bürkert
FLUID CONTROL SYSTEMS

Fieldbus gateway

- Gateway for industrial Ethernet and fieldbus standards
- Up to 128 input and 128 output variables can be assigned
- Easy integration in the process control level through system-specific device description files
- Graphical programming for automation of sub-systems

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

Can be combined with

Type 8741 ▸
Mass Flow Controller (MFC)/ Mass Flow Meter (MFM) for Gases

Type 8742 ▸
Mass Flow Controller (MFC)/ Mass Flow Meter (MFM) for gases

Type 8746 ▸
Mass flow controller (MFC)/Mass flow meter (MFM) for gases

Type 8905 ▸
Online Analysis System

Type 8652 ▸
AirLINE - the valve island optimised for process automation

Type description

The fieldbus gateway Type ME43 is the central control unit for Bürkert products (valves, sensors, mass flow controllers or displays), which are based on EDIP (“Efficient Device Integration Platform”). The basic version of Type ME43 consists of a fieldbus coupler which transmits the internal CANopen-based communication of the Bürkert field devices to industry standards for industrial Ethernet and fieldbus.

With the help of graphical programming, which the module supports, sub-systems can be automated specifically to the customer’s needs (e.g. controlled mixing of gases, error monitoring through limit value switches, time switches).

DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

Visit product website ▸

Table of contents

DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

1. General Technical Data

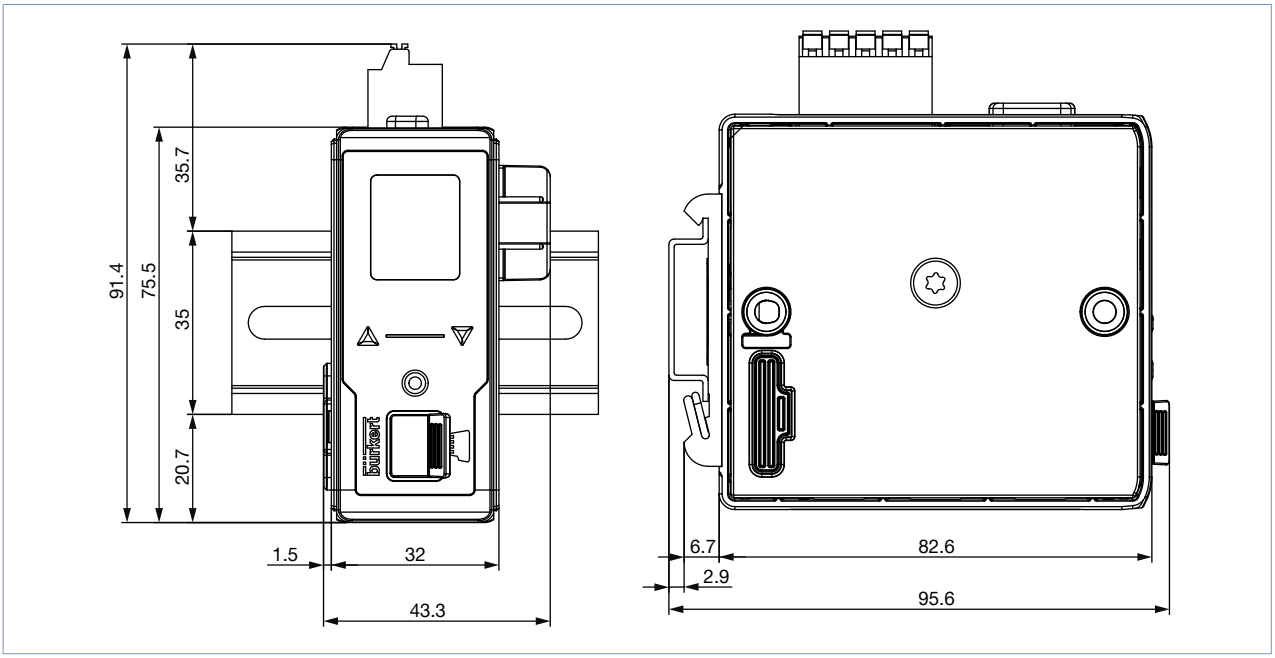
Product properties	
Dimensions	Detailed information can be found in chapter "2. Dimensions" on page 4.
Material	
Body	PC (Polycarbonate)
Status display	RGB LED based on NAMUR NE107
Configuration storage	Micro SD card (not included in delivery) (for storing device parameters, configuration and easy replacement of a module)
Electrical data	
Operating voltage	24 V DC ±10 % - residual ripple 10 %[1.)]
Power consumption	2 W
Max. output current	400 mA (at 3.3 V and 5 V)
Current limitation	3.2 A at 24 V
Process/Port connection & communication	
Gateway functionality (integrated switch for Industrial Ethernet)	PROFINET EtherNet/IP Modbus/TCP PROFIBUS DPV1 EtherCAT CC-Link
Approvals and Certificates	
Approvals	
UL	cULus Listed
ATEX	Certificate: E238179
IECEx	II 3G Ex ec IIC T4 Gc Certificate: BVS 18 ATEX E 051 X Ex ec IIC T4 Gc Certificate: IECEx BVS 18.0041X
Certificates	
PROFINET (PNO)	Certificate Z11908
EtherNet/IP (ODVA)	DOC 11648
Environment and installation	
Ambient temperature	-20…+60 °C
Degree of protection	IP20 (Fieldbus Gateway)
Installation position	Horizontal or vertical on DIN rail EN 50022

