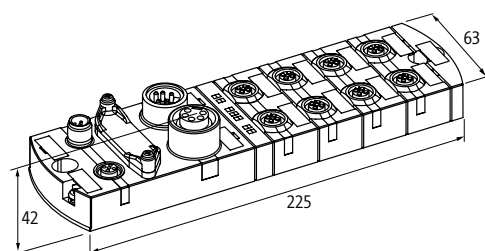


Approvals:

MVK-MP



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	55307		
DIO8 (DI8)		55308	
DIO8 (DIO8)			55309
Connections			
Fieldbus	M12, B-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Sync- and freeze mode are supported		
Transfer rate	to 12 Mbit/s		
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Parameterization			
PIN 4	Input	Input/output	
PIN 2	Input/diagnostic		Input/output/diagnostic
Output			
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Cable break	per port		
General data			
Protection	IP67		
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes	
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MVK METAL

Expanded diagnostic

– 7/8"

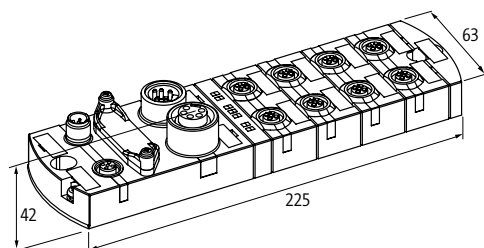


Approvals:

MVK-MP



Order Data	Art-No.	Art-No.
DO8 (DO8)	55290	
DO4 (DO4) DI4 (DI4)		55274
Connections		
Fieldbus	M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Sync- and freeze mode are supported	
Transfer rate	to 12 Mbit/s	
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	–	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)
Type	–	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
General data		
Protection	IP67	
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

Expanded diagnostic

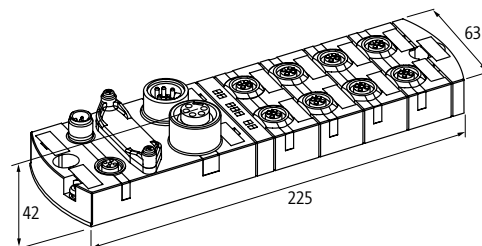
– IO-Link



MVK-MP IO-Link



Order Data	Art-No.
DIO4 IOL4 (DIO8)	55315
Connections	
Fieldbus	M12, B-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 x max. 9 A
I/O ports	M12, A-coded, 5-pole
Fieldbus	
Operating voltage	24 V DC (EN 61131-2)
Operating modes	Sync- and freeze mode are supported
Transfer rate	to 12 Mbit/s
Addressing	Rotary switch 1...99
Input	
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Parameterization	
PIN 4	Input/output
PIN 2	Input/output/diagnostic (port 4...7); input/IO-Link master (port 0...3)
Output	
Actuator supply UA	24 V DC, (EN 61131-2), max. 9 A
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
Cable break	per port
General data	
Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Mounting method	2-hole screw mounting
Dimension drawing	



Notes

Expanded diagnostic

– IO-Link

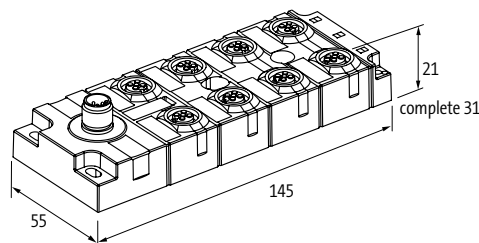
☑ IO-Link

MVP12-M DI16 IO-Link

MVP12-M DI8 DO8 IO-Link



Order Data	Art-No.	Art-No.
DI16 IOL	GOST	59407
DI8 DO8 IOL		59408
Internal communication		
LED display	US: sensor supply and internal supply voltage (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)	
Current consumption	max. 35 mA	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input filter	1 ms	
IO-Link		
Type	A	
Operating modes	COM2 (38.4 kBaud)	
Parameterization		
PIN 2	Input/diagnostic	
PIN 4	Input	
Output		
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -25...+70 °C)	
Mounting method	4 hole screw mounting	
Dimension drawing		



Notes

MVK METAL

Expanded diagnostic

– Passive

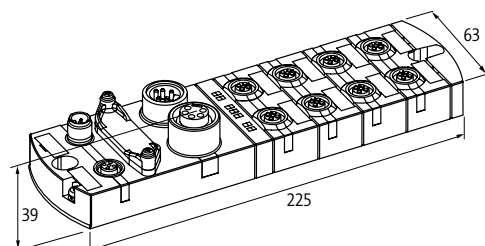
- output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays



MVK-MP Safety



Order Data	Art-No.
K3 DO4 (DO4) DIO4 (DIO4)	55291
Connections	
Fieldbus	M12, B-coded
I/O ports	M12, A-coded, 5-pole
Sensor-system/actuator supply	7/8", 5-pole, max. 9 A, safe circuits (1 + 2) via separate 7/8" supply (yellow), 2-pole disconnectable
Fieldbus	
Operating voltage	24 V DC (EN 61131-2)
Operating modes	Sync- and freeze mode are supported
Transfer rate	to 12 Mbit/s
Addressing	Rotary switch 1...99
Input	
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Parameterization	
PIN 4	4 × input/output
PIN 2	4 × input/output/diagnostic
Output	
Actuator supply UA	24 V DC, (EN 61131-2), 3 circuits, (max. 9 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Safe output	
Switching current by safe output	max. 2 A, short-circuit and overload protected, (EN13849-1) PLd
M12-(yellow) PIN 4	2 safety circuits (UA1/UA2) with 2 digital outputs each (EN13849-1) PLd
M12-(yellow) PIN 2	2 safety circuits (UA1/UA2) with 2 digital outputs each (EN13849-1) PLd
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
Cable break	per port
General data	
Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Mounting method	2-hole screw mounting
Dimension drawing	



Notes

Expanded diagnostic

– Analog outputs

– Current

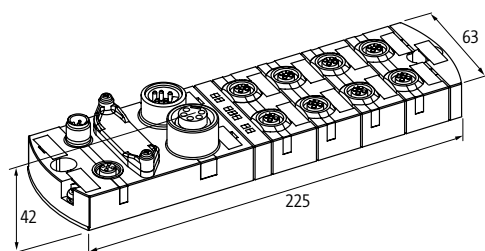


Approvals:

MVK-MP



Order Data		Art-No.
AO4 (I) DIO4 (DIO4)		55292
Connections		
Fieldbus	M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Sync- and freeze mode are supported	
Transfer rate	to 12 Mbit/s	
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Input range (analog)	analog 0...20 mA, 4...20 mA (0...10 V via adapter Art.-No. 7000-42252-0000000)	
Conversion time (analog)	1 ms	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

MVK METAL

Expanded diagnostic

– Analog inputs

– Voltage

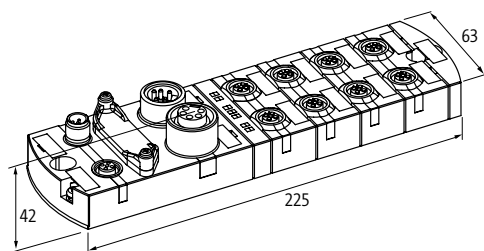


Approvals:  

MVK-MP



Order Data	Art-No.
AI4 (U) DIO4 (DIO4)	55293
Connections	
Fieldbus	M12, B-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A
I/O ports	M12, A-coded, 5-pole
Fieldbus	
Operating voltage	24 V DC (EN 61131-2)
Operating modes	Sync- and freeze mode are supported
Transfer rate	to 12 Mbit/s
Addressing	Rotary switch 1...99
Input	
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Resolution (analog)	16 Bit
Input range (analog)	0...10 V, 0...20 mA and 4...20 mA via adapter Art.-No. 7000-42251-0000000
Input resistor (analog)	approx. 1 MOhm, differential input
Conversion time (analog)	1 ms
Output	
Actuator supply UA	24 V DC, (EN 61131-2), max. 9 A
Lamp load (8 × M12 left side)	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
Wire break upper/lower limit overload	per channel via LED and BUS
General data	
Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Mounting method	2-hole screw mounting
Dimension drawing	



Notes

Expanded diagnostic

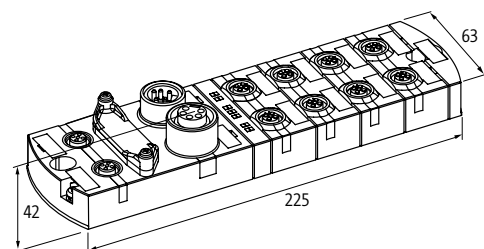
– 7/8"



MVK-MPNIO



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	55287		
DIO8 (DI8)		55288	
DIO8 (DIO8)			55289
Connections			
Fieldbus	M12, D-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Autonegotiation/Auto MDI/MDI-X		
Transfer rate	to 100 MBit/s Full Duplex		
Addressing	DCP		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Parameterization			
PIN 4	Input	Input/output	
PIN 2	Input/diagnostic		Input/output/diagnostic
Output			
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Cable break	per port		
General data			
Protection	IP67		
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

Expanded diagnostic



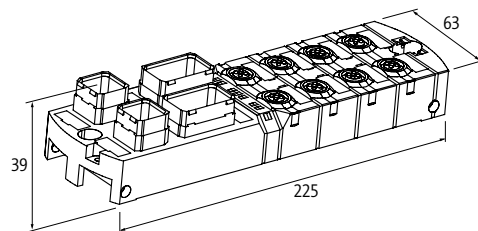
Approvals:

MVK+ MPNIO

Push Pull



Order Data	Art-No.
DIO8 (DIO8)	55283
Connections	
Fieldbus	Push Pull RJ45 Data connector
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A
I/O ports	M12, A-coded, 5-pole
Fieldbus	
Operating voltage	24 V DC (EN 61131-2)
Operating modes	Autonegotiation/Auto MDI/MDI-X
Transfer rate	to 100 MBit/s Full Duplex
Addressing	DCP
Input	
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Parameterization	
PIN 4	Input/output
PIN 2	Input/output/diagnostic
Output	
Actuator supply UA	24 V DC, (EN 61131-2), max. 12 A
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
Cable break	per port
General data	
Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Mounting method	2-hole screw mounting
Dimension drawing	



Notes

MVK METAL

Expanded diagnostic

– FSU (Fast-Start-Up)

– galvanically separated input and output potentials



MVK+ MPNIO

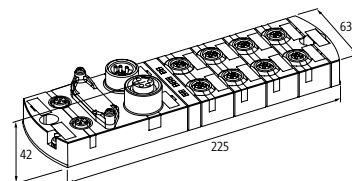
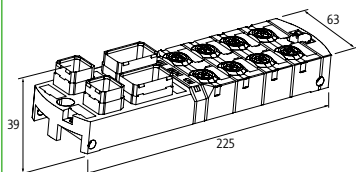
Push Pull



MVK+ MPNIO



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	cULus, GOST	55268	
DI8 (DO8)		cULus, GOST	55269
DO8 (DI4 DI4)			55339
Connections			
Fieldbus	Push Pull RJ45 Data connector		M12, D-coded
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A		7/8", 5-pole, max. 9 A Protection against reverse polarization
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Autonegotiation/Auto MDI/MDI-X		Autonegotiation/Auto MDI/MDI-X/MRP
Transfer rate	to 100 MBit/s Full Duplex		
FSU (Fast-Start-Up)	max. 500 ms		
Addressing	DCP		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
PIN 2	–	Female 4...7	–
PIN 4	–	Female 4...7	–
Parameterization			
PIN 4	Input	Input (female 4...7); output (female 0...3)	
PIN 2	Input	Input (female 4...7); output (female 0...3)	
Output			
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 12 A	24 V DC, (EN 61131-2), max. 9 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Cable break	per port		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

LWL-Push Pull

– FSU (Fast-Start-Up)

– galvanically separated input and output potentials

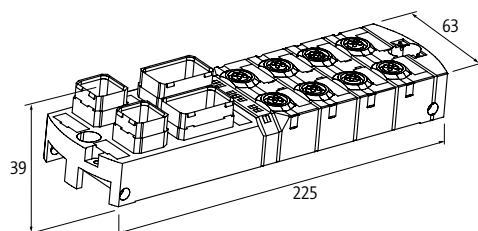


MVK+ MPNIO POF

POF Push Pull



Order Data	Art-No.	Art-No.
DI8 (DI8)	55256	
DI8 (DO8)		55257
Connections		
Fieldbus	2 × SCRJ45 POF-Push Pull	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Autonegotiation/Auto MDI/MDI-X/MRP	
Transfer rate	to 100 MBit/s Full Duplex	
FSU (Fast-Start-Up)	max. 500 ms	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Parameterization		
PIN 4	Input	Input (female 4...7); output (female 0...3)
PIN 2	Input	Input (female 4...7); output (female 0...3)
Output		
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 12 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)
Lamp load	–	10 W
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
Further	POF- dumping/length measurement	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

MVK METAL

Active

- safe inputs/outputs up to cat. 4/PLe (EN ISO 13849-1), up to SIL 3 (IEC 61508), up to SILCL 3 (IEC 62061)

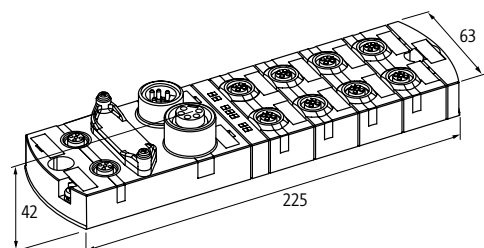


Approvals:

MVK-MPNIO Safety



Order Data	Art-No.	Art-No.
DI16/8 F	55560	
DI8/4 F DO4		55561
Connections		
Fieldbus	M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Autonegotiation/Auto MDI/MDI-X	
Transfer rate	to 100 MBit/s Full Duplex	
Addressing	DCP	
Safety input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA (per PIN 1+5), short-circuit and overload protected, or max. 700 mA for only one PIN	
Type	for electronic sensors or mechanical switches	
Safe output		
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 9 A
Switching current by safe output	–	max. 2 A (short-circuit and overload protected)
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cross-link detection	Sensor-/Actuator	
Wire break detection	yes	
General data		
Protection	IP67	
Temperature range	-20...+55 °C (storage temperature -40...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

MVK METAL

Expanded diagnostic

– 7/8"

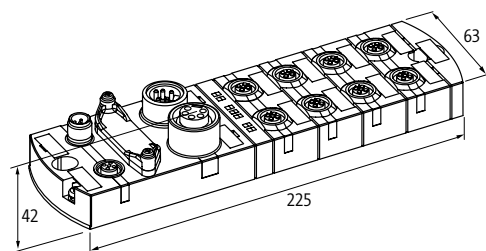
CANopen

Approvals:  

MVK-MC



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	55304		
DIO8 (DI8)		55305	
DIO8 (DIO8)			55306
Connections			
Fieldbus	M12, A-coded, 5-pole		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Polling; change of state; Cyclic		
Transfer rate	max. 1 Mbit/s with switchable terminal resistors		
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Parameterization			
PIN 4	Input	Input/output	
PIN 2	Input/diagnostic		Input/output/diagnostic
Output			
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Cable break	per port		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes	
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MVK METAL

Blind Plug/caps		Art-No.
	Screw plug M12 × 1 mm Metal, hex, 1 piece	996049
	Blind cap 7/8" Metal	55390
	Blind plug diagnostic M12 × 1 mm Bridge PIN 1 and PIN 2	7000-13481-0000000
	Addressing cap Metal	55317
Labeling accessories		Art-No.
	Label plates 20 × 8 mm (20 pieces per plate)	55318
Connection accessories		Art-No.
	Adapter plug M12/M12 for inputs Current /voltage converter Quantity: 4 pcs.	7000-42251-0000000
	Voltage/current converter Quantity: 4 pcs.	7000-42252-0000000
	MVK PushPull Dust Protection Set	553260
	Ground strap 4 mm² 100 mm for screw (M4)	4000-71001-0410004
	Screw plug M23 Metal	55352

NOTES



IMPACT67 COMPACT I/O MODULES FOR THE FIELD

- Application oriented
- Easy to Install
- Cost-effective

ECONOMIC DECENTRALIZATION

Impact67 is the perfect fieldbus solution for basic applications that need to be cost-effective. The modules in this series are available with different bus protocols, they feature pluggable connections, diagnostics and IP67 tested seals.













This makes Impact67 the perfect choice for an electrical engineer whose objective is to minimize costs while maintaining digital inputs and outputs under ordinary conditions.

FOCUSED ON ESSENTIALS

- Predefined inputs and outputs – helps facilitate configuration
- Single channel diagnostic via LED – don't look for errors, find them
- Group diagnostics via the bus – easy remote diagnostics
- Port-related shut off – only the affected port is shut off



Impact67 I/O Modules

 <p>Impact67-P • Digital I/Os</p>  <p>Page 4.5.1</p>	 <p>Impact67-PNIO • Digital I/Os</p>  <p>Page 4.5.2</p>
 <p>Impact67-E • Digital I/Os</p>  <p>Page 4.5.3</p>	 <p>Impact67-EC • Digital I/Os</p>  <p>Page 4.5.4</p>
 <p>Impact67-C • Digital I/Os</p>  <p>Page 4.5.5</p>	 <p>Impact67-DN • Digital I/Os</p>  <p>Page 4.5.6</p>

Basic diagnostic



Approvals:

Impact67-P

DI16

Impact67-P

DI8/DO8 - 2 A

Impact67-P

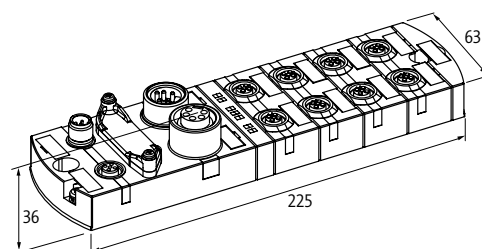
DO8 - 2 A

Impact67-P

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55345			
DI8/DO8 - 2 A		55346		
DO8 - 2 A			55347	
DO16 - 0.5 A				55348
Connections				
Fieldbus	M12, B-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, A-coded, 5-pole			
Fieldbus				
Operating voltage	24 V DC (EN 61131-2)			
Operating modes	Sync- and freeze mode are supported			
Transfer rate	to 12 Mbit/s			
Addressing	Rotary switch 3...99			
Input				
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module	per module and channel		
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
General data				
Protection	IP67			
Temperature range	0...+55 °C (storage temperature -25...+70 °C)			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Dimension drawing				



Notes	
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IMPACT67

Basic diagnostic



Impact67-PN

DI16

Impact67-PN

DI8/DO8 - 2 A

Impact67-PN

DO8 - 2 A

Impact67-PN

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55091			
DI8/DO8 - 2 A		55092		
DO8 - 2 A			55093	
DO16 - 0.5 A				55094

Connections

Fieldbus	M12, D-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A

I/O ports	M12, A-coded, 5-pole
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Fieldbus

Operating voltage	24 V DC (EN 61131-2)
Operating modes	Autonegotiation/Auto MDI/MDI-X
Transfer rate	to 100 MBit/s Full Duplex
Addressing	DCP

Input

Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	–

Output

Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
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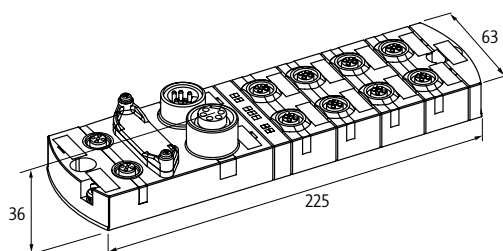
Diagnostic

Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	per module and channel
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	—

General data

Protection	IP67
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range

Dimension drawing



Notes

Basic diagnostic

EtherNet/IP™
conformance tested

Approvals:   

Impact67-E

DI16

Impact67-E

DI8/DO8 - 2 A

Impact67-E

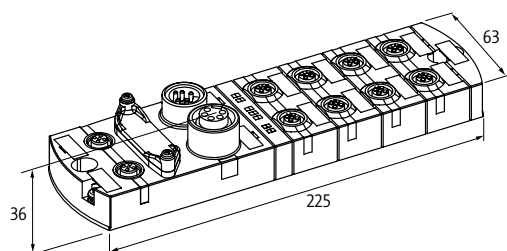
DO8 - 2 A

Impact67-E

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55085			
DI8/DO8 - 2 A		55086		
DO8 - 2 A			55087	
DO16 - 0.5 A				55088
Connections				
Fieldbus	M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, A-coded, 5-pole			
Fieldbus				
Operating voltage	24 V DC (EN 61131-2)			
Operating modes	Autonegotiation/Auto MDI/MDI-X			
Transfer rate	to 100 MBit/s Full Duplex			
Addressing	DHCP, BOOTP or IP address by rotary switch			
Input				
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module		per module and channel	
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
General data				
Protection	IP67			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Dimension drawing				



Notes	
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IMPACT67

Basic diagnostic

EtherCAT

Approvals:   

Impact67-EC

DI16

Impact67-EC

DI8/DO8 - 2 A

Impact67-EC

DO8 - 2 A

Impact67-EC

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55081			
DI8/DO8 - 2 A		55082		
DO8 - 2 A			55083	
DO16 - 0.5 A				55084

Connections

Fieldbus	M12, D-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A

I/O ports	M12, A-coded, 5-pole
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Fieldbus

Operating voltage	24 V DC (EN 61131-2)
Operating modes	Autocrossing Autonegotiation
Transfer rate	to 100 Mbit/s
Addressing	automatic or Device ID by rotary switch

Input

Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	–

Output

Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
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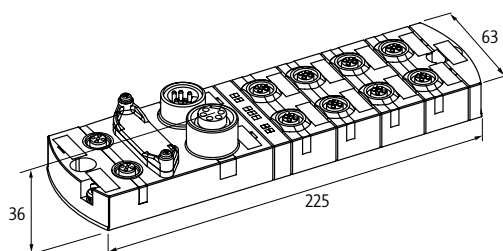
Diagnostic

Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	per module and channel
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	

General data

Protection	IP67
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range

Dimension drawing



Notes

IMPACT67

Basic diagnostic

CANopen

Approvals:   

Impact67-C

DI16

Impact67-C

DI8/DO8 - 2 A

Impact67-C

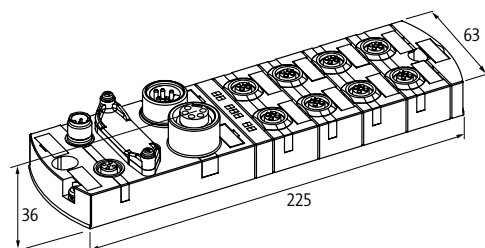
DO8 - 2 A

Impact67-C

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.
DI16	55075		
DI8/DO8 - 2 A		55076	
DO8 - 2 A			55077
DO16 - 0.5 A			55078
Connections			
Fieldbus	M12, A-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Polling; change of state; Cyclic		
Transfer rate	max. 1 Mbit/s		
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	–	
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP67		
Temperature range	-25...+75 °C (storage temperature -25...+70 °C)		
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range		
Dimension drawing			



Notes	
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IMPACT67

Basic diagnostic



Impact67-DN

DI16

Impact67-DN

DI8/DO8 - 2 A

Impact67-DN

DO8 - 2 A

Impact67-DN

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	55071			
DI8/DO8 - 2 A		55072		
DO8 - 2 A			55073	
DO16 - 0.5 A				55074

Connections

Fieldbus	M12, A-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A

I/O ports	M12, A-coded, 5-pole
-----------	----------------------

Fieldbus

Operating voltage	24 V DC (EN 61131-2)
Operating modes	Polling; change of state; Cyclic
Transfer rate	125 kBit/s; 250 kBit/s; 500 kBit/s
Addressing	Rotary switch 0...63

Input

Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	–

Output

Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
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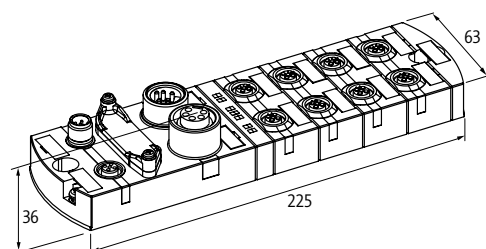
Diagnostic

Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	per module and channel
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	



General data

Protection	IP67
Temperature range	-25...+75 °C (storage temperature -25...+70 °C)
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range

Dimension drawing



Notes

Accessories			Art-No.
	Label plates 20 × 8 mm (20 pieces per plate)		55318
	Screw plug M12 × 1 mm (for female) Plastic, hex	Quantity: 10 pcs.	58627

IMPACT20 COMPACT I/O MODULES

- IP20 protection
- Efficient
- Cost-effective

FOCUSED ON THE ESSENTIALS

Murrelektronik's Impact20 is the perfect solution when you need a cost-effective application of fieldbus I/O modules in terminal boxes and control panels.

