avrora-arm.ru
+7 (495) 956-62-18

**bürkert**
FLUID CONTROL SYSTEMS

# Fieldbus Gateway Type ME43

▪ Gateway for Industrial Ethernet and Fieldbus standards

▪ Up to 128 input and 128 output variables can be assigned

▪ Easy integration in the process control system ensured through system specific device description files

▪ Graphical programming for automation of sub-systems

powered by
EDIP

Type ME43 can be combined with…
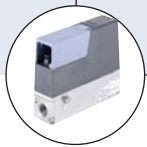
**Type 874x**       **Type 8905**       **Type 8652**

The Fieldbus Gateway of Type ME43 is the central control unit for Bürkert devices (valves, sensors, mass flow controller or displays), which are based on EDIP ("Efficient Device Integration Platform"). The basic version of the system consists of a Fieldbus Gateway Type ME43 and can be extended with several IO modules. The Fieldbus Gateway transmits the internal CANopen based communication of the Bürkert field devices to industrial standards for Industrial Ethernet and fieldbus.

With the help of the graphical programming sub-systems can be automated specifically to the customer's needs. (For e.g. controlled mixing of gases, error monitoring through switching commands, timer switches etc.)

| Technical data | |
|---|---|
| **Housing material** | PC (Polycarbonate) |
| **Gateway functionality** (Integrated switch for Industrial Ethernet) | PROFINET EtherNet/IP Modbus/TCP PROFIBUS DPV1 EtherCAT |
| **Configuration storage** | Micro SD Card (for storing device parameters, configuration and easy replacement of a module) |
| **Operating voltage** | 24V DC +/- 10% - residual ripple 10% |
| **Light diodes** Housing (external) | RGB-LED based on NAMUR NE107 |
| **Power consumption** | 2W |
| **Ambient temperature** | -20...+60 °C |
| **Protection class** ME43 (Fieldbus Gateway) | IP20 |
| **Installation** | Horizontal or vertical on DIN rail EN 50022 |

## EDIP – Efficient Device Integration Platform

EDIP is the new Bürkert device platform which will in the future standardise the operation, communication and interfaces of many process devices (e.g. Sensors, Mass Flow Controller). Thanks to EDIP the devices can be intelligently networked and operated with with the consistent Software, the Bürkert Communicator. The backbone and connecting link of EDIP is the digital interface which complies with the CANopen standard and is always downwards compatible to it. EDIP offers following advantages to the user:
▪ Interoperability - guaranteed by the uniform interface
▪ Comfortable operating and display concept
▪ Fast start-up and easy commissioning
▪ Modularity – allows adjustment of the devices to individual customer requirements
▪ Easy transfer and backup of device settings