1.) The requirements of the attached components need to be considered in the selection of the power supply as well.

DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

2. Dimensions

2.1. Version with spring terminal block for büS connection (example)



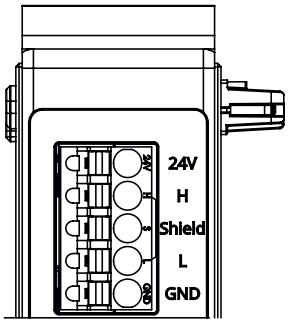
DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

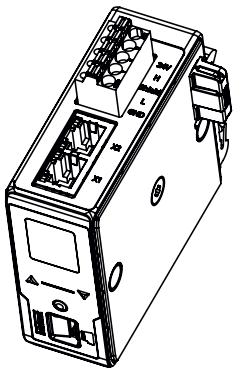
3. Device/Process connections

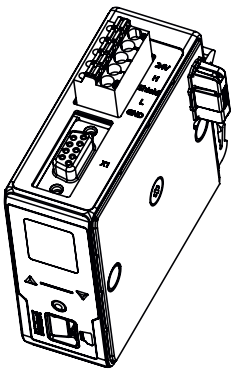
3.1. Pin assignment

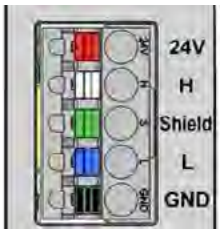
Note:

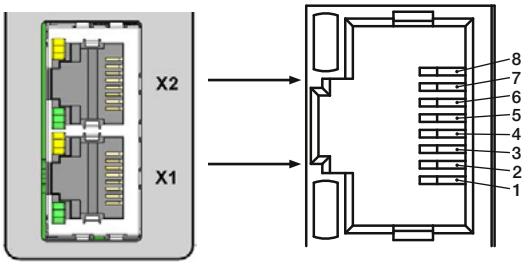
- The termination resistor can be plugged in easily to the right of the module (included in delivery. It can also be ordered as an accessory. For the article no. see "7.4. Ordering chart Accessories" on page 9).
- CANopen requires two termination resistors: one at the beginning and one at the end of the network. An indicator of the correct bus termination is the resistance between CAN_H and CAN_L when the power supply is disconnected; this should be about 60 Ohm.

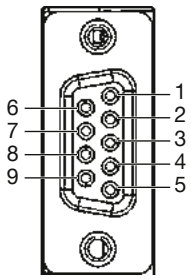


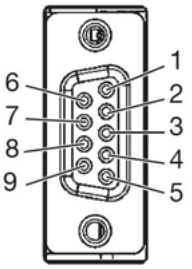




CANopen / büS - Spring terminal, 5 pin	Colour	Pin assignment
	Red	24 V DC
	White	CAN H (büS-connection)
	Green	SHIELD
	Blue	CAN L (büS-connection)
	Black	GND

Industrial Ethernet RJ45 - Interface X1 and X2	Pin	Pin assignment
	1	TX+
	2	TX–
	3	RX+
	4	Not assigned
	5	Not assigned
	6	RX–
	7	Not assigned
	8	Not assigned

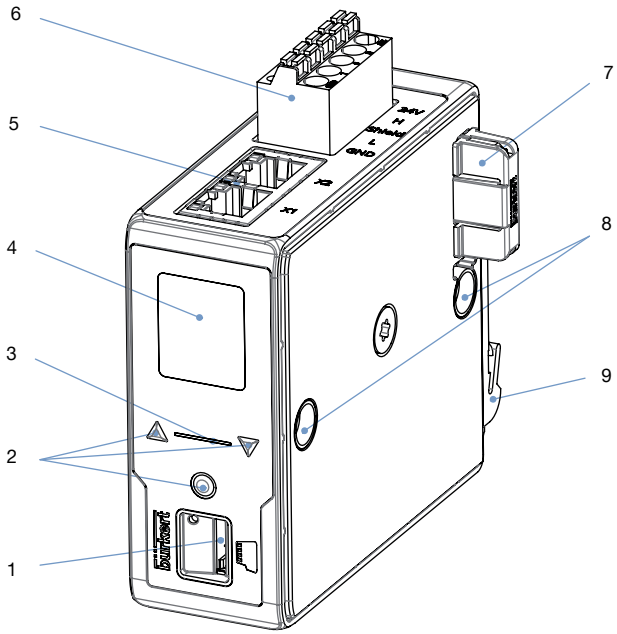
PROFIBUS-DPV1 D-Sub 9 - D-Sub 9 pin, female	Pin	Pin assignment
	1	SHIELD
	2	M24 (optional)
	3	RxD/TxD-P (B-Line)
	4	CNTR-P (optional)
	5	DGND
	6	+5 V (supply for the termination resistor)
	7	+24 V (optional)
	8	RxD/TxD-N (A-Line)
	9	CNTR-N (optional)