- **Predefined Inputs and Outputs**
 - Helps facilitate configuration
- **Single Channel Diagnostic via LED**
 - Indicates failures on the spot
- **Group Diagnostic via the Bus**
 - Facilitates failure analysis
- **Channel-Related Shut Down**
 - Only the affected channel is shutdown



Impact20 I/O Modules



Impact20-P
• Digital I/Os



Page 4.6.1



Impact20-PNIO
• Digital I/Os



Page 4.6.2



Impact20-E
• Digital I/Os



Page 4.6.3



Impact20-EC
• Digital I/Os



Page 4.6.4



Impact20-C
• Digital I/Os



Page 4.6.5



Impact20-DN
• Digital I/Os



Page 4.6.6



Impact20-P

DI16



Impact20-P

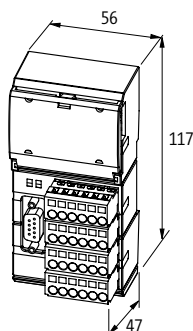
DI8/DO8 - 2 A

Impact20-P

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.
DI16	56900		
DI8/DO8 - 2 A		56901	
DO16 - 0.5 A			56902
Connections			
Fieldbus	SUB-D9		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Sync- and freeze mode are supported		
Transfer rate	to 12 Mbit/s		
Addressing	Rotary switch 3...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

IMPACT20



Impact20-PN

DI16



Impact20-PN

DI8/DO8 - 2 A

Impact20-PN

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.
DI16	56920		
DI8/DO8 - 2 A		56921	
DO16 - 0.5 A			56922

Connections

Fieldbus	2 × RJ45
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm ² (max. 12 A)

Fieldbus

Operating voltage	24 V DC (EN 61131-2)
Operating modes	Autonegotiation/Auto MDI/MDI-X
Transfer rate	to 100 MBit/s Full Duplex

Input

Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)	–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	–

Output

Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	

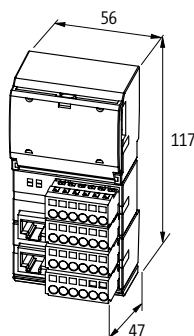
Diagnostic

Communication status	via LED	
Diagnostic via LED	per module	per module and channel
Diagnostic via BUS	per module	per module and channel
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	

General data

Protection	IP20
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



Notes

EtherNet/IP™
conformance tested

Impact20-E

DI16



Impact20-E

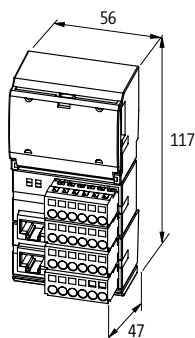
DI8/DO8 - 2 A

Impact20-E

DO16 - 0.5 A

Approvals:  

Order Data	Art-No.	Art-No.	Art-No.
DI16	56916		
DI8/DO8 - 2 A		56917	
DO16 - 0.5 A			56918
Connections			
Fieldbus	2 × RJ45		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Transfer rate	to 100 MBit/s Full Duplex		
Addressing	DHCP, BOOTP or IP address by rotary switch		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes	
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IMPACT20

EtherCAT

Approvals:  

Impact20-EC

DI16



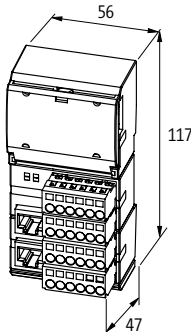
Impact20-EC

DI8/DO8 - 2 A

Impact20-EC

DO16 - 0.5 A

Order Data	Art-No.	Art-No.	Art-No.
DI16	56912		
DI8/DO8 - 2 A		56913	
DO16 - 0.5 A			56914
Connections			
Fieldbus	2 × RJ45		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Autocrossing Autonegotiation		
Transfer rate	to 100 Mbit/s		
Addressing	automatic		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

Approvals:   Listed

Impact20-C

DI16



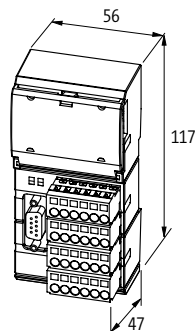
Impact20-C

DI8/DO8 - 2 A

Impact20-C

DO16 - 0.5 A

Order Data	Art-No.	Art-No.	Art-No.
DI16	56904		
DI8/DO8 - 2 A		56905	
DO16 - 0.5 A			cCSAus56906
Connections			
Fieldbus	SUB-D9		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Polling; change of state; Cyclic		
Transfer rate	max. 1 Mbit/s		
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)	–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes	
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IMPACT20



Impact20-DN

DI16



Impact20-DN

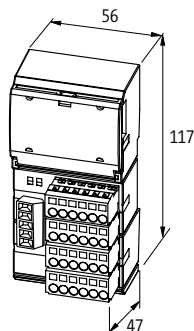
DI8/DO8 - 2 A

Impact67-DN

DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.
DI16	56908		
DI8/DO8 - 2 A		56909	
DO16 - 0.5 A			56910
Connections			
Fieldbus	5 × pluggable spring clamp terminals		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Polling; change of state; Cyclic		
Transfer rate	125 kBit/s; 250 kBit/s; 500 kBit/s		
Addressing	Rotary switch 0...63		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

Labeling accessories		Art-No.	
	Label-sheet Quantity: 40 pcs.		56113
	Label plates 20 × 8 mm (20 pieces per plate)		55318
Connection accessories		Art-No.	
	Potential terminal block		
	brown/brown/blue/blue		56109
	blue/yellow		56110
	blue/yellow/brown/blue		56111

MASI00/20 FOR THE CONTROL CABINET

- High signal density in a very small space
- Pluggable cutting clamp or spring clamp connections
- Sensor supply from AS Interface or 24 V DC

AS-INTERFACE SYSTEM – MASI00/20

MASI00 and MASI20 modules are designed to correctly support the single strand wiring used in control cabinets and terminal boxes. This gives the user the advantage during installation, setup and maintenance. The modules have a slim design which makes them the perfect choice for applications in terminal boxes and cabinets. The coded, pluggable connections reduce time and errors during installation.

They are designed according to the latest 3.0 AS Interface specification and have the globally recognized AS Interface certification, which guarantees that they are interoperable and a secure investment. Furthermore, with the special K3 module you can create safety shutdowns according to EN 13849-1 up to PL d.



I/O Modules



MASI00 bus components

Page 4.7.1



MASI20 bus components

Page 4.7.1

Installation Technology



Bus and power distributors

Page 4.7.5

Digital inputs/outputs

Approvals: 

MASI00

DI4/DO4 - 0.2 A



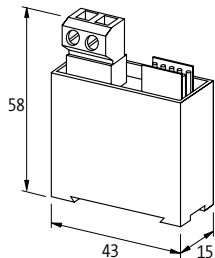
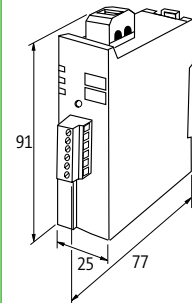
MASI00

DI4/DO4 - 0.2 A (AB)

MASI20

DI4 - 0.17 A (AB)



Order Data	Art-No.	Art-No.	Art-No.
DI4/DO4 - 0.2 A	55700		
DI4/DO4 - 0.2 A (AB)		ASI	55701
DI4 - 0.17 A (AB)			ASI, UL-Listed, CSA
55688			
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 V DC		
Total current (AS-Interface)	max. 250 mA		
Addressing	1...31 via plug terminals	1...62 (1...31 A or B) via plug-in terminal	via built-in address port or master
Address range	1...31	1...62 (1...31 A or B)	
Current consumption	–	max. 200 mA	–
Profile (IO/ID/ID2 code)	S-7.F.F	S-7.A.7	S-0.A.0
Input			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)		max. 170 mA from AS-Interface (short-circuit and overload protected)
Type	for standard switches		for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Input current	–		max. 10 mA
Output			
Switching current per output	max. 0.2 A (short-circuit and overload protected)		–
Total current	max. 200 mA		–
Switch off time in case of short circuit	approx. 50 ms		–
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Monitoring - no voltage	yes		
General data			
Protection	IP00		IP20
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		-20...+60 °C
Mounting method	DIN-rail mountable (EN 60715)		
Connection AS-Interface	Screw plug-in terminal: 0.2...2.5 mm ²		IDC terminals, 0.5...0.75 mm ²
Connection sensor/actuator	–		Spring clamp plug-in terminals: 0.14...1.5 mm ²
Dimension drawing			
			
Notes	For DIN-rail mounting use 1 x Art-No. 20900 adapter feet		

MASI00/20

Digital inputs

– Semiconductor outputs



MASI20

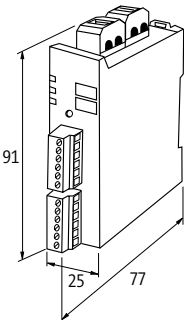
DI4 - 0.2 A DO3 - 0.5 A (AB)



MASI20

DI4 - 0.2 A DO4 - 0.5 A

Order Data	Art-No.		Art-No.
DI4 - 0.2 A DO3 - 0.5 A (AB)	55687		
DI4 - 0.2 A DO4 - 0.5 A			55686
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 V DC		
Total current (AS-Interface)	max. 50 mA		
Addressing	via built-in address port or master		
Address range	1...62 (1...31 A or B)	1...31	
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.E	
Input			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input current	max. 10 mA		
Output			
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Total current	max. 2 A		
Switch off time in case of short circuit	approx. 20 ms		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Monitoring - no voltage	yes		
General data			
Protection	IP20		
Connection AS-Interface/Power	IDC terminals, 0.5...0.75 mm²		
Connection sensor/actuator	Spring clamp plug-in terminals: 0.14...1.5 mm²		
Temperature range	-20...+60 °C		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

MASI00/20

Digital inputs

– Relay outputs



MASI20

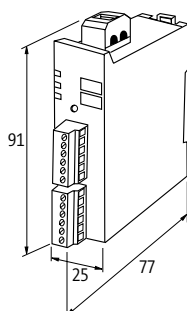
DI4 - 0.17 A DO3 - 2 A (AB)



MASI20

DI4 - 0.2 A DO4 - 2 A

Order Data	Art-No.	Art-No.
DI4 - 0.17 A DO3 - 2 A (AB)	55768	
DI4 - 0.2 A DO4 - 2 A		55685
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 300 mA	
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	1...31
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.E
Input		
Sensor supply US	max. 170 mA from AS-Interface (short-circuit and overload protected)	max. 200 mA from AS-Interface (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input current	max. 10 mA	
Output		
Switching current per output	max. 2 A	
Total current	max. 4.5 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Connection AS-Interface/Power	IDC terminals, 0.5...0.75 mm ²	
Connection sensor/actuator	Spring clamp plug-in terminals: 0.14...1.5 mm ²	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes

MASI00/20

MASI00/20

Digital inputs

– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

– Opto decoupled inputs (only with additional supply voltage)

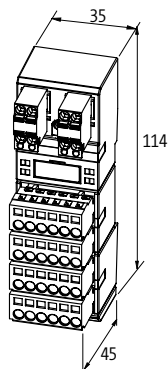
Approvals: 

MASI20

DI4 - 0.2 A DO4 - 0.5 A (AB) K3



Order Data		Art-No.
DI4 - 0.2 A DO4 - 0.5 A (AB) K3		56440
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 300 mA	
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	
Profile (IO/ID/ID2 code)	S-7.A.7	
Input		
Supply voltage	alternatively (switchable) from AS-Interface or from 24 V DC (EN 61131-2) by additional supply	
Sensor supply US	max. 200 mA external or from AS-Interface, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input current	max. 10 mA	
Output		
Supply voltage	24 V DC (18...30.2 V DC) EN 61131-2 by additional supply, safely separated from input supply	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Total current	max. 2 A	
Switch off time in case of short circuit	approx. 20 ms	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -20...+70 °C)	
Connection	Spring clamp plug-in terminal: 0.2...2.5 mm ²	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		

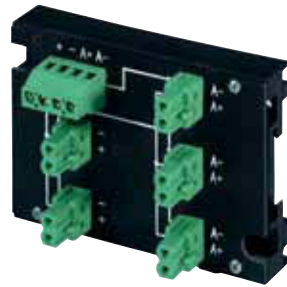


Notes

Installation technology

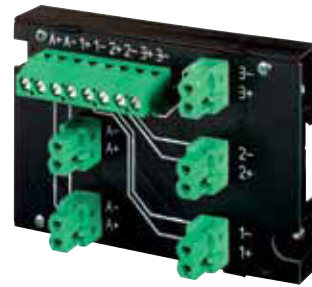
Approvals:  

Bus or Power distributor

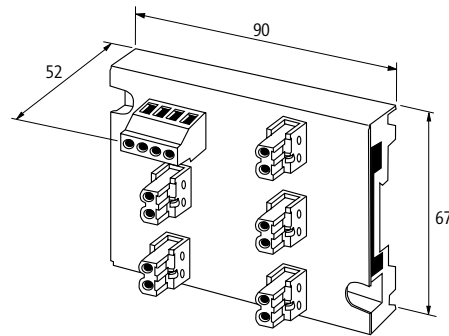


Bus or Power distributor

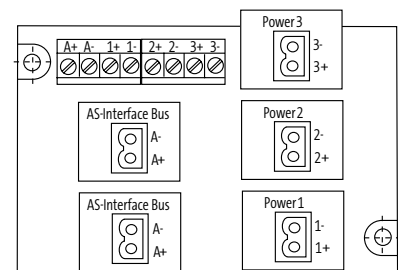
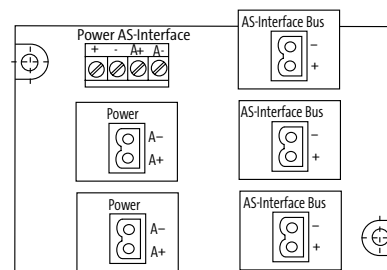
potentially separated



Order Data	Art-No.	Art-No.
3 AS-Interface + 2 power ports	5 plug terminals included	55606
2 AS-Interface + 3 power ports	5 plug terminals included	55575
Technical Data		
Operating voltage	max. 36 V DC	
Current per connection	max. 8 A	
Total current	max. 24 A	
Isolation voltage	AS-Interface/Power 200 V, (EN 60664-1)	
General data		
Protection	IP20	
Temperature range	-20...+70 °C	-20...+70 °C (storage temperature -40...+80 °C)
Connection	Screw terminal: single wire (0.25...4 mm ²), stranded wire (0.5...2.5 mm ²)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



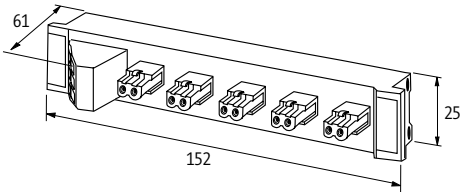
Connection diagram

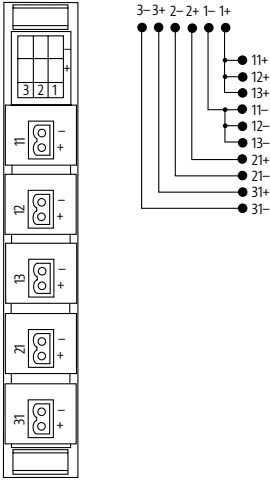
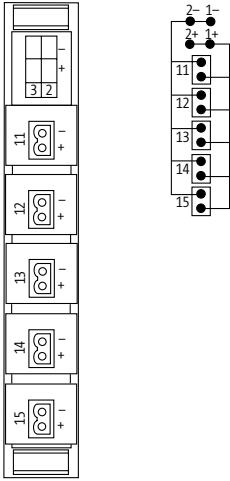


Notes




Order Data		Art-No.	Art-No.
3 potentials	5 ports, universal	55605	
	without plug terminals	55607	
1 potential		5 plug terminals included	55611
Technical Data			
Operating voltage	max. 36 V DC		
Current per connection	max. 8 A		
Total current	max. 12 A		
Isolation voltage	AS-Interface/Power 200 V, Power/Power 50 V (EN 60664-1)		
General data			
Protection	IP20		
Temperature range	-20...+70 °C		
Connection	Screw terminal: single wire (0.2...2.5 mm²), stranded wire (0.2...1.5 mm²)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Connection diagram	
	

Notes

Accessories			Art-No.
	I/O cable for MASI00		
	1.0 m		556510
	I/O cable for MASI00		
	with cable fork 150 mm		556511
	MASI Z-Plug		
	Passive bus terminator	AS-Interface	55779
	Programming device		
		AS-Interface	55696
	Spare cable		
		AS-Interface programming device	55727
Labeling accessories			Art-No.
	Label plate		
	Quantity: 22 pieces		55218
	Quantity: 20 pieces	Bus and external voltage supply	55219
Connection accessories			Art-No.
	Plug terminal (AS-Interface profile cable)		
		for bus or power distributor	55604
	AS-Interface Distributor		
	from profile to profile cable	AS-Interface	55749
	Mounting bracket		
	Quantity: 50 pcs.	AS-Interface profile cable	55742

MASI00/20

Connection accessories			Art-No.
	Adapter		
	from profile cable to M12 2-pole	AS-Interface	55741
	Profile cable yellow, 2 × 1.5 mm²		
	By the meter	AS-Interface	55743
	Profile cable black, 2 × 1.5 mm²		
	By the meter	AS-Interface	55744
	Spring clamp plug-in terminal Quantity: 5 pcs.	MASI20 I/O-level	55213
	Screw plug-in terminal Quantity: 5 pcs.	MASI20 I/O-level	55210
	Screw plug-in terminal Quantity: 5 pcs.	MASI20 Bus connection (AS-Interface)	55211
	Screw plug-in terminal Quantity: 5 pcs.	MASI20 external voltage supply	55212
	IDC terminal Quantity: 5 pcs.	MASI20 Bus connection (AS-Interface)	55214
	IDC terminal Quantity: 5 pcs.	MASI20 external voltage supply	55215

NOTES



MASI67

FLAT CABLES TAKE SYSTEMS INTO THE FIELD

- One module switches off two circuits
- Active and passive components
- Flat cable can be inserted multiple times

AS INTERFACE SYSTEM – MASI67

With MASI67, Murrelektronik provides an optimized installation system for mechanical engineering. The potted I/O modules are extremely resistant to mechanical influences such as vibration and shocks, and are sealed to meet industrial requirements. Having two outputs in one M12 port reduces valve installation by as much as 50 %.

The product range is supplemented with passive installation technology modules with practical interfaces for round cables, which are typically used in C-track applications.

They are designed according to the latest 3.0 AS Interface specification and have the globally recognized AS Interface certification, which guarantees that they are interoperable and a secure investment. With the special K3 module you can create safety shut downs according to EN 13849-1 up to PL d.



