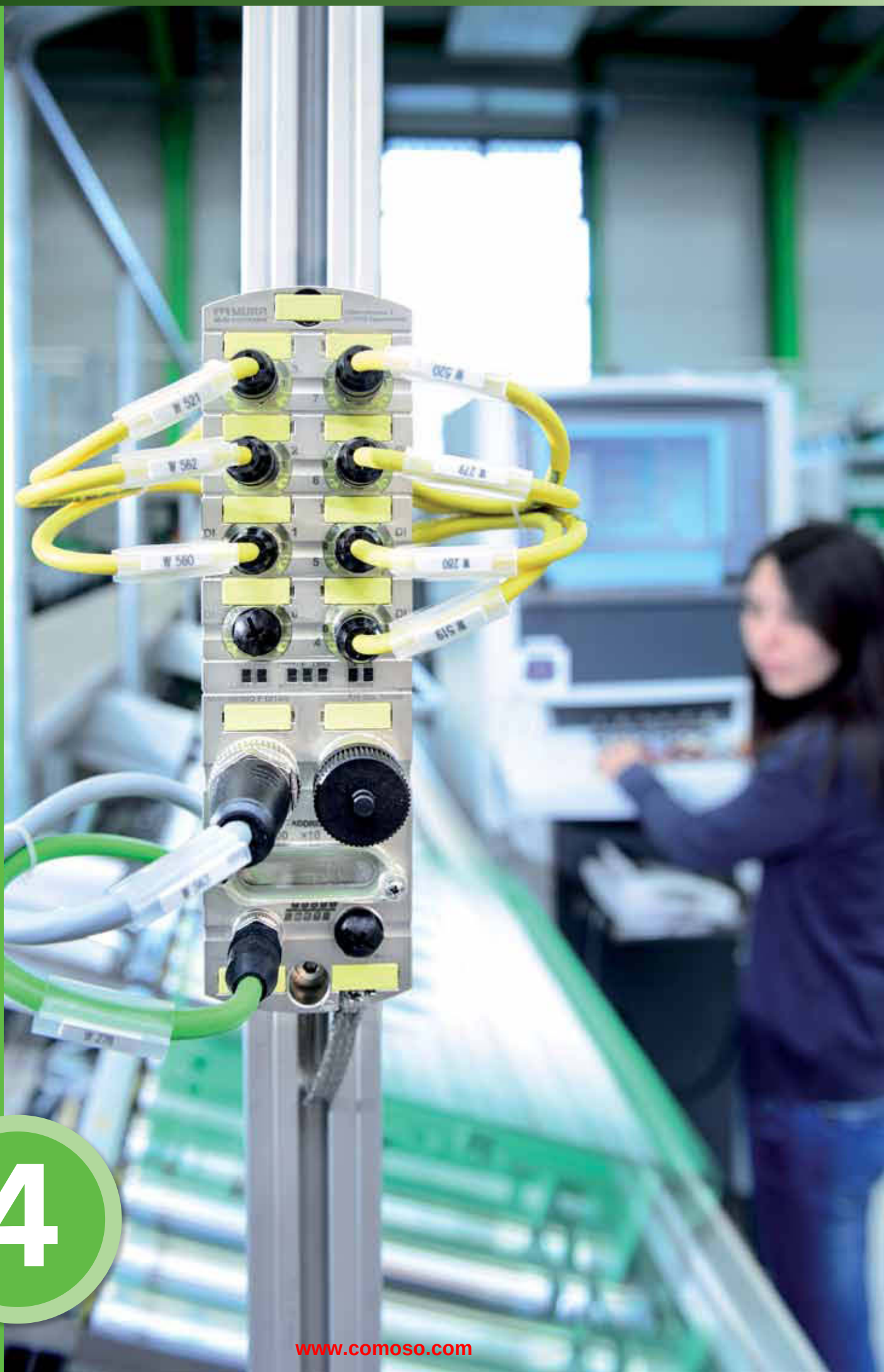
4 I/O SYSTEMS



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.

PROFIBUS® EtherCAT®
PROFINET® CANopen
EtherNet/IP™ DeviceNet™

Cube67 I/O Modules

Bus Nodes
• IP67 protection

Page 4.1.1

Digital Inputs
• IP67 protection

Page 4.1.5

Digital Inputs/Outputs
• IP67 protection

Page 4.1.7

Function Modules
• IP67 protection

Page 4.1.11

Analog Inputs
• IP67 protection

Page 4.1.14

Analog Outputs
• IP67 protection

Page 4.1.17

Safe outputs
• IP67 protection

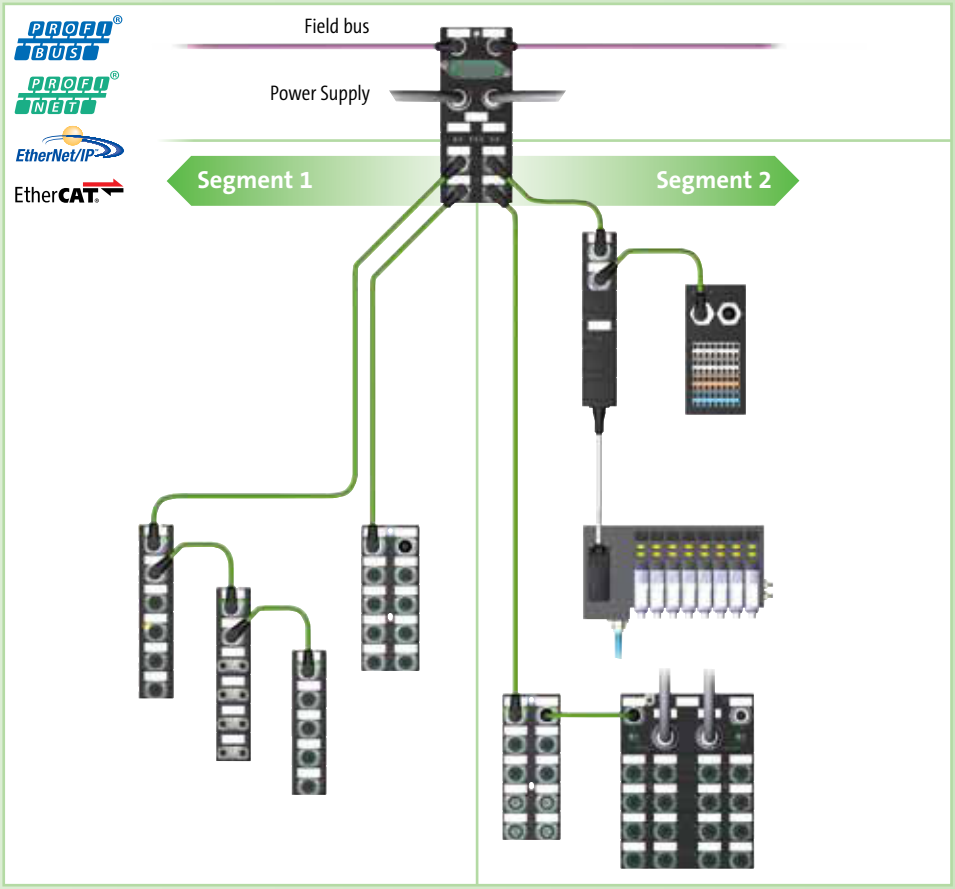
Page 4.1.18

Digital Inputs and Outputs with Cable
• IP67 protection

Page 4.1.19

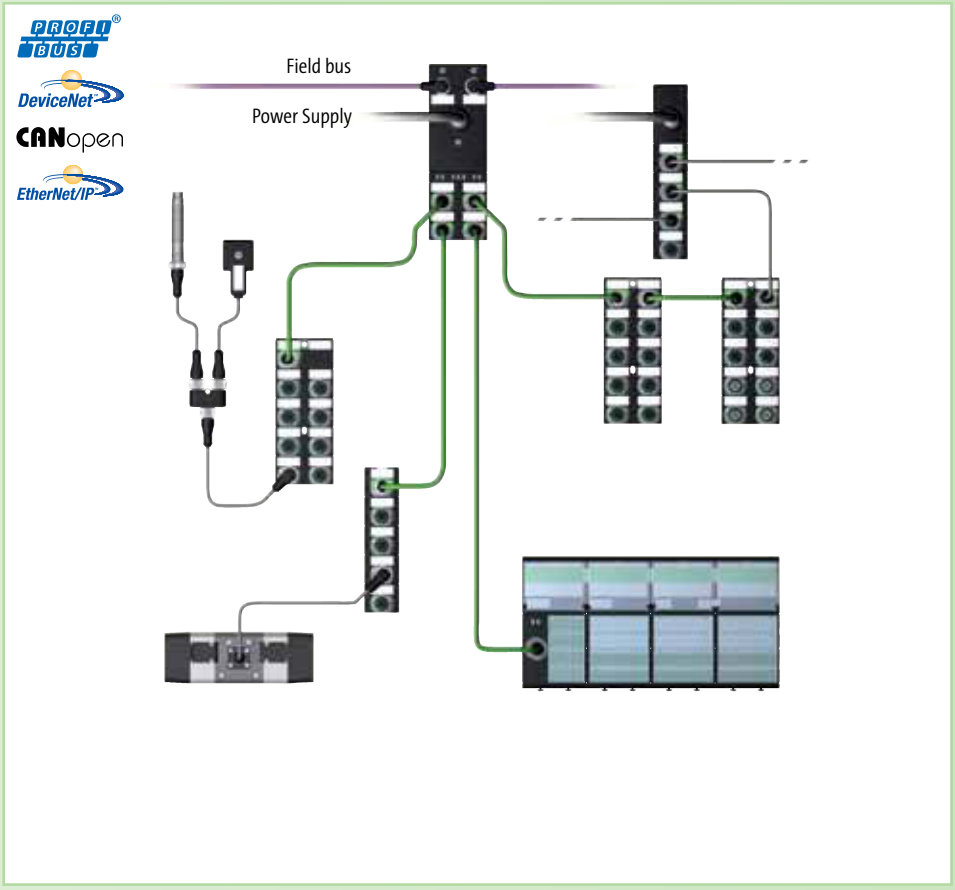
Accessories

Page 4.1.25



cube67+

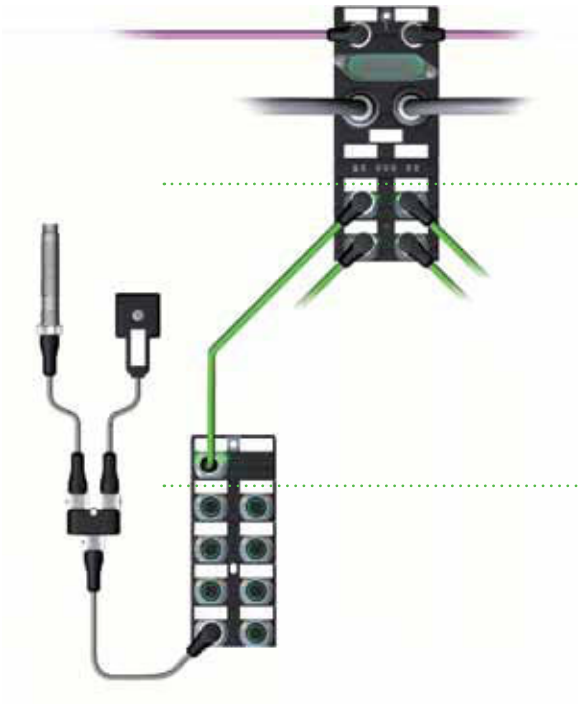
- 2 segments
- Per segment:
  - 16 modules
  - 30 meters cable length
- Pin Level Diagnostics
- LED Indicator per I/O
- Topology
  - Star/line
- Transfer type
  - Change of State
- System connection
  - Hybrid cable M12
- Addressing
  - Automatically



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+



BUS NODES

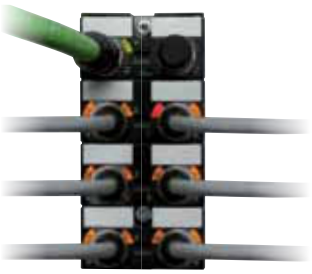
- Communication
- Module status
- Under voltage
- Overload

I/O MODULE

- Communication
- Under voltage
- Overload

PORT

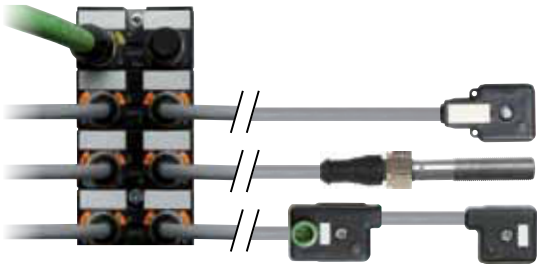
- Signal status
- Overflow and underflow (measured value)
- Short circuit
- Overload
- Cable break
- Actuator warning



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

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

HIGHLY FLEXIBILE 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.

Bus Nodes, Cube67+

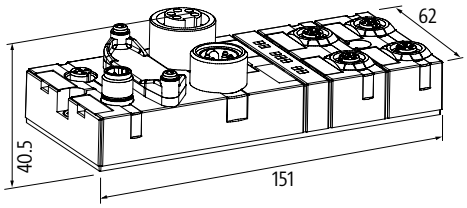
– up to 32 modules

– max. 2 × 30 m system expansion

PROFIBUS PROFINET EtherNet/IP conformance tested

Approvals: cULus Listed, PCT

	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.

Bus Nodes, Cube67+

– up to 32 modules

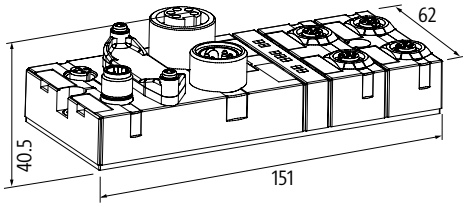
– max. 2 × 30 m system expansion

EtherCAT

Approvals: cULus Listed, PCT

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		



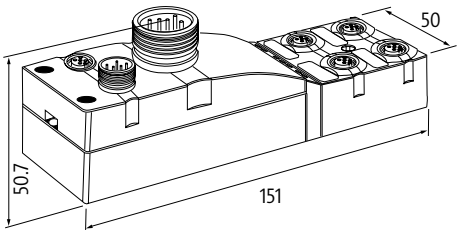
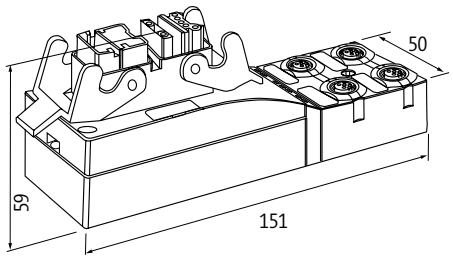
Notes	
	Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.

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				

Bus Nodes, Cube67

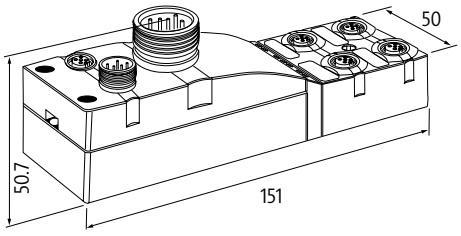
– up to 16 modules

– max. 4×10 m system expansion

EtherNet/IP conformance tested DeviceNet

CANopen Approvals: cULus Listed

	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			

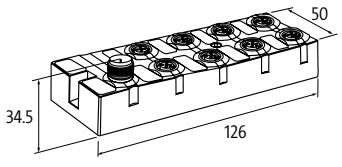
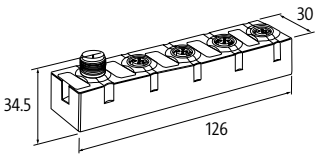
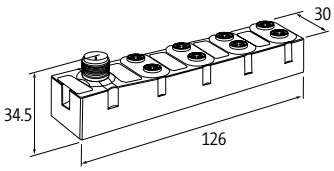


Notes

Compact module

– Digital inputs

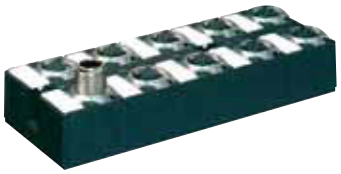
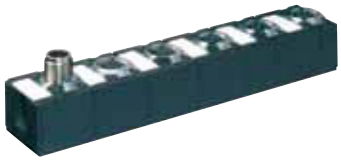
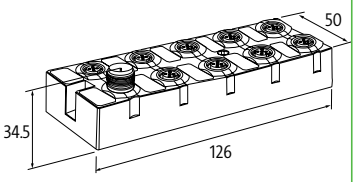
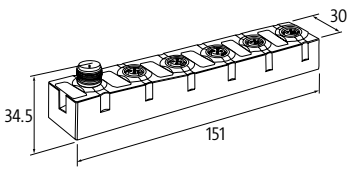
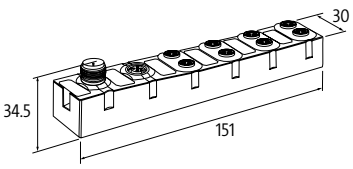
Approvals: cULus Listed, PCT

	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			

Expansion module

– Digital inputs

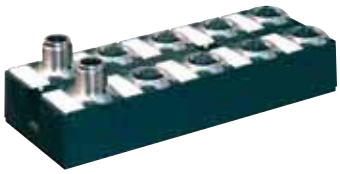
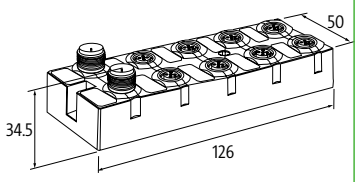
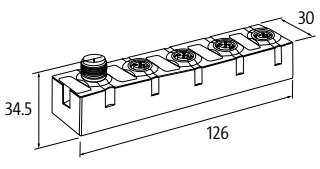
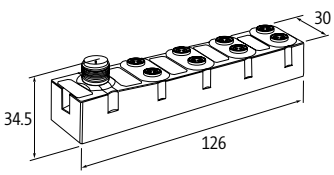
Approvals:

