Industrial Ethernet gateway, IP65/ IP67/ IP69k

- Gateway for Industrial Ethernet standards, incl. OPC UA, for use in environments requiring a high degree of protection
- Up to 128 input and 128 output variables can be transmitted
- "Batch controller" functionality for precise dosing of liquids
- Connection of up to eight end devices or junction box modules, connection of up to 126 CANopen participants
- Integrated central configuration management for easy device replacement

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

Type 8742 ▸
Mass flow controller (MFC)/ mass flow meter (MFM) for gases

Type 8653 ▸
AirLINE Field – the valve island – optimised for process automation

Type 8802 ▸
ELEMENT continuous control valve systems – overview

Type 3361 ▸
Electromotive 2-way globe control valve

Type 8605 ▸
PWM control electronics for electromagnetic proportional valves

Type 8681 ▸
Control head for decentralized automation of hygienic process valves

Type ME64 ▸
I/O modules IP65/ IP67/ IP69k

Type description

The Industrial Ethernet gateway Type ME63 is the central control unit for Bürkert products (valves, sensors, process control systems), which is based on EDIP (Efficient Device Integration Platform) and used in processes requiring a high degree of protection. Type ME63 consists of a fieldbus gateway which transmits the internal CANopen-based communication of the Bürkert field devices to all common industry standards for Industrial Ethernet. With the help of eight M12 ports, CANopen-based Bürkert field devices can be connected directly to the gateway Type ME63. The power supply of the field devices can be provided either by an M12 L-Power (up to 32 A) or an A-coded M12 connector (up to 4 A). One of these additional participants can be either Type ME64 (I/O module) or a passive junction box (included as an accessory part with this data sheet). The passive junction box is intended to simply integrate further participants into the proprietary bus system of the gateway Type ME63. The power supply via the M12 L-Power input can supply further field devices located close to the process via the second M12 L-Power output. Also integrated is an Ethernet switch which allows the direct integration of further field devices located close to the process in the Ethernet communication.

DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

Visit product website ▸

Table of contents

DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "3. Dimensions" on page 4.
Weight	400 g
Material	
Body	PC (polycarbonate)
Status display	RGB-LED based on NAMUR NE107
Configuration memory	Micro SD card (not included in delivery) (Configuration provider function: for optional storage of unit parameters, configuration and easy exchange of EDIP modules)
Electrical data	
Operating voltage	24 V DC ±10 % - residual ripple 10 % [1.)]
Power consumption of module	3.6 W
Maximum input current	4 A for supply via X4 (M12, A-coded, plug), 32 A for supply via X03 (M12, L-coded, plug), factory-set to X03, the module detects this automatically when supplied via X4 instead of X03
Maximum output current	4 A per büS/CANopen connection (X1-X3, X5-X8) with supply via X03, 4 A in total with supply via X4
Process/Port connection & communication	
Communication interface (integrated switch for Industrial Ethernet)	Connections X01 and X02, M12 D-coded (socket) PROFINET, EtherNet/IP, Modbus TCP EtherCAT, CC-Link IE Field Basic, OPC UA
Electrical connection	Via X4 (IN): M12, A-coded, or via X03 (IN) and X04 (OUT): M12, L-coded
büS/CANopen communication (proprietary)	X1-X3 and X5-X8 (M12, socket), X4 (M12, plug) – preferably for the büS/CANopen input for integration of the module into a büS/CANopen network
Approvals and conformities	
Further information can be found in chapter "2. Approvals and conformities" on page 3	
Environment and installation	
Ambient temperature	-20…+60 °C
Storage temperature	-30…+80 °C
Degree of protection	IP65, IP67 and IP69k according to EN 60529 / IEC 60529 (with cables connected and with protective caps on unused connections)
Height above sea level	Maximum 2000 m

1.) The requirements of all connected components must be taken into consideration when selecting the power supply.

2. Approvals and conformities

2.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available versions can be supplied with the below mentioned approvals or conformities.