➤ MASI65

For I/O modules, accessories and more information about MASI65 see our **online-Shop**:

➤ onlineshop.murrelektronik.com

I/O-Modules



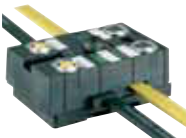
- With M8 connections**
- IP67 protection

Page 4.8.1



- With M12 connections**
- IP67 protection

Page 4.8.3



- With M12 connections and safe outputs**
- IP67 protection
 - Two release circuits
 - Safety

Page 4.8.4

Installation Technology



- Converter
- Accessories

Page 4.8.6

MAI67

Digital inputs

– M8 Round Plug Connectors

Approvals: 

MAI67

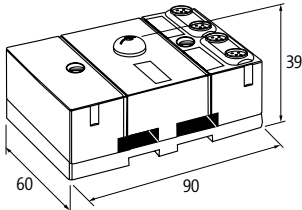
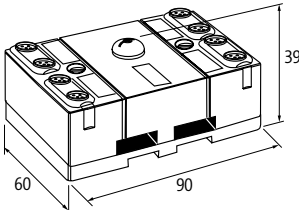
DI4 - 0.2 A (AB) 4×M8



MAI67

DI8 - 0.24 A (AB) 8×M8



Order Data		Art-No.	Art-No.
DI4 - 0.2 A (AB) 4×M8		56405	
DI8 - 0.24 A (AB) 8×M8			56406
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 V DC		
Total current (AS-Interface)	max. 250 mA	max. 290 mA	
Addressing	via built-in address port or master		
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)	
Profile (IO/ID/ID2 code)	S-0.A.0	2 × S-0.A.0	
Input			
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	max. 240 mA from AS-Interface (short-circuit and overload protected)	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Monitoring - no voltage	yes		
General data			
Protection	IP67		
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715) or screw fixing		
Dimension drawing			
			
Notes			

MAI67

MASI67

Digital inputs and outputs

– M8 Round Plug Connectors

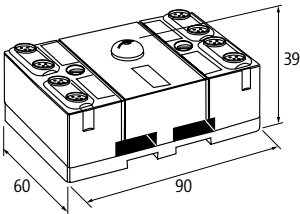
Approvals:   

MASI67

DI4 - 0.2 A DO4 - 0.5 A 8×M8



Order Data		Art-No.
DI4 - 0.2 A DO4 - 0.5 A 8×M8		56408
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 250 mA	
Addressing	via built-in address port or master	
Address range	1...31	
Profile (IO/ID/ID2 code)	S-7.0.E	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Output		
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Total current	max. 2 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	DIN-rail mountable (EN 60715) or screw fixing	
Dimension drawing		



Notes

Digital inputs and outputs

– M12 Round Plug Connectors

Approvals:

MASI67

DI4 - 0.2 A (AB) 4×M12



MASI67

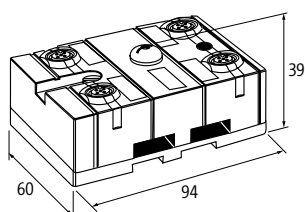
DI8 - 0.24 A (AB) 4×M12

MASI67

DI4 - 16 A DO4 - 2 A 4×M12



Order Data	Art-No.	Art-No.	Art-No.
DI4 - 0.2 A (AB) 4×M12	56400		
DI8 - 0.24 A (AB) 4×M12		56401	
DI4 - 16 A DO4 - 2 A 4×M12			56404
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 V DC		
Total current	max. 250 mA	max. 290 mA	max. 50 mA
Addressing	via built-in address port or master		
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)	1...31
Profile (IO/ID/ID2 code)	S-0.A.0	S-0.A.2	S-7.FE
Double assignment of M12 female	no	yes	
PIN 2 and PIN 4 of M12 female bridged	yes	no	–
Input			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	max. 240 mA from AS-Interface (short-circuit and overload protected)	max. 1.6 A from AS-Interface (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Output			
Actuator supply UA	–		24 V DC external (18...30.2 V DC) EN 61131-2
Switching current per output	–		max. 2 A (short-circuit and overload protected)
Total current	–		max. 8 A
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	yes	–	
Monitoring - no voltage	–	yes	
General data			
Protection	IP67		
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715) or screw fixing		
Connection	–		AS-Interface profile cable (black)
Dimension drawing			



Notes	
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MASI67

Digital inputs

– Passive

– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

– M12 Round Plug Connectors

Approvals:  

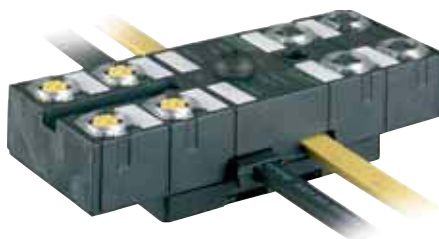
MASI67

DI4 - 0.2 A DO4 - 1.6 A (AB) 4×M12 (K3)



MASI67

DI8 - 0.34 A DO8 - 1.6 A (AB) 8×M12 (K3)



Order Data	Art-No.	Art-No.
DI4 - 0.2 A DO4 - 1.6 A (AB) 4×M12 (K3)	56414	
DI8 - 0.34 A DO8 - 1.6 A (AB) 8×M12 (K3)		56415

Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current	max. 250 mA	max. 440 mA
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-7.A.7	2 × S-7.A.7
Double assignment of M12 female	yes	

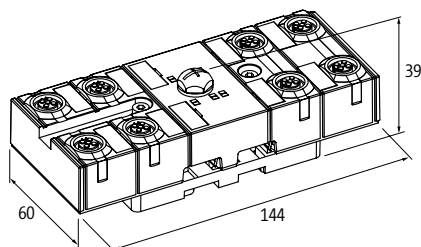
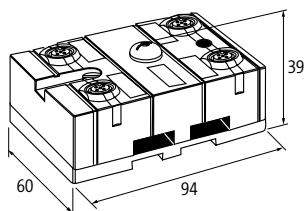
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	max. 340 mA from AS-Interface, (short-circuit and overload protected)

Output		
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable, 2 safely separated supplies possible
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Total current	2 × 3.2 A	2 × 4 A



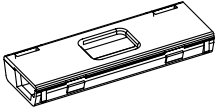





Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	

General data		
Protection	IP67	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	DIN-rail mountable (EN 60715) or screw fixing	

Dimension drawing		
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Notes

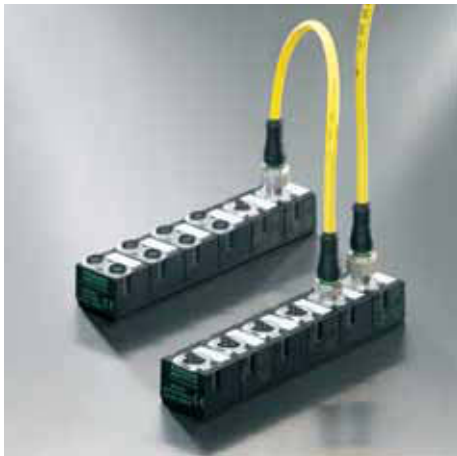
Accessories			Art-No.
	End gasket		
		Quantity: 2 pieces right + 2 pieces left	55061
	Middle gasket		
		Quantity: 2 pcs.	55062
	Coding element - short		
	for MASI67	Quantity: 2 pcs.	55059
	Coding element - long		
	for MASI67	Quantity: 2 pcs.	55060
	MASI Z-Plug Passive bus terminator	AS-Interface	55779
	Programming device		
		AS-Interface	55696
	Spare cable		
		AS-Interface programming device	55727
Blind Plug/caps			Art-No.
	Screw plug M8 × 1 mm (for female)		
	Plastic, hex	Quantity: 10 pcs.	3858627
	Screw plug M12 × 1 mm		
	Plastic, hex	Quantity: 4 pcs.	55468

MASI67

Connection accessories		Art-No.	
	AS-Interface Distributor from profile to profile cable	AS-Interface	55749
	Mounting bracket Quantity: 50 pcs. from profile cable to M12 2-pole	AS-Interface profile cable	55742
		AS-Interface	55741
Installation technology		Art-No.	
	MASI67 converter 2 × profile cable to 7/8" (female)	AS-Interface	55035
	MASI67 converter 2 × profile cable to 7/8" (male)	AS-Interface	55036
	MASI67 converter 2 × profile cable to M12 (female)	AS-Interface	55037
	MASI67 converter 2 × profile cable to M12 (male)	AS-Interface	55038
	MASI67 distribution boxes 1 × on 3 × profile cable	AS-Interface	55034
	MASI67 connection 2 × on 2 × profile cable	AS-Interface	55033
	MASI67 passive distribution box 2 × profile cable to 4 × M12 (female)	AS-Interface	56412

MA SI67

Installation technology			Art-No.
	MA SI67 passive distribution box 2 x profile cable to 4 x M12 (female) 2 separate circuits	AS-Interface	56416



MAI68

ROUND CABLES TAKE SYSTEMS INTO THE FIELD

- Small and compact with high signal density
- Sealed to meet industrial requirements
- Easy to install with integrated bus distributor

AS INTERFACE SYSTEM – MASI68

The I/O modules of the MASI68 series, with bus connections and M12 standard cables, are designed for applications in exposed areas that require sealed components. They offer a complete solution with IP68/69K protection.

Accessories and special round cables complete the MASI68 range offering the user a total installation concept for decentralized installations. Pluggable round cables make installation and service much easier.

With MASI68 K3 modules, you can shutdown safely according to EN 13849-1 up to PL d. They are designed according to the latest 3.0 AS Interface specifications and have AS Interface certification, which guarantees that they are compatible.



Digital inputs



With M8 connections

- IP68 protection

Page 4.9.1



With M12 connections

- IP68/69K protection

Page 4.9.4

Digital inputs/outputs



With M8 connections

- IP68 protection

Page 4.9.6



With M12 connections

- IP68/69K protection
- Models with safe outputs (safety)

Page 4.9.7

Installation technology



Converters/Accessories

Accessories for round cables
see page 3.6.24

Page 4.9.9

MASI68

Digital inputs

– M8 Round Plug Connectors

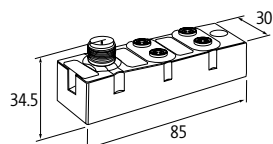
Approvals:  

MASI68

Compact module




Order Data	Art-No.	Art-No.
DI4 - 0.2 A (C) 4×M8	56435	
DI4 - 0.2 A (C) 4×M8 (AB)		56434
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Addressing	via master or M12 connection and programming device	
Address range	1...31	1...62 (1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.0	S-0.A.0
Total current	max. 250 mA	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



Notes

MASI68

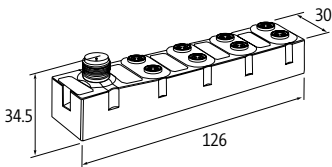
Digital inputs
– M8 Round Plug Connectors

Approvals: 

MASI68
Compact module



Order Data		Art-No.
DI8 - 0.2 A (C) 8×M8 (AB)		56420
	pre-programmed – ASI	564201
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device, presetting 2 × address 0	
Address range	2 × 1...62 (2 × 1...31 A or B)	
Profile (IO/ID/ID2 code)	2 × S-0.A.0	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



Notes

Digital inputs

– M8 Round Plug Connectors

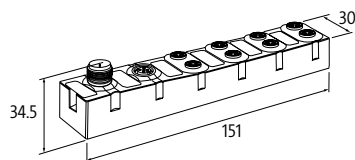
Approvals:  

MASI68

Expansion module



Order Data	Art-No.
DI8 - 0.2 A (E) 8×M8 (AB)	56436
Technical Data	
Bus voltage (AS-Interface)	26.5...31.6 V DC
ASI-Power 24	yes
Addressing	via master or M12 connection and programming device, presetting 1 × address 31 A, 1 × address 31 B
Address range	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	2 × S-0.A.E
Total current	max. 300 mA
Input	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Sensor supply US	max. 240 mA from AS-Interface (short-circuit and overload protected)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module
Monitoring - no voltage	yes
General data	
Protection	IP68
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)
Mounting method	screw fixing
Dimension drawing	



Notes

MASI68

Digital inputs

– M12 Round Plug Connectors

Approvals:  

MASI68

Compact module

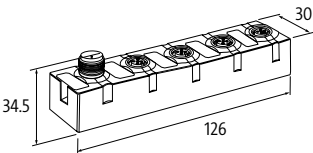
Y-wiring



MASI68

Compact module

Order Data	Art-No.	Art-No.
DI4 - 0.2 A (C) 4×M12 (AB) Y	56421	
DI8 - 0.2 A (C) 4×M12 (AB)		56424
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device	
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.A.2	2 × S-0.A.2
Address presetting	–	Slave 1: address 31 A; Slave 2: address 31 B
Input		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
M12 configuration	Y-wiring	–
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



Notes

Digital inputs

– M12 Round Plug Connectors

MASI68

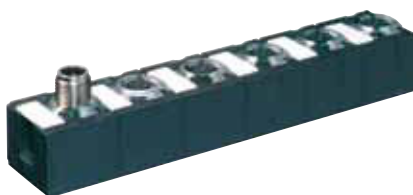
Expansion module

MASI68

Expansion module
Y-wiring

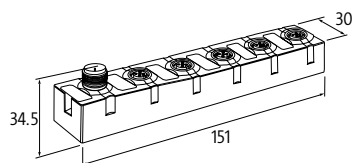
MASI68

Expansion module



Approvals:

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI4 - 0.2 A (E) 4×M12 (AB)	56425			
DI8 - 0.2 A (E) 4×M12 (AB)		56426		
DI4 - 0.2 A (E) 4×M12 (AB) AUX-Y			56443	
DI8 - 0.2 A (E) 4×M12 (AB) AUX				56444
Technical Data				
Bus voltage (AS-Interface)	26.5...31.6 V DC			
Addressing	via master or M12 connection and programming device			
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.A.2	2 × S-0.A.2	S-0.A.2	2 × S-0.A.2
Total current	max. 250 mA			
Address presetting	–	Slave 1: address 31 A; Slave 2: address 31 B	–	
Input				
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)		max. 200 mA from AUX Power, (short-circuit and overload protected)	
M12 configuration	–		Y-wiring	–
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module			
Monitoring - no voltage	yes			
General data				
Protection	IP68			
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)			
Mounting method	screw fixing			
Dimension drawing				



Notes

MASI68

Digital inputs/outputs

– M8 Round Plug Connectors

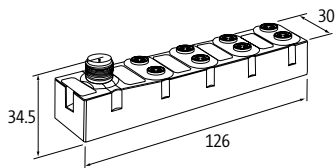


MASI68

Compact module



Order Data		Art-No.	Art-No.
DI4 - 0.2 A DO3 - 0.5 A (C) 7×M8 (AB)		56418	
DI4 - 0.2 A DO4 - 0.5 A (C) 8×M8			56419
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 V DC		
Addressing	via master or M12 connection and programming device		
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.0	
Address range	1...62 (1...31 A or B)	1...31	
Total current	max. 250 mA		
Input			
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)		
Output			
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable, 2 safely separated supplies possible	24 V DC external (18...30.2 V DC) EN 61131-2	
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Total current	max. 1.5 A	max. 2 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Monitoring - no voltage	yes		
General data			
Protection	IP68		
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)		
Mounting method	screw fixing		
Dimension drawing			



Notes

Digital inputs/outputs

– M12 Round Plug Connectors

Approvals: 

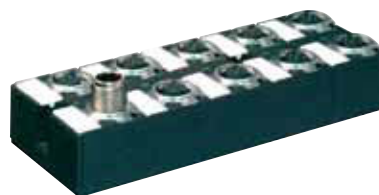
MASI68

Compact module
Y-wiring

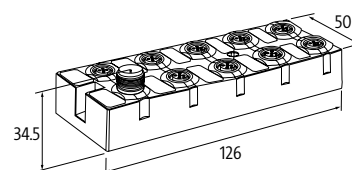
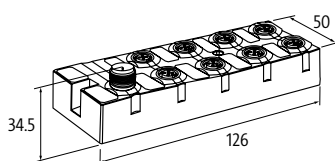


MASI68

Expansion module



Order Data	Art-No.	Art-No.
DI4 - 0.2 A DO4 - 2 A (C) 8×M12 (Y)	56422	
DI4 - 0.2 A DO4 - 2 A (E) 8×M12 (Y)		56427
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device	
Address range	1...31	
Profile (IO/ID/ID2 code)	S-7.FE	
Input		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
M12 configuration	Y-wiring	–
Output		
Switching current per output	max. 2 A (short-circuit and overload protected)	
Total current	max. 4 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



MASI68

Notes

MASI68

Passive

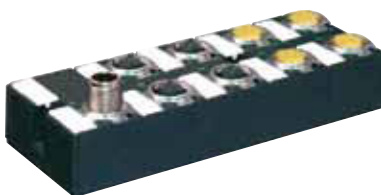
– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

– M12 Round Plug Connectors

Approvals:  

MASI68

Compact module
Y-wiring



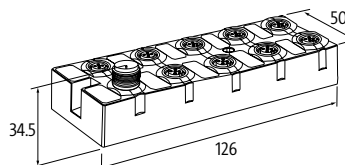
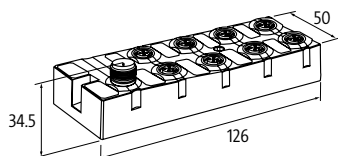
MASI68

Expansion module
Y-wiring



Order Data	Art-No.	Art-No.
DI4 - 0.2 A DO4 - 1.6 A (AB) 8×M12 (Y) K3	56423	
DI4 - 0.2 A DO4 - 1.6 A (E) 8×M12 (AB) Y (K3)		56428

Technical Data	
Bus voltage (AS-Interface)	26.5...31.6 V DC
Addressing	via master or M12 connection and programming device
ASI-Power 24	– yes
Profile (IO/ID/ID2 code)	S-7.A.7
Address range	1...62 (1...31 A or B)
Total current	max. 250 mA
Input	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)
Output	
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2
Switching current per output	max. 2 A (short-circuit and overload protected)
Total current	max. 4 A
M12 configuration	Y-wiring
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module
Monitoring - no voltage	yes
General data	
Protection	IP68
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)
Mounting method	screw fixing
Dimension drawing	







Notes

Accessories			Art-No.
	MAI Z-Plug Passive bus terminator	AS-Interface	55779
	Programming device		
		AS-Interface	55696
Blind Plug/caps			Art-No.
	Screw plug M8 x 1 mm (for female) Plastic, hex	Quantity: 10 pcs.	3858627
	Screw plug M12 x 1 mm Plastic, hex	Quantity: 4 pcs.	55468
Connection accessories			Art-No.
	AS-Interface Distributor from profile to profile cable	AS-Interface	55749
	Distribution box from profile to round cable	AS-Interface	55745
	T-coupler M12/M12, female/male straight, A-coded, 4-pole	MAI68 additional actuator power supply	7060-42701-0000000
	T-coupler (Slimline) M12 - M12 5-pole Parallel circuit		7000-41151-0000000

MAI68

Connection accessories			Art-No.
	Adapter		
	from profile cable to PG11	AS-Interface	55732
	Mounting bracket		
	Quantity: 50 pcs.	AS-Interface profile cable	55742
	Adapter		
	from profile cable to M12 2-pole	AS-Interface	55741
	Spare cable		
		AS-Interface programming device	55727
	Profile cable yellow, 2 × 1.5 mm²		
	By the meter	AS-Interface	55743
	Profile cable black, 2 × 1.5 mm²		
	By the meter	AS-Interface	55744
System components			Art-No.
	Gateway-Singlemaster		
	via screw terminals on the front	AS-Interface/PROFIBUS DP	55707
	Gateway-Singlemaster		
	via pluggable spring clamp terminals on the front 0.2...2.5 mm ² Specification 2.1	AS-Interface/PROFIBUS DP cULus	556612

System components			Art-No.
	Gateway-Singlemaster via pluggable spring clamp terminals on the front 0.2...2.5 mm ² Specification 3.0	AS-Interface/PROFIBUS DP cULus	56451
	Gateway-Doublemaster via pluggable spring clamp terminals on the front 0.2...2.5 mm ² Specification 3.0	AS-Interface/PROFIBUS DP cULus	556616
	Switch mode power supplies INPUT: 95...265 V AC Current: 4 A	AS-Interface cULus	85381
	Switch mode power supplies INPUT: 95...265 V AC Current: 4 A with EFD (earth fault detection)	AS-Interface cULus	85382



M8 DISTRIBUTION SYSTEMS EXACT8

- Saves space
- Versatile
- Application oriented

EXACT8 – THE NEW GENERATION OF MURRELEKTRONIK'S M8 DISTRIBUTION BOXES

- Small dimensions (30 mm width)
- PUR/PVC cable for flexible and fixed assembly
- High-quality, halogen-free PUR cable suitable for C-tracks, UL/CSA approved
- Standard or side mounting for limited space
- Quick and easy replacement of connection cables

For Sensors and Actuators – Molded Homerun Cables or Connection Caps



Exact8

- 4-, 6-, 8-, 10-way
- PUR or PUR/PVC homerun cable

Page 4.10.1



Exact8 Basic Modules

- 4-, 6-, 8-, 10-way

Page 4.10.5



Exact8 Connection Caps

- Pre-wired
- PUR or PUR/PVC homerun cable

Page 4.10.8



Exact8 Set

- 4-, 6-, 8-, 10-way
- Field-wireable

Page 4.10.11

For Sensors – with M12 Connection



Exact8

- 4-, 6-, 8-, 10-way
- with 8- or 12-pole M12 connection

Page 4.10.12

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals:  