Order Data	Cube67 DI16 E - 8×M12	Cube67 DI8 E - 4×M12	Cube67 DI8 E - 8×M8
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16 - (E) p-switching (8×M12)	**56603**		
DI16 - (E) n-switching (8×M12)	**56606**		
DI8 - (E) p-switching (4×M12)		**56613**	
DI8 - (E) n-switching (4×M12)		**56616**	
DI8 - (E) p-switching (8×M8)			**56623**
DI8 - (E) n-switching (8×M8)			**56626**
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 (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			

Compact module

– Multifunctional I/Os

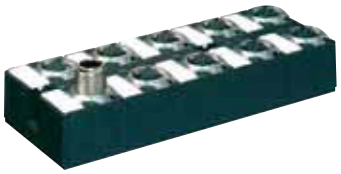
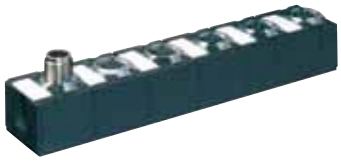
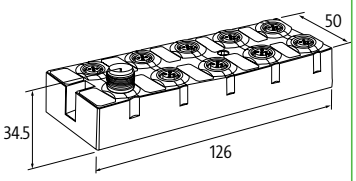
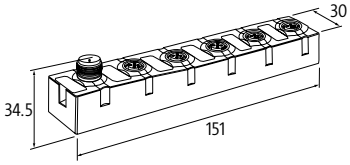
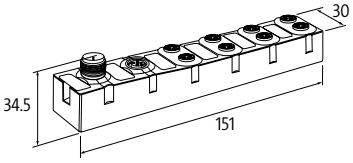
Approvals: cULus Listed, PCT

	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			

Expansion module

– Multifunctional I/Os

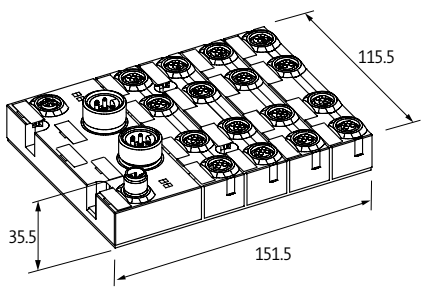
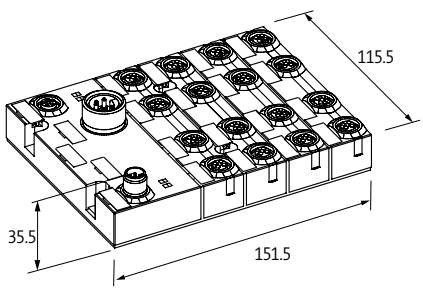
Approvals: cULus Listed, PCT

	Cube67 DIO16 E - 8×M12	Cube67 DIO8 E - 4×M12	Cube67 DIO8 E - 8×M8
			
Order Data	**Art-No.**	**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

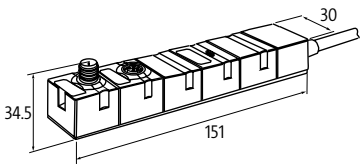
	Cube67 DIO16 DO16 E - 1.6/2 A 16×M12	Cube67 DIO32 E - 16×M12
		
Order Data	**Art-No.**	**Art-No.**
DIO16 - 1.6 A DO16 - 2 A (E) 16×M12	**56641**	
DIO32 - 0.5 A (E) 16×M12		**56642**
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	max. 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		

Expansion module

– Multifunctional I/Os

– Digital inputs and outputs

Order Data	Cube67 DIO8 E - Cable	Art-No.	Cube67 DIO8 E - Cable M12	Art-No.	Cube67 DIO16 E - Cable	Art-No.	Cube67 DI16 DO16 E - Cable	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. 2×4 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								



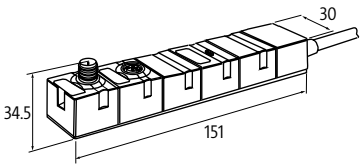
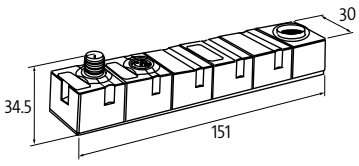
Notes	

Expansion module

– Multifunctional I/Os

– Digital outputs

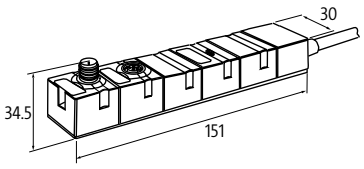
Approvals:

	Cube67 DO7 - 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.**
DO7 - (E) 0.5 m (M12)	**5665503**		
DIO8 - (E) 0.2 m (M12)		**5666500**	
DIO8 - 0.5 A (E) 1×M16			cULus **56663**
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			

Expansion module

– Digital outputs

	Cube67 DO8 - Valve	Cube67 DO16 - Valve	Cube67 DO32 - Valve
			
Approvals:	c UL us Listed, PCT		
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	

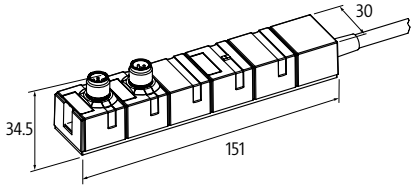
Compact module

– 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

Compact module - Safety

– Passive

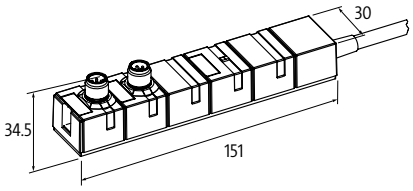
– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

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, Tuev Süd	**56650**	FESTO - CPV (SUB-D9)	**5665003**
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	

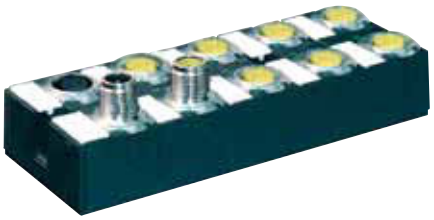
Expansion module - Safety

– Passive

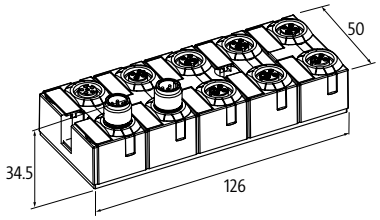
– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

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

Expansion module

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

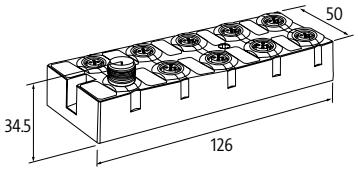
– IO-Link V1.0

IO-Link

Approvals:

Cube67+ DIO12 IOL4 - E 8×M12

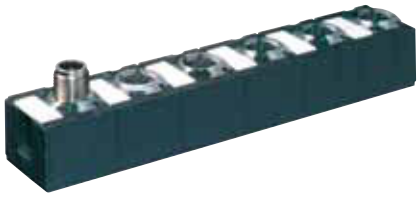
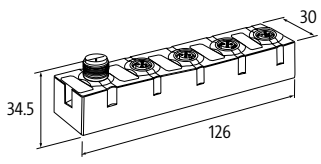
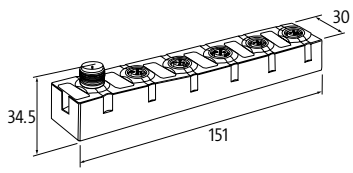
Order Data		Art-No.
DIO12/IOL4 - (E) 8×M12		56765
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 100 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Input		
Sensor supply US	24 V 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

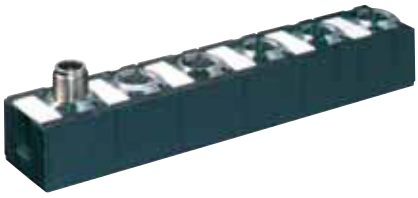
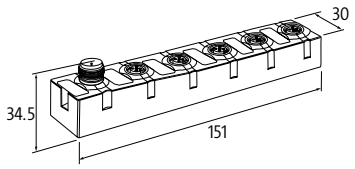
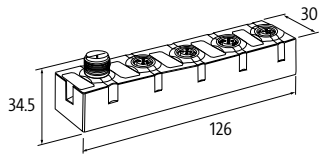
Approvals: cULus Listed, PCT

	Cube67 CNT2 - C 4×M12 Counter module with preprocessing	**Cube67 Logic - DI6 DO2 E 4×M12** Logic module
		
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		

Function modules

– Multifunctional I/Os

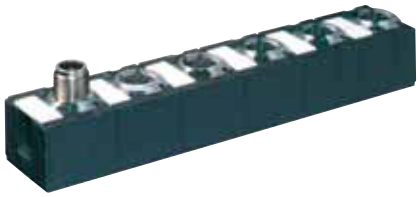
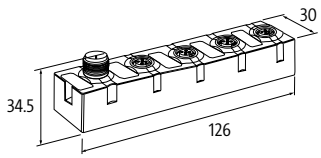
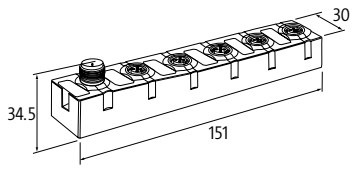
Approvals:

	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		cULus **56760**
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

Approvals:

	Cube67 AI4 C - 4×M12	Cube67 AI4 C - 4×M12	Cube67 AI4 E - 4×M12	Cube67 AI4 E - 4×M12
	Compact module Voltage	Compact module Current	Expansion module Voltage	Expansion module Current
				
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				

Analog inputs

– for resistors and temperature

– for thermo elements

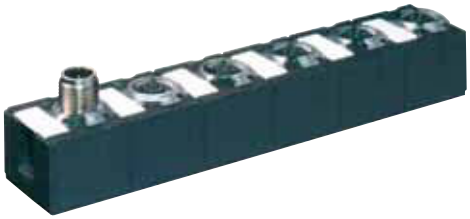
Approvals:

Cube67 AI4 C (RTD) - 4×M12

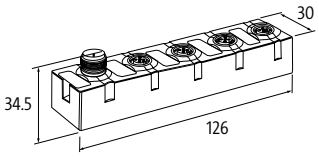
Compact module
for resistors and temperature

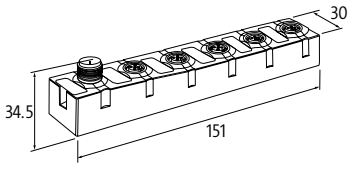
Cube67 AI4 E (RTD) - 4×M12

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

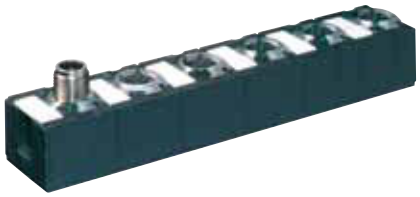
Approvals:

Cube67 AI4 C (TH) - 4×M12

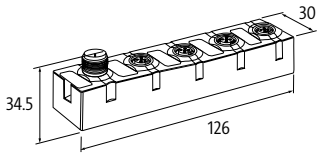
Compact module
for thermo elements

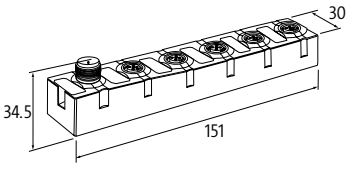
Cube67 AI4 E (TH) - 4×M12

Expansion module
for thermo elements



Order Data		Art-No.	Art-No.
AI4 - (C) 4×M12 (TH)	cULus	**56748**	
AI4 - (E) 4×M12 (TH)			**56749**
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	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			



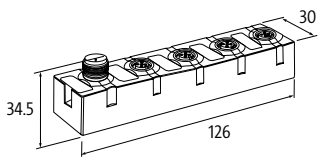


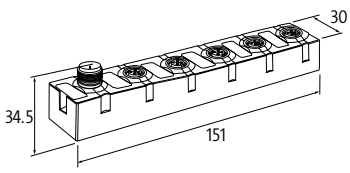
Notes			

Analog outputs – Voltage/current

Approvals:

	Cube67 AO4 C 4×M12	Cube67 AO4 C 4×M12	Cube67 AO4 E 4×M12	Cube67 AO4 E - 4×M12
	Compact module Voltage	Compact module Current	Expansion module Voltage	Expansion module Current
Order Data	**Art-No.**	**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	11 Bit
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	–	max. 500 Ohm
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				

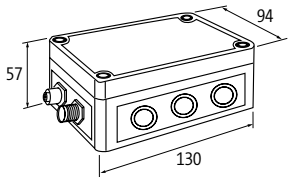
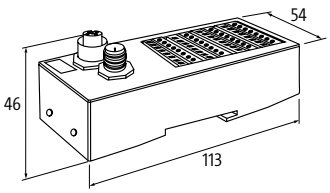




Terminal modules

– 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 **56691**
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**

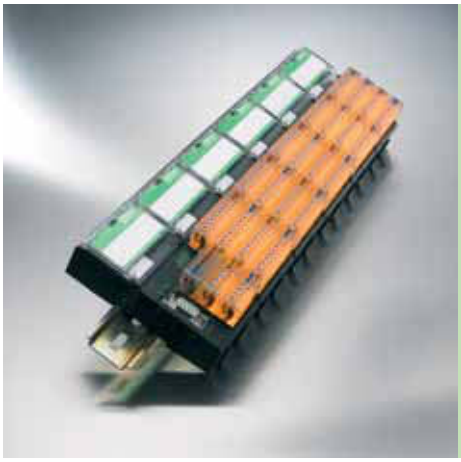
Blind Plug/caps			Art-No.
	**Screw plug M8 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**3858627**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**58627**
	**Screw plug M12 × 1 mm (for male)**		
	Plastic	Quantity: 4 pcs.	**56951**
	**Screw plug 7/8" (for male)**		
	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 × 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**

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.

PROFIBUS
PROFINET
EtherNet/IP

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

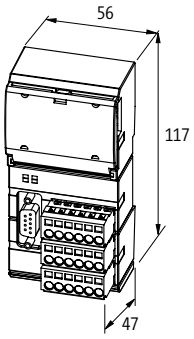
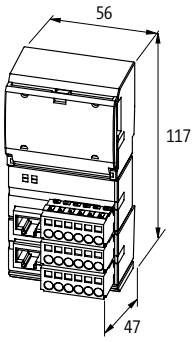
Accessories

Page 4.2.7

Bus Nodes

– Digital inputs

Approvals:

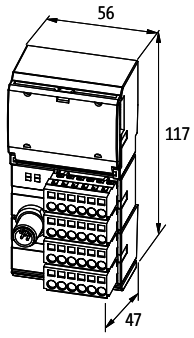
	Cube20 BN-P DI8	Cube20 BN-E DI8	Cube20 BN-PNIO DI8
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
PROFIBUS DP	**56001**		
EtherNet-IP		**56005**	
PROFINET IO			**56006**
Fieldbus			
Operating modes	Sync- and freeze mode are supported	Autonegotiation/Auto MDI/MDI-X	
Transfer rate	to 12 Mbit/s	10/100 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			

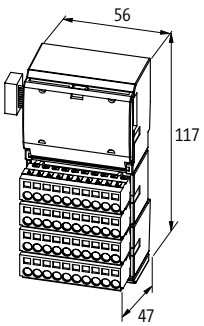
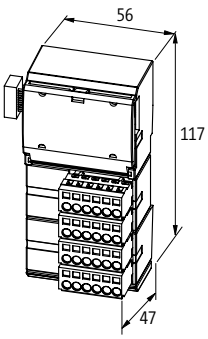
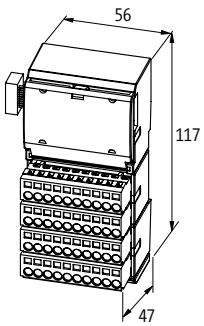
Bus Nodes

– 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		

Expansion module	Cube20 DI32 E	Cube20 DI16 DO16 E	Cube20 DO16 E	Cube20 DO32 E
– Digital inputs				
– Digital outputs				
– Digital inputs and outputs				
Approvals:				
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 overload protected)	max. 2 A	max. 0.5 A (short-circuit and overload protected)
Lamp load	–	10 W	40 W	10 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				

Analog inputs

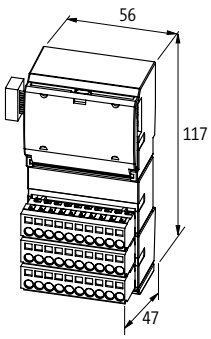
– Voltage/current

Approvals:

Cube20 AI4 E

Voltage/current

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	



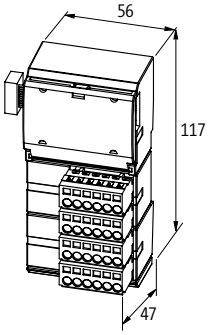
Notes	

Analog inputs

– Temperature converter

Approvals: cULus Listed, PCT

	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	

Analog outputs

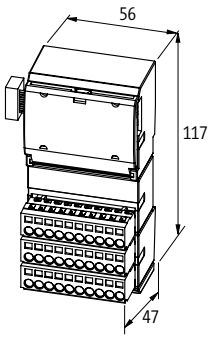
– Voltage/current

Approvals: c UL us Listed, PCT

Cube20 AO4 E

Expansion module
Voltage/current

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**

Connection accessories			Art-No.
	**Potential terminal block**		
	SlimLine		**56082**

CUBE20S
SMALL, SPEEDY, SAFE

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

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.

