



I/O Module IP65/ IP67/ IP69k

- Configurable I/O module for up to 16 digital input signals
- For use in environments requiring a high degree of protection
- Integrated diagnostic possibilities such as wire break, short circuit detection
- M12 L-Power port for the additional power supply (up to 32 A) for devices close to the process
- Up to four inputs can be used as frequency inputs

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

Can be combined with

	Type ME63 ▶ Industrial Ethernet gateway, IP65/ IP67/ IP69k
	Type 8653 ▶ AirLINE Field - the valve island optimised for process automation
	Type 8691 ▶ Control head for de-centralised automation of ELEMENT process valves
	Type 8012 ▶ Flowmeter with paddle wheel for continuous flow measurement
	Type 8032 ▶ Flowmeter/Threshold detector with paddle wheel

Type description

Bürkert I/O modules (In/Out) Type ME64 for extending the Industrial Ethernet gateway Type ME63 are designed to capture the switching signals of various sensors. The further processing of these input signals, e.g. by Ethernet protocol to a higher field level, is configured via the gateway. The 16DI module (16 digital inputs) can be used for the feedback from switches (limit switches, position switches, etc.). The captured signals are connected and transmitted to the gateway via a CANopen-based bus. Together with valve island components, such as Type 8653 AirLINE Field (pneumatic control of process valves) or process valve controls such as Type 8691, ME64 can be used to capture and evaluate feedback locally within waterproof environments. Via the central configuration management of the gateway, Type ME64 can be simply replaced with a new module, if required. Electronic modules Type ME63 and Type ME64 are part of the Bürkert EDIP concept (Efficient Device Integration Platform). They facilitate the integration of field level devices (e.g. valves or sensors) in the higher control level. The modules complement Bürkert EDIP systems.

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1. General Technical Data

1.1. I/O-Module

Product properties	
Dimensions	Detailed information can be found in chapter "2. Dimensions" on page 4.
Weight	400 g
Material	
Body	PC (Polycarbonate)
Status display	RGB-LED based on NAMUR NE107, Status LEDs per channel
Approvals and Certificates	
CE	EU conformity
UL	cULus listed
EMV	EN 61000
Environment and installation	
Ambient temperature	-20 °C...+60 °C
Storage temperature	-30 °C...+80 °C
Degree of protection	IP65, IP67 and IP69k acc. to EN 60529 / IEC 60529 (with cables connected and with protective caps on unused connections)
Height above sea level	Max. 2000 m

1.2. 16DI Module: digital input (DI)