Exact8

4-way



Exact8

6-way



Exact8

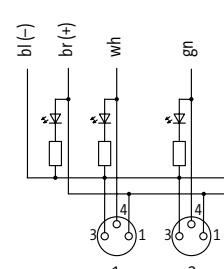
8-way



Exact8

10-way



1 Form	84010	86010	88010	80010
Type	PNP, 3-pole	PNP, 3-pole	PNP, 3-pole	PNP, 3-pole
Contact layout	<p>M8-Females 3-pole</p> <p>4 (N/O)</p> <p>3 (-) 1 (+)</p>  <p>for 1 signal per port</p>			
2 Cable Type	Jacket Color – No./diameter of wires			
	gray	gray	gray	gray
PUR/PVC	337 – 4 × 0.34 + 2 × 0.75 mm ²	350 – 6 × 0.34 + 2 × 0.75 mm ²	357 – 8 × 0.34 + 2 × 0.75 mm ²	385 – 10 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA)	334 – 4 × 0.34 + 2 × 0.75 mm ²	356 – 6 × 0.34 + 2 × 0.75 mm ²	359 – 8 × 0.34 + 2 × 0.75 mm ²	384 – 10 × 0.34 + 2 × 0.75 mm ²
3 Cable Length				
3.0 m	0300			
5.0 m	0500			
10.0 m	1000			
15.0 m	1500			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 10 A			
Protection	IP65, IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
Contact 1	(+)			
Contact 3	(-)			
Contact 4	(NO)/(S1)			
LED display	LED (green): power / LED (yellow): (S1)			
Article No.				
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	1 Form	2 Cable Type	3 Cable Length	
Notes				

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals:  

Exact8

4-way



Exact8

6-way



Exact8


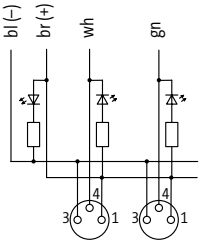
8-way



Exact8

10-way



1 Form		84011	86011	88011	80011
Type		NPN, 3-pole	NPN, 3-pole	NPN, 3-pole	NPN, 3-pole
Contact layout		M8-Females 3-pole   for 1 signal per port			
2 Cable Type		Jacket Color – No./diameter of wires			
		gray	gray	gray	gray
PUR/PVC		337 – 4 × 0.34 + 2 × 0.75 mm ²	350 – 6 × 0.34 + 2 × 0.75 mm ²	357 – 8 × 0.34 + 2 × 0.75 mm ²	385 – 10 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA)		334 – 4 × 0.34 + 2 × 0.75 mm ²	356 – 6 × 0.34 + 2 × 0.75 mm ²	359 – 8 × 0.34 + 2 × 0.75 mm ²	384 – 10 × 0.34 + 2 × 0.75 mm ²
3 Cable Length					
5.0 m		0500			
10.0 m		1000			
Technical Data					
Operating voltage		24 V DC			
Total current		max. 10 A			
Protection		IP65, IP67			
Temperature range		-20...+80 °C, depending on cable quality			
Contact Layout					
Contact 1		(+)			
Contact 3		(-)			
Contact 4		(NO)/(S1)			
LED display		LED (green): power / LED (yellow): (S1)			
Article No.					
The composition of your article number is explained on page 3.1.i		<div>8000</div> <div>–</div> <div>–</div> <div>–</div>			
		1 Form	2 Cable Type	3 Cable Length	
Notes					

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals:  

Exact8

4-way



Exact8

6-way



Exact8

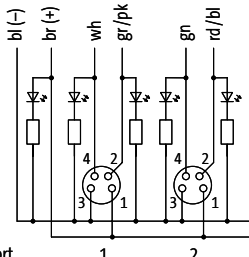
8-way



Exact8

10-way



1 Form	84110	86110	88110	80110
Type	PNP, 4-pole	PNP, 4-pole	PNP, 4-pole	PNP, 4-pole
Contact layout	<p>M8-Females 4-pole</p> <p>4 (S1) 2 (S2) 3 (-) 1 (+)</p>  <p>for 2 signals per port</p>			
2 Cable Type	Jacket Color – No./diameter of wires			
	gray	gray	gray	gray
PUR/PVC	358 – 8 × 0.34 + 2 × 0.75 mm ²	386 – 12 × 0.34 + 2 × 0.75 mm ²	395 – 16 × 0.34 + 2 × 0.75 mm ²	412 – 20 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA)	360 – 8 × 0.34 + 2 × 0.75 mm ²	389 – 12 × 0.34 + 2 × 0.75 mm ²	396 – 16 × 0.34 + 2 × 0.75 mm ²	411 – 20 × 0.34 + 2 × 0.75 mm ²
3 Cable Length				
3.0 m	0300			
5.0 m	0500			
10.0 m	1000			
15.0 m	1500			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 10 A			
Protection	IP65, IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
Contact 1	(+) / (S1)			
Contact 2	(NC) / (S2)			
Contact 3	(-) / (S1)			
Contact 4	(NO) / (S2)			
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)			
Article No.				
The composition of your article number is explained on page 3.1.i	<div>8 0 0 0 - - - - -</div>			
	1 Form	2 Cable Type	3 Cable Length	
Notes				

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals:  

Exact8

4-way



Exact8

6-way



Exact8

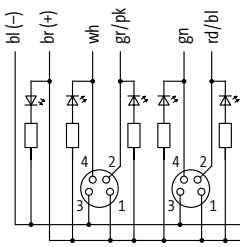
8-way



Exact8

10-way



1 Form		84111	86111	88111	80111
Type		NPN, 4-pole	NPN, 4-pole	NPN, 4-pole	NPN, 4-pole
Contact layout		<p>M8-Females 4-pole</p> <p>4 (S1) 2 (S2) 3 (-) 1 (+)</p>  <p>for 2 signals per port</p> <p>1 2</p>			
2 Cable Type		Jacket Color – No./diameter of wires			
		gray	gray	gray	gray
PUR/PVC		358 – 8 × 0.34 + 2 × 0.75 mm ²	386 – 12 × 0.34 + 2 × 0.75 mm ²	395 – 16 × 0.34 + 2 × 0.75 mm ²	412 – 20 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA)		360 – 8 × 0.34 + 2 × 0.75 mm ²	389 – 12 × 0.34 + 2 × 0.75 mm ²	396 – 16 × 0.34 + 2 × 0.75 mm ²	411 – 20 × 0.34 + 2 × 0.75 mm ²
3 Cable Length					
5.0 m		0500			
10.0 m		1000			
Technical Data					
Operating voltage		24 V DC			
Total current		max. 10 A			
Protection		IP65, IP67			
Temperature range		-20...+80 °C, depending on cable quality			
Contact Layout					
Contact 1		(+)			
Contact 2		(NC)/(S2)			
Contact 3		(-)			
Contact 4		(NO)/(S1)			
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)			
Article No.					
The composition of your article number is explained on page 3.1.i		8 0 0 0	-	-	-
			1 Form	2 Cable Type	3 Cable Length
Notes					

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

- Base modules
- inline face or side mounting

Approvals:

Exact8

4-way



Exact8

6-way



Exact8

8-way



Exact8

10-way



1	Form	84000	86000	88000	80000
Type		PNP, 3-pole	PNP, 3-pole	PNP, 3-pole	PNP, 3-pole
Contact layout		<div>M8-Females 3-pole</div> <div></div> <div></div>			
Technical Data					
Operating voltage		24 V DC			
Operating current per contact		max. 2 A			
Total current		max. 8 A			
Protection		IP65, IP67			
Temperature range		-20...+70 °C, depending on cable quality			
Contact Layout					
Contact 1		(+)			
Contact 3		(-)			
Contact 4		(NO)/(S1)			
LED display		LED (green): power / LED (yellow): (S1)			
Article No.					
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		1 Form			
Notes					

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– Base modules

– inline face or side mounting

Approvals:  

Exact8

4-way



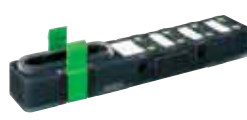
Exact8

6-way



Exact8

8-way



Exact8

10-way



1

Form

84001

86001

88001

80001

Type

NPN, 3-pole

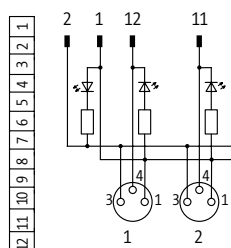
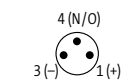
NPN, 3-pole

NPN, 3-pole

NPN, 3-pole

Contact layout

M8-Females 3-pole



for 1 signal per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Total current	max. 8 A
Protection	IP65, IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

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

8 0 0 0

-

-

0 0 0

0 0 0 0

1

Form

Notes

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

- Base modules
- inline face or side mounting

Approvals:  

Exact8
4-way

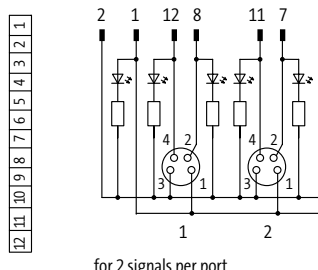
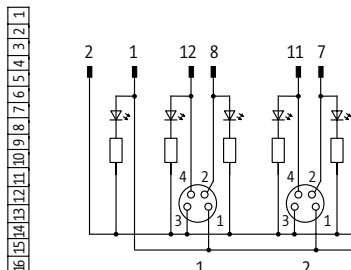


Exact8
6-way



Exact8
8-way




1 Form		84100	86100	88100
Type		PNP, 4-pole	PNP, 4-pole	PNP, 4-pole
Contact layout		<p>M8 Females 4-pole</p> <p>4 (S1) 2 (S2) 3 (-) 1 (+)</p>  <p>for 2 signals per port</p>	<p>M8-Females 4-pole</p> <p>4 (S1) 2 (S2) 3 (-) 1 (+)</p>  <p>for 2 signals per port</p>	
Technical Data				
Operating voltage		24 V DC		
Operating current per contact		max. 2 A		
Total current		max. 8 A		
Protection		IP65, IP67		
Temperature range		-20...+70 °C, depending on cable quality		
Contact Layout				
Contact 1		(+)		
Contact 2		(NC)/(S2)		
Contact 3		(-)		
Contact 4		(NO)/(S1)		
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)		
Article No.				
The composition of your article number is explained on page 3.1.i		<div>8000</div> <div>-</div> <div>000</div> <div>0000</div>		
		1 Form		
Notes				

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– Field-wireable (pluggable spring clamp terminals)

Approvals: 

Exact8

Connection cap short



Exact8

Connection cap long



1 Form

84949

80949

Type

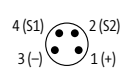
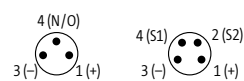
for 4-way distribution box, 3-/4-pole, for 4...10-way, 3-pole

6-, and 8-way distribution box, 4-pole

Contact layout

M8-Females 3-pole/4-pole

M8-Females 4-pole



12 11 10 9 8 7 6 5 4 3 2 1

18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Technical Data

Total current	max. 8 A
Housing	Plastic, flame retardant
Temperature range	-20...+80 °C

Article No.

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

8 0 0 0

- - - - -

0 0 0

0 0 0 0

1 Form

Notes

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

- with homerun cable
- with pluggable spring clamp terminals

Approvals:  

Exact8

Connection cap short



1 Form	84049	86049	88049	80049
Type	for 4-way distribution box, 3-pole	for 6-way distribution box, 3-pole	for 8-way distribution box, 3-pole	for 10-way distribution box, 3-pole
Contact layout	M8-Females 3-pole  			
2 Cable Type	Jacket Color – No./diameter of wires			
	gray	gray	gray	gray
PUR/PVC	337 – 4 × 0.34 + 2 × 0.75 mm ²	350 – 6 × 0.34 + 2 × 0.75 mm ²	357 – 8 × 0.34 + 2 × 0.75 mm ²	385 – 10 × 0.34 + 2 × 0.75 mm ²
PUR (UL/CSA)	334 – 4 × 0.34 + 2 × 0.75 mm ²	356 – 6 × 0.34 + 2 × 0.75 mm ²	359 – 8 × 0.34 + 2 × 0.75 mm ²	384 – 10 × 0.34 + 2 × 0.75 mm ²
3 Cable Length				
3.0 m	0300			
5.0 m	0500			
10.0 m	1000			
15.0 m	1500			
Technical Data				
Temperature range	-20...+80 °C, depending on cable quality			
Article No.				
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	1 Form	2 Cable Type	3 Cable Length	
Notes				

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with homerun cable

– with pluggable spring clamp terminals

Approvals:  

Exact8

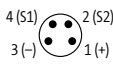
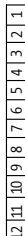
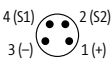
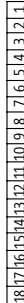
Connection cap short



Exact8

Connection cap long



1	Form	84149	86149	88149
	Type	for 4-way distribution box, 4-pole	for 6-way distribution box, 4-pole	for 8-way distribution box, 4-pole
	Contact layout	M8-Females 4-pole 4 (S1) 2 (S2) 3 (-) 1 (+)  	M8-Females 4-pole 4 (S1) 2 (S2) 3 (-) 1 (+)  	
2	Cable Type	Jacket Color – No./diameter of wires		
		gray	gray	gray
	PUR/PVC	358 – 8 × 0.34 + 2 × 0.75 mm ²	386 – 12 × 0.34 + 2 × 0.75 mm ²	395 – 16 × 0.34 + 2 × 0.75 mm ²
	PUR (UL/CSA)	360 – 8 × 0.34 + 2 × 0.75 mm ²	389 – 12 × 0.34 + 2 × 0.75 mm ²	396 – 16 × 0.34 + 2 × 0.75 mm ²
3	Cable Length			
	3.0 m	0300		
	5.0 m	0500		
	10.0 m	1000		
	15.0 m	1500		
	Technical Data			
	Temperature range	-20...+80 °C, depending on cable quality		
	Article No.			
	The composition of your article number is explained on page 3.1.i	8 0 0 0	- - - - -	- - - - -
		1 Form	2 Cable Type	3 Cable Length
	Notes			

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– Sets (basic module and cap)

– inline face or side mounting

Approvals:  

Exact8

4-way



Exact8

6-way



Exact8

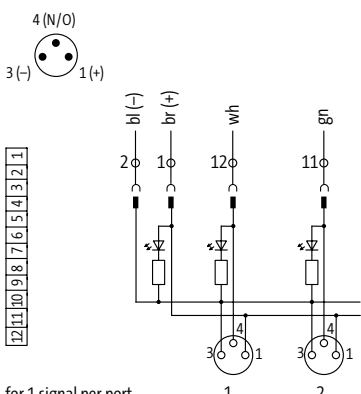
8-way



Exact8

10-way



1	Form	84040	86040	88040	80040
Type	3-pole	3-pole	3-pole	3-pole	3-pole
Contact layout	<p>M8-Females 3-pole</p> <p>4 (N/O) 3 (-) 1 (+)</p>  <p>for 1 signal per port</p>				
2	Cable Type	Jacket Color – No./diameter of wires			
	PUR (UL/CSA)	gray 334 – 4 × 0.34 + 2 × 0.75 mm²	gray 356 – 6 × 0.34 + 2 × 0.75 mm²	gray 359 – 8 × 0.34 + 2 × 0.75 mm²	gray 384 – 10 × 0.34 + 2 × 0.75 mm²
3	Cable Length	3.0 m 0300	5.0 m 0500	10.0 m 1000	15.0 m 1500
Technical Data		Operating voltage	24 V DC	Total current	max. 8 A
		Protection	IP65, IP67	Temperature range	-20...+80 °C, depending on cable quality
Contact Layout		Contact 1	(+)	Contact 3	(-)
		Contact 4	(NO)/(S1)	LED display	LED (green): power / LED (yellow): (S1)
Article No.		<p>The composition of your article number is explained on page 3.1.i</p> <p>8 0 0 0 – – – – –</p>			
		1	Form	2	Cable Type
		3	Cable Length		
Notes					

M8 DISTRIBUTION SYSTEMS

For sensors

- M12 plug connection
- 8-pole
- inline face or side mounting

Approvals:  

Exact8

4-way



Exact8

6-way



1 Form

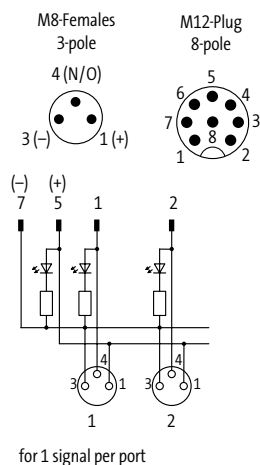
84070

86070

Type
Contact layout

3-pole

3-pole



Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

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

8 0 0 0

- - - - -

0 0 0

0 0 0 0

1 Form

Notes

M8 DISTRIBUTION SYSTEMS

For sensors

- M12 plug connection
- 12-pole
- inline face or side mounting

Approvals:

Exact8

4-way



Exact8

6-way



Exact8

8-way



Exact8

10-way



1 Form

84060

86060

88060

80060

Type

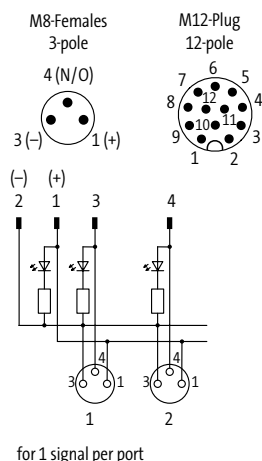
3-pole

3-pole

3-pole

3-pole

Contact layout



Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 1.5 A
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

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

8 0 0 0

-

0 0 0

0 0 0 0

1 Form

Notes

M8 DISTRIBUTION SYSTEMS

- For sensors
- M12 plug connection
 - 12-pole
 - inline face or side mounting

Approvals:

UL

US

Listed

PC

CE



1	Form	84160			
	Type	4-pole			
	Contact layout	<div><div>M8-Females 4-pole</div><div>M12-Plug 12-pole</div><div><div>4 (S1)</div><div>2 (S2)</div><div>3 (-)</div><div>1 (+)</div></div><div><div>7</div><div>6</div><div>5</div><div>4</div><div>3</div><div>2</div><div>1</div><div>10</div><div>11</div><div>9</div></div><div><div>(-) (+)</div><div>2 1 3 5 4 9</div><div><div>4 2</div><div>3 1</div><div>4 2</div><div>3 1</div></div><div>1 2</div></div></div> <div>for 2 signals per port</div>			
	Technical Data				
	Operating voltage	24 V DC			
	Operating current per contact	max. 1.5 A			
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
	Housing	Plastic, flame retardant			
	Temperature range	-20...+70 °C, depending on cable quality			
	Contact Layout				
	Contact 1	(+)			
	Contact 2	(NC)/(S2)			
	Contact 3	(-)			
	Contact 4	(NO)/(S1)			
	LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)			
	Article No.				
	The composition of your article number is explained on page 3.1.i	<div><div><div><div>8</div><div>0</div><div>0</div><div>0</div></div><div>-</div><div><div>8</div><div>4</div><div>1</div><div>6</div><div>0</div></div><div>-</div><div><div>0</div><div>0</div><div>0</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div></div>			
		1 Form			
	Notes				

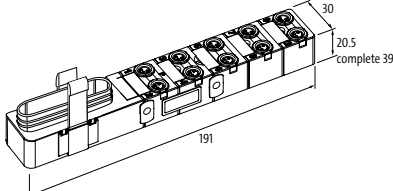
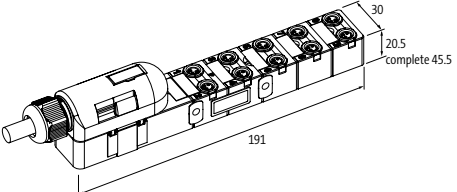
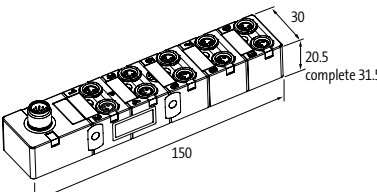
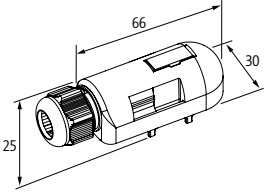
M8 DISTRIBUTION SYSTEMS

Plug accessories			Art-No.
	Torque wrench set M8 (0.4 Nm, AF9)		7000-99101-0000000
	Screw plug M8 x 1 mm (for female) Plastic, hex	Quantity: 10 pcs.	3858627
	Adapter M8/M12 3-pole	M8 Distribution Systems	7000-88521-0000000
	4-pole	M8 Distribution Systems	7000-88531-0000000
	Label plates KES 20 x 8 (white)	(10 pieces/2 plates)	996067
	T-coupler (Nano) M8 - M8 Distribution function (NO)	M8 distribution systems, 4-pole	7000-88602-0000000
	Screw plug M12 x 1 mm (for male) Plastic	Quantity: 4 pcs.	56951
Homerun cable accessories			Art-No.
	Connection cap short Spring clamp terminals, 12-pole	4-way distribution box, 3-/4-pole, 4...10-way, 3-pole Cable diameter (7.4...13 mm)	8000-84949-0000000
	Connection cap long Spring clamp terminals, 18-pole	6-, and 8-way distribution box, 4-pole Cable diameter (7.4...13 mm)	8000-80949-0000000
	Cable rings (50 m), 3-pole, PUR/PVC 4x0.34 + 2x0.75 mm ²	4-way distribution boxes M8	8000-00000-3375000
	4x0.34 + 2x0.75 mm ²	4-way distribution boxes M8	8000-00000-3345000

