**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 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 8691** ▶
Control head for decentralised automation of ELEMENT process valves

**Type 8692** ▶
Digital electro-pneumatic positioner for integrated mounting on process control valves

**Type 8693** ▶
Digital electro-pneumatic process controller for integrated mounting on process control valves

## 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).

## Table of contents

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# 1. General technical data

| Product properties | |
|---|---|
| Dimensions | Detailed information can be found in chapter "2. Dimensions" on page 4. |
| Weight | 0.322 kg |
| **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 |
| Current limitation | 3.2 A at 24 V |
| Max. output current | 400 mA (at 3.3 V and 5 V) |
| **Process/Port connection & communication** | |
| Communication link (integrated switch for Industrial Ethernet) | PROFINET EtherNet/IP Modbus/TCP PROFIBUS DPV1 EtherCAT CC-Link |
| **Approvals and Certificates** | |
| **Approval** | |
| 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 |
| **Certificate** | |
| PROFINET (PNO) | Certificate Z11908 |
| EtherNet/IP (ODVA) | DOC 11648 |
| **Environment and installation** | |
| Ambient temperature | -20…+60 °C |
| Storage temperature | -30…+80 °C |
| Degree of protection | IP20 (Fieldbus Gateway) |
| Height above sea level | Max. 2000 m |

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

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## 2. Dimensions

### 2.1. Version with spring terminal block for büS connection (example)
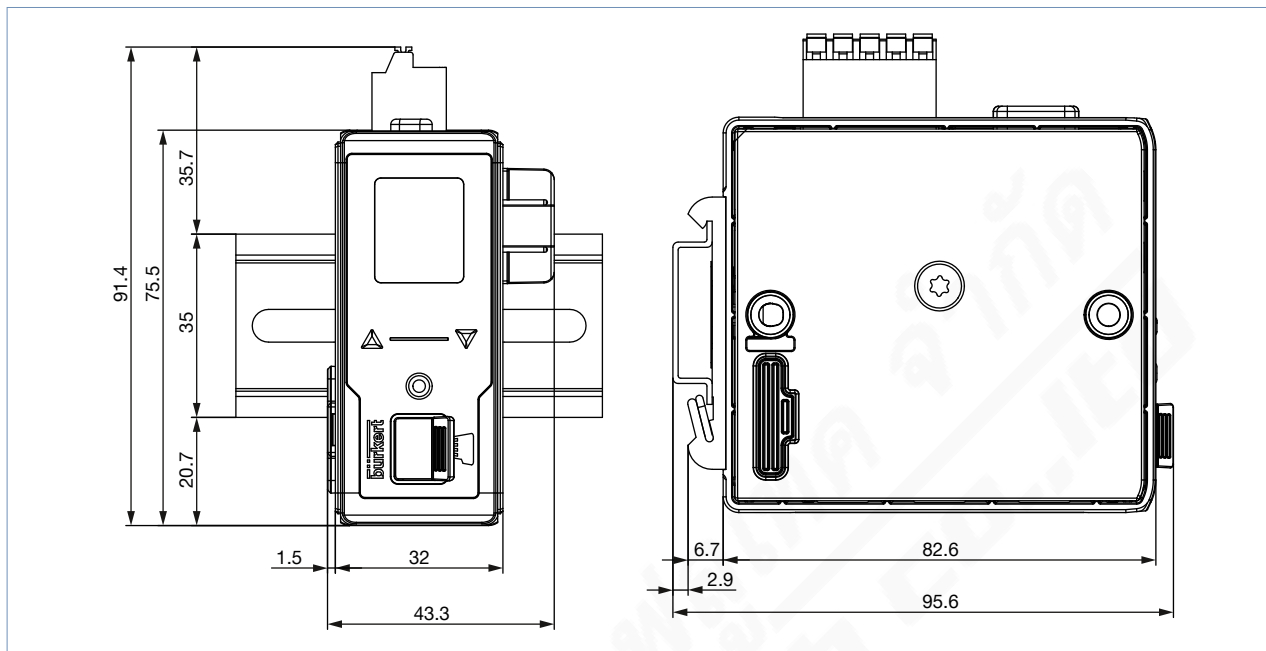
DTS 1000328369 EN Version: N Status: RL (released | freigegeben | validé) printed: 17.04.2023