PROFIBUS®
PROFINET®
DeviceNet
EtherNet/IP
EtherCAT®
CANopen
Modbus

Cube20S I/O Modules

Bus Nodes / Power Modules
• IP20 protection

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Function Modules
• IP20 protection

Page 4.3.3

Digital Inputs
• IP20 protection

Page 4.3.4

Digital Outputs
• IP20 protection

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Analog Inputs
• IP20 protection

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Analog Outputs
• IP20 protection

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Accessories

Page 4.3.10

Bus Nodes

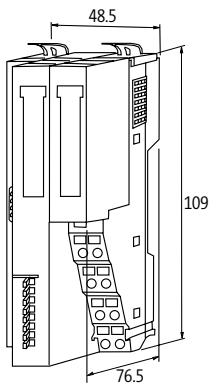
– Power module included

PROFIBUS DeviceNet CANopen

Approvals: cULus 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

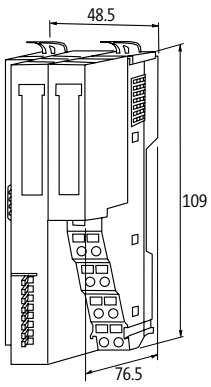
Bus Nodes

– Power module included

Approvals:

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	

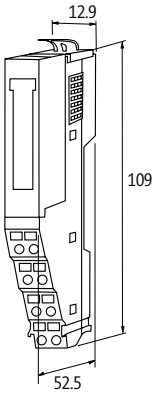
Power supplies

Approvals: cULus Listed

Cube20S

Potential distributor

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			

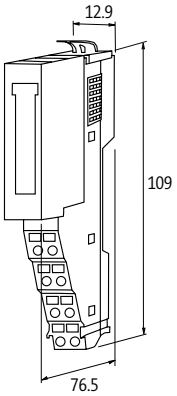


Notes

Power supplies

Approvals: c UL us Listed

	Cube20S for external voltage supply	**Cube20S** for external voltage supply and internal backplane
		
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		



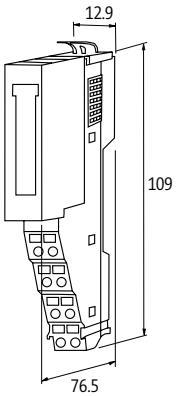
Notes	

Digital inputs

Approvals: cULus Listed

Cube20S

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 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



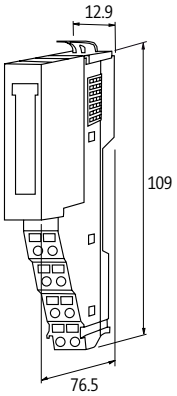
Notes	

Digital outputs

Cube20S

Approvals: cULus Listed

Order Data		Art-No.
DO2 - (E)		**57320**
DO4 - (E)		**57340**
DO8 - (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		

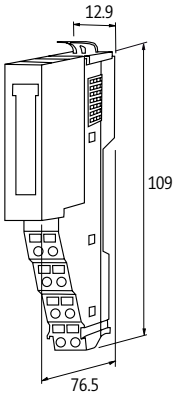


Notes	

Digital outputs

Approvals: cULus Listed

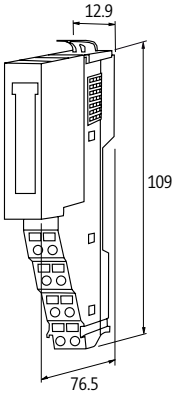
Order Data	Cube20S - 2A Art-No.	Cube20S - 230VAC (Relays) Art-No.
DO2 - (E)	**57325**	**57327**
DO4 - (E)	**57345**	
Internal communication		
Module supply	via system connection	
Current consumption	max. 60 mA	max. 130 mA
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 4 A	max. 30 V DC/230 V 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	

Analog inputs

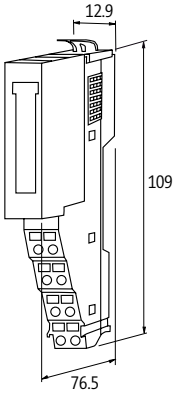
Approvals: cULus Listed

Order Data	Cube20S Voltage	Cube20S Current	Cube20S Voltage
			
	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		
Input			
Conversion time (analog)	480 ms (all channels)		
Resolution (analog)	15 Bit + sign		
Accuracy	max. ±0.2 %	max. 0.3 %	max. ±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 mm² (AWG 16)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			
			
Notes			

Analog inputs

Approvals: cULus Listed

	Cube20S (TH) for thermo elements	Cube20S (RTD) for resistors and temperature
		
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

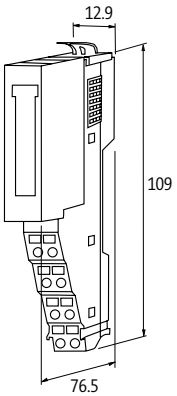
Analog outputs

Cube20S

Voltage

Approvals: cULus Listed

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

MVK Metal I/O Modules

MVK-MP
- Multi-functional I/Os
- I/O link
- Safety outputs
- Analog I/Os

Page 4.4.1

MVK-MPNIO
- Multi-functional I/Os
- Digital I/Os
- AIDA Push Pull
- Safety inputs/outputs
- Fast Start Up

Page 4.4.8

MVK-MC
- Multi-functional I/Os

Page 4.4.13

MURR ELEKTRONIK
stay connected

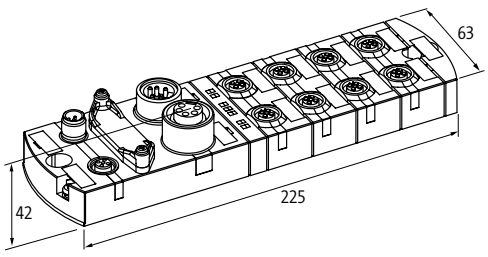
Expanded diagnostic

– 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	

MVK METAL

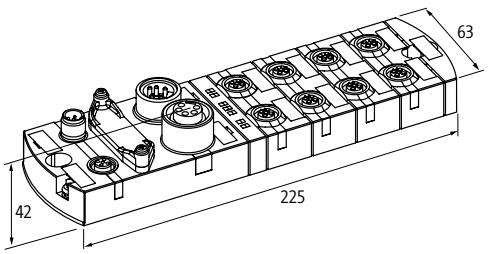
Expanded diagnostic

– 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

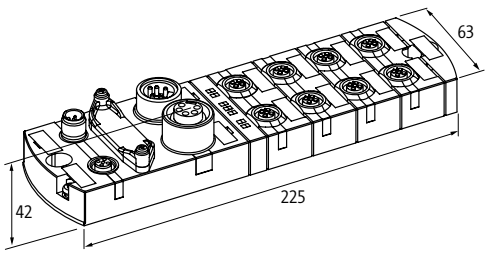
– IO-Link

PROFIBUS IO-Link

Approvals:

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 × 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

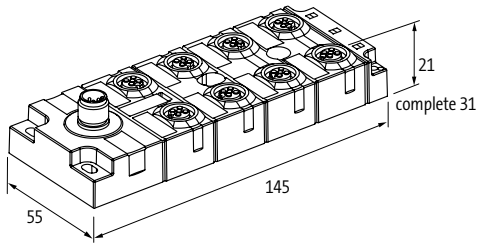
– IO-Link

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	

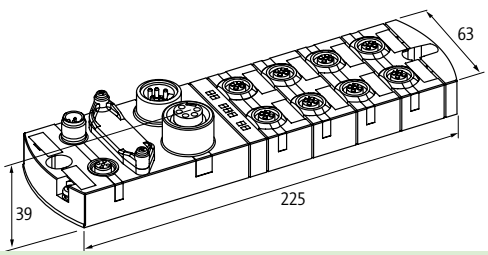
Expanded diagnostic

– Passive

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

Approvals:

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

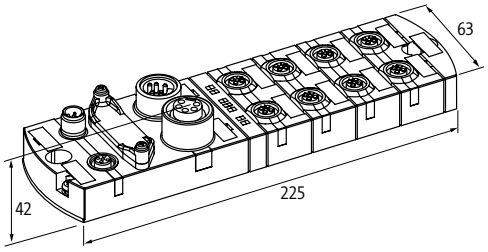
– Current

PROFIBUS

Approvals: cULus Listed, PCT

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	

MURR ELEKTRONIK
stay connected

Expanded diagnostic

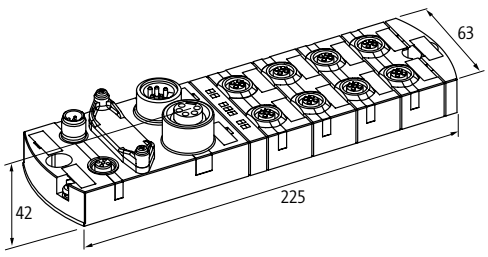
– Analog inputs

– 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

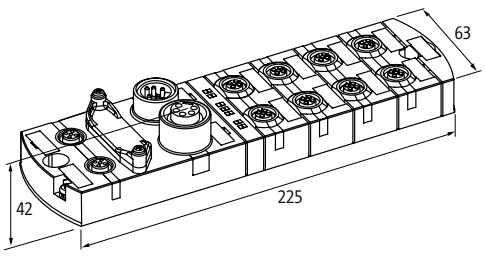
– 7/8"

PROFINET

Approvals: cULus

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	

MURR ELEKTRONIK
stay connected

Expanded diagnostic

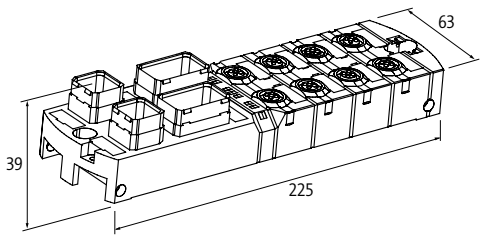
PROFINET

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	

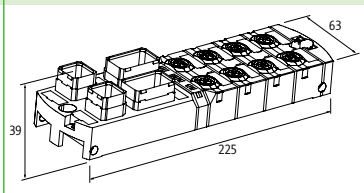
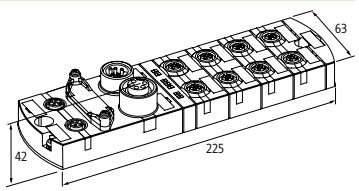
MVK METAL

Expanded diagnostic

– FSU (Fast-Start-Up)

– galvanically separated input and output potentials

PROFINET

	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			

MURR ELEKTRONIK
stay connected

LWL-Push Pull

– FSU (Fast-Start-Up)

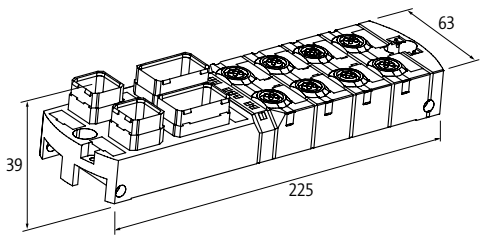
– galvanically separated input and output potentials

PROFINET®

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	

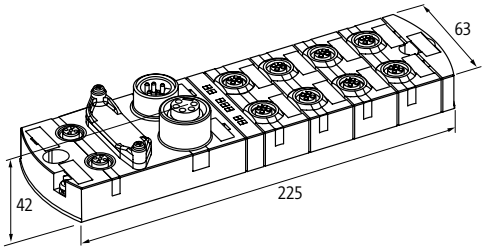
Active

– 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 electronical 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	

MURR ELEKTRONIK
stay connected

Expanded diagnostic

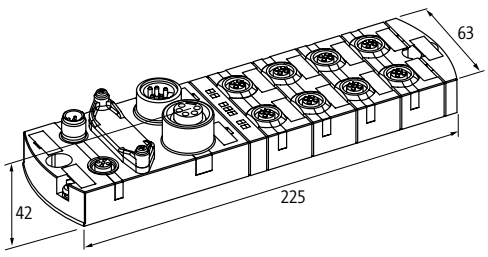
– 7/8"

CANopen

Approvals: cULus Listed, PCT

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	

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**

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

PROFIBUS® PROFINET® EtherNet/IP™ EtherCAT® CANopen DeviceNet™

Impact67 I/O Modules

Impact67-P
• Digital I/Os

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Impact67-PNIO
• Digital I/Os

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Impact67-E
• Digital I/Os

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Impact67-EC
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Impact67-C
• Digital I/Os

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Impact67-DN
• Digital I/Os

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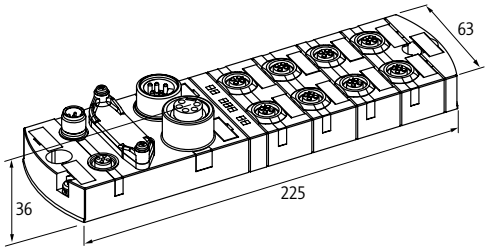
Basic diagnostic

PROFIBUS

Approvals: cULus Listed, cCSAus, PCT

	Impact67-P	Impact67-P	Impact67-P	Impact67-P
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	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				

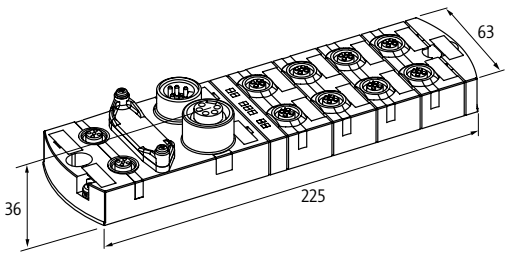


Notes	

Basic diagnostic

PROFINET

Approvals: cULus Listed, cSAus, PCT

	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			
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)
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				

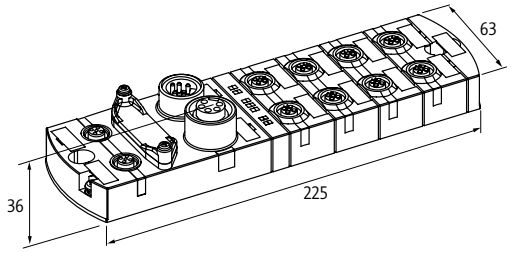
Basic diagnostic

EtherNet/IP conformance tested

Approvals: cULus Listed, CSA, PCT

	Impact67-E	Impact67-E	Impact67-E	Impact67-E
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	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				



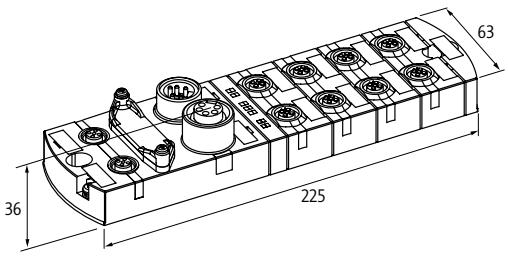
Notes

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			
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)
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	

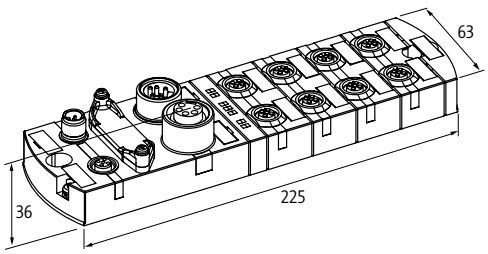
Basic diagnostic

CANopen

Approvals: cULus Listed, cSPus, PCT

	Impact67-C	Impact67-C	Impact67-C	Impact67-C
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A

Order Data	Art-No.	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				



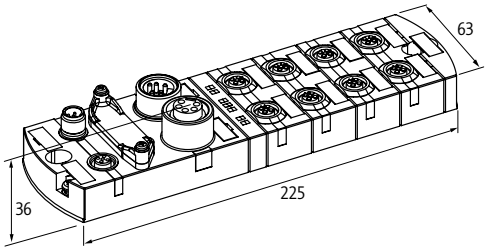
Notes

Basic diagnostic

DeviceNet

Approvals: cULus Listed, cSAus, PCT

	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)
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

PROFIBUS
PROFINET
EtherNet/IP
EtherCAT
CANopen
DeviceNet

Impact20 I/O Modules

Impact20-P
• Digital I/Os

PROFIBUS

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Impact20-PNIO
• Digital I/Os

PROFINET

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Impact20-E
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EtherNet/IP

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Impact20-C
• Digital I/Os

CANopen

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Impact20-DN
• Digital I/Os

DeviceNet

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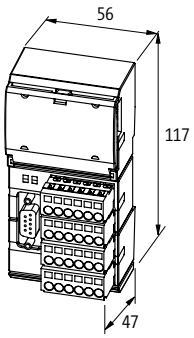
PROFIBUS

Approvals: cULus Listed

	Impact20-P	Impact20-P	Impact20-P
	DI16	DI8/DO8 - 2 A	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			

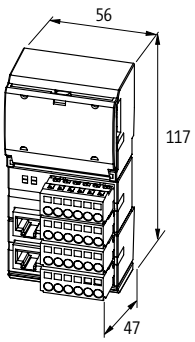


Notes

PROFINET

Approvals:

	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 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	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			