M8 DISTRIBUTION SYSTEMS

Homerun cable accessories			Art-No.
	Cable rings (50 m), 3-pole, PUR/PVC		
	6×0.34 + 2×0.75 mm ²	6-way distribution boxes M8	8000-00000-3505000
	6×0.34 + 2×0.75 mm ²	6-way distribution boxes M8	8000-00000-3565000
	Cable rings (50 m), 3-pole, PUR/PVC		
	8×0.34 + 2×0.75 mm ²	8-way distribution boxes M8	8000-00000-3575000
	8×0.34 + 2×0.75 mm ²	8-way distribution boxes M8	8000-00000-3595000
	Cable rings (50 m), 3-pole, PUR/PVC		
	10×0.34 + 2×0.75 mm ²	10-way distribution boxes M8	8000-00000-3855000
	10×0.34 + 2×0.75 mm ²	10-way distribution boxes M8	8000-00000-3845000
	Cable rings (50 m), 4-pole, PUR/PVC		
	8×0.34 + 2×0.75 mm ²	4-way distribution boxes M8	8000-00000-3585000
	8×0.34 + 2×0.75 mm ²	4-way distribution boxes M8	8000-00000-3605000
	Cable rings (50 m), 4-pole, PUR/PVC		
	12×0.34 + 2×0.75 mm ²	6-way distribution boxes M8	8000-00000-3865000
	12×0.34 + 2×0.75 mm ²	6-way distribution boxes M8	8000-00000-3895000
	Cable rings (50 m), 4-pole, PUR/PVC		
	16×0.34 + 2×0.75 mm ²	8-way distribution boxes M8	8000-00000-3955000
	16×0.34 + 2×0.75 mm ²	8-way distribution boxes M8	8000-00000-3965000
	Cable rings (50 m), 4-pole, PUR (UL/CSA), halogen free		
	20×0.34 + 2×0.75 mm ²	10-way distribution boxes M8	8000-00000-4115000
	20×0.34 + 2×0.75 mm ²	10-way distribution boxes M8	8000-00000-4125000

M8 Distribution Systems Technical Data

	Description Exact8 Molded homerun cable	4-way 96 mm	6-way 109 mm	8-way 132 mm	10-way 155 mm
	Description Exact8 Basic module 3-pole Basic module 4-pole	4-way 132 mm 132 mm	6-way 145 mm 166 mm	8-way 168 mm 189 mm	10-way 191 mm –
	Description Exact8 Sets 3-pole Sets 4-pole	4-way 132 mm 132 mm	6-way 145 mm 166 mm	8-way 168 mm 189 mm	10-way 191 mm –
	Description Exact8 M12 plug connection	4-way 91,5 mm	6-way 104 mm	8-way 127 mm	10-way 150 mm
	Description Exact8 Short connection cap				
	Description Exact8 Long connection cap				



M12 DISTRIBUTION SYSTEMS METAL

- Rugged
- Resistant to media
- Sealed

POTTED FORMS FOR HARSH ENVIRONMENTS

- Metal housing withstands mechanical and thermal stress, with molded cable or maintenance-friendly M23 plug connection
- High quality PUR cable: suitable for C-tracks, halogen-free, wider wire cross sections for higher current capacity
- Shielded models for sensitive digital or analog signals for an EMC compatible installation
- Universal configuration - contacts designed 1:1
- Fully potted

With molded homerun cable or M23 plug connection



MVP12 Metal

- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for analog signals and voltages up to 125 VAC/DC
- With PUR homerun cable or M23 connection

Page 4.11.1



MVP12 metal universal

- 4-way
- M12 Pin 1, 2, 3, and 4 freely configurable

Page 4.11.8

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals:  

MVP12 Metal

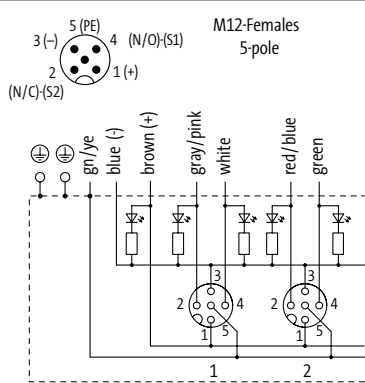
4-way
for PNP signals 24 V DC



MVP12 Metal

8-way
for PNP signals 24 V DC



1 Form		54510	58510
Type		PNP, 5-pole	PNP, 5-pole
Contact layout		 <p>for 2 signals per port</p>	
2 Cable Type		Jacket Color – No./diameter of wires	
PUR (UL/CSA)		gray	gray
		448 – 8 × 0.5 + 3 × 1.0 mm ²	452 – 16 × 0.5 + 3 × 1.0 mm ²
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 12 A	
Protection		IP65, IP67, IP68	
Temperature range		-20...+90 °C, depending on cable quality	
Contact Layout			
Contact 1		(+) (N/O)/(S1)	
Contact 2		(NC)/(S2)	
Contact 3		(-)	
Contact 4		(N/O)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1/S2)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals:  

MVP12 Metal

8-way
with potential separation



MVP12 Metal

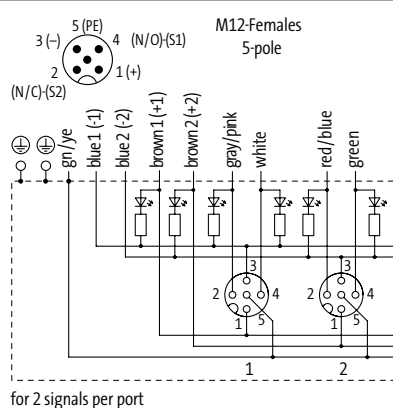
4-way
without LED



1 Form

58610

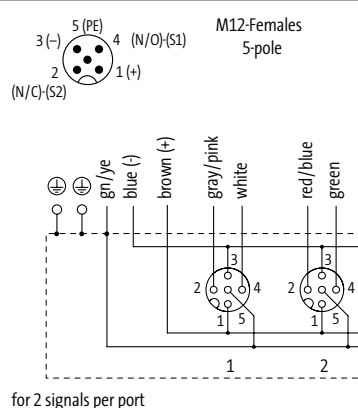
PNP, 5-pole



for 2 signals per port

54512

without LED, 5-pole (for analog signals)



for 2 signals per port

2 Cable Type

Jacket Color – No./diameter of wires

PUR (UL/CSA)

gray

403 – 16 × 0.34 + 5 × 0.75 mm²

gray

448 – 8 × 0.5 + 3 × 1.0 mm²

3 Cable Length

3.0 m	0300
5.0 m	0500
10.0 m	1000
15.0 m	1500

Technical Data

Operating voltage	24 V DC	max. 125 V AC/DC
Total current	max. 10 A	max. 12 A
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1/S2)

Article No.

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

8 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– unshielded



MVP12 Metal

8-way
without LED



MVP12 Metal

8-way
for NPN signals 24 V DC



1 Form		58512	58511
Type		without LED, 5-pole (for analog signals)	NPN, 5-pole
Contact layout		<p>for 2 signals per port</p>	<p>for 2 signals per port</p>
2 Cable Type		Jacket Color – No./diameter of wires	
PUR (UL/CSA)		gray	gray
		452 – 16 × 0.5 + 3 × 1.0 mm ²	452 – 16 × 0.5 + 3 × 1.0 mm ²
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		max. 125 V AC/DC	24 V DC
Total current		max. 12 A	
Protection		IP65, IP67, IP68	
Temperature range		-20...+90 °C, depending on cable quality	
Contact Layout			
Contact 1		(+)	
Contact 2		(NC)/(S2)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		–	LED (green): power / LED (yellow): (S1/S2)
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0 – – – – –	– – – – –
		1 Form	2 Cable Type 3 Cable Length
Notes			

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

- with molded homerun cable
- shielded

Approvals:  

MVP12 Metal

4-way



MVP12 Metal

8-way



1 Form

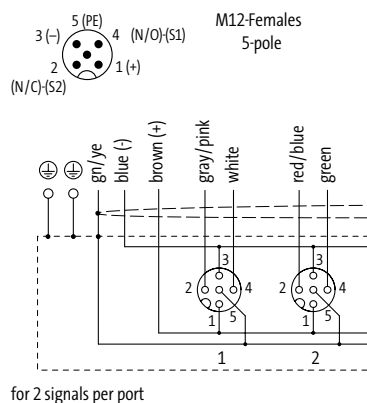
54515

without LED, 5-pole (for analog signals)

58515

without LED, 5-pole (for analog signals)

Type
Contact layout



2 Cable Type

Jacket Color – No./diameter of wires

PUR (UL/CSA)

gray

373 – 8 × 0.34 + 3 × 0.75 mm²

gray

401 – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	0300
5.0 m	0500
10.0 m	1000
15.0 m	1500

Technical Data

Operating voltage	max. 125 V AC/DC
Total current	max. 10 A
Protection	IP65, IP67, IP68
Temperature range	-20...+90 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
Shield	via M12 thread

Article No.

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

8 0 0 0

1 Form

2 Cable Type

3 Cable Length

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– shielded

Approvals:  

MVP12 Metal

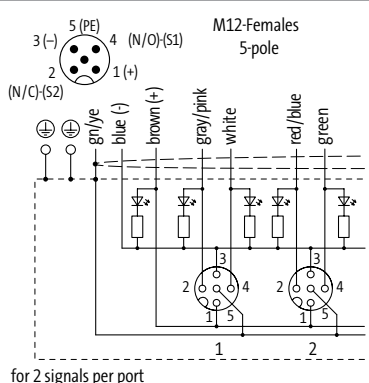
4-way
for PNP signals 24 V DC



MVP12 Metal

8-way
for PNP signals 24 V DC



1 Form		54513	58513
Type		PNP, 5-pole	PNP, 5-pole
Contact layout			
2 Cable Type		Jacket Color – No./diameter of wires	
PUR (UL/CSA)		gray	gray
		373 – 8 × 0.34 + 3 × 0.75 mm ²	401 – 16 × 0.34 + 3 × 0.75 mm ²
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 10 A	
Protection		IP65, IP67, IP68	
Temperature range		-20...+90 °C, depending on cable quality	
Contact Layout			
Contact 1		(+) (NC)/(S2)	
Contact 2		(-) (NO)/(S1)	
Contact 3		(Earth)	
LED display		LED (green): power / LED (yellow): (S1/S2)	
Shield		via M12 thread	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0	
		1 Form	2 Cable Type 3 Cable Length
Notes			

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– M23 plug connection, 19-pole

– for unshielded or shielded use



MVP12 Metal

4-way
for PNP signals 24 V DC



MVP12 Metal

8-way
for PNP signals 24 V DC



1 Form

54520

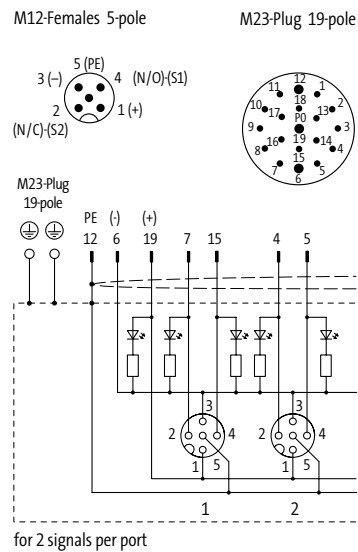
58520

Type

PNP, 5-pole

PNP, 5-pole

Contact layout



Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 10 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+90 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1/S2)
Shield	via M12 outer thread and M23 outer thread

Article No.

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

8 0 0 0

-

-

0 0 0

0 0 0 0

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

- M23 plug connection, 19-pole
- for unshielded or shielded use

Approvals:  

MVP12 Metal

4-way



MVP12 Metal

8-way



1 Form

54522

without LED, 5-pole (for analog signals)

58522

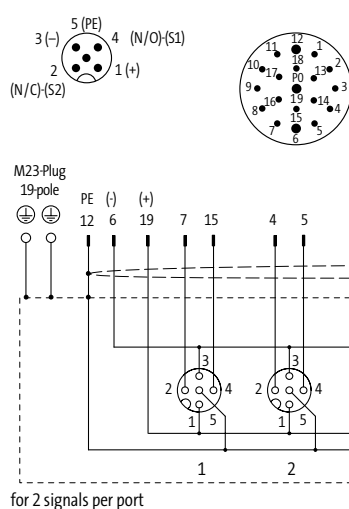
without LED, 5-pole (for analog signals)

Type

Contact layout

M12-Females 5-pole

M23-Plug 19-pole



Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 10 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+80 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
Shield	via M12 outer thread and M23 outer thread

Article No.

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

8 0 0 0

1 Form

0 0 0

0 0 0 0

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For harsh environments

– for unshielded or shielded use

MVP12 Metal UNIVERSAL

with molded homerun cable

4-way



Approvals:

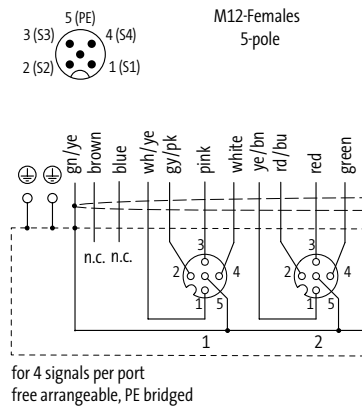
1 Form

54712

Type

without LED, 5-pole (for analog signals)

Contact layout



2 Cable Type

Jacket Color – No./diameter of wires

PUR (UL/CSA)

gray

401 – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	0300
5.0 m	0500
10.0 m	1000
15.0 m	1500

Technical Data

Operating voltage	max. 42 V AC/DC
Total current	max. 10 A
Protection	IP65, IP67, IP68
Temperature range	-20...+90 °C, depending on cable quality

Contact Layout

Contact 1	(S1)
Contact 2	(S2)
Contact 3	(S3)
Contact 4	(S4)
Contact 5	(Earth)
Shield	via M12 thread

Article No.

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

8 0 0 0

–

5 4 7 1 2

–

– – –

– – – –

1 Form

2 Cable Type

3 Cable Length

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For harsh environments

– for unshielded or shielded use

MVP12 Metal UNIVERSAL

M23 plug connection, 19-pole
4-way



Approvals:  

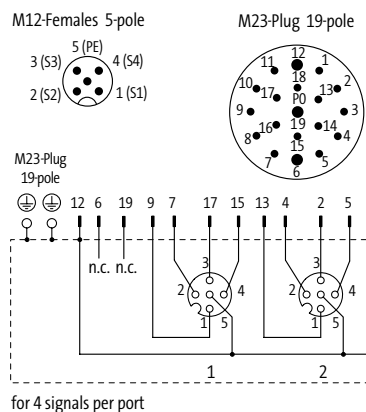
1 Form

54722

Type

without LED, 5-pole (for analog signals)

Contact layout



Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 10 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+90 °C

Contact Layout

Contact 1	(S1)
Contact 2	(S2)
Contact 3	(S3)
Contact 4	(S4)
Contact 5	(Earth)

Article No.











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

8 0 0 0 - 5 4 7 2 2 - 0 0 0 0

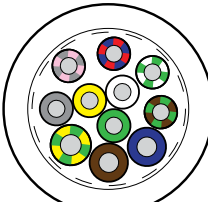
1 Form

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

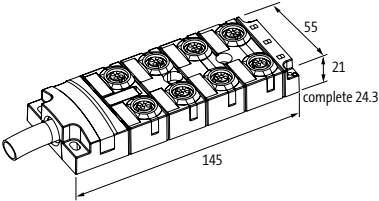
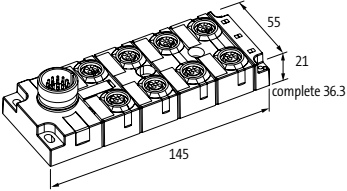
Mounting accessories			Art-No.
	Torque wrench set M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	7000-99102-0000000
	Torque wrench M12 (SW13)		7000-99109-0000000
	Torque wrench M12 (SW14)		7000-99108-0000000
	Torque wrench M12 (SW17)		7000-99094-0000000
	Torque wrench M12 (SW18)		7000-99103-0000000
	DIN-rail adapter with fixing screws, plastic		27905
	Earth connection set		996064
	V2A-base plate	MVP12 Metal, 4-way	996065
		MVP12 Metal, 8-way	996066
	Ground strap 4 mm² 100 mm for hole M3		4000-71001-0410003
	End fitting set M3	Ground straps	4000-71003-0101403
Plug accessories			Art-No.
	Torque wrench set M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	7000-99102-0000000
	Screw plug M12 × 1 mm Metal, hex, 1 piece		996049

M12 DISTRIBUTION SYSTEMS (METAL)

Plug accessories			Art-No.
	Label plates		
	KES 20 × 8 (white)	(10 pieces/2 plates)	996067
	Adapter M12/M8		
	3-pole		7000-42201-0000000
	4-pole		7000-42211-0000000
Homerun cable accessories			Art-No.
	Screw plug M23		
	Metal		55352
	Cable rings (50 m), 5-pole, PUR (UL/CSA), halogen free		
	8×0.5 + 3×1.0 mm ²	4-way distribution boxes M12	8000-00000-4485000
	16×0.5 + 3×1.0 mm ²	8-way distribution boxes M12	8000-00000-4525000
	16×0.34 + 5×0.75 mm ²	8-way distribution boxes M12, potentially separated	8000-00000-4035000
	Cable rings (50 m), 5-pole, PUR (UL/CSA), halogen free		
	8×0.34 + 3×0.75 mm ²	4-way distribution boxes M12, shielded	8000-00000-3735000
	16×0.34 + 3×0.75 mm ²	8-way distribution boxes M12, shielded	8000-00000-4015000

M12 DISTRIBUTION SYSTEMS (METAL)

M12 Distribution Systems Technical Data

	Description	4-way	8-way
	MVP Metal and MVP Metal UNIVERSAL Molded homerun cable	95 mm	145 mm
	Description	4-way	8-way
	MVP Metal and MVP Metal UNIVERSAL M23 plug connection	95 mm	145 mm

NOTES

M12 DISTRIBUTION SYSTEMS PLASTIC

- Fully potted, sealed
- Highly resistant
- Application oriented

PLUGGABLE CONNECTIONS FROM THE PROCESS TO THE CONTROL

- Quick installation with pre-wired and tested cables
- Easy to separate during transportation and simple when redesigning your system, rapid replacement of damaged cables
- Double assignment of M12 ports saves space
- Safety models for inputs and outputs according to EN ISO 13849-2
- Universal configuration – contacts designed 1:1

Pluggable or pre-wired homerun cable

 <p>Exact12</p> <ul style="list-style-type: none"> • 4-, 8-way • With LED for PNP or NPN signals • Without LED for voltages up to 125 V AC/DC • Analog signals <p><i>Page 4.12.1</i></p>	 <p>Exact12</p> <ul style="list-style-type: none"> • 4-, 8-way • with 8- or 12-pole M12 connection <p><i>Page 4.12.27</i></p>
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With pluggable homerun cable

 <p>Exact12 Basic Module</p> <ul style="list-style-type: none"> • 4-, 8-way • With LED for PNP or NPN signals • Without LED for voltages up to 125 V AC/DC • Analog signals <p><i>Page 4.12.8</i></p>	 <p>Exact12/MVP12 connection caps</p> <ul style="list-style-type: none"> • Field-wireable with screw or spring clamp terminals • With pre-wired homerun cable and screw-plug terminals <p><i>Page 4.12.14</i></p>
 <p>Exact12 set</p> <ul style="list-style-type: none"> • 4-, 8-way • With pluggable cap and screw plug terminals or spring clamp terminals <p><i>Page 4.12.17</i></p>	 <p>Exact12 with connection on the back</p> <ul style="list-style-type: none"> • 8-way • with pluggable connection on the back • Potential separation optional <p><i>Page 4.12.25</i></p>
 <p>Exact12/MVP12 universal</p> <ul style="list-style-type: none"> • 4-, 6-, 8-way • With pluggable 12- or 19-pole M23 connection • With pluggable connection cap • M12 pin 1, 2, 3, and 4 freely configurable <p><i>Page 4.12.30</i></p>	 <p>MSDS – safety distribution system</p> <ul style="list-style-type: none"> • 8-way • With pluggable cap and screw terminals • With and without electrical feed back <p><i>Page 4.12.35</i></p>

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable



Exact12

4-way

for PNP signals 24 V DC

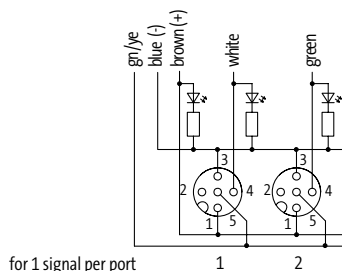
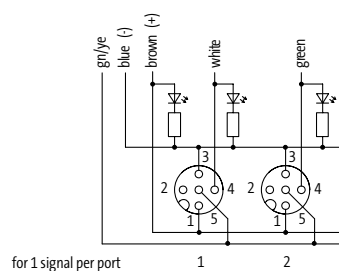


Exact12

8-way

for PNP signals 24 V DC



1 Form		84410	88410
Type		PNP, 4-pole	PNP, 4-pole
Contact layout		<p>M12-Females 4-pole</p> <p>3 (-) 5 (PE) 4 (N/O)/(S1) 2 1 (+)</p>  <p>for 1 signal per port</p>	<p>M12-Females 4-pole</p> <p>3 (-) 5 (PE) 4 (N/O)/(S1) 2 1 (+)</p>  <p>for 1 signal per port</p>
2 Cable Type		Jacket Color – No./diameter of wires	
PUR/PVC		gray	gray
PUR (UL/CSA)		333 – 4 × 0.34 + 3 × 0.75 mm ²	362 – 8 × 0.34 + 3 × 0.75 mm ²
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 10 A	
Protection		IP65, IP67	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
Contact 1		(+) (Earth)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1)	
Article No.			
The composition of your article number is explained on page 3.1.i		<div>8 0 0 0 - - - - -</div>	
		1 Form	2 Cable Type
		3 Cable Length	
Notes		Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable



Exact12

4-way
for NPN signals 24 V DC



Exact12

8-way
for NPN signals 24 V DC



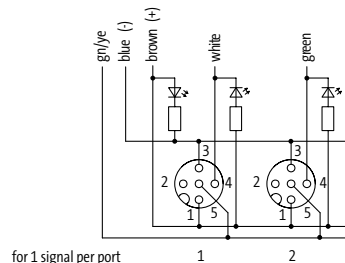
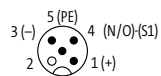
1 Form

84411

NPN, 4-pole

Type
Contact layout

M12-Females 4-pole

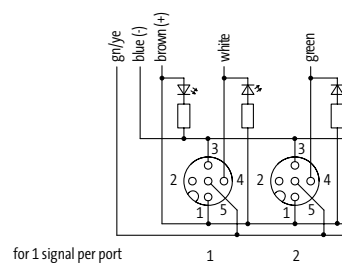
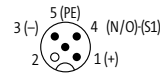


for 1 signal per port

88411

NPN, 4-pole

M12-Females 4-pole



for 1 signal per port

2 Cable Type

Jacket Color – No./diameter of wires

gray

gray

PUR/PVC

333 – 4 × 0.34 + 3 × 0.75 mm²

362 – 8 × 0.34 + 3 × 0.75 mm²

PUR (UL/CSA)

447 – 8 × 0.5 + 3 × 1.0 mm²

3 Cable Length

5.0 m

0500

10.0 m

1000

Technical Data

Operating voltage

24 V DC

Total current

max. 10 A

Protection

IP65, IP67

Temperature range

-20...+70 °C, depending on cable quality

Contact Layout

Contact 1

(+)

Contact 3

(-)

Contact 4

(NO)/(S1)

Contact 5

(Earth)

LED display

LED (green): power / LED (yellow): (S1)

Article No.