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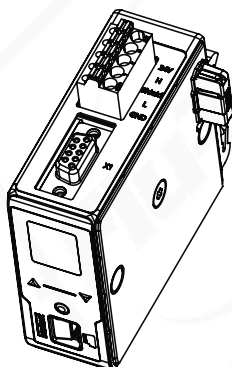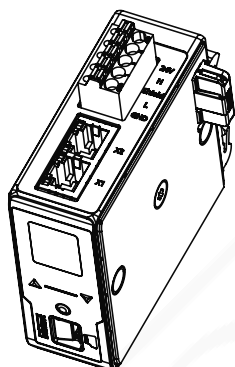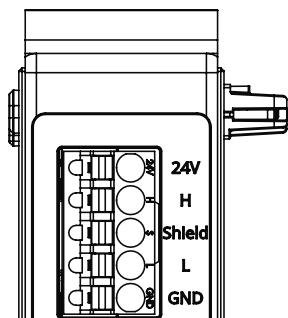
| CANopen / büS - Spring terminal, 5-pin | Colour | Pin assignment |
|---|---|---|
| | Red | 24 V DC |
| | White | CAN H (büS-connection) |
| | Green | SHIELD |
| | Blue | CAN L (büS-connection) |
| | Black | GND |

| 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 |

## 4. Product design and assembly

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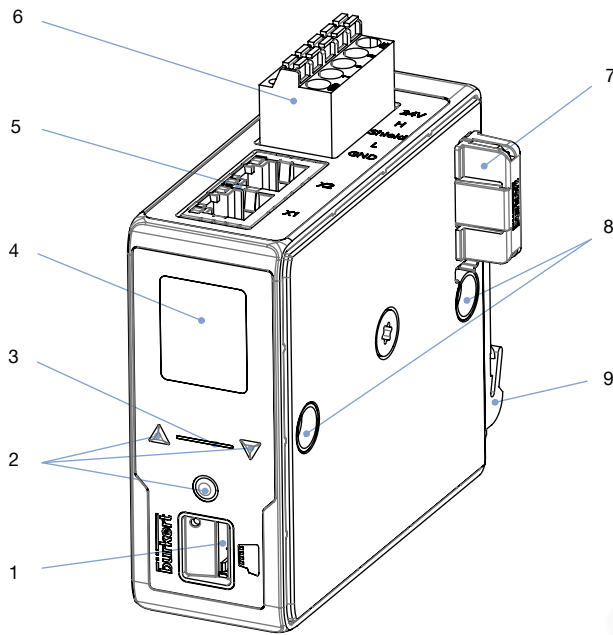
| No. | Description |
|-----|-------------|
| 1 | Micro-SD card slot |
| 2 | Buttons |
| 3 | NAMUR-LED |
| 4 | Display |
| 5 | Fieldbus connection |
| 6 | büS connector |
| 7 | Termination resistor[1.] |
| 8 | Fastening to the valve island (Type 8652) |
| 9 | DIN rail mounting |

1.) Included in delivery

# 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 ).

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
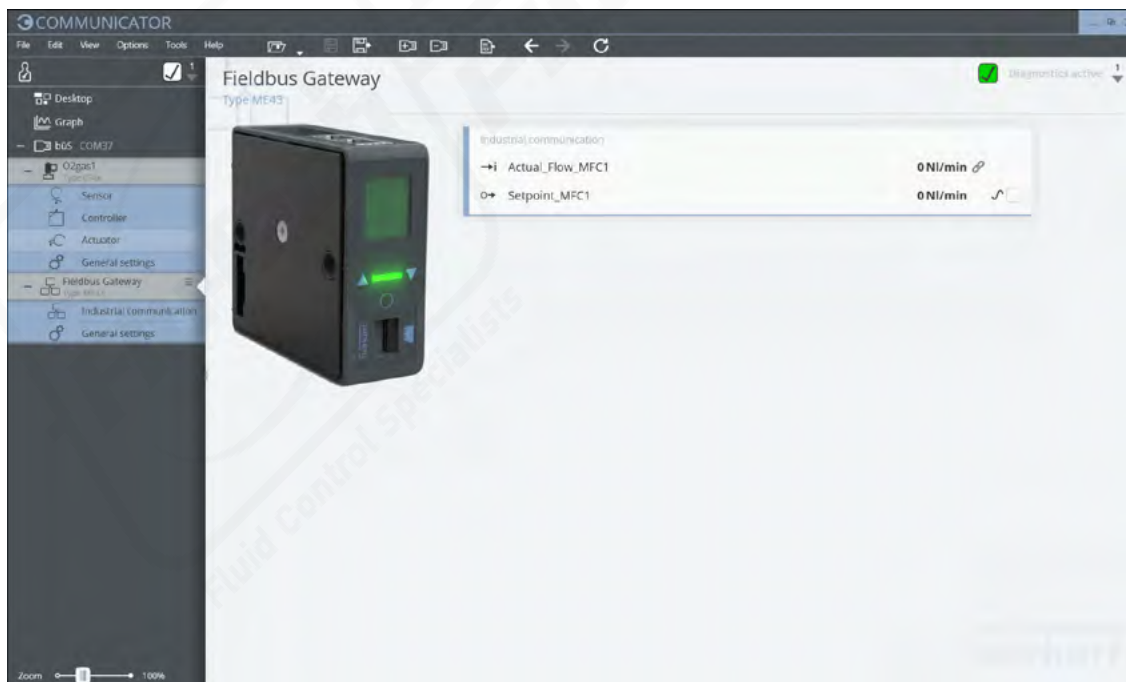
## 6. Networking and combination with other Bürkert products