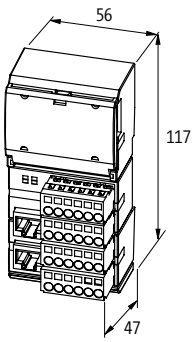


Notes			

EtherNet/IP conformance tested

Approvals: cULus Listed, PCT

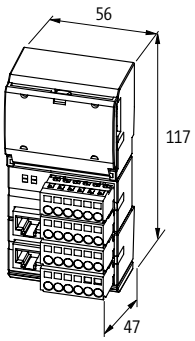
	Impact20-E DI16	Impact20-E DI8/DO8 - 2 A	Impact20-E DO16 - 0.5 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**56916**		
DI8/DO8 - 2 A		**56917**	
DO16 - 0.5 A			**56918**
Connections			
Fieldbus	2 × RJ45		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 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

EtherCAT

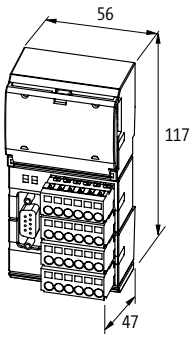
Approvals:

	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			

CANopen

Approvals:

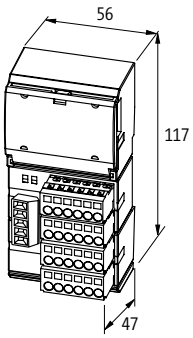
	Impact20-C DI16	Impact20-C DI8/DO8 - 2 A	Impact20-C DO16 - 0.5 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**56904**		
DI8/DO8 - 2 A		**56905**	
DO16 - 0.5 A			cCSAus **56906**
Connections			
Fieldbus	SUB-D9		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (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

DeviceNet

Approvals:

	Impact20-DN	Impact20-DN	Impact67-DN
	DI16	DI8/DO8 - 2 A	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

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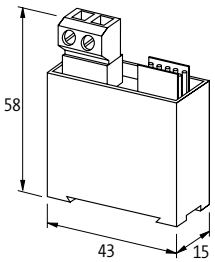
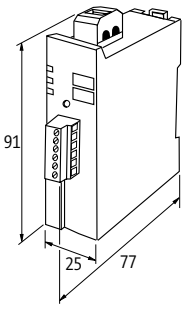
stay connected

Digital inputs/outputs

Approvals:

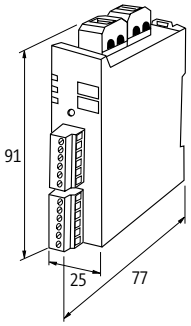
	MASI00 DI4/DO4 - 0.2 A	**MASI00** DI4/DO4 - 0.2 A (AB)	**MASI20** DI4 - 0.17 A (AB)
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI4/DO4 - 0.2 A	**55700**		
DI4/DO4 - 0.2 A (AB)		ASI **55701**	
DI4 - 0.17 A (AB)			ASI, UL-Listed, CSA **55688**
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 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-Inerface (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 mm²		IDC terminals, 0.5...0.75 mm²
Connection sensor/actuator	–		Spring clamp plug-in terminals: 0.14...1.5 mm²
Dimension drawing			
			
Notes			
	For DIN-rail mounting use 1 x Art.-No. 20900 adapter feet		

MASI00/20

Digital inputs

– Semiconductor outputs

Approvals:

	MASI20	MASI20
	DI4 - 0.2 A DO3 - 0.5 A (AB)	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		

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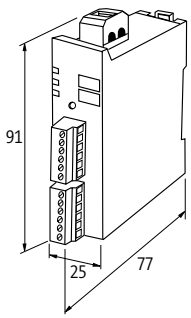
Digital inputs

– Relay outputs

Approvals:

	MASI20	**MASI20**
	DI4 - 0.17 A DO3 - 2 A (AB)	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-Inerface (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 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

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

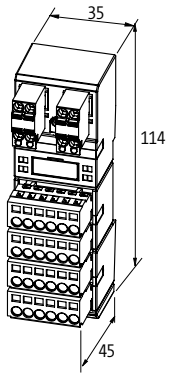
– Opto decoupled inputs (only with additional supply voltage)

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 mm²	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	

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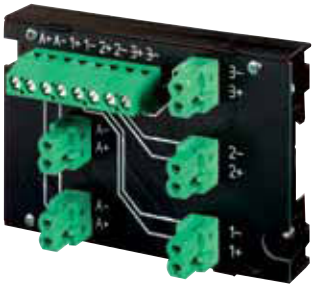
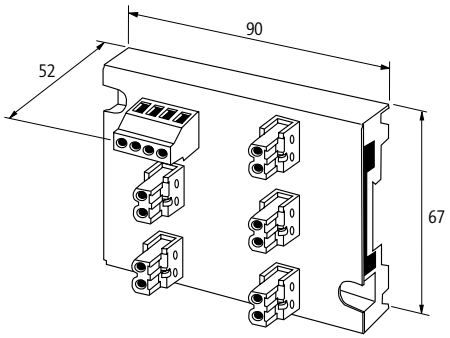
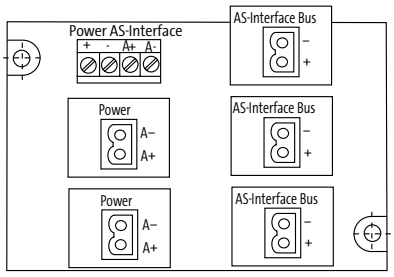
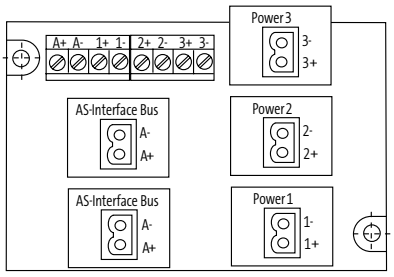
Installation technology	Bus or Power distributor	Bus or Power distributor potentially separated
Approvals: cULus, PCT		

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 mm²), stranded wire (0.5...2.5 mm²)			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				



Connection diagram





Notes

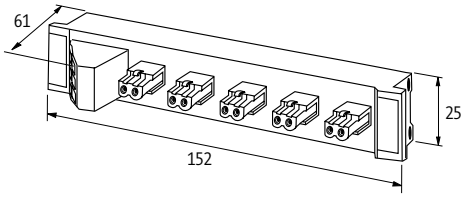
MASI00/20

Installation technology

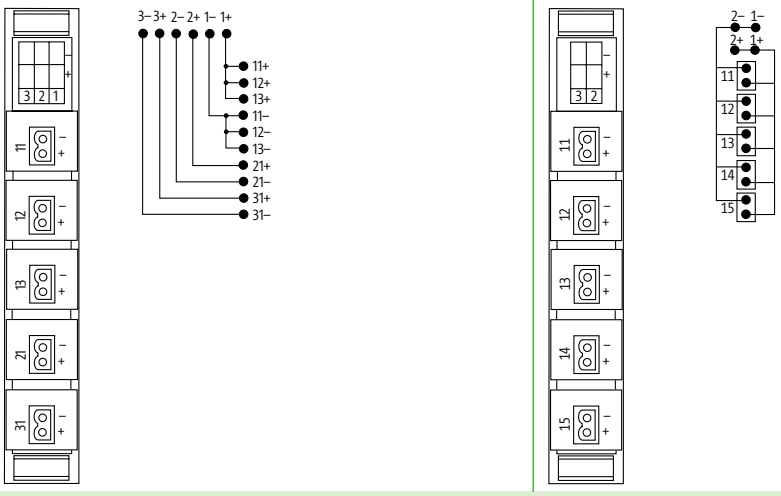
Bus or Power distributor

Approvals:

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**
	Profie 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**

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

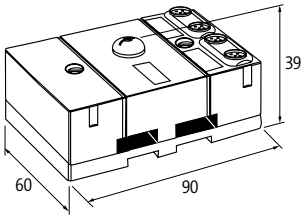
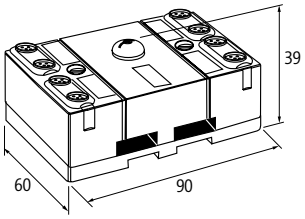
Page 4.8.6

MURR ELEKTRONIK
stay connected

Digital inputs

– M8 Round Plug Connectors

Approvals:

	MASI67 DI4 - 0.2 A (AB) 4×M8	MASI67 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		

MASI67

Digital inputs and outputs

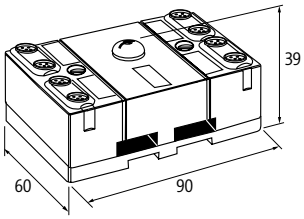
– M8 Round Plug Connectors

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		



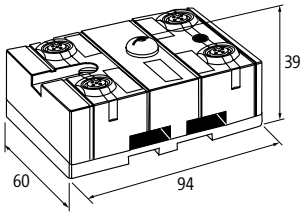
Notes	

MURR ELEKTRONIK
stay connected

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.F.E
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-Inerface (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			

MASI67

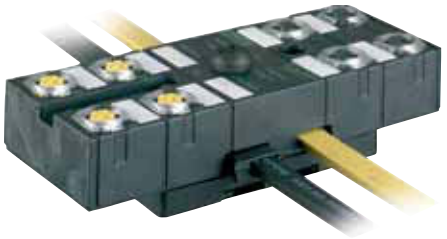
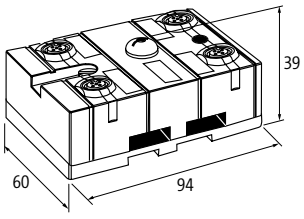
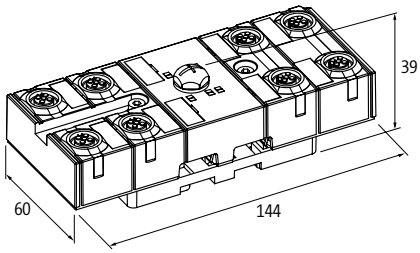
Digital inputs

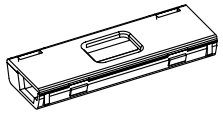
– Passive

– 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		
		
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.	AS-Interface profile cable	**55742**
	from profile cable to M12 2-pole	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**

Installation technology			Art-No.
	**MASI67 passive distribution box**		
	2 × profile cable to 4 × M12 (female) 2 separate circuits	AS-Interface	**56416**

MASI68
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

MURR ELEKTRONIK
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Digital inputs

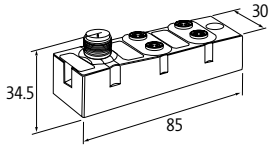
– M8 Round Plug Connectors

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

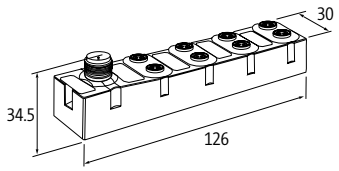
– M8 Round Plug Connectors

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

MURR ELEKTRONIK
stay connected

Digital inputs

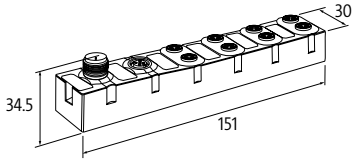
– M8 Round Plug Connectors

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		



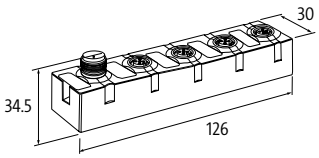
Notes	

MASI68

Digital inputs

– M12 Round Plug Connectors

Approvals:

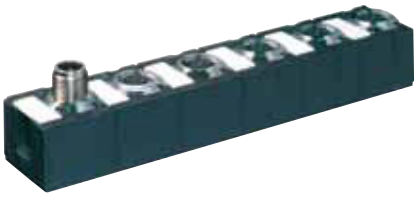
	MASI68 Compact module Y-wiring	**MASI68** Compact module
		
Order Data	**Art-No.**	**Art-No.**
DI4 - 0.2 A (C) 4×M12 (AB) Y	**56421**	
DI8 - 0.2 A (C) 4×M12 (AB)		**56424**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master 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		

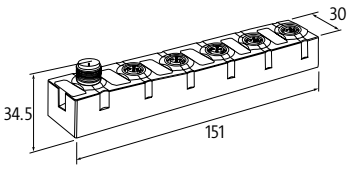
MURR ELEKTRONIK
stay connected

Digital inputs

– M12 Round Plug Connectors

Approvals:

	MASI68 Expansion module		**MASI68** Expansion module Y-wiring	**MASI68** Expansion module
				
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

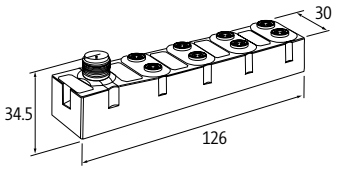
– M8 Round Plug Connectors

Approvals:

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		



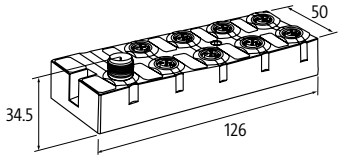
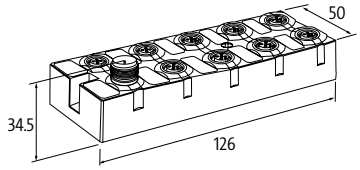
Notes

MURR ELEKTRONIK
stay connected

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.F.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)	
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		
		
Notes		

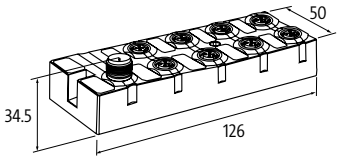
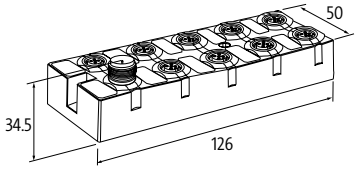
MASI68

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.
	**MASI Z-Plug**		
	Passive bus terminator	AS-Interface	**55779**
	**Programming device**		
		AS-Interface	**55696**
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**
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	MASI68 additional actuator power supply	**7060-42701-0000000**
	**T-coupler (Slimline) M12 - M12**		
	5-pole Parallel circuit		**7000-41151-0000000**

MASI68

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**
	Profie 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 mm² 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 mm² Specification 3.0	AS-Interface/PROFIBUS DP cULus	**56451**
	**Gateway-Doublemaster**		
	via pluggable spring clamp terminals on the front 0.2...2.5 mm² 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

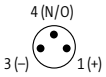
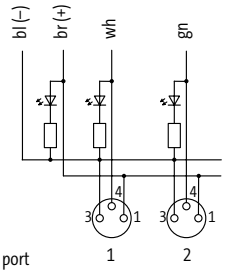
Page 4.10.12

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals: cULus Listed, PCT

	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	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 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**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. 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

8 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

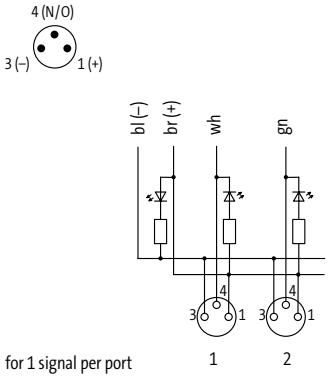
Notes

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals: c UL us Listed, PCT

	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 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 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...+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	**8 0 0 0** – _ _ _ _ _ – _ _ _			_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

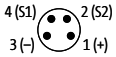
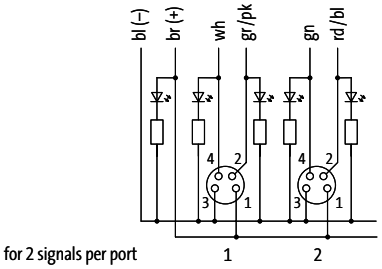
MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals: cULus Listed, PCT

	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	M8-Females 4-pole   			

2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²	**412** – 20 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 0.34 + 2 × 0.75 mm²	**411** – 20 × 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. 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

8000	– _____	– ___	____
	1 Form	**2 Cable Type**	**3 Cable Length**

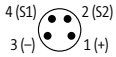
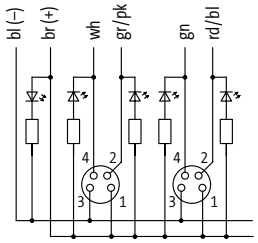
Notes

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals: cULus Listed, PCT

	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	M8-Females 4-pole   for 2 signals per port 1 2			
2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²	**412** – 20 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 0.34 + 2 × 0.75 mm²	**411** – 20 × 0.34 + 2 × 0.75 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...+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

For sensors and actuators

– Base modules

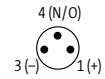
– inline face or side mounting

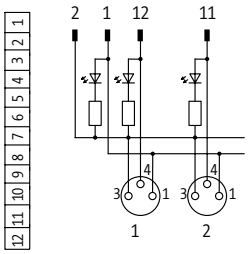
Approvals: cULus Listed, PCT

	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

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

8000	– _____	– 000	0000
	1 Form		

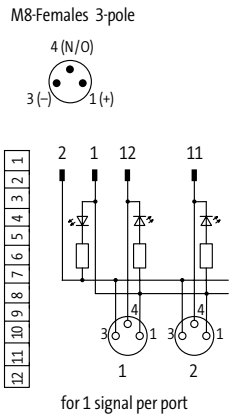
Notes

For sensors and actuators

– Base modules

– inline face or side mounting

Approvals: cULus Listed, PCT

	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				

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		

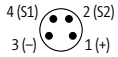
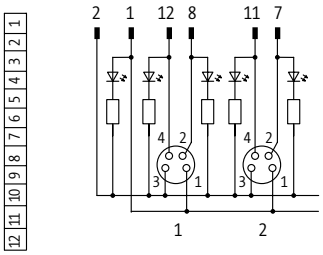
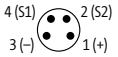
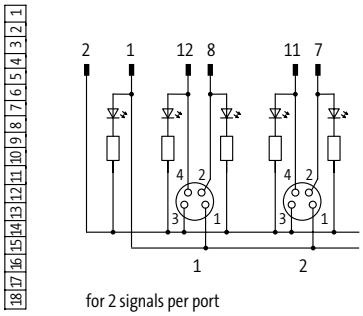
Notes

For sensors and actuators

– Base modules

– inline face or side mounting

Approvals: cULus Listed, PCT

	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	M8 Females 4-pole   for 2 signals per port	M8-Females 4-pole   for 2 signals 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 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

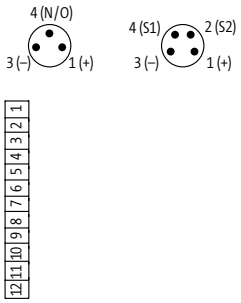
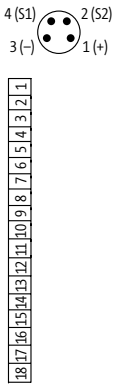
8000	–	_____	–	000	0000
		1 Form			

Notes

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 
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		

For sensors and actuators

– with homerun cable

– with pluggable spring clamp terminals

Approvals: cULus Listed, PCT

Exact8

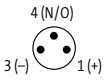
Connection cap short

1 Form

Type	84049	86049	88049	80049
	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 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**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

Temperature range	-20...+80 °C, depending on cable quality

Article No.