CC Link D-Sub 9 pin, female	Pin	Pin assignment
	1	Not assigned
	2	Not assigned
	3	DA data cable - (A-Line)
	4	DG data ground
	5	Not assigned
	6	Not assigned
	7	Not assigned
	8	DB data cable + (B-Line)
	9	Not assigned

DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

4. Product design and assembly

4.1. Product features



No.	Description
1	Micro-SD card slot
2	Buttons
3	NAMUR-LED
4	Display
5	Fieldbus connection
6	büS connector
7	Termination resistor[1.)]
8	Fastening to the valve island (Type 8652)
9	DIN rail mounting

1.) Included in delivery

DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

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:

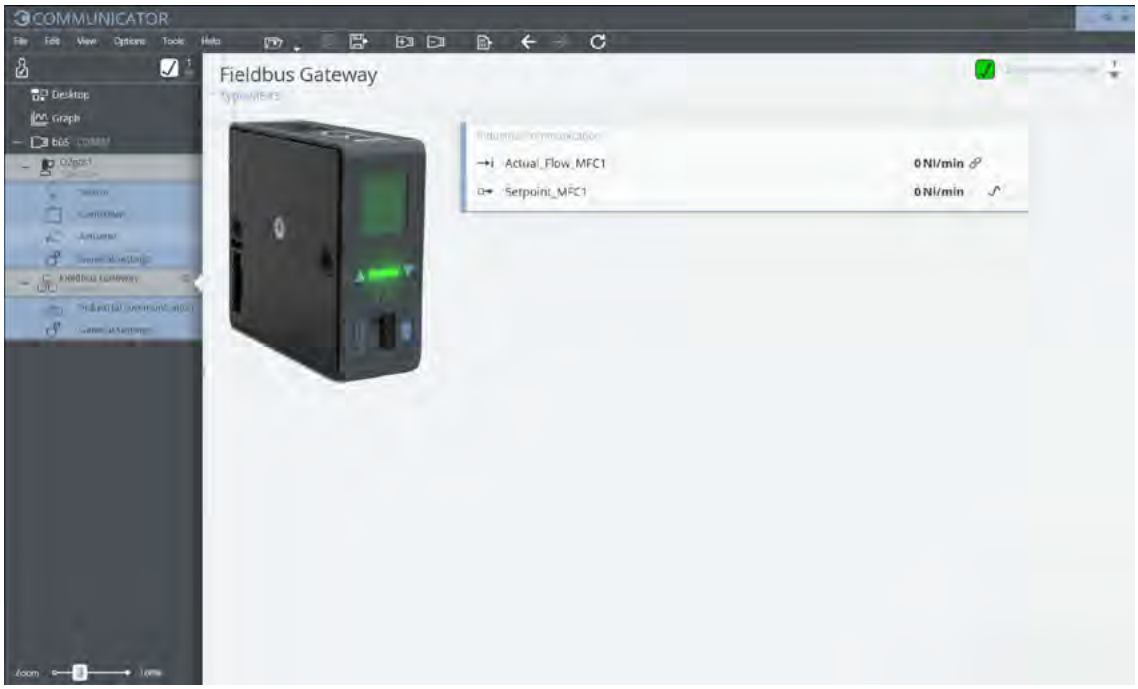
- Interoperability - guaranteed by the uniform interface
- Comfortable operation and display concept
- Faster and simplified commissioning
- Modularity - allows the devices to be adapted to individual customer requirements
- Easy transfer and fusion of device settings

5.2. Bürkert Communicator Software

Note:
To install the software, click **here** ▶.