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

8 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Further cable lengths on request.

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals:

Exact12

4-way
without LED



Exact12

8-way
without LED



1 Form		84412	88412
Type		without LED, 4-pole	without LED, 4-pole
Contact layout		<p>M12-Females 4-pole</p> <p>for 1 signal per port</p>	<p>M12-Females 4-pole</p> <p>for 1 signal per port</p>
2 Cable Type		Jacket Color – No./diameter of wires	
PUR/PVC		gray	gray
PUR (UL/CSA)		333 – 4 × 0.34 + 3 × 0.75 mm ²	362 – 8 × 0.34 + 3 × 0.75 mm ²
			447 – 8 × 0.5 + 3 × 1.0 mm ²
3 Cable Length			
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		125 V AC/DC	
Total current		max. 10 A	
Protection		IP65, IP67	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
Contact 1		(+)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0 – – – – –	– – – – –
		1 Form	2 Cable Type 3 Cable Length
Notes		Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals:  

Exact12

4-way
for PNP signals 24 V DC



Exact12

8-way
for PNP signals 24 V DC



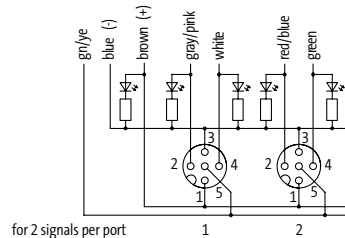
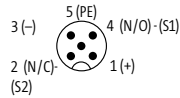
1 Form

84510

Type
Contact layout

PNP, 5-pole

M12-Females 5-pole

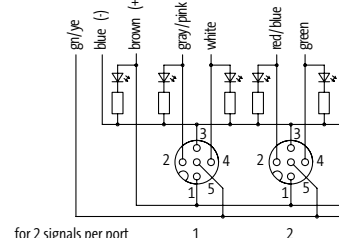
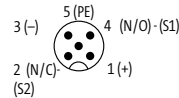


for 2 signals per port

88510

PNP, 5-pole

M12-Females 5-pole



for 2 signals per port

2 Cable Type

Jacket Color – No./diameter of wires

PUR/PVC

gray

gray

PUR (UL/CSA)

363 – 8 × 0.34 + 3 × 0.75 mm²

398 – 16 × 0.34 + 3 × 0.75 mm²

448 – 8 × 0.5 + 3 × 1.0 mm²

452 – 16 × 0.5 + 3 × 1.0 mm²

3 Cable Length

3.0 m

0300

5.0 m

0500

10.0 m

1000

15.0 m

1500

Technical Data

Operating voltage

24 V DC

Total current

max. 10 A

Protection

IP65, IP67

Temperature range

-20...+70 °C, depending on cable quality

Contact Layout

Contact 1

(+)

Contact 2

(NC)/(S2)

Contact 3

(-)

Contact 4

(NO)/(S1)

Contact 5

(Earth)

LED display

LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

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

8 0 0 0

-

-

1 Form

2 Cable Type

3 Cable Length

Notes

Further cable lengths on request.

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable



Exact12

4-way
for NPN signals 24 V DC



Exact12

8-way
for NPN signals 24 V DC



1 Form		84511	88511
Type		NPN, 5-pole	NPN, 5-pole
Contact layout		<p>M12-Females 5-pole</p> <p>for 2 signals per port</p>	<p>M12-Females 5-pole</p> <p>for 2 signals per port</p>
2 Cable Type		Jacket Color – No./diameter of wires	
		gray	gray
PUR/PVC		363 – 8 × 0.34 + 3 × 0.75 mm ²	398 – 16 × 0.34 + 3 × 0.75 mm ²
PUR (UL/CSA)		448 – 8 × 0.5 + 3 × 1.0 mm ²	452 – 16 × 0.5 + 3 × 1.0 mm ²
3 Cable Length			
5.0 m		0500	
10.0 m		1000	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 10 A	
Protection		IP65, IP67	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
Contact 1		(+)	
Contact 2		(NC)/(S2)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0 – – – – –	– – – – –
		1 Form	2 Cable Type
			3 Cable Length
Notes		Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals:  

Exact12

4-way
without LED



Exact12

8-way
without LED



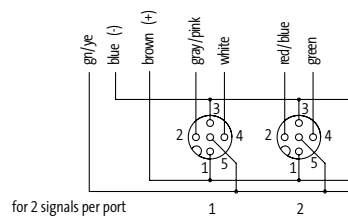
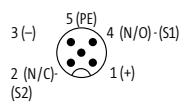
1 Form

84512

without LED, 5-pole

Type
Contact layout

M12-Females 5-pole

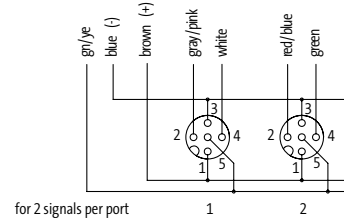
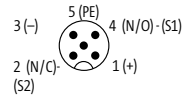


for 2 signals per port

88512

without LED, 5-pole

M12-Females 5-pole



for 2 signals per port

2 Cable Type

Jacket Color – No./diameter of wires

gray

gray

PUR/PVC

363 – 8 × 0.34 + 3 × 0.75 mm²

398 – 16 × 0.34 + 3 × 0.75 mm²

PUR (UL/CSA)

448 – 8 × 0.5 + 3 × 1.0 mm²

452 – 16 × 0.5 + 3 × 1.0 mm²

3 Cable Length

5.0 m

0500

10.0 m

1000

Technical Data

Operating voltage

125 V AC/DC

Total current

max. 10 A

Protection

IP65, IP67

Temperature range

-20...+70 °C, depending on cable quality

Contact Layout

Contact 1

(+)

Contact 2

(NC)/(S2)

Contact 3

(-)

Contact 4

(NO)/(S1)

Contact 5

(Earth)

Article No.

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

8 0 0 0

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-

1 Form

2 Cable Type

3 Cable Length

Notes

Further cable lengths on request.

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

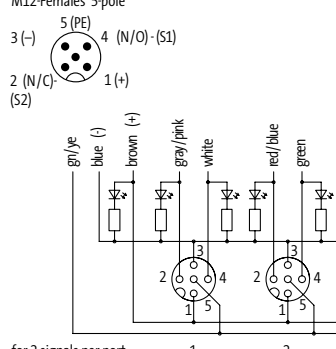
- with molded homerun cable
- Homerun cable with spring clamp terminals

Approvals:  

Exact12

8-way
for PNP signals 24 V DC



1 Form		98510	
Type		PNP, 5-pole	
Contact layout		<p>M12-Females 5-pole</p>  <p>for 2 signals per port</p>	
2 Cable Type		Jacket Color – No./diameter of wires	
PUR/PVC		<p>gray</p> <p>398 – 16 × 0.34 + 3 × 0.75 mm²</p>	
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Protection		IP65, IP67	
Operating voltage		24 V DC	
Total current		max. 10 A	
Temperature range		-20...+70 °C, depending on cable quality	
Contact Layout			
Contact 1		(+) (NC)/(S2)	
Contact 2		(-) (NO)/(S1)	
Contact 3		(Earth)	
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	
Article No.			
The composition of your article number is explained on page 3.1.i		<div>8000 - 98510 - - - -</div>	
		1 Form	2 Cable Type
		3 Cable Length	
Notes			
		Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:  

Exact12

4-way
for PNP signals 24 V DC



Exact12

8-way
for PNP signals 24 V DC



1	Form	84400	88400
Type	PNP, 4-pole	PNP, 4-pole	
Contact layout	<div>M12-Females 4-pole</div> <div><div><div>3 (-)</div><div>5 (PE)</div><div>4 (N/O)-(S1)</div><div>2</div><div>1 (+)</div></div><div><div>-1</div><div>+1</div><div>1</div><div>3</div><div>PE</div><div>4</div><div>2</div><div>+2</div><div>-2</div></div></div> <div><div><div>PE -1</div><div>-2</div><div>+1</div><div>+2</div><div>1</div><div>2</div></div><div><div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div></div><div>for 1 signal per port</div><div>1</div><div>2</div></div><div><div>M12-Females 4-pole</div><div><div><div>3 (-)</div><div>5 (PE)</div><div>4 (N/O)-(S1)</div><div>2</div><div>1 (+)</div></div><div><div>-1</div><div>+1</div><div>1</div><div>3</div><div>PE</div><div>4</div><div>2</div><div>+2</div><div>-2</div></div></div><div><div><div>PE -1</div><div>-2</div><div>+1</div><div>+2</div><div>1</div><div>2</div></div><div><div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div></div><div>for 1 signal per port</div><div>1</div><div>2</div></div></div></div></div>		
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
Contact 1		(+)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1)	
Article No.			
The composition of your article number is explained on page 3.1.i		<div><div><div>8</div><div>0</div><div>0</div><div>0</div></div><div>-</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>-</div><div><div>0</div><div>0</div><div>0</div></div><div></div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div>	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:

Exact12

4-way
for NPN signals 24 V DC



Exact12

8-way
for NPN signals 24 V DC



1 Form		84401		88401	
Type		NPN, 4-pole		NPN, 4-pole	
Contact layout		<div>M12-Females 4-pole</div> <div><div><div>3 (-)</div><div>2</div><div>5 (PE)</div><div>4 (N/O)-(S1)</div><div>1 (+)</div></div><div><div>-1</div><div>+1</div><div>1</div><div>3</div><div>PE</div><div>4</div><div>2</div><div>+2</div><div>-2</div></div></div> <div><div>PE -1 -2 +1 +2 1 2</div><div></div><div>for 1 signal per port 1 2</div></div>		<div>M12-Females 4-pole</div> <div><div><div>3 (-)</div><div>2</div><div>5 (PE)</div><div>4 (N/O)-(S1)</div><div>1 (+)</div></div><div><div>5</div><div>7</div><div>15</div><div>8</div><div>6</div></div></div> <div><div>PE -1 -2 +1 +2 1 2</div><div></div><div>for 1 signal per port 1 2</div></div>	
Technical Data					
Operating voltage		24 V DC			
Operating current per contact		max. 4 A			
Total current		max. 8 A			
Protection		IP65, IP67			
Housing		Plastic, flame retardant			
Temperature range		-20...+70 °C			
Contact Layout					
Contact 1		(+)			
Contact 3		(-)			
Contact 4		(NO)/(S1)			
Contact 5		(Earth)			
LED display		LED (green): power / LED (yellow): (S1)			
Article No.					
The composition of your article number is explained on page 3.1.i		<div><div><div>8</div><div>0</div><div>0</div><div>0</div></div><div>-</div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>-</div><div><div>0</div><div>0</div><div>0</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div>			
		1 Form			
Notes					

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:  

Exact12

4-way
without LED



Exact12

8-way
without LED



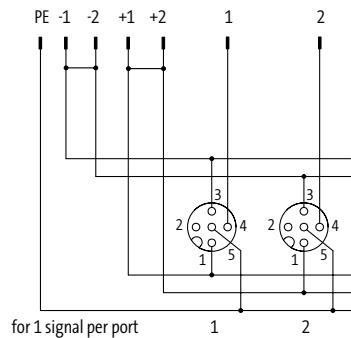
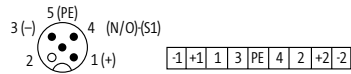
1 Form

Type
Contact layout

84402

without LED, 4-pole

M12 Females 4-pole

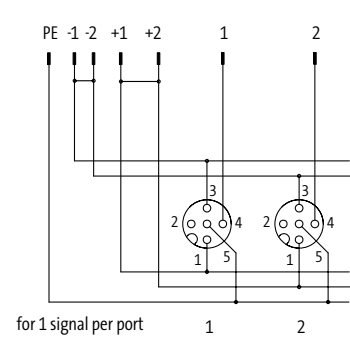
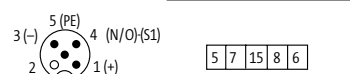


for 1 signal per port

88402

without LED, 4-pole

M12-Females 4-pole



for 1 signal per port

Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)

Article No.

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

8 0 0 0 - - - - - - - - - - 0 0 0 0 0 0 0 0

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:

Exact12

4-way
for PNP signals 24 V DC



Exact12

8-way
for PNP signals 24 V DC



1 Form		84500	88500
Type Contact layout	PNP, 5-pole		PNP, 5-pole
	<p>M12-Females 5-pole</p> <p> </p> <p> </p> <p>for 2 signals per port</p>		<p>M12-Females 5-pole</p> <p> </p> <p> </p> <p>for 2 signals per port</p>
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
Contact 1		(+)	
Contact 2		(NC)/(S2)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	
Article No.			
The composition of your article number is explained on page 3.1.i		<div>8000</div> <div>-</div> <div>000</div> <div>0000</div>	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:  

Exact12

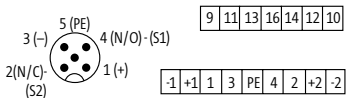
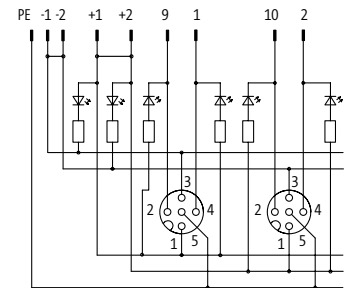
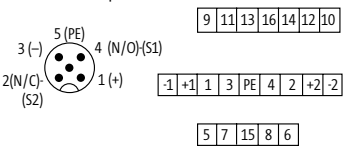
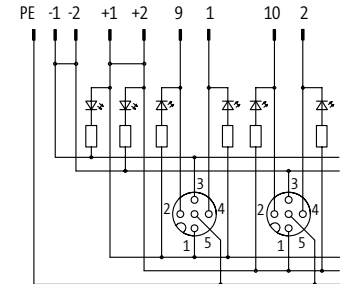
4-way
for NPN signals 24 V DC



Exact12

8-way
for NPN signals 24 V DC



1	Form	84501	88501
Type		NPN, 5-pole	NPN, 5-pole
Contact layout		<p>M12-Females 5-pole</p>   <p>for 2 signals per port 1 2</p>	<p>M12-Females 5-pole</p>   <p>for 2 signals per port 1 2</p>
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
Contact 1		(+)	
Contact 2		(NC)/(S2)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	
Article No.			
The composition of your article number is explained on page 3.1.i		<div>8</div> <div>0</div> <div>0</div> <div>0</div>	<div>0</div> <div>0</div> <div>0</div> <div>0</div>
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals:

Exact12

4-way
without LED



Exact12

8-way
without LED



1 Form		84502	88502
Type		without LED, 5-pole	without LED, 5-pole
Contact layout		<p>M12-Females 5-pole</p> <p>for 2 signals per port</p>	<p>M12-Females 5-pole</p> <p>for 2 signals per port</p>
Technical Data			
Operating voltage		125 V AC/DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
Contact 1		(+)	
Contact 2		(NC)/(S2)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		<div> <div>8000</div> <div>-</div> <div></div> <div>-</div> <div>000</div> <div></div> <div>0000</div> </div>	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

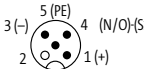
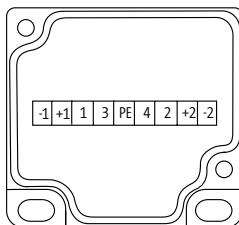
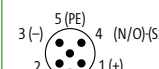
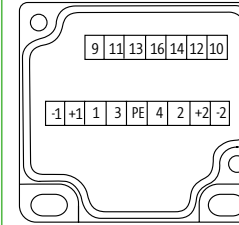
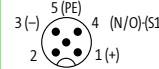
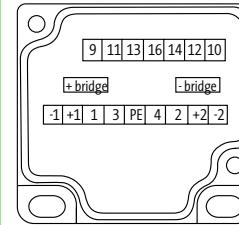
- Field-wireable
- with homerun cable

Approvals: 

Exact12

for 4-way distribution boxes



1 Form	84459	84559	84659
	4-pole Screw plug-in terminals	5-pole Screw plug-in terminals	5-pole, potential separation as option Screw plug-in terminals
Contact layout	<p>M12-Females 4-pole</p>   <p>for 1 signal per port</p>	<p>M12-Females 5-pole</p>   <p>for 2 signals per port</p>	<p>M12 Females 5-pole</p>   <p>for 2 signals per port</p>
2 Cable Type	Jacket Color – No./diameter of wires		
	gray	gray	gray
PUR/PVC	333 – 4 × 0.34 + 3 × 0.75 mm ²	363 – 8 × 0.34 + 3 × 0.75 mm ²	374 – 8 × 0.34 + 5 × 0.75 mm ²
PUR (UL/CSA)		448 – 8 × 0.5 + 3 × 1.0 mm ²	
3 Cable Length			
3.0 m	0300		
5.0 m	0500		
10.0 m	1000		
15.0 m	1500		
20.0 m	2000		
25.0 m	2500		
30.0 m	3000		
Technical Data			
Temperature range	-20...+80 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	<div>8 0 0 0 - - - - -</div>		
	1 Form	2 Cable Type	3 Cable Length
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Field-wireable

– with homerun cable

Exact12

for 8-way distribution boxes



Approvals:


1 Form		88459	88559	88659
Type		4-pole	5-pole	5-pole, potential separation as option
		Screw plug-in terminals	Screw plug-in terminals	Screw plug-in terminals
Contact layout		<p>M12 Females 4-pole</p> <p>for 1 signal per port</p>	<p>M12-Females 5-pole</p> <p>for 2 signals per port</p>	<p>M12-Females 5-pole</p> <p>for 2 signals per port</p>
2 Cable Type		Jacket Color – No./diameter of wires		
		gray	gray	gray
PUR/PVC		362 – 8 × 0.34 + 3 × 0.75 mm ²	398 – 16 × 0.34 + 3 × 0.75 mm ²	404 – 16 × 0.34 + 5 × 0.75 mm ²
PUR (UL/CSA)		447 – 8 × 0.5 + 3 × 1.0 mm ²	452 – 16 × 0.5 + 3 × 1.0 mm ²	
3 Cable Length				
3.0 m		0300		
5.0 m		0500		
10.0 m		1000		
15.0 m		1500		
20.0 m		2000		
25.0 m		2500		
30.0 m		3000		
Technical Data				
Temperature range		-20...+80 °C, depending on cable quality		
Article No.				
The composition of your article number is explained on page 3.1.i		8 0 0 0	-	-
		1 Form	2 Cable Type	3 Cable Length
Notes				

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Field-wireable

– without homerun cable

Approvals: 

Exact12

Spring clamp plug-in terminals
for 4-, and 8-way distribution boxes



Exact12

Screw plug-in terminals
for 4-, and 8-way distribution boxes



1 Form

88549

88559

Type

5-pole

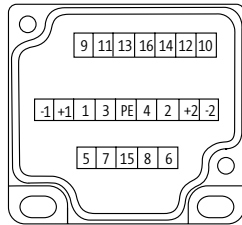
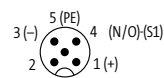
5-pole

Spring clamp plug-in terminals

Screw plug-in terminals

Contact layout

M12-Females 5-pole



for 2 signals per port

Technical Data

Total current	max. 2 × 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16)	Screw plug-in terminals: max. 1.5 mm ² (AWG 16)
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C, depending on cable quality	

Article No.