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

8000	–	_____	–	___	____
		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: c UL us Listed, PG

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 (+) 12 11 10 9 8 7 6 5 4 3 2 1	M8-Females 4-pole 4 (S1) 2 (S2) 3 (–) 1 (+) 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	

2 Cable Type

Jacket Color – No./diameter of wires

	gray	gray	gray
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 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

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

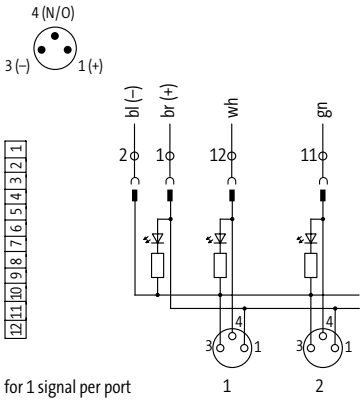
Notes

For sensors and actuators

– Sets (basic module and cap)

– inline face or side mounting

Approvals: cULus Listed, PCT

	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**
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 (UL/CSA)	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**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.				
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

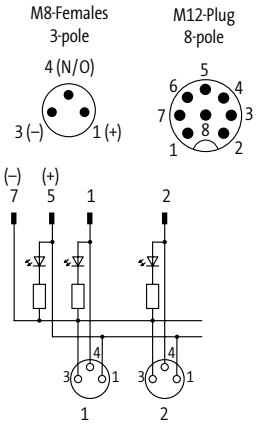
For sensors

– M12 plug connection

– 8-pole

– inline face or side mounting

Approvals: c UL us Listed, PG

	Exact8 4-way	**Exact8** 6-way
		
1 Form	**84070**	**86070**
Type	**3-pole**	**3-pole**
Contact layout	 for 1 signal per port	

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

8000	– _____	– 000	0000
	1 Form		

Notes

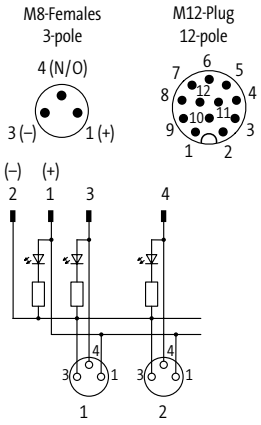
For sensors

– M12 plug connection

– 12-pole

– inline face or side mounting

Approvals: cULus Listed, PCT

	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				

for 1 signal per port

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

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors

– M12 plug connection

– 12-pole

– inline face or side mounting

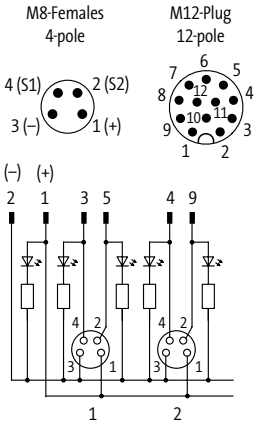
Approvals: c UL us Listed, PG

Exact8

4-way

1 Form

84160

Type	**4-pole**
Contact layout	

for 2 signals per port

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)

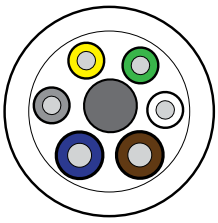
Article No.

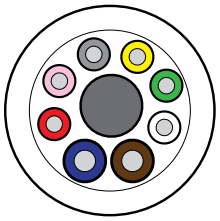
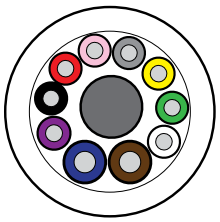
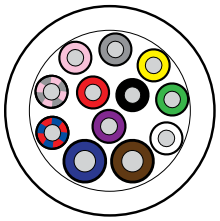
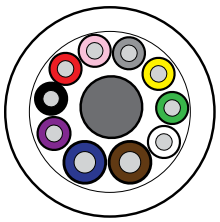
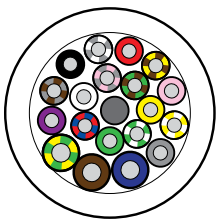
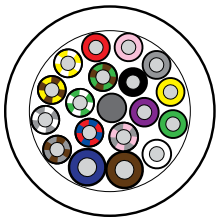
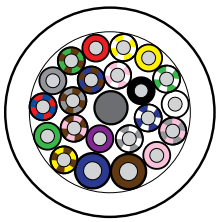
The composition of your article number is explained on page 3.1.i

8000	–	84160	–	000	0000
		1 Form			

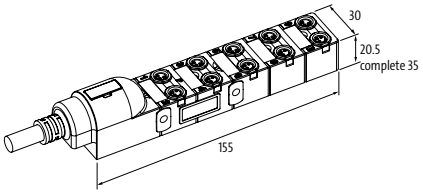
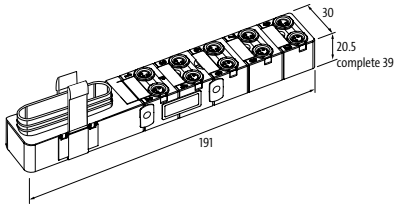
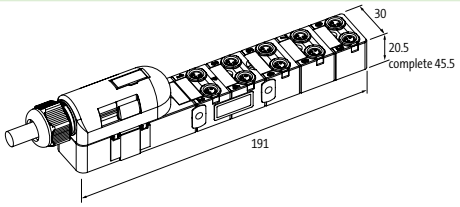
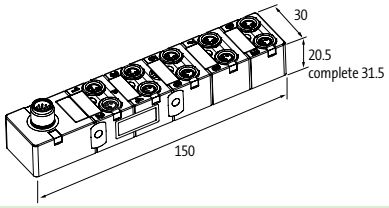
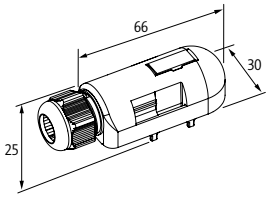
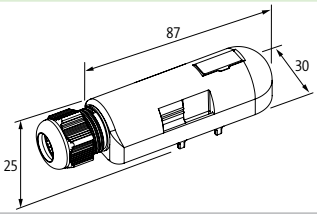
Notes

Plug accessories			Art-No.
	**Torque wrench set**		
	M8 (0.4 Nm, AF9)		**7000-99101-0000000**
	**Screw plug M8 × 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 × 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 × 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**		
	4×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3375000**
	4×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3345000**

Homerun cable accessories			Art-No.
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	6×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3505000**
	6×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3565000**
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	8×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3575000**
	8×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3595000**
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	10×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-3855000**
	10×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-3845000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	8×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3585000**
	8×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3605000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	12×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3865000**
	12×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3895000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	16×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3955000**
	16×0.34 + 2×0.75 mm²	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 mm²	10-way distribution boxes M8	**8000-00000-4115000**
	20×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-4125000**

M8 Distribution Systems Technical Data

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

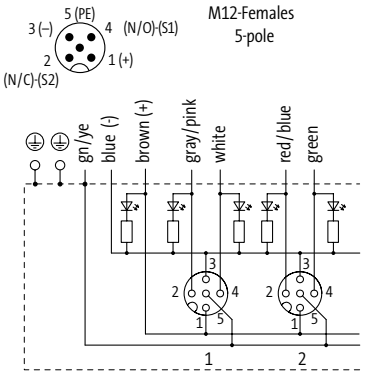
MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals: cULus Listed, PCT

	MVP12 Metal	**MVP12 Metal**
	4-way for PNP signals 24 V DC	8-way for PNP signals 24 V DC
		
1 Form	**54510**	**58510**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	 for 2 signals per port	
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA)	**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. 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		

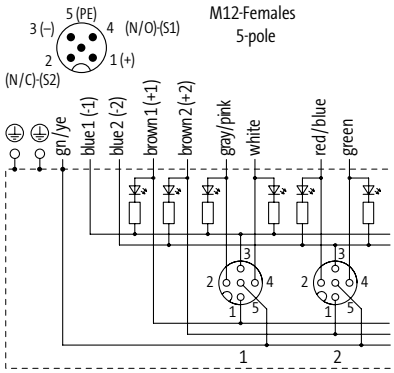
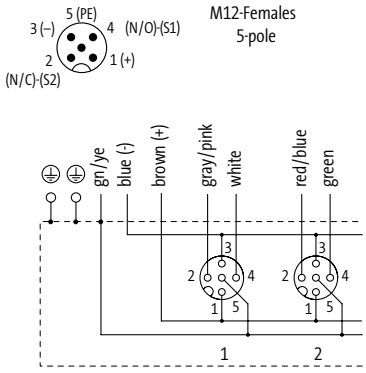
M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals: cULus Listed, PCT

	MVP12 Metal 8-way with potential separation	**MVP12 Metal** 4-way without LED
		
1 Form	**58610**	**54512**
Type	**PNP, 5-pole**	**without LED, 5-pole (for analog signals)**
Contact layout	 for 2 signals per port	 for 2 signals per port
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA)	**403** – 16 × 0.34 + 5 × 0.75 mm²	**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		

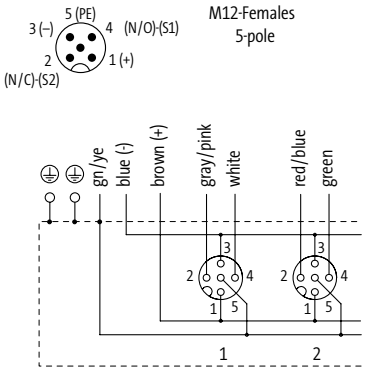
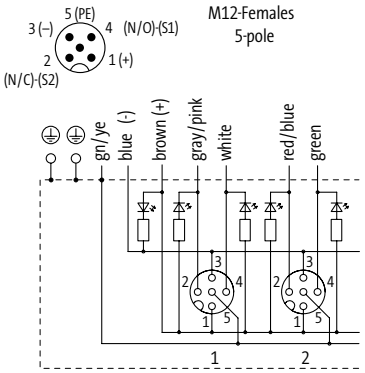
MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals: cULus Listed, PCT

		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	 for 2 signals per port	 for 2 signals per port
2	**Cable Type**	**Jacket Color** – No./diameter of wires	
		gray	**gray**
	PUR (UL/CSA)	**452** – 16 × 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	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**

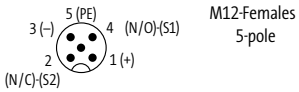
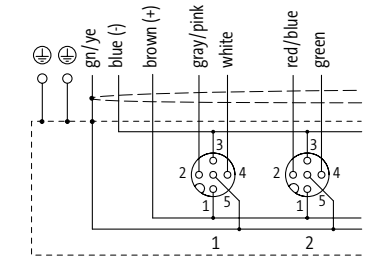
Notes

For sensors and actuators

– with molded homerun cable

– shielded

Approvals:

	MVP12 Metal 4-way	MVP12 Metal 8-way
		
1 Form	**54515**	**58515**
Type	**without LED, 5-pole (for analog signals)**	**without LED, 5-pole (for analog signals)**
Contact layout	  for 2 signals per port	
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA)	**373** – 8 × 0.34 + 3 × 0.75 mm²	**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		

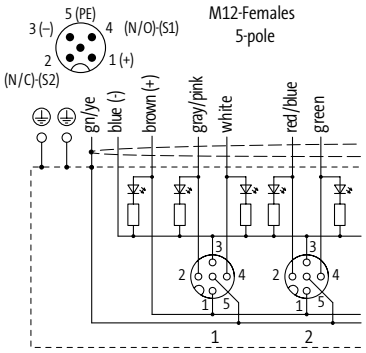
MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– shielded

Approvals: cULus Listed, PCT

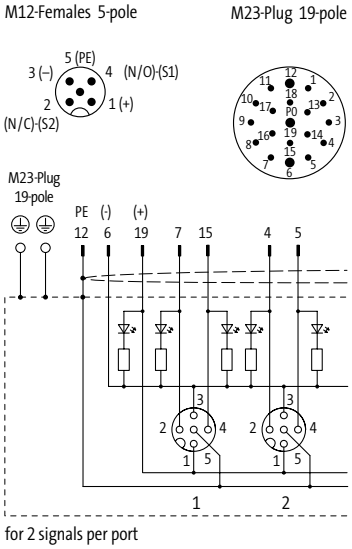
	MVP12 Metal	**MVP12 Metal**
	4-way for PNP signals 24 V DC	8-way for PNP signals 24 V DC
		
1 Form	**54513**	**58513**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	 for 2 signals per port	
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA)	**373** – 8 × 0.34 + 3 × 0.75 mm²	**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	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	(+)	
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 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		

For sensors and actuators

– M23 plug connection, 19-pole

– for unshielded or shielded use

Approvals: cULus Listed, PCT

	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	 for 2 signals per port	

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

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– M23 plug connection, 19-pole

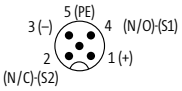
– for unshielded or shielded use

Approvals: cULus Listed, PCT

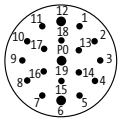
	MVP12 Metal	MVP12 Metal
	4-way	8-way
		
1 Form	**54522**	**58522**
Type	**without LED, 5-pole (for analog signals)**	**without LED, 5-pole (for analog signals)**

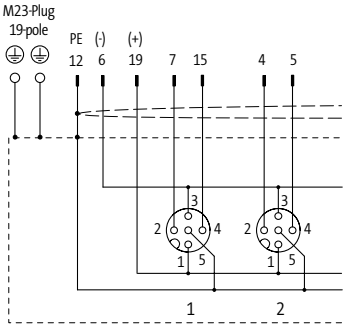
Contact layout

M12-Females 5-pole



M23-Plug 19-pole





for 2 signals per port

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

8000	–	_____	–	000	0000
		1 Form			

Notes

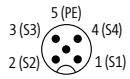
For harsh environments

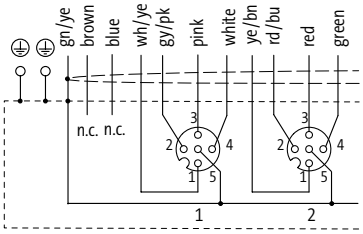
– for unshielded or shielded use

MVP12 Metal UNIVERSAL
with molded homerun cable
4-way

Approvals:

1 Form — 54712

Type	**without LED, 5-pole (for analog signals)**
Contact layout	 M12-Females 5-pole



for 4 signals per port
free arrangeable, PE bridged

2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR (UL/CSA)	**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

8000	–	54712	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

For harsh environments

– for unshielded or shielded use

MVP12 Metal UNIVERSAL

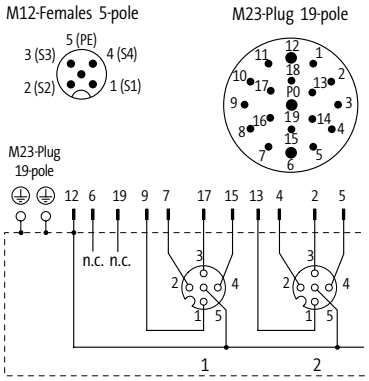
M23 plug connection, 19-pole

4-way

Approvals: c UL us Listed, PCT

1 Form

54722

Type	**without LED, 5-pole (for analog signals)**
Contact layout	

for 4 signals per port

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

1 Form			
8000	– 54722 –	000	0000

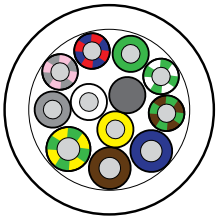
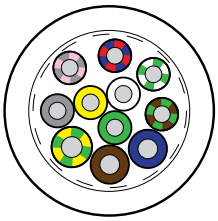
Notes

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**

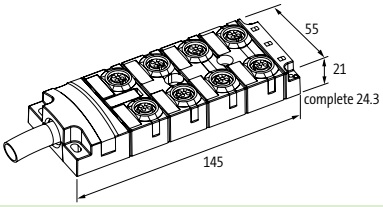
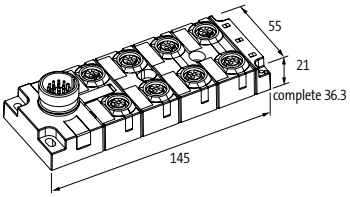
Plug accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	**7000-99102-0000000**
	**Screw plug M12 × 1 mm**		
	Metal, hex, 1 piece		**996049**

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 mm²	4-way distribution boxes M12	**8000-00000-4485000**
	16×0.5 + 3×1.0 mm²	8-way distribution boxes M12	**8000-00000-4525000**
	16×0.34 + 5×0.75 mm²	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 mm²	4-way distribution boxes M12, shielded	**8000-00000-3735000**
	16×0.34 + 3×0.75 mm²	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