2.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

2.3. Standards

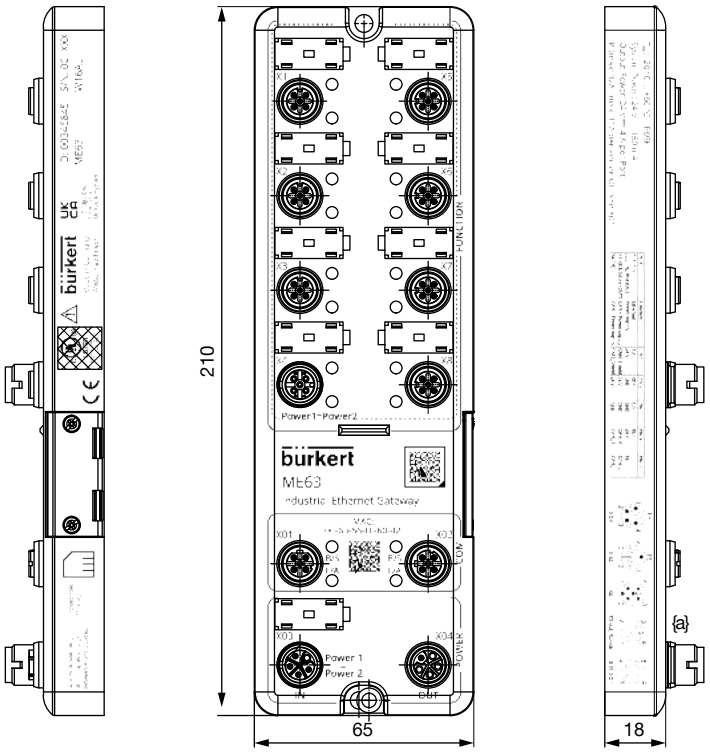
The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

3. Dimensions

3.1. Gateway module Type ME63

Note:
Dimensions in mm



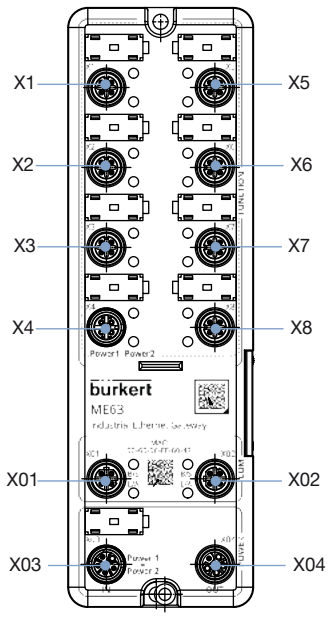
DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

4. Device/Process connections

4.1. Gateway Module Type ME63

Connection details

Note:
The device automatically recognises if the power supply is connected to X4 or X03.



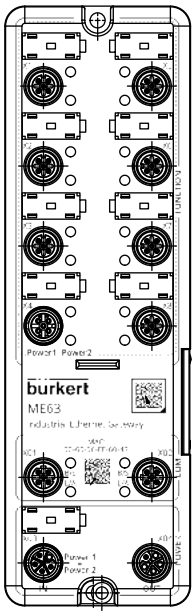
No.	Description
X1	M12-A, socket, büS/CANopen and 24 V DC, maximum 4 A, for connecting a device via büS/CANopen
X2	M12-A, socket, büS/CANopen and 24 V DC, maximum 4 A, for connecting a device via büS/CANopen
X3	M12-A, socket, büS/CANopen and 24 V DC, maximum 4 A, for connecting a device via büS/CANopen
X4	M12-A, plug, büS/CANopen and 24 V DC, maximum 4 A, preferably for büS/CANopen connection
X5	M12-A, socket, büS/CANopen and 24 V DC, maximum 4 A, for connecting a device via büS/CANopen
X6	M12-A, socket, büS/CANopen and 24 V DC, maximum 4 A, for connecting a device via büS/CANopen
X7	M12-A, socket, büS/CANopen and 24 V DC, maximum 4 A, for connecting a device via büS/CANopen
X8	M12-A, socket, büS/CANopen and 24 V DC, maximum 4 A, for connecting a device via büS/CANopen
X01	M12-D, socket, Ethernet, e.g. for the Ethernet connection of the module
X02	M12-D, socket, Ethernet, e.g. for Ethernet integration of further devices
X03	M12-L, plug, Power IN, maximum 32 A, for power supply
X04	M12-L, socket, Power OUT, maximum 32 A, for the power supply of further devices