**Note:**
Example of a network with Gateway ME43 and MFCs

Industrial Ethernet

24 V DC, GND, CAN-L, CAN-H
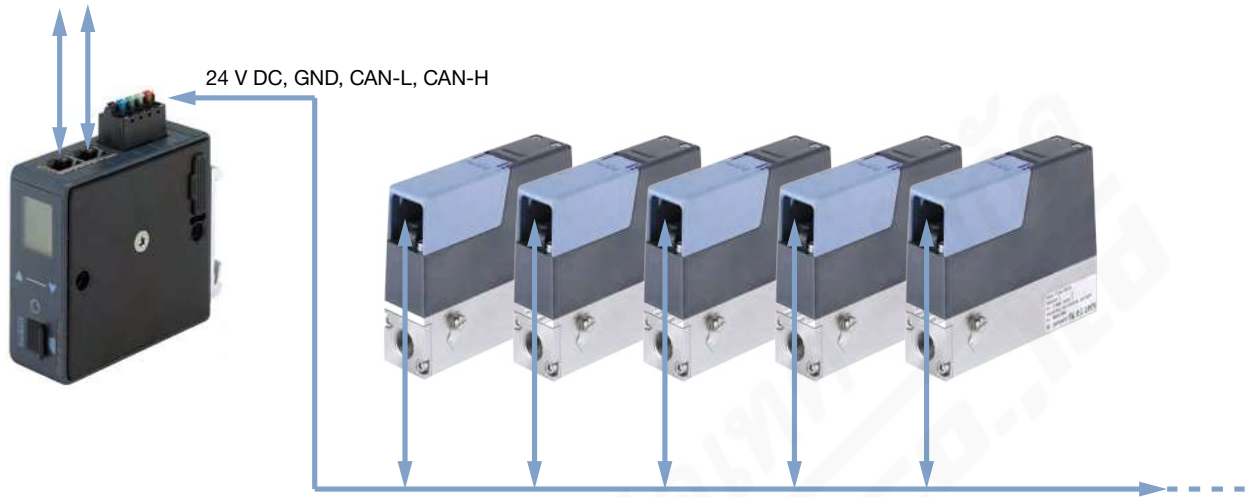
## 7. Ordering information

### 7.1. Bürkert eShop – Easy ordering and quick delivery

**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**

### 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**

## 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 |
|---|---|
| Gateway Industrial Ethernet (PROFINET, EtherNet/IP, Modbus TCP, EtherCAT) | 307390 🛒 |
| Gateway PROFIBUS DPV1 | 307393 🛒 |
| Gateway CANopen (büS) | 307391 🛒 |
| Gateway CC-Link | 307394 🛒 |

**Software Functions**

| Article | Article no. |
|---|---|
| Graphical programming f(x) license for Type ME43 gateway[1.] | 567713 🛒 |
| Batch Controller license for Type ME43 gateway[1.] | 572948 🛒 |

1.) Without the license the active run time is limited to 60 minutes.

## 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 distributer | 772420 🛒 |
| Y connector for connecting two separately powered segments of a büS network | 772421 🛒 |
| Termination resistor (directly pluggable) | 303833 🛒 |
| Termination resistor 120 Ohm M12 plug | 772424 🛒 |
| Termination resistor 120 Ohm M12 socket | 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 🛒 |
| Bürkert Communicator Software | **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.