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

Exact12
- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for voltages up to 125 V AC/DC
- Analog signals

Page 4.12.1

Exact12
- 4-, 8-way
- with 8- or 12-pole M12 connection

Page 4.12.27

With pluggable homerun cable

Exact12 Basic Module
- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for voltages up to 125 V AC/DC
- Analog signals

Page 4.12.8

Exact12/MVP12 connection caps
- Field-wireable with screw or spring clamp terminals
- With pre-wired homerun cable and screw-plug terminals

Page 4.12.14

Exact12 set
- 4-, 8-way
- With pluggable cap and screw plug terminals or spring clamp terminals

Page 4.12.17

Exact12 with connection on the back
- 8-way
- with pluggable connection on the back
- Potential separation optional

Page 4.12.25

Exact12/MVP12 universal
- 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

Page 4.12.30

MSDS – safety distribution system
- 8-way
- With pluggable cap and screw terminals
- With and without electrical feed back

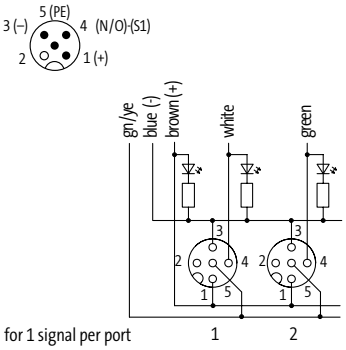
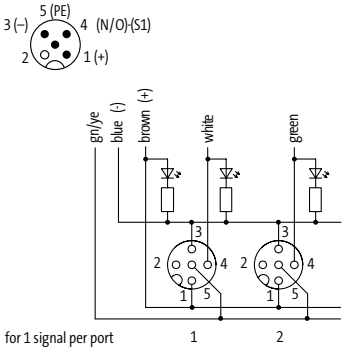
Page 4.12.35

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

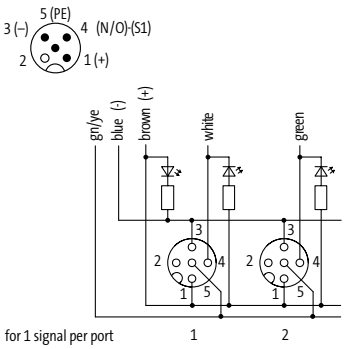
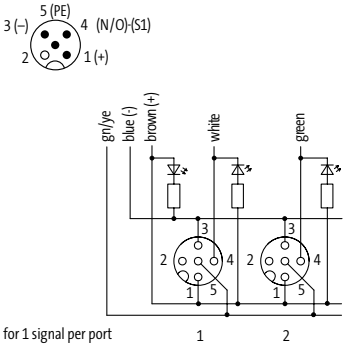
	Exact12 4-way for PNP signals 24 V DC	**Exact12** 8-way for PNP signals 24 V DC
		
1 Form	**84410**	**88410**
Type	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M12-Females 4-pole 	M12-Females 4-pole 
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**333** – 4 × 0.34 + 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		
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 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: cULus Listed, PCT

	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84411**	**88411**
Type	**NPN, 4-pole**	**NPN, 4-pole**
Contact layout	M12-Females 4-pole 	M12-Females 4-pole 
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**

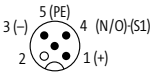
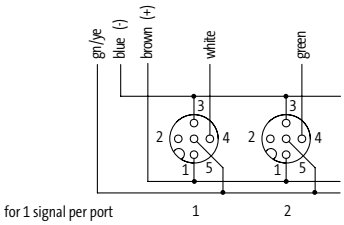
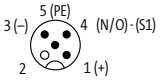
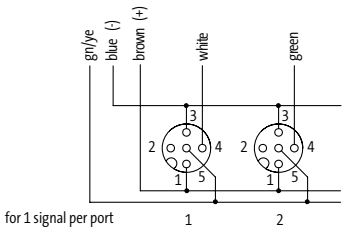
Notes

Further cable lengths on request.

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

	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	M12-Females 4-pole  	M12-Females 4-pole  
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	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**

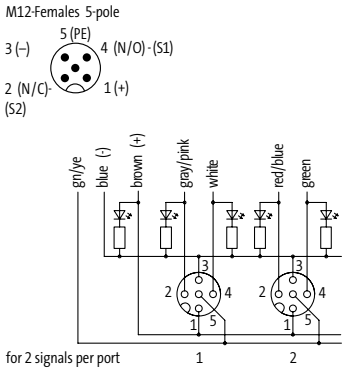
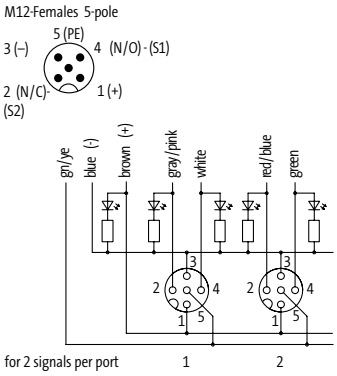
Notes

Further cable lengths on request.

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

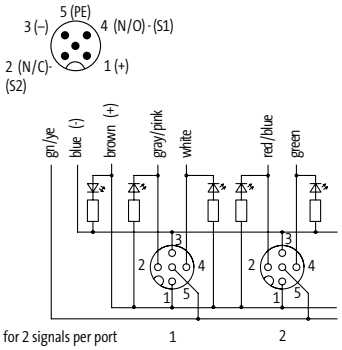
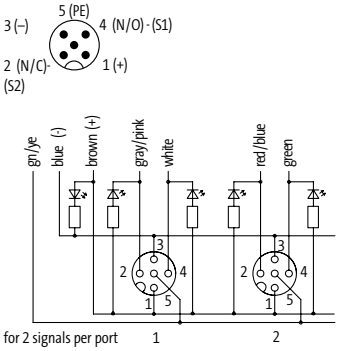
	Exact12 4-way for PNP signals 24 V DC	**Exact12** 8-way for PNP signals 24 V DC
		
1 Form	**84510**	**88510**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout		
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**363** – 8 × 0.34 + 3 × 0.75 mm²	**398** – 16 × 0.34 + 3 × 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		
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.	

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

	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	M12-Females 5-pole 	M12-Females 5-pole 
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	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**

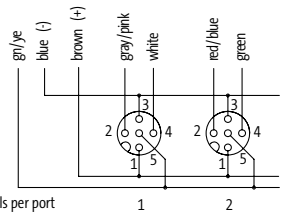
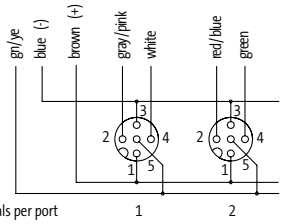
Notes

Further cable lengths on request.

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84512**	**88512**
Type	**without LED, 5-pole**	**without LED, 5-pole**
Contact layout	M12-Females 5-pole 3 (–) 5 (PE) 4 (N/O)·(S1) 2 (N/C)·(S2) 1 (+)  	M12-Females 5-pole 3 (–) 5 (PE) 4 (N/O)·(S1) 2 (N/C)·(S2) 1 (+) 

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

8000	– _____	– ___	____
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Further cable lengths on request.

For sensors and actuators

– with molded homerun cable

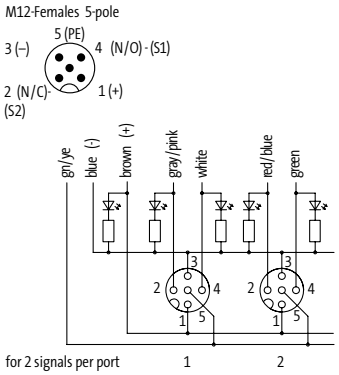
– Homerun cable with spring clamp terminals

Approvals: cULus Listed, PCT

Exact12

8-way
for PNP signals 24 V DC

1 Form — 98510

Type	**PNP, 5-pole**
Contact layout	

2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR/PVC	**398** – 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

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	(+)
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

8000	–	98510	–	___	____
		1 Form		2 Cable Type	3 Cable Length

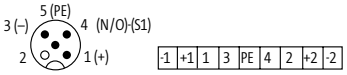
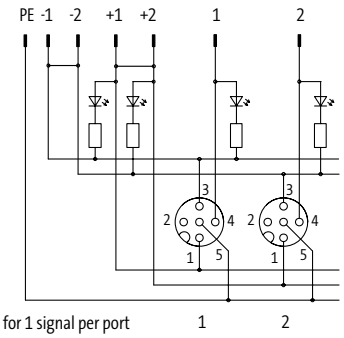
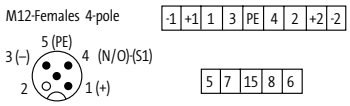
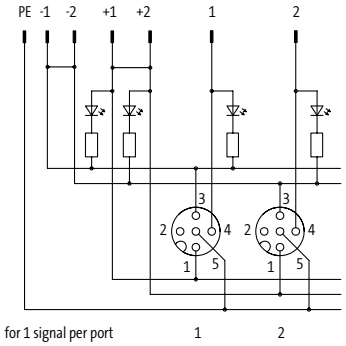
Notes

Further cable lengths on request.

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	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	M12-Females 4-pole   	M12-Females 4-pole  

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

8000	– _____	– 000	0000
	1 Form		

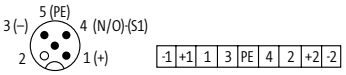
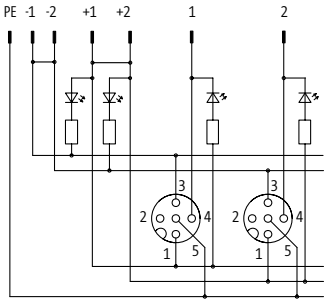
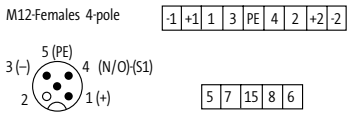
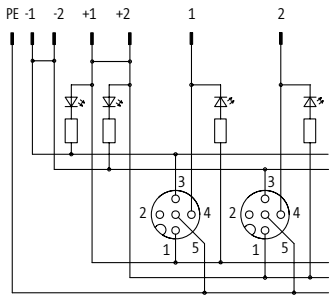
Notes

MURR ELEKTRONIK
stay connected

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	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	M12-Females 4-pole  	M12-Females 4-pole  

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

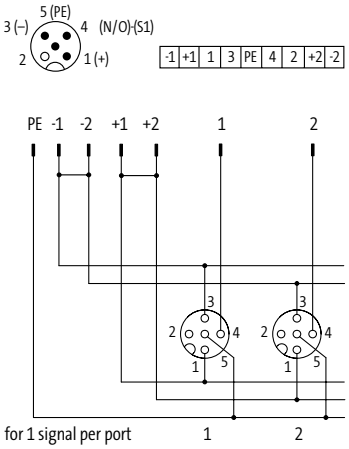
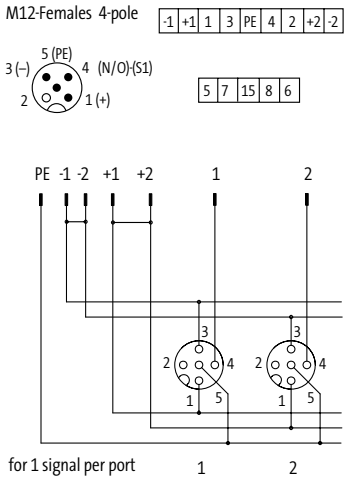
8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84402**	**88402**
Type	**without LED, 4-pole**	**without LED, 4-pole**
Contact layout	M12 Females 4-pole 	M12-Females 4-pole 

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

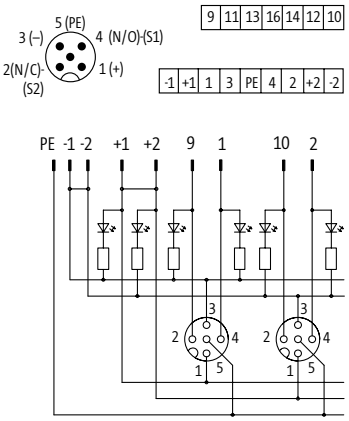
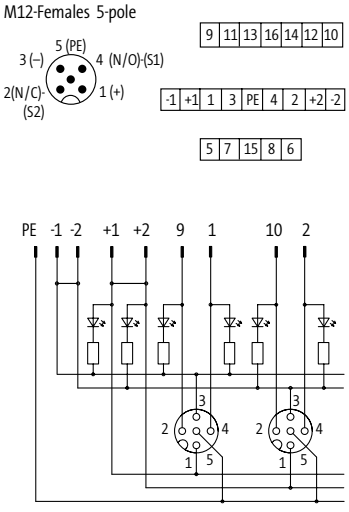
8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	Exact12	Exact12
	4-way for PNP signals 24 V DC	8-way for PNP signals 24 V DC
		
1 Form	**84500**	**88500**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	M12-Females 5-pole 	M12-Females 5-pole 

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

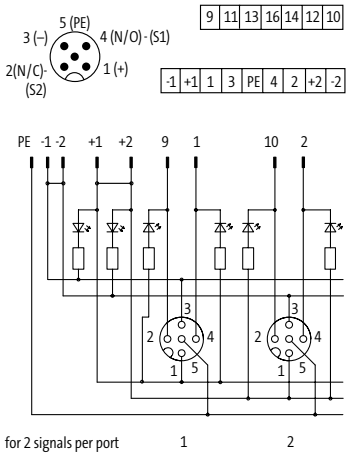
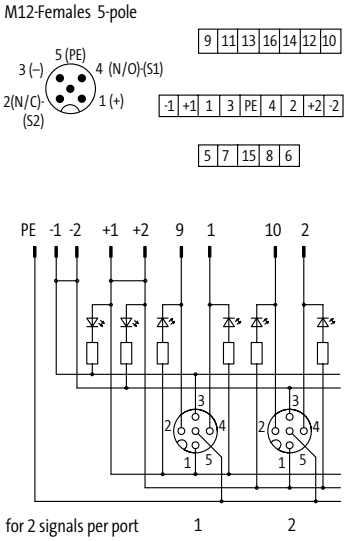
8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	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	M12-Females 5-pole 	M12-Females 5-pole 

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

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Base modules

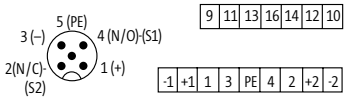
Approvals: cULus Listed, PCT

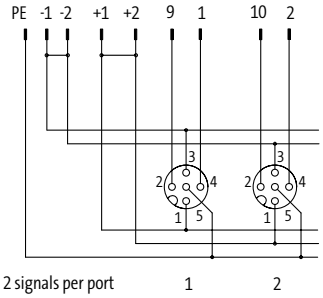
Exact12
4-way
without LED

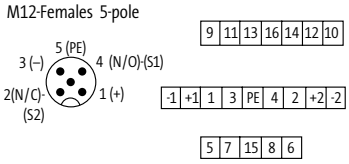
Exact12
8-way
without LED

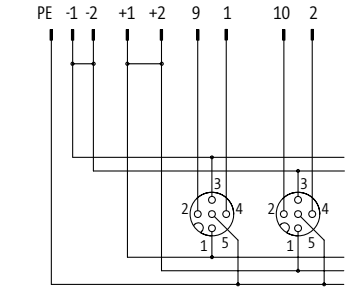
1 Form

Type	**84502**	**88502**
	without LED, 5-pole	**without LED, 5-pole**
Contact layout	M12-Females 5-pole	M12-Females 5-pole









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

8000	– _____	– 000	0000
	1 Form		

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

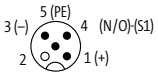
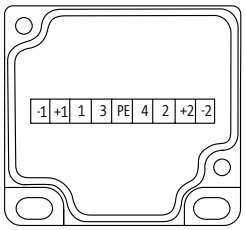
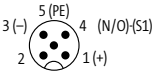
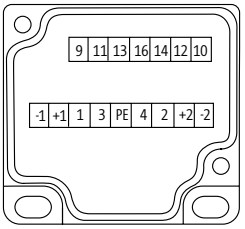
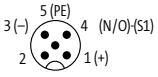
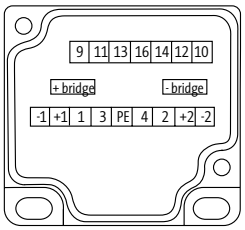
– Field-wireable

– with homerun cable

Approvals:

Exact12

for 4-way distribution boxes

1 Form	84459	84559	84659
Type	4-pole Screw plug-in terminals	5-pole Screw plug-in terminals	5-pole, potential separation as option Screw plug-in terminals
Contact layout	M12-Females 4-pole   for 1 signal per port	M12-Females 5-pole   for 2 signals per port	M12 Females 5-pole   for 2 signals per port
2 Cable Type	**Jacket Color** – No./diameter of wires		
	gray	gray	gray
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	**363** – 8 × 0.34 + 3 × 0.75 mm²	**374** – 8 × 0.34 + 5 × 0.75 mm²
PUR (UL/CSA)		**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**		
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

For sensors and actuators

– Field-wireable

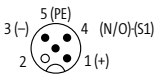
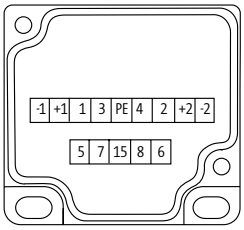
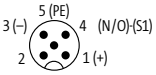
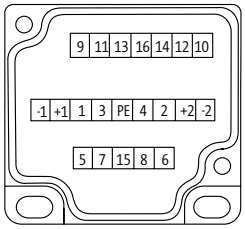
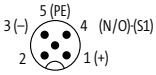
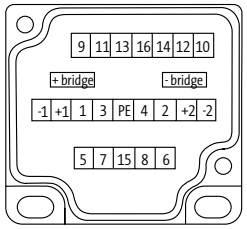
– with homerun cable