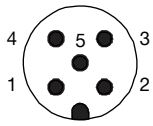
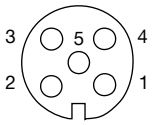
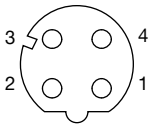
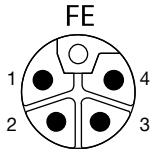
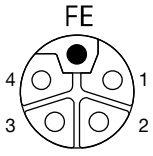
DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

Pin assignment

Note:

- The L-coded M12 connection (X03, X04) is designed for connecting 2 power supplies, each up to maximum 16 A.
- Both power supplies are integrated on the module and made available to all ports.



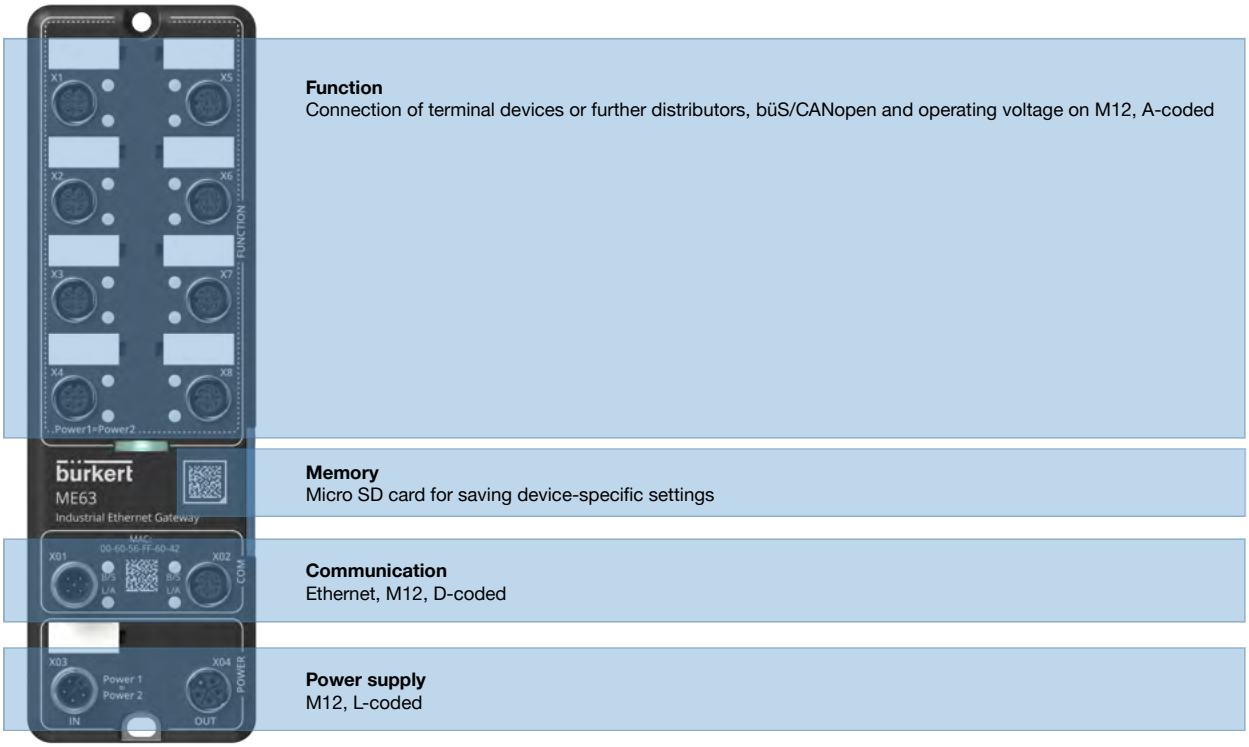
M12, X4 (plug) and X1-X3, X5-X8 (socket), A-coded		Pin	Pin assignment	Function
		**1**	FE/CAN_GND	Shielding
		2	24 V	Power supply
		3	GND	Power supply GND
		4	CAN_H	büS communication
		5	CAN_L	büS communication
M12, X01, X02 (socket), D-coded		**Pin**	**Pin assignment**	**Function**
		**1**	TD +	Transmitting data +
		2	RD +	Receiving data +
		3	TD –	Transmitting data –
		4	RD –	Receiving data –
M12, X03 (plug), X04 (socket), L-coded		**Pin**	**Pin assignment**	**Function**
X03	**X04**	**1**	24 V	Power supply Power 1 [1.)]
		**2**	GND	Power supply Power 1 [1.)]
		3	GND	Power supply Power 2 [1.)]
		4	(24 V)	Power supply Power 2 [1.)]
		5	FE	Shielding

1) The power supplies Power 1 and Power 2 are internally connected.