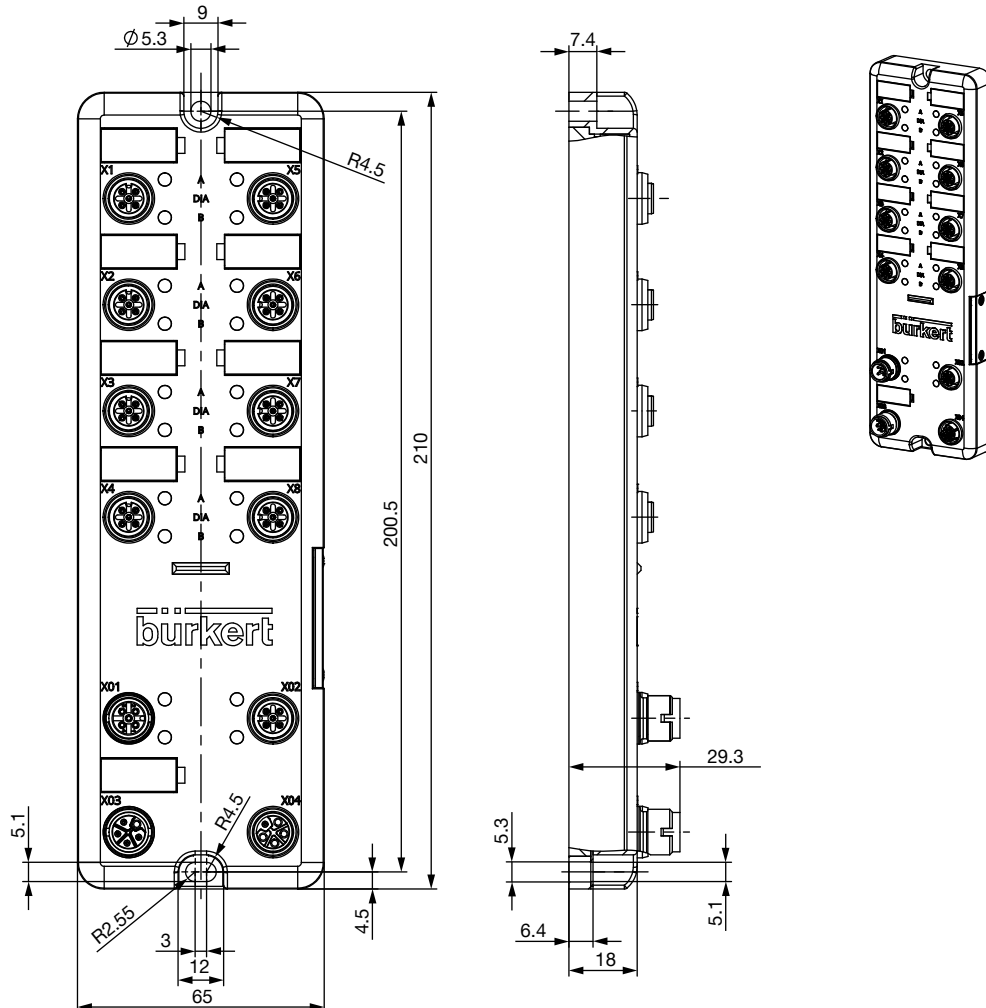
Product properties	
Diagnostics	Open circuit detection with 2-wire sensors, short-circuit detection with 3-wire sensors
Safety	Protection against over-voltage
Electrical data	
Electric version	2-wire sensor, 3-wire sensor, mechanical limit switches
Operating voltage	24 V DC +20 %/- 15 %
Electrical connection	8x M12, A-coded, socket, 5 pin
Switching threshold	$V_{OFF} = 0...5 \text{ V}$ $V_{ON} = 10...30 \text{ V}$
Input current for V_{ON} , typ. 24 V DC	Max. 5.7 mA per channel
Input type	Type1 and Type3 acc. to IEC 61132 - 2
Number of frequency inputs	Up to 4
Frequency input	Max. up to 2.5 kHz
Input impedance	>4 kOhm
Sampling time/Sampling frequency	1 ms...4 s / 0.25 Hz...1 kHz
Max. sensor power supply	16x 125 mA

2. Dimensions

2.1. 16DI Module Type ME64

Note:

Dimensions in mm



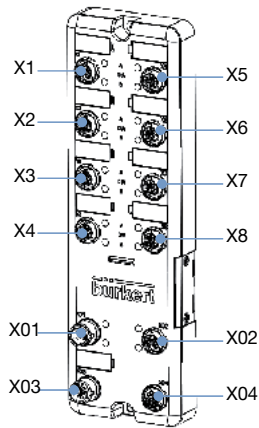
3. Device/Process connections

3.1. 16DI Module Type ME64

Connection details

Note:

Switch the power supply from X03 to X4 via the switch located on the side under the cover.



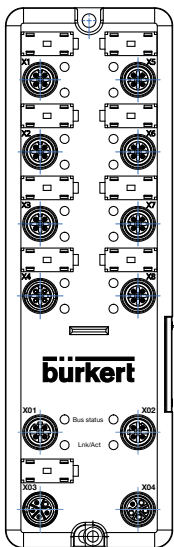
Connection	Channel	Description
X1	1 and 2	M12-A, socket, 2DI and 24 V DC max. 4 A, 2 multifunctional inputs ^{1.)}
X2 to X4	3 to 8	M12-A, socket, 2DI and 24 V DC max. 4 A, 2 digital inputs
X5	9 and 10	M12-A, socket, 2DI and 24 V DC max. 4 A, 2 multifunctional inputs ^{1.)}
X6 to X8	11 to 16	M12-A, socket, 2DI and 24 V DC max. 4 A, 2 digital inputs
X01 (IN)	–	M12-D, plug, bus/CANopen IN, for connection of bus/ CANopen network
X02 (OUT)	–	M12-D, socket, bus/CANopen OUT, for the integration of further bus/CANopen device
X03 (IN)	–	M12-L, plug, power IN, max. 32 A, for the power supply
X04 (OUT)	–	M12-L, socket, power OUT, max. 32 A, for the supply of further devices