Approvals:

Exact12

for 8-way distribution boxes

1 Form

	88459	88559	88659
Type	**4-pole** **Screw plug-in terminals**	**5-pole** **Screw plug-in terminals**	**5-pole, potential separation as option** **Screw plug-in terminals**
Contact layout	M12 Females 4-pole   for 1 signal per port	M12-Females 5-pole   for 2 signals per port	M12-Females 5-pole   for 2 signals per port

2 Cable Type

Jacket Color – No./diameter of wires

	gray	gray	gray
PUR/PVC	**362** – 8 × 0.34 + 3 × 0.75 mm²	**398** – 16 × 0.34 + 3 × 0.75 mm²	**404** – 16 × 0.34 + 5 × 0.75 mm²
PUR (UL/CSA)	**447** – 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**
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

8000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

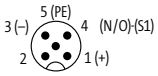
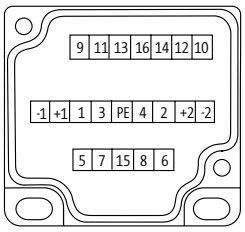
M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Field-wireable

– without homerun cable

Approvals:

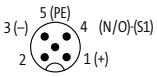
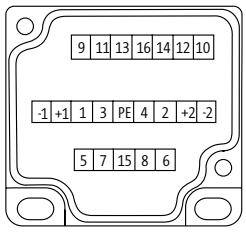
	Exact12 Spring clamp plug-in terminals for 4-, and 8-way distribution boxes	**Exact12** Screw plug-in terminals for 4-, and 8-way distribution boxes
		
1 Form	**88549**	**88559**
Type	**5-pole** **Spring clamp plug-in terminals**	**5-pole** **Screw plug-in terminals**
Contact layout	M12-Females 5-pole   for 2 signals per port	
Technical Data		
Total current	max. 2 × 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 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 0 0 0 0 0**	
	1 Form	
Notes		

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** **Spring clamp plug-in terminals**	**5-pole** **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 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

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

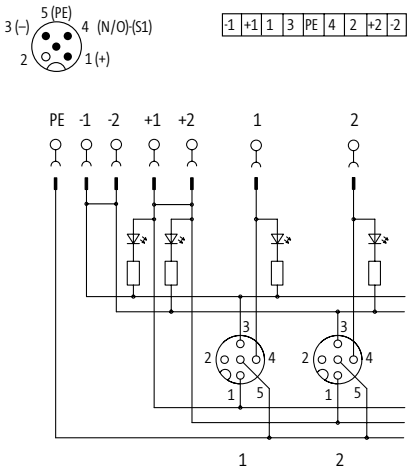
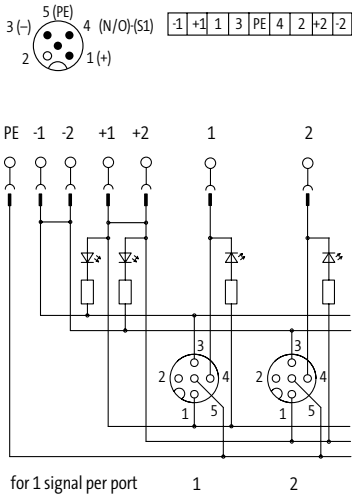
– Sets (basic module and cap)

– Field-wireable

Approvals: cULus Listed, PCT

Exact12

4-way

1 Form	84440	84450	84451
Type	PNP, 4-pole Spring clamp plug-in terminals	PNP, 4-pole Screw plug-in terminals	NPN, 4-pole Screw plug-in terminals
Contact layout	M12-Females 4-pole  for 1 signal per port		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 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	(+)
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

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals:

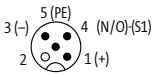
Exact12

4-way

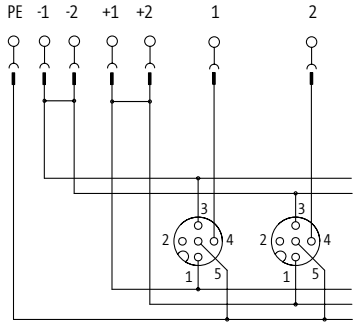
1 Form

84452

Type	**without LED, 4-pole** **Screw plug-in terminals**
Contact layout	M12-Females 4-pole



-1	+1	1	3	PE	4	2	+2	-2



for 1 signal per port 1 2

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 mm² (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

8000	–	84452	–	000	0000
		1 Form			

Notes

For sensors and actuators

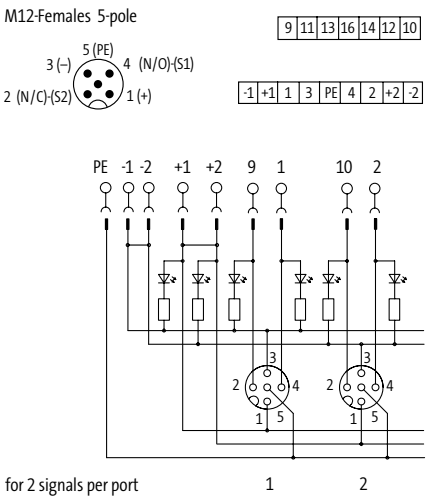
– Sets (basic module and cap)

– Field-wireable

Approvals: cULus Listed, PG

Exact12

4-way

1 Form	84540	84550
Type	PNP, 5-pole Spring clamp plug-in terminals	PNP, 5-pole Screw plug-in terminals
Contact layout		

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	(+)
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

8000	– _____	– 000	0000
	1 Form		

Notes

MURR ELEKTRONIK
stay connected

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** **Screw plug-in terminals**	**without LED, 5-pole** **Screw plug-in terminals**
Contact layout	M12-Females 5-pole 5 (PE), 3 (–), 4 (N/O)-(S1), 2 (N/C)-(S2), 1 (+) 9 11 13 16 14 12 10 -1 +1 1 3 PE 4 2 +2 -2 PE -1 -2 +1 +2 9 1 10 2 for 2 signals per port 1 2	M12-Females 5-pole 5 (PE), 3 (–), 4 (N/O)-(S1), 2 (N/C)-(S2), 1 (+) 9 11 13 16 14 12 10 -1 +1 1 3 PE 4 2 +2 -2 PE -1 -2 +1 +2 9 1 10 2 for 2 signals per port 1 2

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

8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors and actuators

– Sets (basic module and cap)

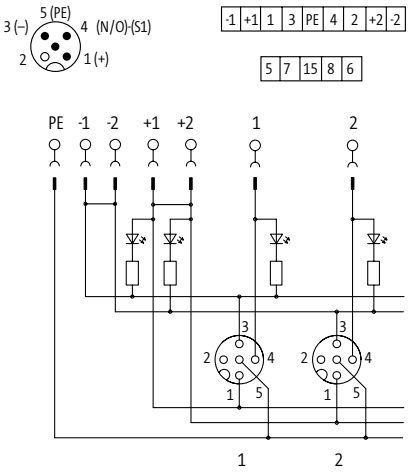
– Field-wireable

Approvals: c UL us Listed, PG

Exact12

8-way

1 Form	88440	88450
Type	PNP, 4-pole Spring clamp plug-in terminals	PNP, 4-pole Screw plug-in terminals
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 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	(+)
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

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

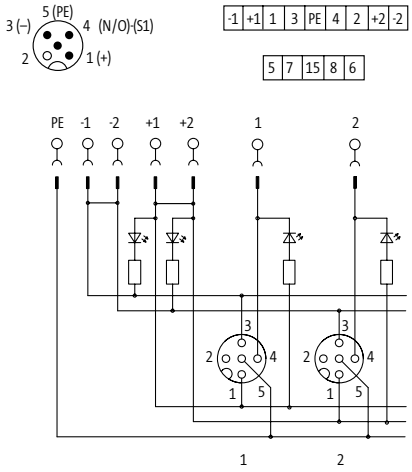
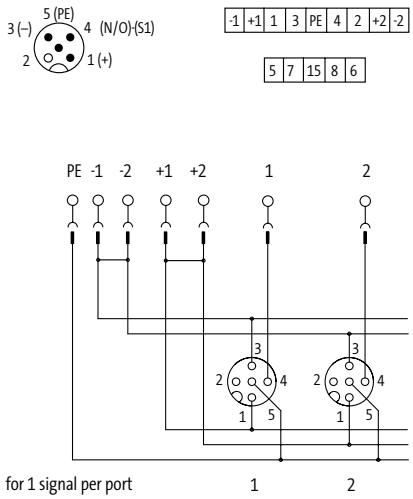
– Sets (basic module and cap)

– Field-wireable

Approvals:

Exact12

8-way

1 Form	88451	88452
Approvals	cULus	
Type	NPN, 4-pole Screw plug-in terminals	without LED, 4-pole Screw plug-in terminals
Contact layout	M12-Females 4-pole  for 1 signal per port	M12-Females 4-pole  for 1 signal per port

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 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

8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors and actuators

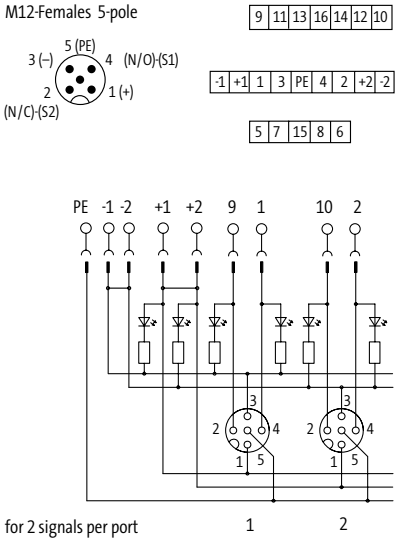
– Sets (basic module and cap)

– Field-wireable

Exact12

8-way

Approvals: cULus Listed, PCT

1 Form	88540	88550
Type	PNP, 5-pole Spring clamp plug-in terminals	PNP, 5-pole Screw plug-in terminals
Contact layout		

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	(+)
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

8000	– _____	– 000	0000
	1 Form		

Notes

MURR ELEKTRONIK
stay connected

For sensors and actuators

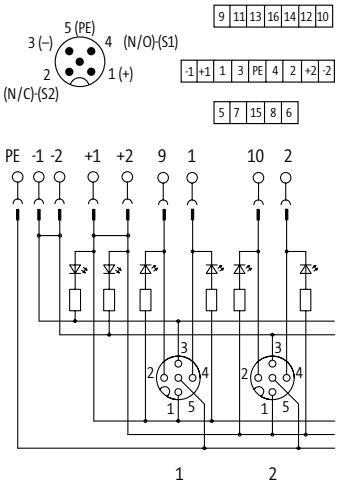
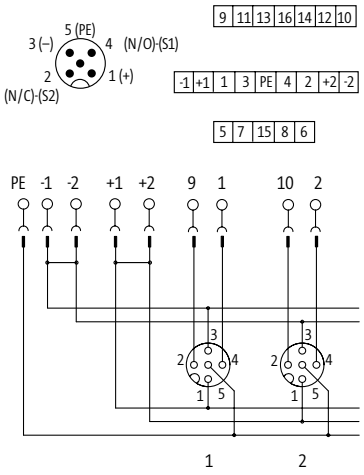
– Sets (basic module and cap)

– Field-wireable

Approvals:

Exact12

8-way

1 Form	88551	88552
Approvals	cULus	
Type	NPN, 5-pole Screw plug-in terminals	without LED, 5-pole Screw plug-in terminals
Contact layout	M12 Females 5-pole  for 2 signals per port	M12 Females 5-pole  for 2 signals per port

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

8000	– _____	– 000	0000
	1 Form		

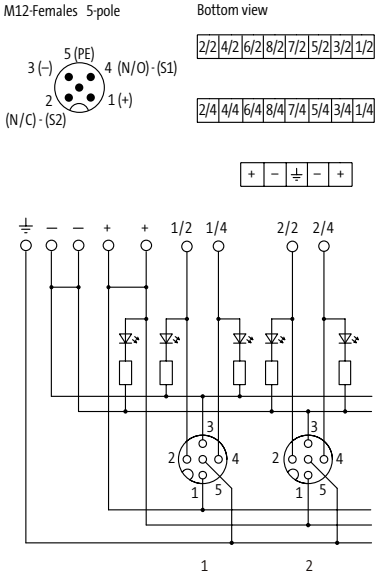
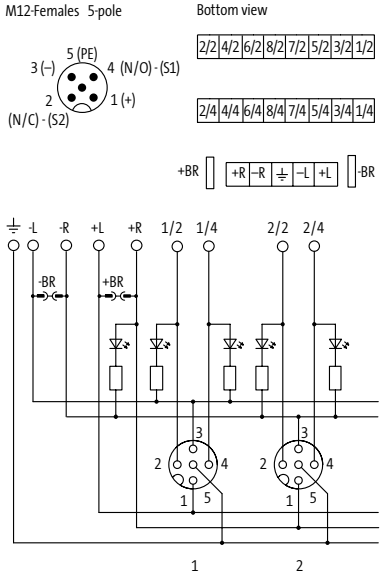
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– rear connection

Approvals:

	Exact12 rear connection	**Exact12** rear connection with potential separation
		
1 Form	**88580**	**88680**
Type	**PNP, 5-pole** **Spring clamp terminals**	**PNP, 5-pole** **Spring clamp terminals**
Contact layout	 for 2 signals per port	 for 2 signals per port

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

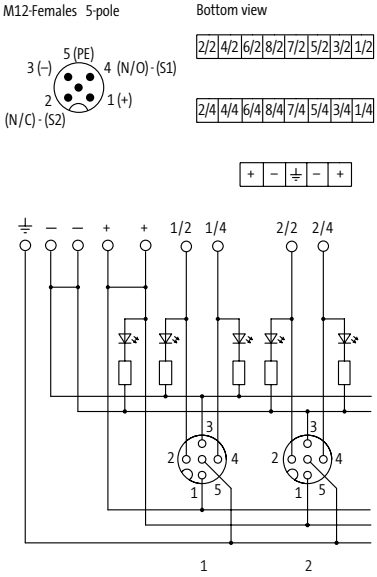
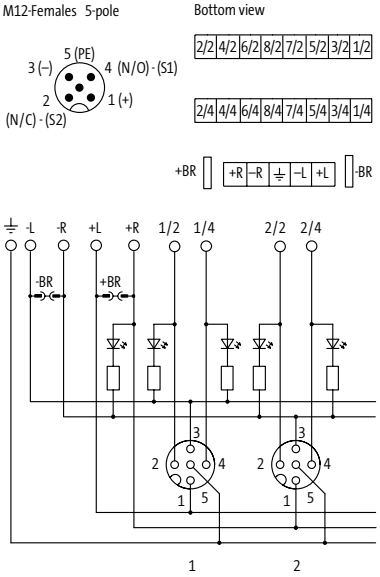
8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors and actuators

– rear connection

Approvals: cULus Listed

	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	 for 2 signals per port	 for 2 signals per port

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

8000	– _____	– 000	0000
	1 Form		

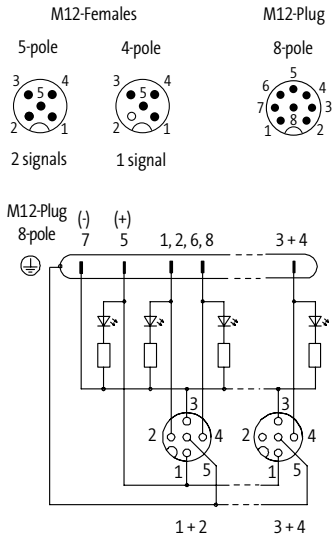
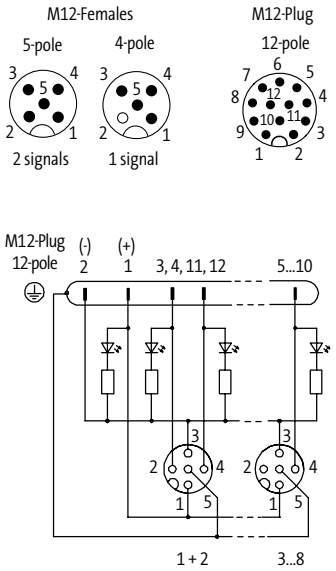
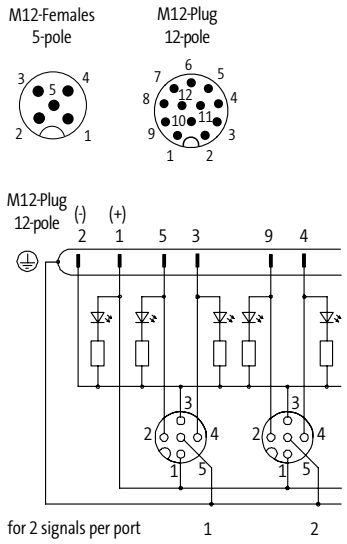
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M12 plug connection

Approvals: cULus Listed, PCT

	Exact12 4-way	Exact12 8-way	Exact12 4-way
			
1 Form	**84470**	**88460**	**84560**
Type	**5-, 4-pole** **M12 plug connection, 8-pole**	**5-, 4-pole** **M12 plug connection, 12-pole**	**5-pole** **M12 plug connection, 12-pole**
Contact layout			