The Bürkert Communicator is the most important software component of the ‚Efficient Device Integration Platform' (EDIP). Various features of this universal tool simplify the configuration and parameterization of devices equipped with a digital CANopen based interface. With this tool the user has a complete overview of cyclic process values as well as acyclic diagnosis data. In the near future, an integral part of the Communicator will be a graphical programming environment which will help in creating decentralized sub-system control functions. The connection to the PC is established with a USB-CAN adapter. This is available as an accessory (see "7.4. Ordering chart Accessories" on page 9). The Communicator enables:

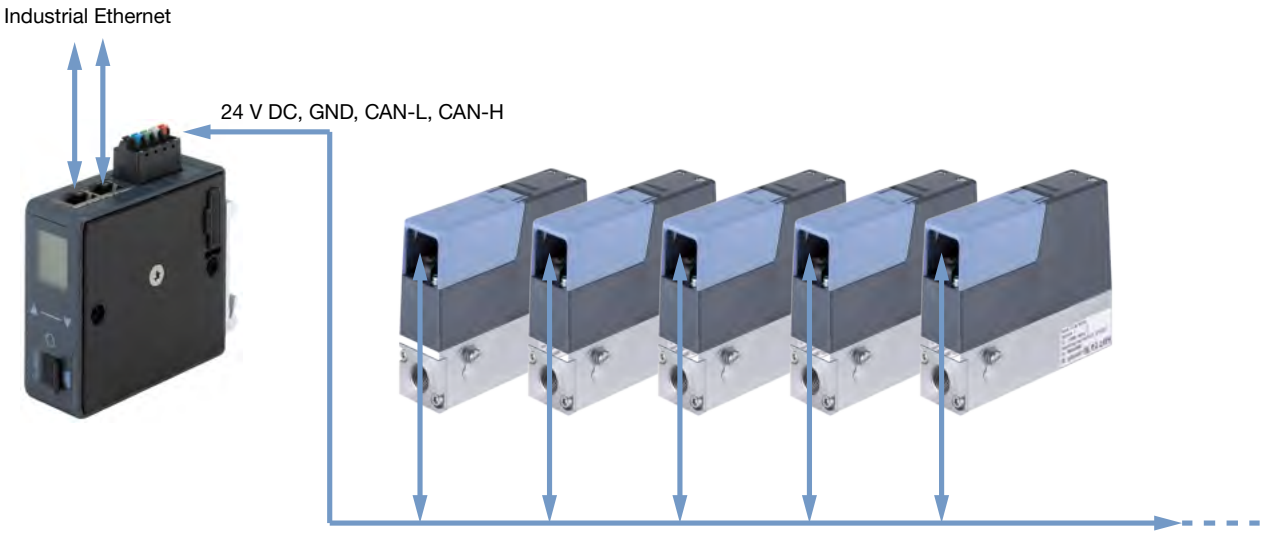
- Configuration, parameterisation and diagnosis of EDIP devices / networks
- Easy and comfortable mapping of cyclic values
- Graphical display of process values
- Firmware update for the connected EDIP devices
- Backup and restoring of device configurations



DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

6. Networking and combination with other Bürkert products

Note:
Example of a network with Gateway ME43 and MFCs



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.

Order online now

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.

Try out our product filter

DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

7.3. Ordering chart

Note:
Please note that the ME43 Gateway modules are not factory configured. However, these must be configured in order to be used in a system. The device description files for the required protocols must be generated with the Communicator software before commissioning a system. For further details, please refer to the **operating instructions for ME43**.

Article	Article no. Standard	Article no. AirLINE Type 8652
Gateway Industrial Ethernet (PROFINET, EtherNet/IP, Modbus TCP, EtherCAT)	307390	301799
Gateway PROFIBUS DPV1	307393	301803
Gateway CANopen (büS)	307391	301802
Gateway CC-Link	307394	–

7.4. Ordering chart Accessories

Article	Article no.
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 connector	772420
Y connector for connecting two separately powered segments of a büS network	772421
Termination resistor (directly pluggable)	303833
Termination resistor 120 Ohm M12 male	772424
Termination resistor 120 Ohm M12 female	772425
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 1.25 A, NEC Class 2 (UL 1310)	772438
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 1 A, NEC Class 2 (UL 1310)	772361
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 2 A, NEC Class 2 (UL 1310)	772362
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 3.8 A, NEC Class 2 (UL 1310)	772898
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 10 A	772698
Micro SD Card	774087
büS-Stick Set 1 (incl. cable (M12)), stick with integrated termination resistor, power supply and software	772426
büS-Stick Set 2 (incl. cable (M12)), stick with integrated termination resistor	772551
License for graphical programming (only required for a running time >60 minutes)	567713
Software Bürkert Communicator	**Link**

1.) Due to lack of space, the M12 single connectors may not be suitable for their simultaneous use on the same side of the Y connector. Please use the available ready-made assembled cable in this case.

DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021

Bürkert – Close to You

For up-to-date addresses
please visit us at
www.burkert.com

DTS 1000328369 EN Version: L Status: RL (released | freigegeben | validé) printed: 02.07.2021