5. Product design and assembly

5.1. Product features

Gateway module Type ME63



DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

6. Product accessories

6.1. EDIP – Efficient Device Integration Platform

EDIP is a Bürkert device platform that standardises the operation, communication and interfaces of many process devices (e.g. sensors, mass flow controllers). Thanks to EDIP, devices can be intelligently networked and operated with the standardized software, the Bürkert Communicator. The backbone and connecting link of EDIP is a digital interface that complies with the CANopen standard and can always be used in a manner compatible with it.

EDIP offers the user the following advantages:

- Interoperability - guaranteed by the uniform interface
- Comfortable operation and display concept
- Faster and simplified commissioning
- Modularity - allows the devices to be adapted to individual customer requirements
- Easy transfer and fusion of device settings

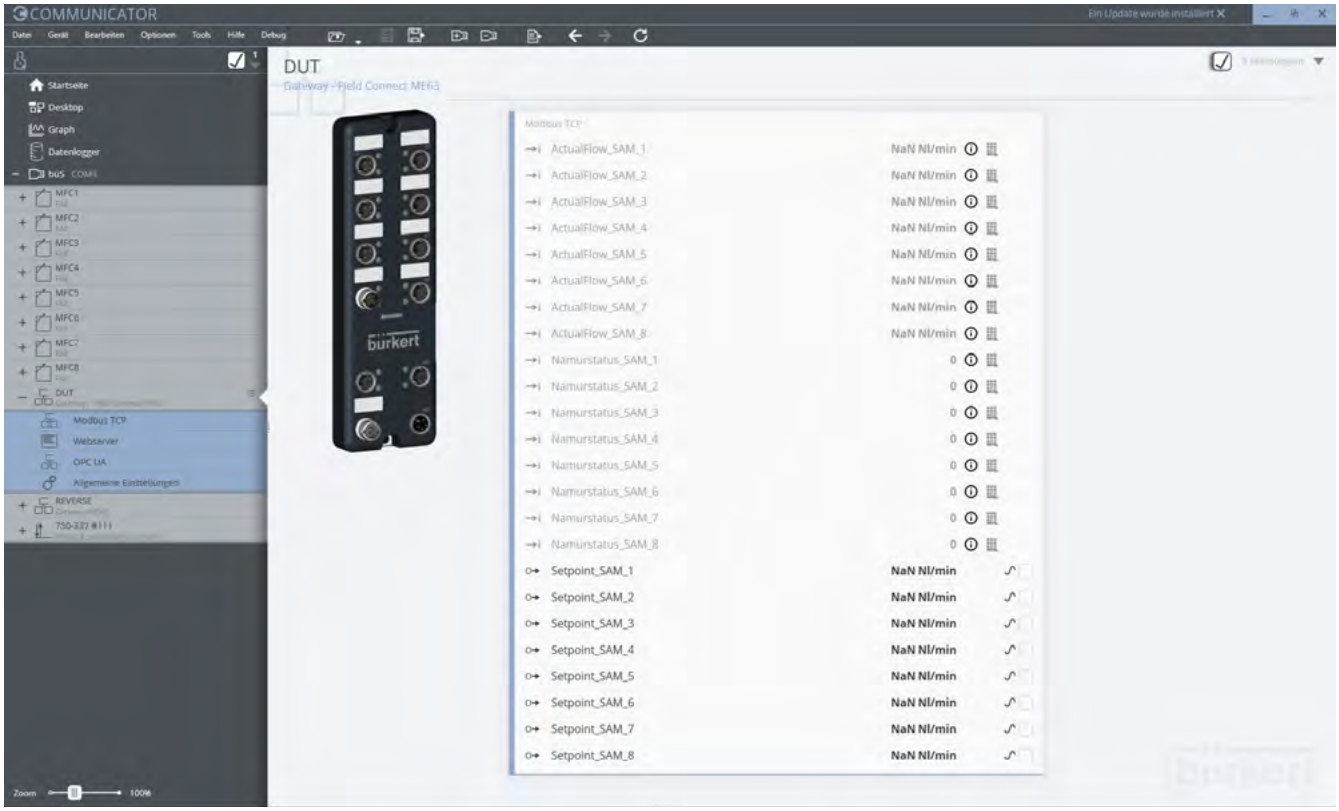
6.2. Bürkert Communicator Software

Note:
The associated communication software can be downloaded under **Type 8920** ▶.

The Bürkert Communicator is the most important software tool of the device platform EDIP (Efficient Device Integration Platform). The extensive features of this universal tool facilitate the configuration and parameterisation of all devices equipped with the digital CANopen-based interface. The Bürkert Communicator provides the user with a complete