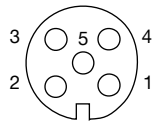
1.) Variants of a multifunction input: digital input, pulse counter, frequency input, flow rate input, flow rate totalizer input

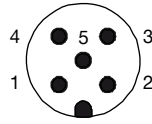
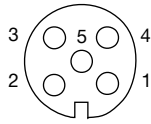
Pin assignment

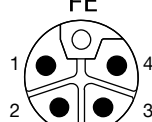
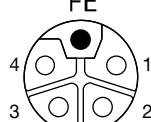
Note:

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

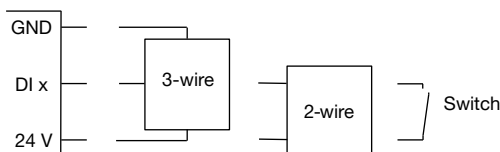


X1 X8		Pin	Pin assignment	Function
		1	24 V	Power supply
		2	IN B	Digital input channel B
		3	GND	Power supply mass
		4	IN A	Digital input channel A
		5	FE	Shield

X01 (IN), X02 (OUT)		Pin	Pin assignment	Function
X01	X02	1	CAN_GND	Shield
		2	24 V	Power supply
		3	GND	Power supply GND
		4	CAN_H	büS/CANopen communication
		5	CAN_L	büS/CANopen communication

X03 (IN), X04 (OUT)		Pin	Pin assignment	Function
X03	X04	1	24 V	Power supply
		2	GND	Power supply GND
		3	GND	Power supply GND
		4	24 V	Power supply
		5	FE	Shield

Circuit diagram:



4. Product design and assembly

4.1. Product features



Function:

Connection of digital input signals, 2 DI and operating voltage on each M12, A-coded

Switch:

Switching from X03 to X01 for the power supply

Communication:

Integration in network, bÜS/CANopen and operating voltage via M12, A-coded

Power supply:

M12, L-coded

5. Product accessories

5.1. EDIP – Efficient Device Integration Platform

EDIP is the new Bürkert device platform that will standardize 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