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

8 0 0 0

-

0 0 0

0 0 0 0


1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

- Field-wireable
- without homerun cable

Approvals: 

Exact12

Spring clamp plug-in terminals
for 4-, and 8-way distribution boxes



Exact12

Screw plug-in terminals
for 4-, and 8-way distribution boxes



1	Form	88549		88559	
	Type	5-pole		5-pole	
	Contact layout	Spring clamp plug-in terminals		Screw plug-in terminals	
		<div>M12-Females 5-pole</div> <div></div> <div></div> <div>for 2 signals per port</div>			
Technical Data					
Total current		max. 2 × 8 A			
Connection		Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)		Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Housing		Plastic, flame retardant			
Temperature range		-20...+80 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		8 0 0 0		0 0 0	
		- - - - -		- - - - -	
		1 Form			
Notes					

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

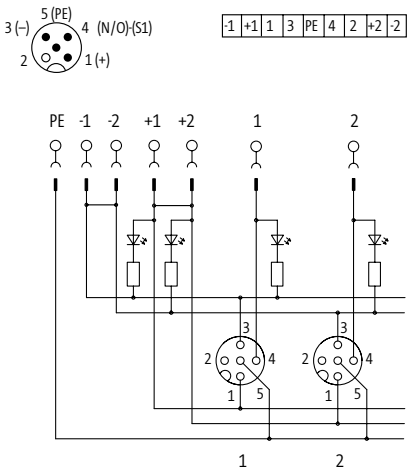
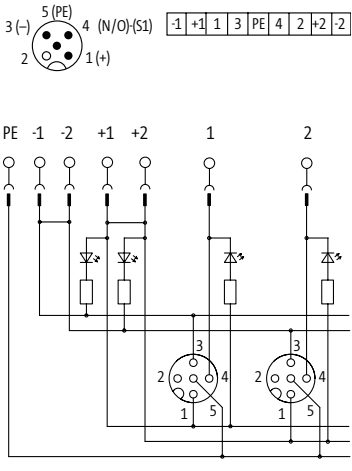
– Field-wireable

Approvals:  

Exact12

4-way



1 Form	84440	84450	84451
Type	PNP, 4-pole	PNP, 4-pole	NPN, 4-pole
	Spring clamp plug-in terminals	Screw plug-in terminals	Screw plug-in terminals
Contact layout	<div>M12-Females 4-pole</div> <div></div> <div>for 1 signal per port</div>		<div>M12-Females 4-pole</div> <div></div> <div>for 1 signal per port</div>
Technical Data			
Operating voltage	24 V DC		
Operating current per contact	max. 4 A		
Total current	max. 8 A		
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16) Screw plug-in terminals: max. 1.5 mm² (AWG 16)		
Protection	IP65, IP67		
Housing	Plastic, flame retardant		
Temperature range	-20...+70 °C		
Contact Layout			
Contact 1	(+) (-) (NO)/(S1) (Earth)		
Contact 3			
Contact 4			
Contact 5			
LED display	LED (green): power / LED (yellow): (S1)		
Article No.			
The composition of your article number is explained on page 3.1.i	<div><div><div>8</div><div>0</div><div>0</div><div>0</div></div><div>-</div><div><div></div><div></div><div></div><div></div></div><div>-</div><div><div>0</div><div>0</div><div>0</div></div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div>		
	1 Form		
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals: 

Exact12

4-way



1 Form

84452

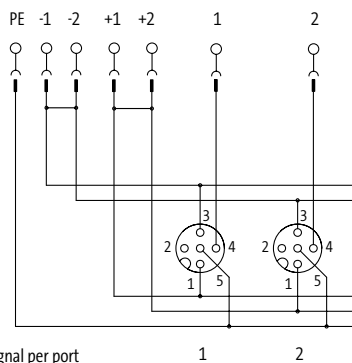
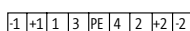
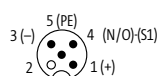
Type

without LED, 4-pole

Screw plug-in terminals

Contact layout

M12-Females 4-pole



for 1 signal per port

Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Connection	Screw plug-in terminals: max. 1.5 mm ² (AWG 16)
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)

Article No.

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

8 0 0 0

-

8 4 4 5 2

-

0 0 0

0 0 0 0

1 Form

Notes

M12 Distribution Systems (Plastic)

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals:  

Exact12

4-way



1 Form

84540

84550

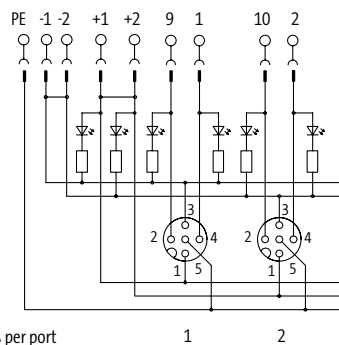
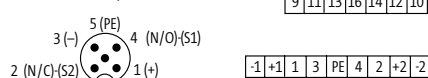
Type

PNP, 5-pole

PNP, 5-pole

Contact layout

M12-Females 5-pole



for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16) Screw plug-in terminals: max. 1.5 mm ² (AWG 16)
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

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

8 0 0 0

-

0 0 0

0 0 0 0

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

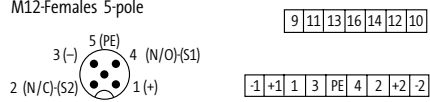
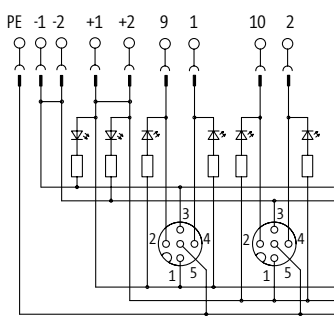
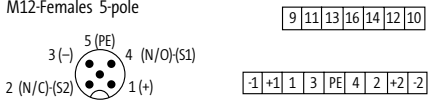
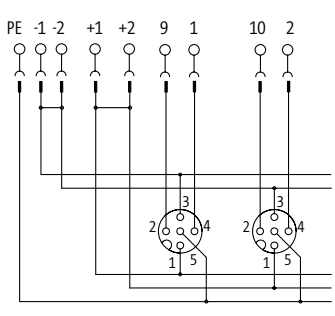
– Field-wireable

Approvals: 

Exact12

4-way



1 Form		84551	84552
Approvals		cULus	
Type		NPN, 5-pole	without LED, 5-pole
		Screw plug-in terminals	Screw plug-in terminals
Contact layout		<p>M12-Females 5-pole</p>   <p>for 2 signals per port</p>	<p>M12-Females 5-pole</p>   <p>for 2 signals per port</p>
Technical Data			
Operating voltage		24 V DC	125 V AC/DC
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Connection		Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
Contact 1		(+)	
Contact 2		(NC)/(S2)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	–
Article No.			
The composition of your article number is explained on page 3.1.i		<div>8</div> <div>0</div> <div>0</div> <div>0</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>0</div> <div>0</div> <div>0</div> <div>–</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div>	
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals:  

Exact12

8-way



1 Form

88440

88450

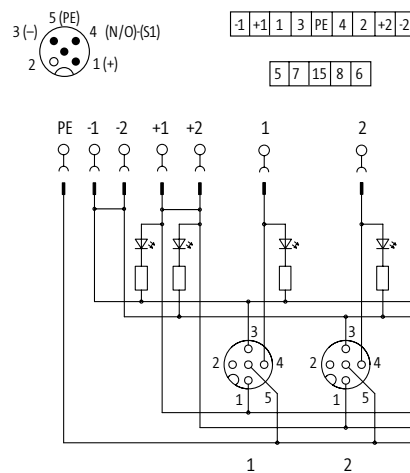
Type

PNP, 4-pole

PNP, 4-pole

Contact layout

M12-Females 4-pole



for 1 signal per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16) Screw plug-in terminals: max. 1.5 mm ² (AWG 16)
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

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

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1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

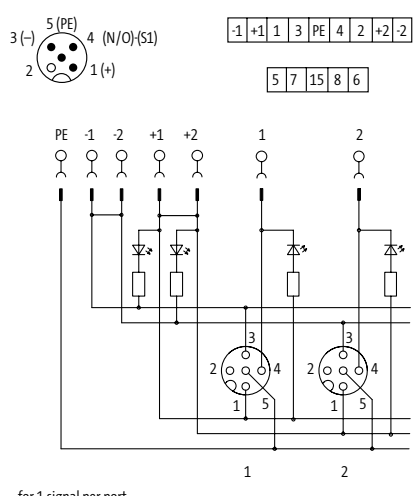
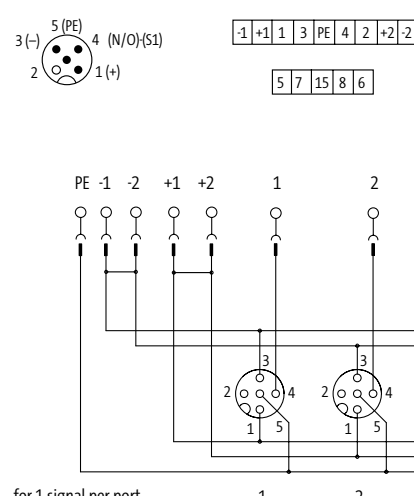
– Field-wireable

Approvals: 

Exact12

8-way



1 Form		88451	88452
Approvals		cULus	
Type		NPN, 4-pole	without LED, 4-pole
		Screw plug-in terminals	Screw plug-in terminals
Contact layout		<p>M12-Females 4-pole</p>  <p>for 1 signal per port</p>	<p>M12-Females 4-pole</p>  <p>for 1 signal per port</p>
Technical Data			
Operating voltage		24 V DC	125 V AC/DC
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Connection		Screw plug-in terminals: max. 1.5 mm ² (AWG 16)	
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
Contact 1		(+)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1)	–
Article No.			
The composition of your article number is explained on page 3.1.i		<div>8</div> <div>0</div> <div>0</div> <div>0</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div>	<div>0</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div>
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals:  

Exact12

8-way



1 Form

88540

88550

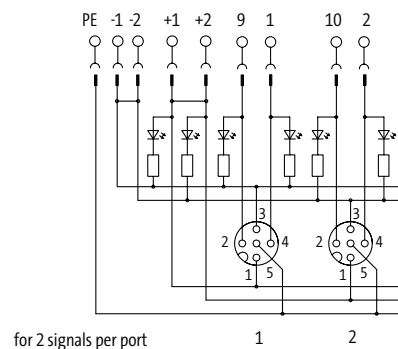
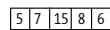
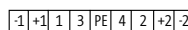
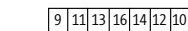
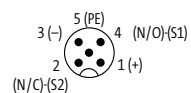
Type

PNP, 5-pole

PNP, 5-pole

Contact layout

M12-Females 5-pole



for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Connection	Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16) Screw plug-in terminals: max. 1.5 mm ² (AWG 16)
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

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

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1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

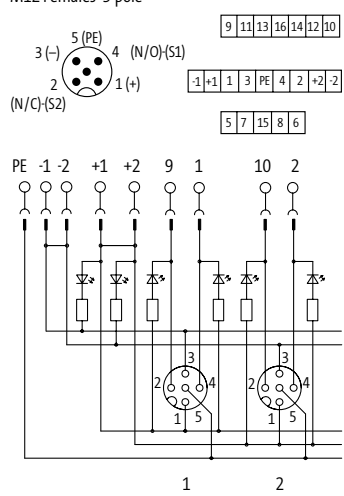
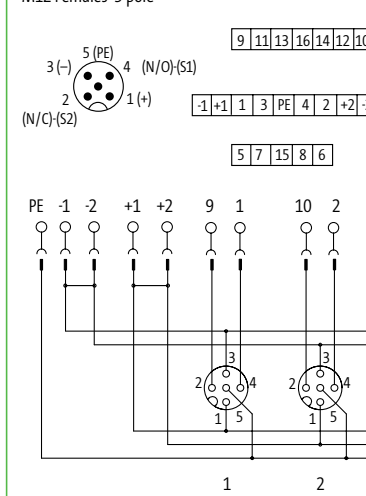
– Field-wireable

Approvals: 

Exact12

8-way



1 Form		88551	88552
Approvals		cULus	
Type		NPN, 5-pole	without LED, 5-pole
		Screw plug-in terminals	Screw plug-in terminals
Contact layout		<p>M12 Females 5-pole</p>  <p>for 2 signals per port</p>	<p>M12 Females 5-pole</p>  <p>for 2 signals per port</p>
Technical Data			
Operating voltage		24 V DC	125 V AC/DC
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Connection		Screw plug-in terminals: max. 1.5 mm ² (AWG 16)	
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+70 °C	
Contact Layout			
Contact 1		(+)	
Contact 2		(NC)/(S2)	
Contact 3		(-)	
Contact 4		(NO)/(S1)	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	–
Article No.			
The composition of your article number is explained on page 3.1.i		<div>8</div> <div>0</div> <div>0</div> <div>0</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>–</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div>	<div>0</div> <div>0</div> <div>0</div> <div>0</div>
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– rear connection



Exact12

rear connection



Exact12

rear connection
with potential separation



1 Form

88580

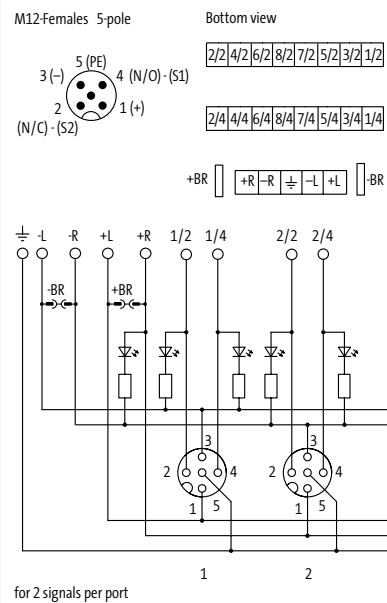
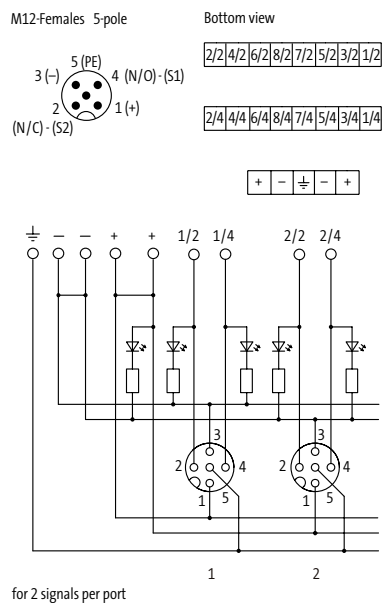
88680

Type

PNP, 5-pole

PNP, 5-pole

Contact layout



Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 2 × 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

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

8 0 0 0

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1 Form

0 0 0

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Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– rear connection

Approvals:

Exact12

pluggable rear connection



Exact12

pluggable rear connection
with potential separation



1 Form	88590	88690
Type	PNP, 5-pole Spring clamp plug-in terminals	PNP, 5-pole Spring clamp plug-in terminals
Contact layout	<p>M12-Females 5-pole Bottom view</p> <p>for 2 signals per port</p>	<p>M12-Females 5-pole Bottom view</p> <p>for 2 signals per port</p>
Technical Data	<p>Operating voltage 24 V DC</p> <p>Operating current per contact max. 4 A</p> <p>Total current max. 2 × 8 A</p> <p>Protection IP65, IP67</p> <p>Housing Plastic, flame retardant</p> <p>Temperature range -20...+70 °C</p>	
Contact Layout	<p>Contact 1 (+)</p> <p>Contact 2 (NC)/(S2)</p> <p>Contact 3 (-)</p> <p>Contact 4 (NO)/(S1)</p> <p>Contact 5 (Earth)</p> <p>LED display LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)</p>	
Article No.	<p>The composition of your article number is explained on page 3.1.i</p> <p>8 0 0 0 - - - - - 0 0 0 0 0 0 0 0</p>	
Notes	<p>1 Form</p>	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M12 plug connection

Approvals:  

Exact12

4-way



Exact12

8-way



Exact12

4-way



1 Form

84470

88460

84560

Type

5-, 4-pole

5-, 4-pole

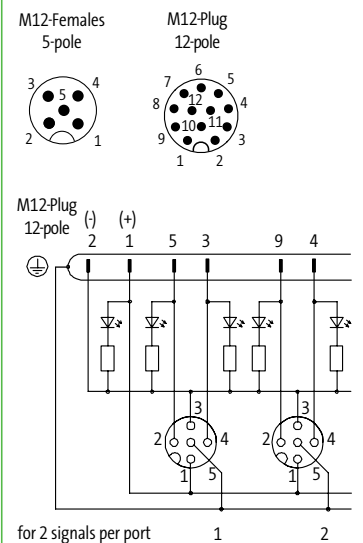
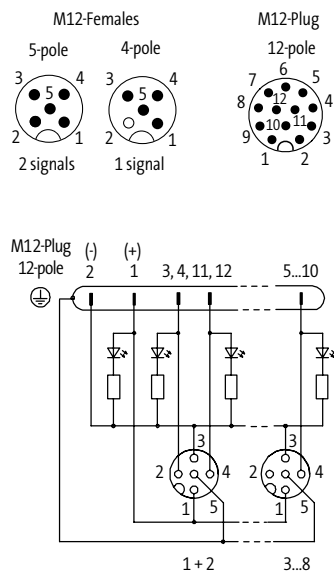
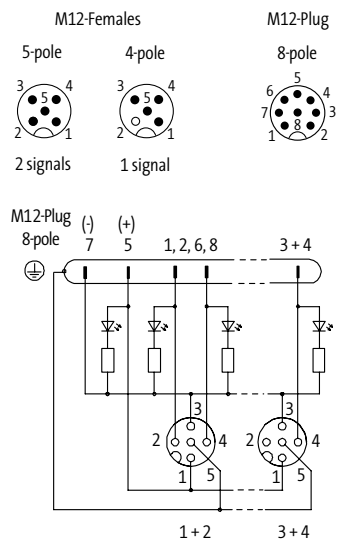
5-pole

Contact layout

M12 plug connection, 8-pole

M12 plug connection, 12-pole

M12 plug connection, 12-pole



Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 2 A	max. 1.5 A
Total current	max. 2 A	max. 1.5 A
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

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

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1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M23 plug connection

Approvals:  

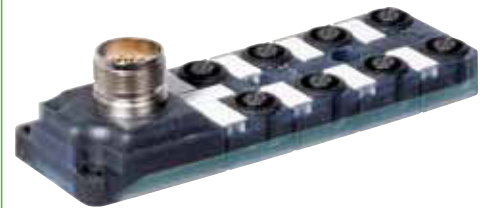
Exact12

4-way



Exact12

8-way



1 Form

84530

88430

Type

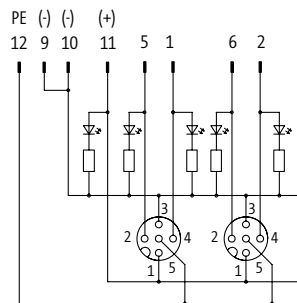
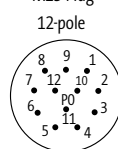
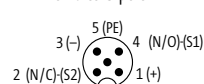
5-pole

4-pole

Contact layout

M12-Females 5-pole

M23-Plug



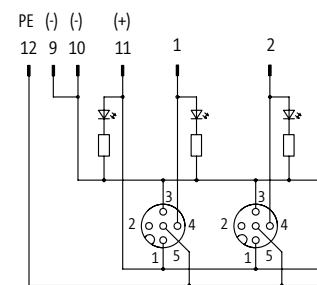
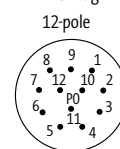
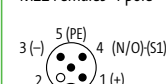
for 2 signals per port

1

2

M12-Females 4-pole

M23-Plug



for 1 signal per port

1

2

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+75 °C

Contact Layout

Contact 1	(+)	
Contact 2	(NC)/(S2)	–
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	LED (green): power / LED (yellow): (S1)

Article No.

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1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M23 plug connection

Approvals:  

Exact12

4-way



Exact12

8-way



1 Form

84520

88520

Type

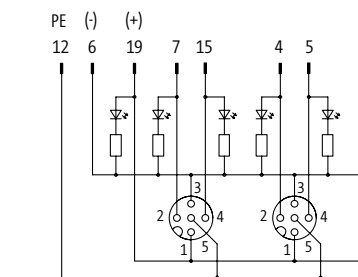
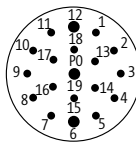
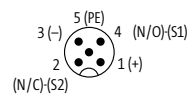
5-pole

5-pole

Contact layout

M12-Females 5-pole

M23-Plug 19-pole



for 2 signals per port

1

2

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 10 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+80 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1/S2) / LED (white): signal (S2)

Article No.