overview of all cyclic process values and acyclic diagnostic data. The integrated graphical programming environment enables the creation of control functions for decentralised sub-systems. The connection to the PC can be established via a USB-büS interface set. This is available as an accessory, see **"8.4. Ordering chart accessories" on page 11**.

The Bürkert Communicator enables:

- Configuration, parameterisation and diagnosis of EDIP devices/networks
- Easy and convenient assignment (mapping) of cyclical values
- Graphical display of process values
- Firmware update of the connected EDIP devices
- Saving and restoring device configurations



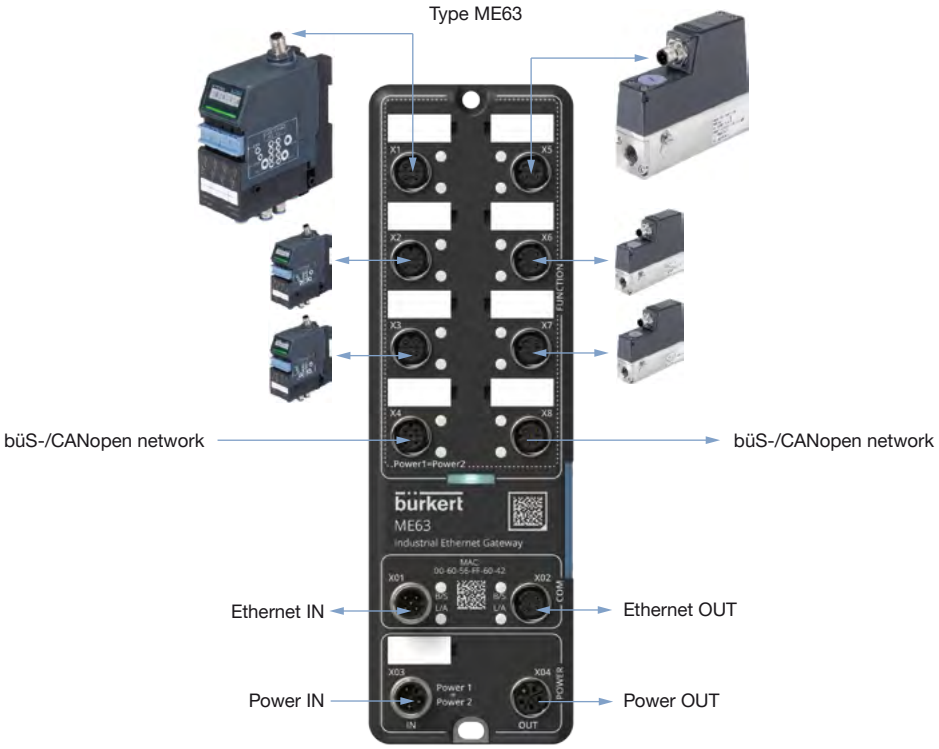
DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

7. Networking and combination with other Bürkert products

7.1. Example for Type ME63

Note:

- Drop lines must not be longer than 5 m.
- Signal integrity measurement is recommended for star cabling of more extensive networks.
- See also **cabling guide** ▶



Short description of the illustrated example

- Connection of 6 Bürkert devices via drop line to X1-X3, X5-X7
- Integration in büS-/CANopen network via X4 and X8
- All büS devices can be reached via the Ethernet connection.
- Additional devices can be integrated into the Ethernet communication via the second Ethernet port X02.
- Further devices can be supplied via the second power port X04.
- A total of up to 126 büS/CANopen devices can be connected to one gateway.

DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

8. Ordering information

8.1. Bürkert eShop

Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

Order online now

8.2. Bürkert product filter

Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements?
Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

8.3. Ordering chart

Note:
Please note that the ME63 gateway modules are not configured from the factory. However, these absolutely must be configured in order to be used in a system. The device description files must be generated with the Bürkert Communicator software before the start-up of a system. See **operating instructions Type ME63** ▶.

Article	Article no.
Type ME63 Industrial Ethernet gateway	346845

Software Functions

Article	Article no.
Licence for graphical programming (only required for a running time >60 minutes)[1.)]	567713
Batch controller licence for Type ME63 gateway[1.)]	572948

1.) The active runtime is limited to 60 min without the licence.

DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024

8.4. Ordering chart accessories

Article	Article no.
Passive distributor Type ME66 (version 2, with separate power supply via X03)	20028654
16x digital inputs, 16DI module (ME64) (version 2, with 8 frequency inputs)	20021994
büS cable extension, M12, cable length: 0.1 m	772492
büS cable extension, M12, cable length: 0.2 m	772402
büS cable extension, M12, cable length: 0.5 m	772403
büS cable extension, M12, cable length: 1 m	772404
büS cable extension, M12, cable length: 3 m	772405
büS socket, M12, straight, A-coded [1.)]	772416
büS plug, M12, straight, A-coded [1.)]	772417
büS socket, M12, angled, A-coded [1.)]	772418
büS plug, M12, angled, A-coded [1.)]	772419
büS Y plug	772420
büS Y plug for linking 2 separately supplied segments of a büS network	772421
büS plug, M12, terminating resistor 120 Ω	772424
büS socket, M12, terminating resistor 120 Ω	772425
Protective cap for connector housing M12	917155
Power supply unit Phoenix Class2 (Type 1573), 85…240 V AC/24 V DC, 1.25 A, NEC Class 2 (UL 1310)	772438
Power supply unit for standard rail (Type 1573), 100…240 V AC/24 V DC, 1 A, NEC Class 2 (UL 1310)	772361
Power supply unit for standard rail (Type 1573), 100…240 V AC/24 V DC, 2 A, NEC Class 2 (UL 1310)	772362
Power supply unit for standard rail (Type 1573), 100…240 V AC/24 V DC, 3.8 A, NEC Class 2 (UL 60950-1)	772898
Power supply unit for standard rail (Type 1573), 100…240 V AC/24 V DC, 10 A	772698
Micro-SD card	774087
büS-Stick Set 1 (incl. cable (M12), stick with integrated terminating resistor, power supply and software)	772426
büS-Stick Set 2 (incl. cable (M12)), stick with integrated terminating resistor	772551
Bürkert Communicator Software	**Type 8920** ▶
Industrial Ethernet connection cable (RJ45 to M12 plug, D-coded)	
RJ45 on M12 plug, D-coded, cable length: 1 m	775050
RJ45 on M12 plug, D-coded, cable length: 2 m	775051
RJ45 on M12 plug, D-coded, cable length: 3 m	775052
RJ45 on M12 plug, D-coded, cable length: 5 m	775053
RJ45 on M12 plug, D-coded, cable length: 10 m	775054
RJ45 on M12 plug, D-coded, cable length: 15 m	775055
RJ45 on M12 plug, D-coded, cable length: 20 m	775056
Industrial Ethernet connection cable (RJ45 to M12 plug, D-coded, angled)	
RJ45 on M12 plug, D-coded, angled), cable length: 0.5 m	774826
RJ45 on M12 plug, D-coded, angled), cable length: 1 m	774827
RJ45 on M12 plug, D-coded, angled), cable length: 2 m	774830

1.) For space reasons, M12 individual push-in connectors may not be suitable for simultaneous use on the same side as a Y distributor. Use a commercially available covered cable in this case.

DTS 1000438645 EN Version: H Status: RL (released | freigegeben | validé) printed: 02.07.2024