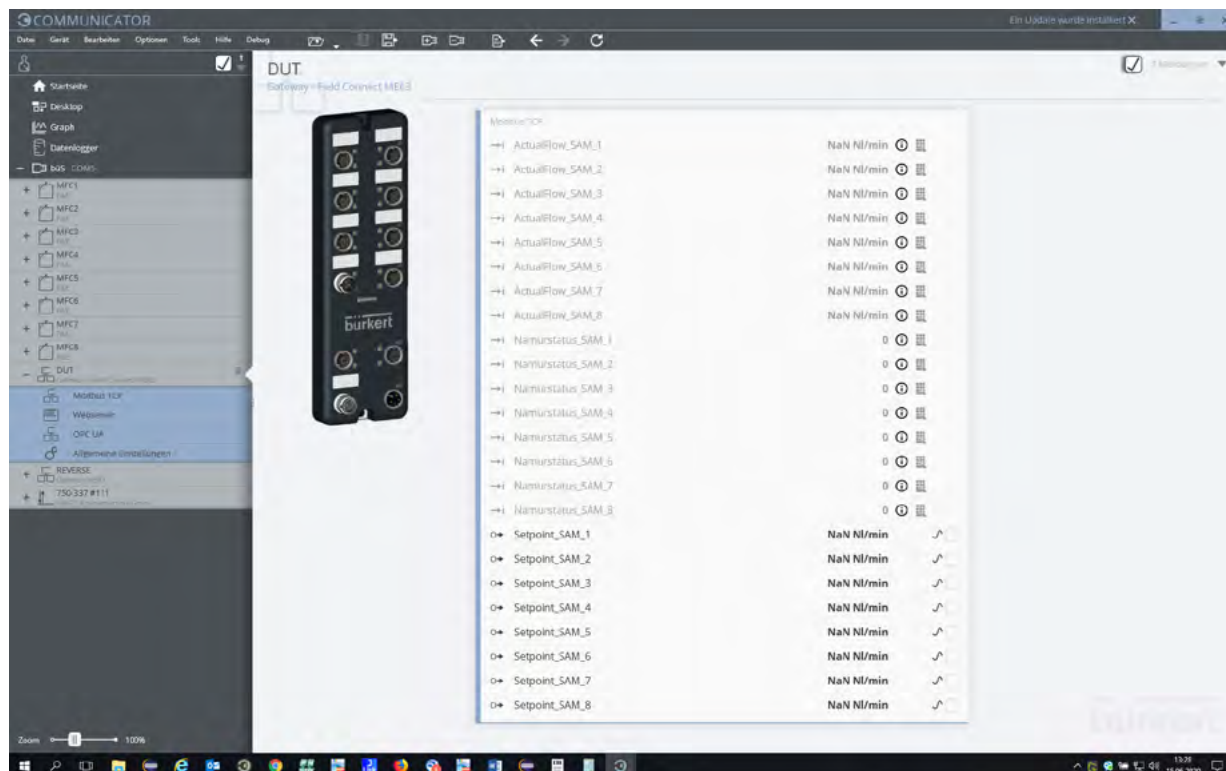
5.2. Bürkert Communicator Software

Note:

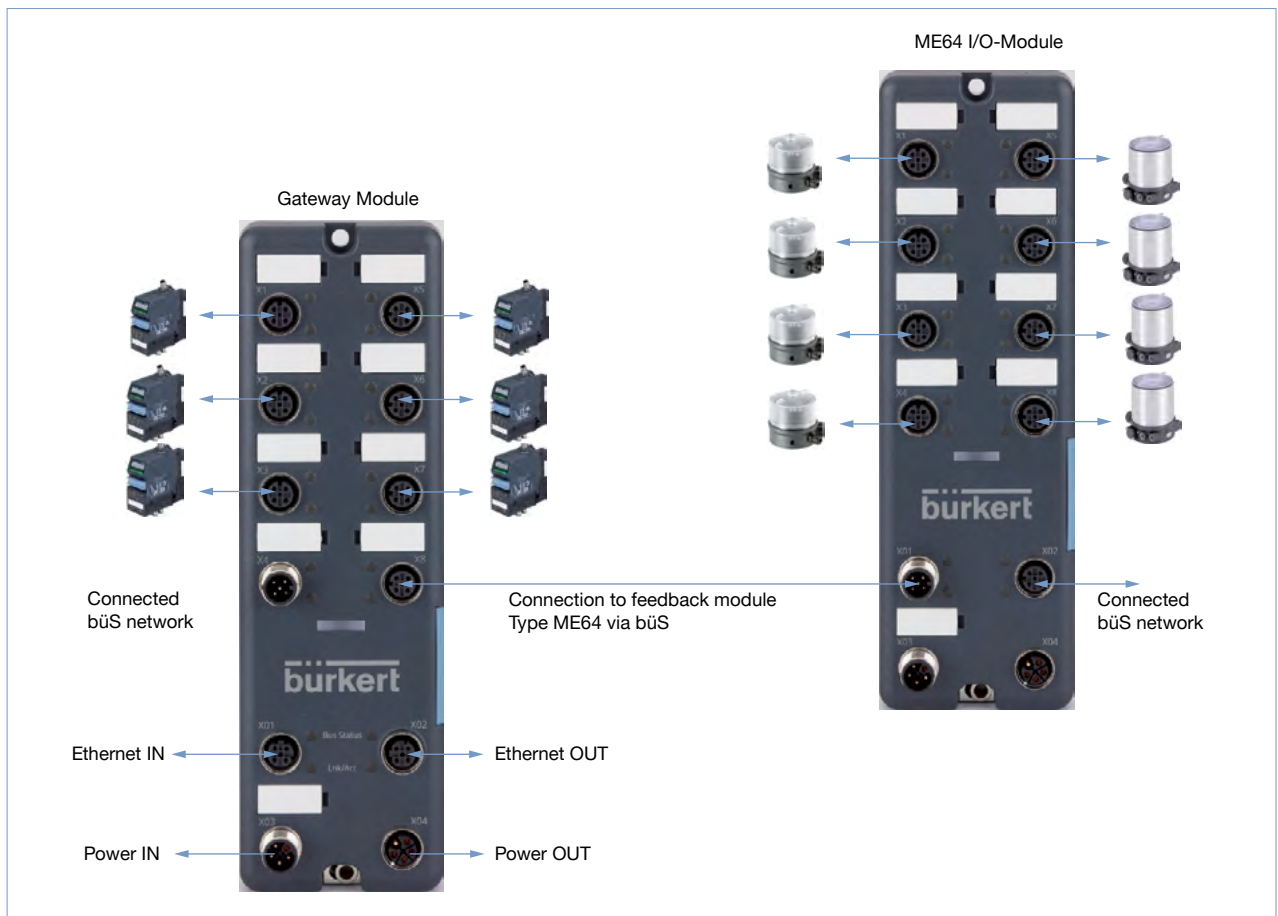
To install the software, click [here](#) ►.