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1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For general applications

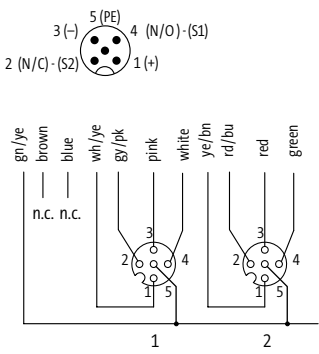
– with molded homerun cable

Exact12 UNIVERSAL

4-way




Approvals:  Listed

1 Form		84712
Type	without LED, 5-pole (for analog signals)	
Contact layout	<p>M12-Females 5-pole</p>  <p>free arrangeable, contact 1:1 on terminals for 4 signals per port, PIN5 bridged on terminals</p>	
2 Cable Type		Jacket Color – No./diameter of wires
		gray
PUR/PVC		398 – 16 × 0.34 + 3 × 0.75 mm ²
3 Cable Length		
3.0 m		0300
5.0 m		0500
10.0 m		1000
15.0 m		1500
Technical Data		
Operating voltage		42 V AC/DC
Total current		max. 10 A
Protection		IP65, IP67
Temperature range		-20...+70 °C, depending on cable quality
Contact Layout		
Contact 1		(S1)
Contact 2		(S2)
Contact 3		(S3)
Contact 4		(S4)
Contact 5		(Earth)
Article No.		
The composition of your article number is explained on page 3.1.i		<div>8 0 0 0</div> <div>–</div> <div>8 4 7 1 2</div> <div>–</div> <div>– – –</div> <div>– – – –</div>
		<div>1 Form</div> <div>2 Cable Type</div> <div>3 Cable Length</div>
Notes		

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For general applications

– Basic module

Approvals: 
Listed

MVP12 UNIVERSAL

4-way



1 Form		44702
Type	without LED, 5-pole (for analog signals)	
Contact layout	<div> M12-Females 5-pole <div> <div> <div>11</div><div>10</div><div>9</div><div>14</div><div>13</div><div>7</div><div>5</div> </div> <div> <div>bridge 1</div><div>bridge 2</div> </div> <div> <div>4</div><div>3</div><div>2</div><div>1</div><div>12</div><div>15</div><div>16</div><div>6</div><div>8</div> </div> <div> <div>17</div><div>19</div><div>21</div><div>20</div><div>18</div> </div> <div> <div>bridge 3</div><div>bridge 4</div> </div> </div> <div> <div> <div>21</div><div>1</div><div>2</div><div>3</div><div>17</div><div>4</div> </div> <div> <div>5</div><div>6</div><div>7</div><div>18</div><div>8</div> </div> </div> <div> <div> <div> <div>3</div><div>2</div><div>1</div><div>4</div> </div> <div> <div>3</div><div>2</div><div>1</div><div>4</div> </div> </div> <div> <div> <div>3</div><div>2</div><div>1</div><div>4</div> </div> <div> <div>3</div><div>2</div><div>1</div><div>4</div> </div> </div> </div> <div> <div>1</div><div>2</div> </div> </div> <p>free arrangeable, contact 1:1 on terminals for 5 signals per port, possibilty to bridge each PIN5</p>	
Technical Data		
Operating voltage	max. 42 V AC/DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C	
Contact Layout		
Contact 1	(S1)	
Contact 2	(S2)	
Contact 3	(S3)	
Contact 4	(S4)	
Contact 5	(S5)/(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	<div> <div>8</div><div>0</div><div>0</div><div>0</div> </div> <div>-</div> <div> <div>4</div><div>4</div><div>7</div><div>0</div><div>2</div> </div> <div>-</div> <div> <div>0</div><div>0</div><div>0</div> </div> <div> <div>0</div><div>0</div><div>0</div><div>0</div> </div>	
	<div>1 Form</div>	
Notes		

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For general applications

– with homerun cable

MVP12 UNIVERSAL



1 Form		84759
Type	universal	
	Screw plug-in terminals	
Contact layout	<p>M12-Females 5-pole</p> <p>5 (S5)-(PE) 3 (S3) 4 (S4) 2 (S2) 1 (S1)</p> <p>free arrangeable, contact 1:1 on terminals</p>	
2 Cable Type		Jacket Color – No./diameter of wires
		gray
PUR/PVC		533 – 18 × 0.75 mm ²
3 Cable Length		
1.0 m		0100
5.0 m		0500
Technical Data		
Total current		max. 8 A
Temperature range		-20...+80 °C, depending on cable quality
Article No.		
The composition of your article number is explained on page 3.1.i		<div>8 0 0 0</div> <div>–</div> <div>8 4 7 5 9</div> <div>–</div> <div>– – –</div> <div>– – – –</div>
		<div>1 Form</div> <div>2 Cable Type</div> <div>3 Cable Length</div>
Notes		

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For general applications

– Field-wireable

MVP12 UNIVERSAL



1	Form	84749		84759	
Approvals				cULus	
Type		universal		universal	
		Spring clamp plug-in terminals		Screw plug-in terminals	
Contact layout		<div>M12-Females 5-pole</div> <div><div><div>5 (S5)-(PE)</div><div>3 (S3)</div><div>2 (S2)</div><div>4 (S4)</div><div>1 (S1)</div></div><div><div><div>11109141375</div><div>432112151668</div><div><div>1719212018</div><div></div><div></div><div></div><div></div></div></div></div><div>free arrangeable, contact 1:1 on terminals</div></div>			
Technical Data					
Total current		max. 8 A			
Connection		Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)		Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Housing		Plastic, flame retardant			
Temperature range		-20...+80 °C, depending on cable quality			
Article No.					
The composition of your article number is explained on page 3.1.i		<div><div><div><div>8</div><div>0</div><div>0</div><div>0</div></div><div>-</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>-</div><div><div><div>0</div><div>0</div><div>0</div></div><div><div>0</div><div>0</div><div>0</div></div></div><div><div><div>0</div><div>0</div><div>0</div><div>0</div></div></div></div></div>			
		1 Form			
Notes					

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For general applications

– Sets (basic module and cap)

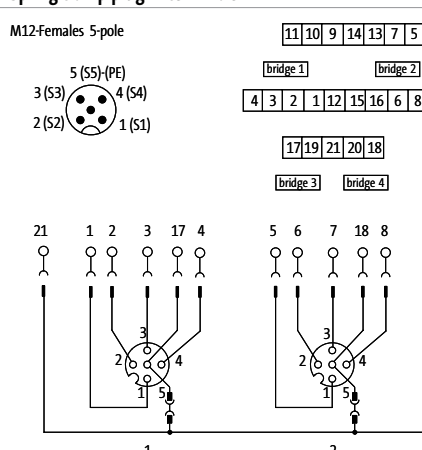
– Field-wireable

Approvals:  **UL** US
Listed

MVP12 UNIVERSAL

4-way



1 Form		44742	44752
Type		universal, without LED, 5-pole (for analog signals) Spring clamp plug-in terminals	universal, without LED, 5-pole (for analog signals) Screw plug-in terminals
Contact layout		<p>M12-Females 5-pole</p>  <p>free arrangeable, contact 1:1 on terminals for 5 signals per port, possibility to bridge each PIN5</p>	
Technical Data			
Operating voltage		max. 42 V AC/DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Connection		Spring clamp plug-in terminals: max. 1.5 mm ² (AWG 16)	Screw plug-in terminals: max. 1.5 mm ² (AWG 16)
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+80 °C	
Contact Layout			
Contact 1		(S1)	
Contact 2		(S2)	
Contact 3		(S3)	
Contact 4		(S4)	
Contact 5		(S5)/(Earth)	
Article No.			
The composition of your article number is explained on page 3.1.i		8 0 0 0	0 0 0 0
		1 Form	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For safety wiring

– Sets (basic module and cap)

– Field-wireable

MSDS8

without electrical feedback



MSDS8R

with electrical feedback



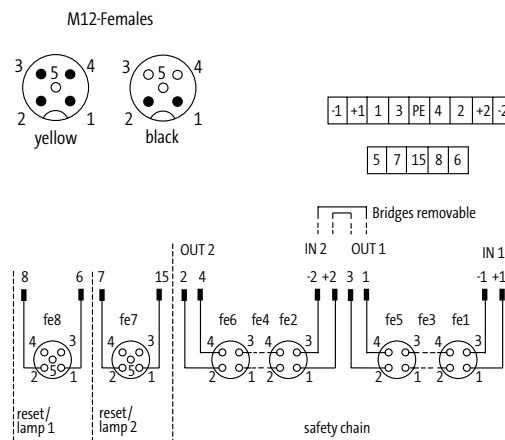
1 Form

98752

without LED

Screw plug-in terminals

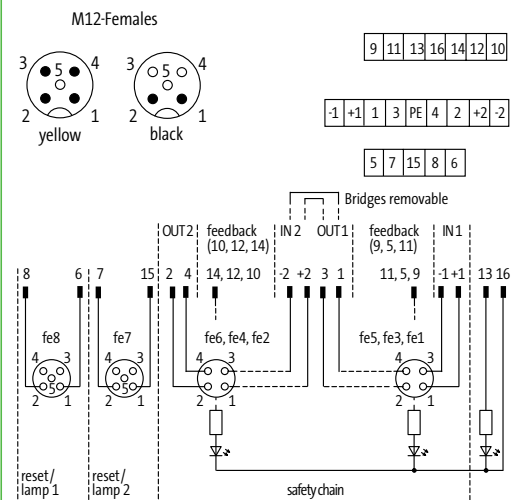
Contact layout



98750

with LED

Screw plug-in terminals



Technical Data

Operating voltage	24 V DC (EN 61131-2)
Operating current (chain)	max. per 1 A
Operating current (black females)	max. per 1 A
Isolation resistance	min. 1000 MOhm
Material group	(EN 60664-1) over voltage, category III

Contact Layout

Contact 1	MSDS: 11 (yellow), 13 (black); EMERGENCY-STOP: 11 (black)
Contact 2	MSDS: 12 (yellow), 14 (black); EMERGENCY-STOP: 12 (black)
Contact 3	MSDS: 21 (yellow); EMERGENCY-STOP: 21 (black)
Contact 4	MSDS: 22 (yellow); EMERGENCY-STOP: 22 (black)

LED display

–

LED (green): power / LED (yellow): EMERGENCY-STOP

Article No.

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

8 0 0 0

–

0 0 0

0 0 0 0

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

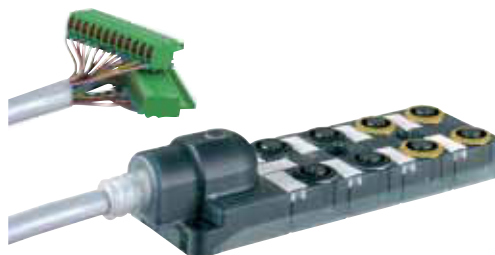
For safety wiring

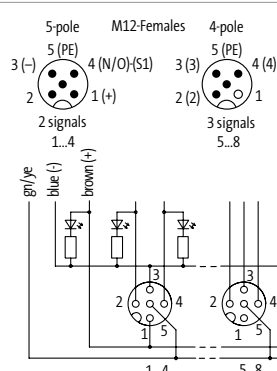
- with molded homerun cable
- Homerun cable with spring clamp terminals
- (EN ISO 13849-2)

Approvals:  

Exact12 Safety

8-way
for PNP signals 24 V DC



1 Form		98710	
Type		PNP, 5-pole, 4/3-pole	
Contact layout			
2 Cable Type		Jacket Color – No./diameter of wires	
		gray	
PUR/PVC		407 – 20 × 0.34 + 3 × 0.75 mm²	
3 Cable Length			
3.0 m		0300	
5.0 m		0500	
10.0 m		1000	
15.0 m		1500	
Technical Data			
Operating voltage		24 V DC	
Total current		max. 8 A	
Protection		IP65, IP67	
Temperature range		-20...+60 °C, depending on cable quality	
Contact Layout			
Contact 1		(+) port 1...4	
Contact 2		(NC)/(S2) port 1...4; (S1) port 5...8	
Contact 3		(-) port 1...4; (S2) port 5...8	
Contact 4		(NO)/(S1) port 1...4; (S3) port 5...8	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2) port 1...4	
Article No.			
The composition of your article number is explained on page 3.1.i		<div><div>8000</div><div>–</div><div>98710</div><div>–</div><div>— — —</div><div>— — — —</div></div>	
		<div>1 Form2 Cable Type3 Cable Length</div>	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For safety wiring

- Basic module
- (EN ISO 13849-2)

Approvals:  

Exact12 Safety

8-way
for PNP signals 24 V DC



1 Form		98700	
Type		PNP, 5-pole, 4/3-pole	
Contact layout		<div><div><div>5-pole</div><div>M12-Females</div><div>4-pole</div></div><div><div><div>5 (PE)</div><div>3 (-)</div><div>4 (N/O)(S1)</div><div>2 (N/C)(S2)</div><div>1 (+)</div></div><div><div>5 (PE)</div><div>3 (S2)</div><div>4 (S3)</div><div>2 (S1)</div><div>1</div></div></div><div><div>2 signals 1...4</div><div>3 signals 5...8</div></div><div><div>15 21 20 19 29 22 24</div><div>5 14 13 6 4 2 18 17 16 8 7</div><div>9 1 11 3 10</div></div></div> <div><div><div>11 9 10 1 2</div><div>13 14 15</div></div><div><div><div>1 2 3 4 5</div><div>1 2 3 4 5</div></div><div><div>1...4</div><div>5...8</div></div></div></div>	
Technical Data			
Operating voltage		24 V DC	
Operating current per contact		max. 4 A	
Total current		max. 8 A	
Protection		IP65, IP67	
Housing		Plastic, flame retardant	
Temperature range		-20...+60 °C	
Contact Layout			
Contact 1		(+) port 1...4	
Contact 2		(NC)/(S2) port 1...4; (S1) port 5...8	
Contact 3		(-) port 1...4; (S2) port 5...8	
Contact 4		(NO)/(S1) port 1...4; (S3) port 5...8	
Contact 5		(Earth)	
LED display		LED (green): power / LED (yellow): (S1) / LED (white): signal (S2) port 1...4	
Article No.			
The composition of your article number is explained on page 3.1.i		<div><div>8 0 0 0</div><div>-</div><div>9 8 7 0 0</div><div>-</div><div>0 0 0</div><div>0 0 0 0</div></div>	
		<div>1 Form</div>	
Notes			

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For safety wiring

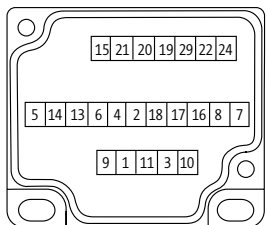
- Connection cap
- Homerun cable with spring clamp terminals
- (EN ISO 13849-2)

Approvals:  

Exact12 Safety

for 8-way distribution boxes



1 Form	98749
Type	5-, 4-pole
Contact layout	<p>5-pole M12-Females 4-pole</p> <p>5 (PE) 4 (N/O)-(S1) 3 (3) 5 (PE) 4 (4)</p> <p>3 (-) 2 1 (+) 2 (2) 1</p> <p>2 signals 3 signals</p> <p>1..4 5..8</p> 
2 Cable Type	Jacket Color – No./diameter of wires
PUR (UL/CSA)	gray 408 – 16 × 0.5 + 3 × 1.0 mm ²
3 Cable Length	
3.0 m	0300
5.0 m	0500
10.0 m	1000
15.0 m	1500
20.0 m	2000
Technical Data	
Temperature range	-20...+80 °C, depending on cable quality
Article No.	
The composition of your article number is explained on page 3.1.i	<div>8 0 0 0 – 9 8 7 4 9 – _ _ _ _</div>
	<div>1 Form 2 Cable Type 3 Cable Length</div>
Notes	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

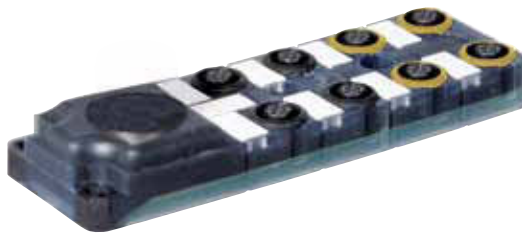
For sensors and actuators

- rear connection
- (EN ISO 13849-2)

Approvals:   Listed

Exact12 Safety

rear connection
with potential separation



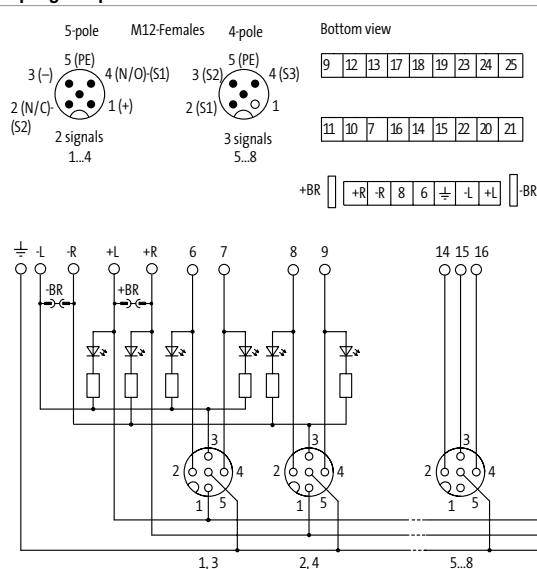
1 Form

98790

Type

PNP, 5-pole, 4/3-pole

Contact layout



Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+60 °C

Contact Layout

Contact 1	(+) port 1...4
Contact 2	(NC)/(S2) port 1...4; (S1) port 5...8
Contact 3	(-) port 1...4; (S2) port 5...8
Contact 4	(NO)/(S1) port 1...4; (S3) port 5...8
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2) port 1...4

Article No.

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

8 0 0 0

- 9 8 7 9 0











- 0 0 0

0 0 0 0

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

Mounting accessories			Art-No.
	Torque wrench set M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	7000-99102-0000000
	Torque wrench M12 (SW13)		7000-99109-0000000
	Torque wrench M12 (SW14)		7000-99108-0000000
	Torque wrench M12 (SW17)		7000-99094-0000000
	Torque wrench M12 (SW18)		7000-99103-0000000
	DIN-rail adapter with fixing screws, plastic		27905
Plug accessories			Art-No.
	Transfer module for 1 × 11- and 1 × 12-pole spring clamp terminals		596154
	Service adapter with LED and SUB-D25	for transfer module Art-No. 596154	596153
	Screw plug M12 × 1 mm Metal, hex, 1 piece		996049
	Screw plug M12 × 1 mm (for female) Plastic, hex	Quantity: 10 pcs.	58627

M12 DISTRIBUTION SYSTEMS (PLASTIC)

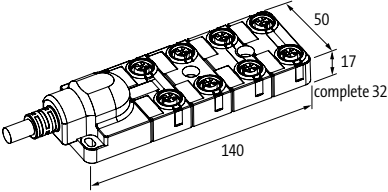
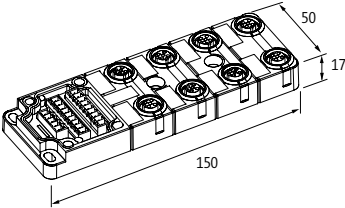
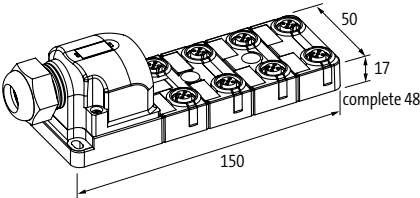
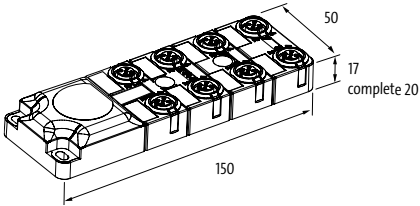
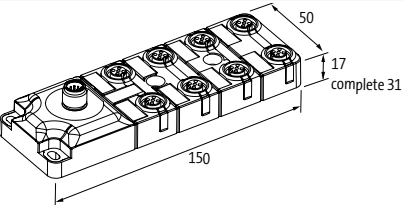
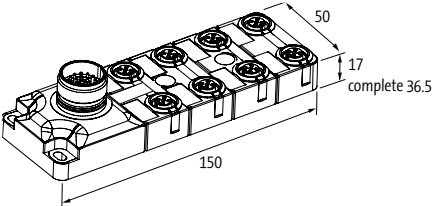
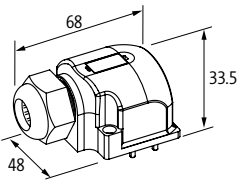
Plug accessories			Art-No.
	Label plates KES 20 × 8 (white)	(10 pieces/2 plates)	996067
	Label plates KES 17 × 9 (Type M) (12 pieces/2 plates)		996050
	Adapter M12/M8 3-pole		7000-42201-0000000
	Adapter M12/M8 4-pole		7000-42211-0000000
Mounting accessories			Art-No.
	EMERGENCY-STOP button with M12 connection	Safety distribution box M12	55550
	Coding plug M12	4-pole with bridges PIN 1-2 and PIN 3-4	332779
	T-coupler (Slimline) M12 - M12 4-pole		7000-41165-0000000
Homerun cable accessories			Art-No.
	Coding element for 6 codings		996054
	Screw plug M23 Metal		55352

M12 DISTRIBUTION SYSTEMS (PLASTIC)

Homerun cable accessories			Art-No.
	Screw plug M12 × 1 mm (for male)		
	Plastic	Quantity: 4 pcs.	56951
	Cable rings (50 m), 5-pole, PUR/PVC		
	8×0.34 + 3×0.75 mm ²	4-way distribution boxes M12	8000-00000-3635000
	12×0.34 + 3×0.75 mm ²	6-way distribution boxes M12	8000-00000-3885000
	16×0.34 + 3×0.75 mm ²	8-way distribution boxes M12	8000-00000-3985000
	Cable rings (50 m), 4-pole, PUR (UL/CSA), halogen free		
	8×0.5 + 3×1.0 mm ²	8-way distribution boxes M12	8000-00000-4475000
	8×0.5 + 3×1.0 mm ²	4-way distribution boxes M12	8000-00000-4485000
	16×0.5 + 3×1.0 mm ²	8-way distribution boxes M12	8000-00000-4525000
	16×0.34 + 5×0.75 mm ²	8-way distribution boxes M12, potentially separated	8000-00000-4035000
	Cable rings (50 m), PUR/PVC		
	18 × 0.75 mm ²	4-way distribution box M12, UNIVERSAL	8000-00000-5335000
	4×0.34 + 3×0.75 mm ²	4-way distribution boxes M12	8000-00000-3335000
	8×0.34 + 3×0.75 mm ²	8-way distribution boxes M12	8000-00000-3625000
	8×0.34 + 5×0.75 mm ²	4-way distribution boxes M12, potentially separated	8000-00000-3745000
	16×0.34 + 5×0.75 mm ²	8-way distribution boxes M12, potentially separated	8000-00000-4045000

M12 DISTRIBUTION SYSTEMS (PLASTIC)

M12 Distribution Systems Technical Data

	Description	4-way	8-way
Exact12 Molded homerun cable		100 mm	140 mm
	Description	4-way	8-way
Exact12 Basic module		100 mm	150 mm
	Description	4-way	8-way
Exact12 and MSDS8 Sets: basic module and cap Field-wireable		100 mm	150 mm
	Description	4-way	8-way
Exact12 Rear connection		100 mm	150 mm
	Description	4-way	8-way
Exact12 M12 plug connection		100 mm	150 mm
	Description	4-way	8-way
Exact12 M23 plug connection		100 mm	150 mm
	Description		
Exact12 Caps			

M12 Distribution Systems (Plastic)

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