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

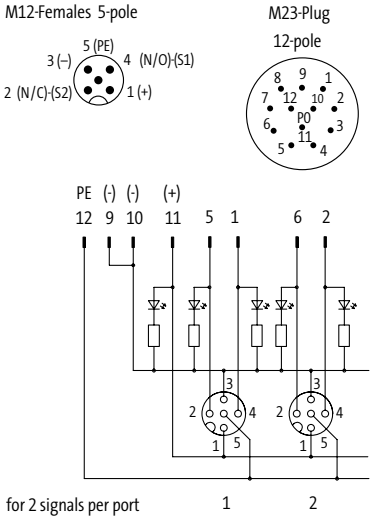
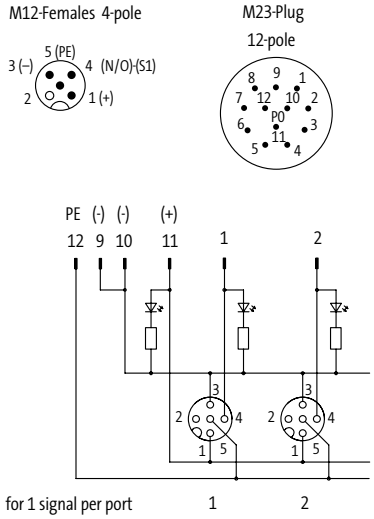
1 Form			
8 0 0 0 –	_ _ _ _ _ –	0 0 0	0 0 0 0

Notes

For sensors and actuators

– M23 plug connection

Approvals: cULus Listed, PCT

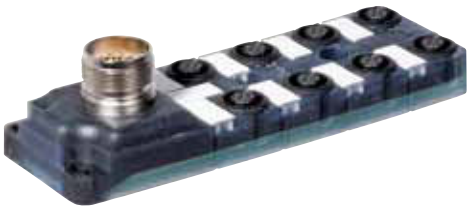
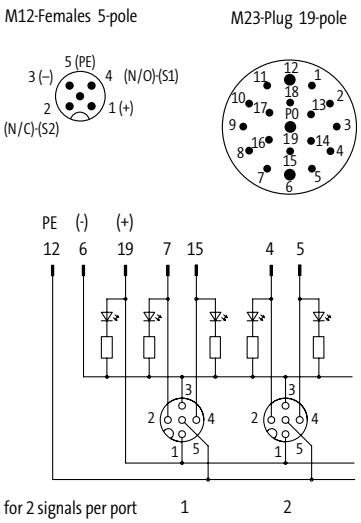
	Exact12 4-way	**Exact12** 8-way
		
1 Form	**84530**	**88430**
Type	**5-pole** **M23 plug connection, 12-pole**	**4-pole** **M23 plug connection, 12-pole**
Contact layout		
Technical Data		
Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+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.		
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

For sensors and actuators

– M23 plug connection

Approvals: cULus Listed, PCT

	Exact12 4-way	**Exact12** 8-way
		
1 Form	**84520**	**88520**
Type	**5-pole** **M23 plug connection, 19-pole**	**5-pole** **M23 plug connection, 19-pole**
Contact layout		

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 10 A	max. 8 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.

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

8000	– _____	– 000	0000
	1 Form		

Notes

For general applications

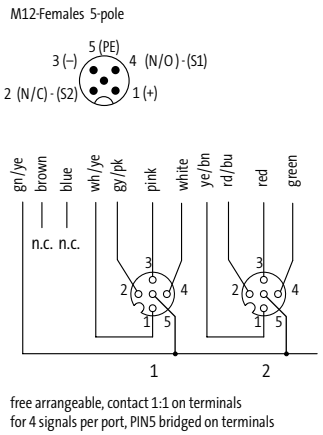
– with molded homerun cable

Approvals: c UL us Listed

Exact12 UNIVERSAL

4-way

1 Form — 84712

Type	**without LED, 5-pole (for analog signals)**
Contact layout	

free arrangeable, contact 1:1 on terminals
for 4 signals per port, PIN5 bridged on terminals

2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR/PVC	**398** – 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	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

8000	–	84712	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

For general applications

– Basic module

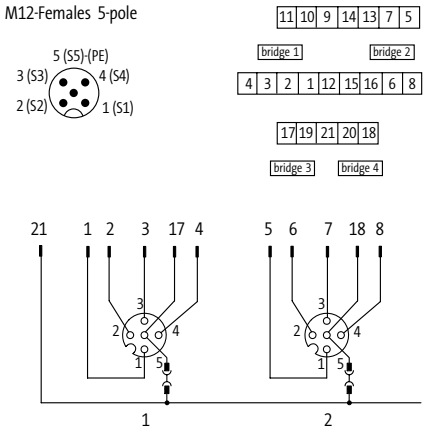
Approvals: c UL us Listed

MVP12 UNIVERSAL

4-way

1 Form

44702

Type	**without LED, 5-pole (for analog signals)**
Contact layout	

free arrangeable, contact 1:1 on terminals
for 5 signals per port, possibilty to bridge each PIN5

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

8000	–	44702	–	000	0000
		1 Form			

Notes

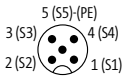
For general applications

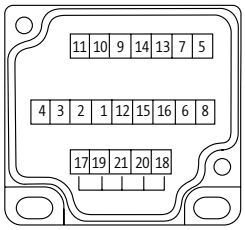
– with homerun cable

MVP12 UNIVERSAL

1 Form — 84759

Type	**universal**
	Screw plug-in terminals
Contact layout	M12-Females 5-pole





free arrangeable, contact 1:1 on terminals

2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR/PVC	**533** – 18 × 0.75 mm²

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

8000	–	84759	–	___	____
		1 Form		2 Cable Type	3 Cable Length

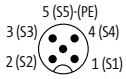
Notes

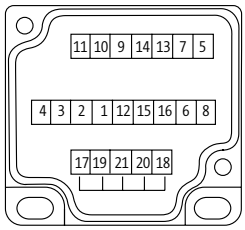
For general applications

– Field-wireable

MVP12 UNIVERSAL

1 Form	84749	84759
Approvals		cULus
Type	universal	universal
	Spring clamp plug-in terminals	Screw plug-in terminals
Contact layout	M12-Females 5-pole	





free arrangeable, contact 1:1 on terminals

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

8000	– _____	– 000	0000
	1 Form		

Notes

For general applications

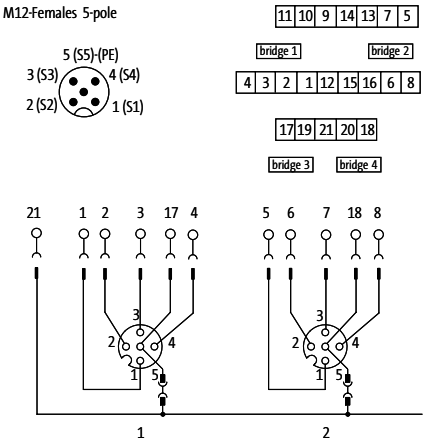
– Sets (basic module and cap)

– Field-wireable

Approvals: cULus 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		

free arrangeable, contact 1:1 on terminals
for 5 signals per port, possibilty to bridge each PIN5

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 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (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

8000	– _____	– 000	0000
	1 Form		

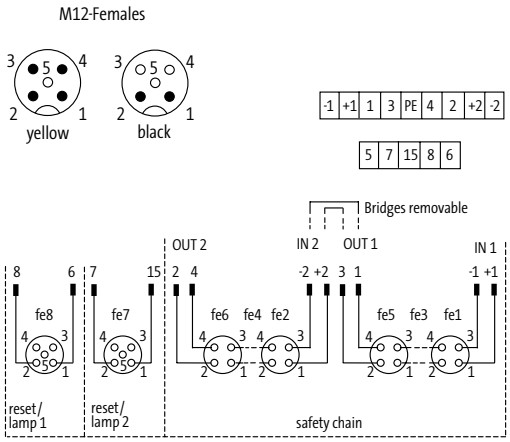
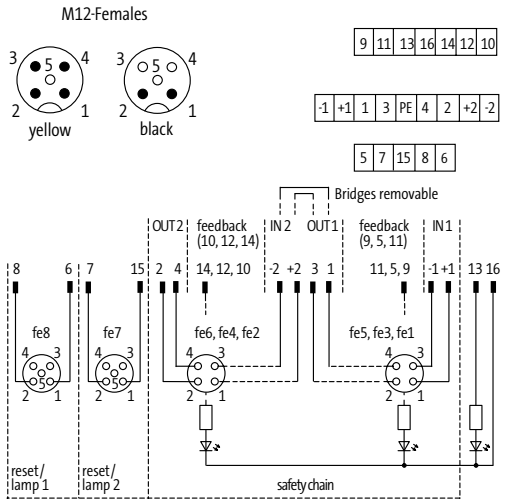
Notes

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**	**98750**
Type	**without LED** **Screw plug-in terminals**	**with LED** **Screw plug-in terminals**
Contact layout		

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

For safety wiring

– with molded homerun cable

– Homerun cable with spring clamp terminals

– (EN ISO 13849-2)

Approvals: cULus Listed, PCT

Exact12 Safety

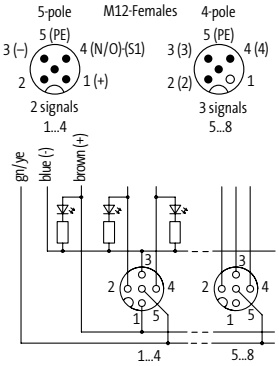
8-way

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

8000	–	98710	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

For safety wiring

– Basic module

– (EN ISO 13849-2)

Approvals:

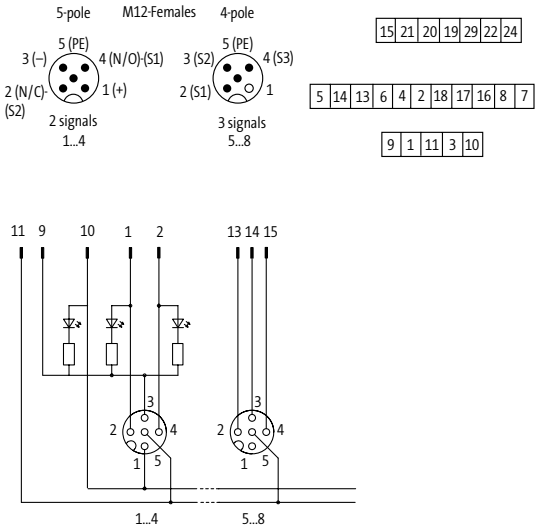
Exact12 Safety

8-way

for PNP signals 24 V DC

1 Form

98700

Type	**PNP, 5-pole, 4/3-pole**
Contact layout	

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

8000	–	98700	–	000	0000
		1 Form			

Notes

For safety wiring

– Connection cap

– Homerun cable with spring clamp terminals

– (EN ISO 13849-2)

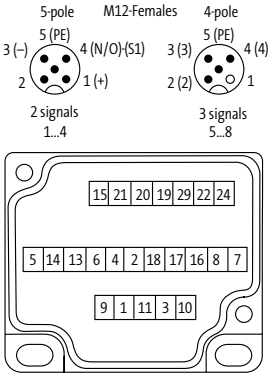
Approvals: cULus Listed, PCT

Exact12 Safety

for 8-way distribution boxes

1 Form

98749

Type	**5-, 4-pole**
Contact layout	

2 Cable Type

Jacket Color – No./diameter of wires

	gray
PUR (UL/CSA)	**408** – 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**
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

8000	–	98749	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

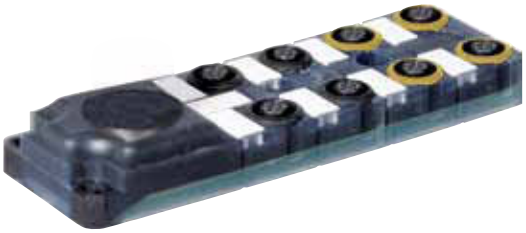
For sensors and actuators

– rear connection

– (EN ISO 13849-2)

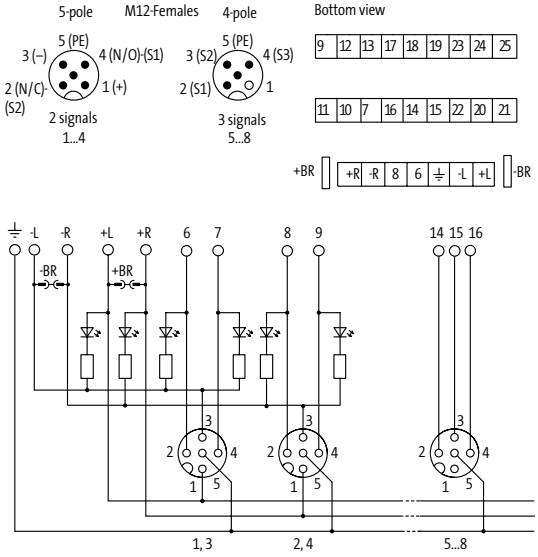
Approvals: cULus Listed

Exact12 Safety
rear connection
with potential separation



1 Form

98790

Type	**PNP, 5-pole, 4/3-pole** **Spring clamp terminals**
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

8000	–	98790	–	000	0000
		1 Form			

Notes

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**

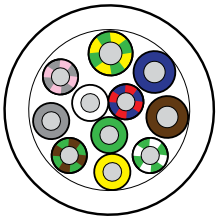
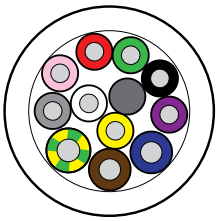
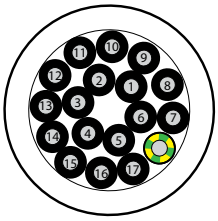
Plug accessories			Art-No.
	**Transfer module**		
	for 1 × 11- and 1 × 12-pole spring clamp terminals		**596154**
	**Service adapter**		
	with LED and SUB-D25	for transfer module Art-No. 596154	**596153**
	**Screw plug M12 × 1 mm**		
	Metal, hex, 1 piece		**996049**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**58627**

M12 DISTRIBUTION SYSTEMS (PLASTIC)

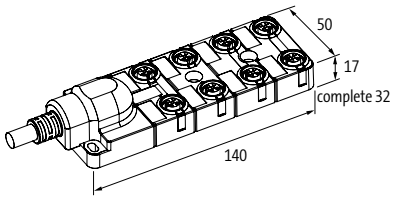
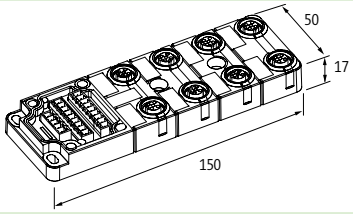
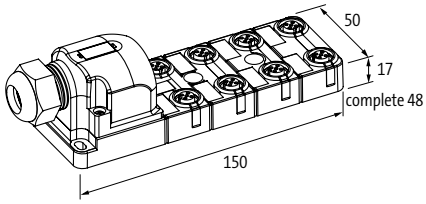
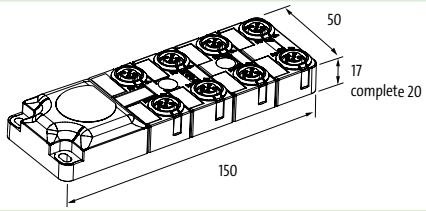
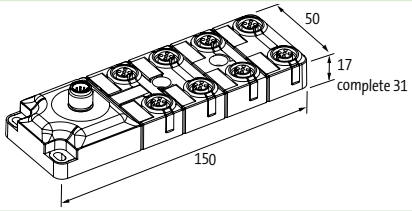
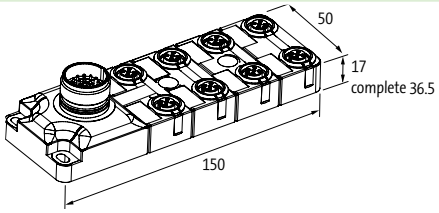
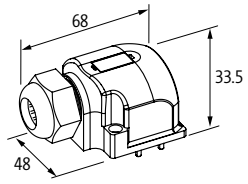
Plug accessories			Art-No.
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**Label plates**		
	KES 17 × 9 (Type M) (12 pieces/2 plates)		**996050**
	**Adapter M12/M8**		
	3-pole		**7000-42201-0000000**
	**Adapter M12/M8**		
	4-pole		**7000-42211-0000000**

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**

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 mm²	4-way distribution boxes M12	**8000-00000-3635000**
	12×0.34 + 3×0.75 mm²	6-way distribution boxes M12	**8000-00000-3885000**
	16×0.34 + 3×0.75 mm²	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 mm²	8-way distribution boxes M12	**8000-00000-4475000**
	8×0.5 + 3×1.0 mm²	4-way distribution boxes M12	**8000-00000-4485000**
	16×0.5 + 3×1.0 mm²	8-way distribution boxes M12	**8000-00000-4525000**
	16×0.34 + 5×0.75 mm²	8-way distribution boxes M12, potentially separated	**8000-00000-4035000**
	**Cable rings (50 m), PUR/PVC**		
	18 × 0.75 mm²	4-way distribution box M12, UNIVERSAL	**8000-00000-5335000**
	4×0.34 + 3×0.75 mm²	4-way distribution boxes M12	**8000-00000-3335000**
	8×0.34 + 3×0.75 mm²	8-way distribution boxes M12	**8000-00000-3625000**
	8×0.34 + 5×0.75 mm²	4-way distribution boxes M12, potentially separated	**8000-00000-3745000**
	16×0.34 + 5×0.75 mm²	8-way distribution boxes M12, potentially separated	**8000-00000-4045000**

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		

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MURR ELEKTRONIK
stay connected

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