Part of Bürkert's new EDIP program (Efficient Device Integration Platform) is the Bürkert Communicator. This software can be run under MS-Windows and it is available on Bürkert's website for free. The Bürkert Communicator allows convenient system configuration and parametrisation of all connected field devices. An accessory part, the bÜS stick serves as the interface between computer and process instruments (see "7.4. Ordering chart accessories" on page 10). The Communicator allows:

- Diagnostics
- Parametrization
- Registration and storage of process data
- Graphical monitoring of the process data
- To update firmware of the bÜS device connected
- Guided re-calibration



6. Networking and combination with other Bürkert products



Short description of the illustrated example:

- Connection of 8 feedback signals, via stub line to X1-X8
- Integration in bus-/CANopen network via X01 and X02
- By connecting the bus-/CANopen network to a gateway type ME63, all signals are accessible via an Ethernet connection.

7. Ordering information

7.1. Bürkert eShop – Easy ordering and quick delivery



Bürkert eShop – Easy ordering and fast 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.

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7.2. 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.

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7.3. Ordering chart

Article	Article no.
16x digital Inputs, 16DI Module (ME64)	346856

7.4. Ordering chart accessories

Article	Article no.
Passive distributor	346873 
büS cable extension, M12, 0.1 m	772492 
büS cable extension, M12, 0.2 m	772402 
büS cable extension, M12, 0.5 m	772403 
büS cable extension, M12, 1 m	772404 
büS cable extension, M12, 3 m	772405 
M12-socket, straight (A-coded) ^{1.)}	772416 
M12-plug, straight (A-coded) ^{1.)}	772417 
M12-socket, angled (A-coded) ^{1.)}	772418 
M12-plug, angled (A-coded) ^{1.)}	772419 
Y distributor	772420 
Y distributor for connecting two separately powered segments of a büS network	772421 
Terminating resistor, 120 Ohm, M12 plug	772424 
Terminating resistor, 120 Ohm, M12 socket	772425 
Power supply unit Type 1573 for DIN rail, 100...240 V AC/24 V DC, 1.25 A, NEC Class 2 (UL 1310)	772438 
Power supply unit Type 1573 for DIN rail, 100...240 V AC/24 V DC, 1 A, NEC Class 2 (UL 1310)	772361 
Power supply unit Type 1573 for DIN rail, 100...240 V AC/24 V DC, 2 A, NEC Class 2 (UL 1310)	772362 
Power supply unit Type 1573 for DIN rail, 100...240 V AC/24 V DC, 4 A	772363 
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 
Software Bürkert Communicator	Link ►

1.) For space reasons, the individual M12 connectors may not be suitable for simultaneous use on the same side of a Y distributor. In this case, please use a commercially available moulded cable.

Bürkert – Close to You

For up-to-date addresses
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