## Fieldbus Gateway ME43
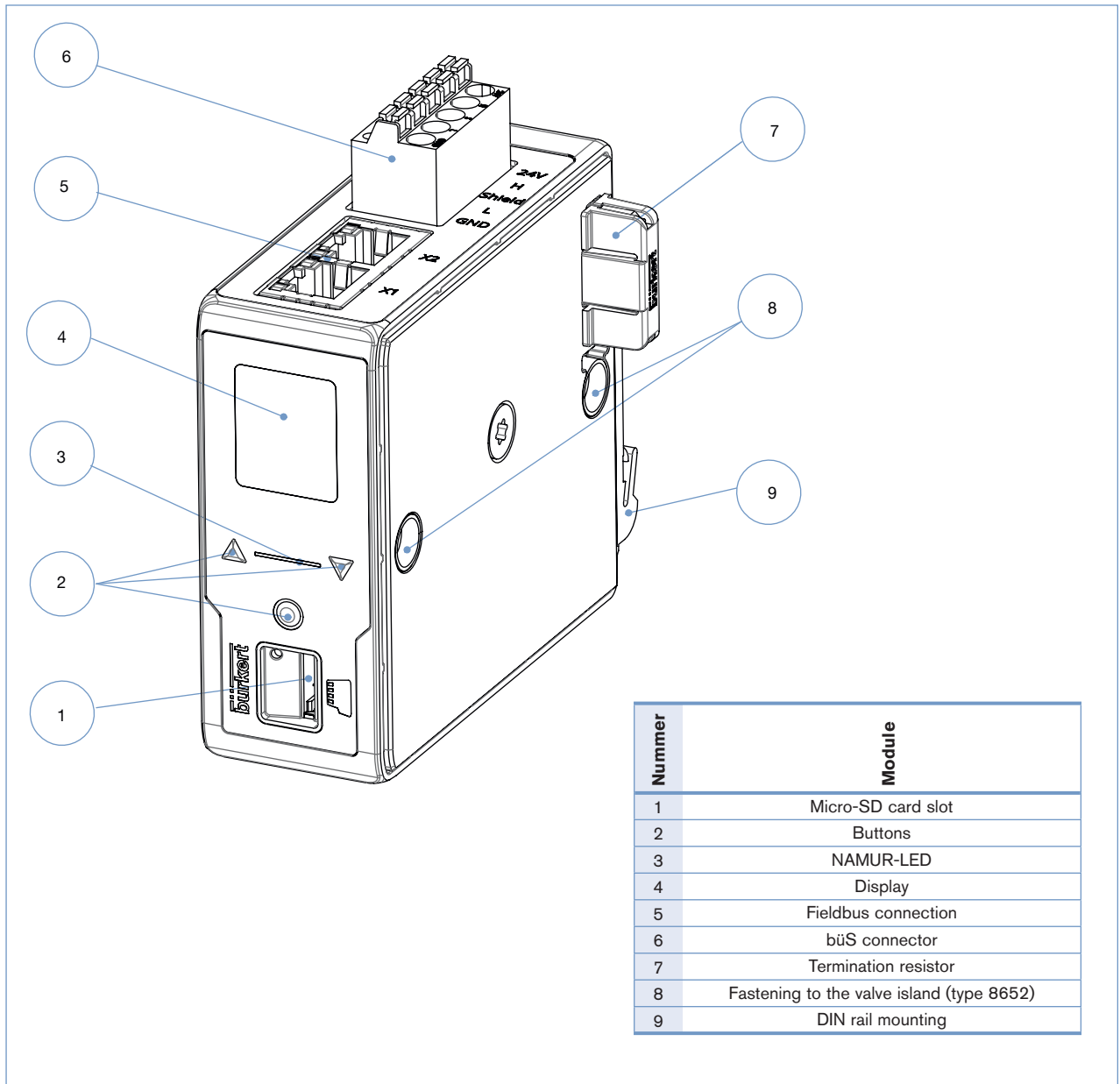


| Nummer | Module |
|--------|--------|
| 1 | Micro-SD card slot |
| 2 | Buttons |
| 3 | NAMUR-LED |
| 4 | Display |
| 5 | Fieldbus connection |
| 6 | büS connector |
| 7 | Termination resistor |
| 8 | Fastening to the valve island (type 8652) |
| 9 | DIN rail mounting |

## Pin assignment
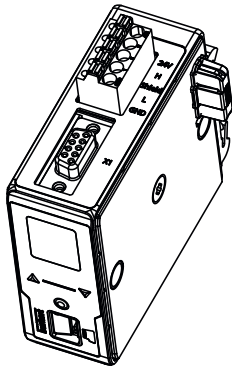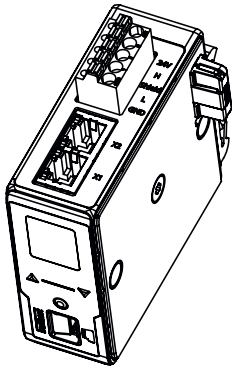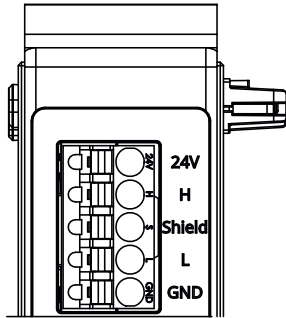
| Spring terminal 5-pin | Color | Assignment |
|---|---|---|
| | Red | Supply voltage 24 V DC |
| | White | CAN H (büS-connection) |
| | Green | SHIELD |
| | Blue | CAN L (büS-connection) |
| | Black | GND |

| Interface X1 and X2 | Pin | Assignment |
|---|---|---|
| | 1 | TX+ |
| | 2 | TX− |
| | 3 | RX+ |
| | 4 | N.C. |
| | 5 | N.C. |
| | 6 | RX− |
| | 7 | N.C. |
| | 8 | N.C. |

| D-SUB 9-pin female | Pin | Assignment |
|---|---|---|
| | 1 | SCHIRM |
| | 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) |

**Note:**

1) The disconnect resistor can be plugged in easily to the right of the module.

2) 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.

**bürkert**

## Software Bürkert Communicator

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.

The communicator allows:

- 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
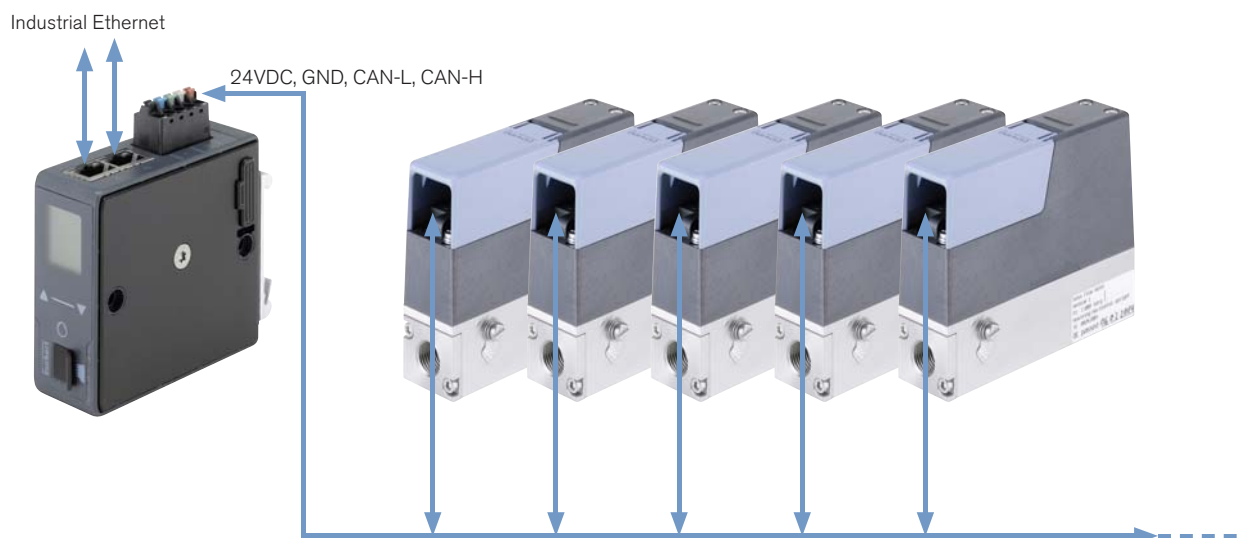- Backup and restoring of device configurations
- Recalibration routine controlled

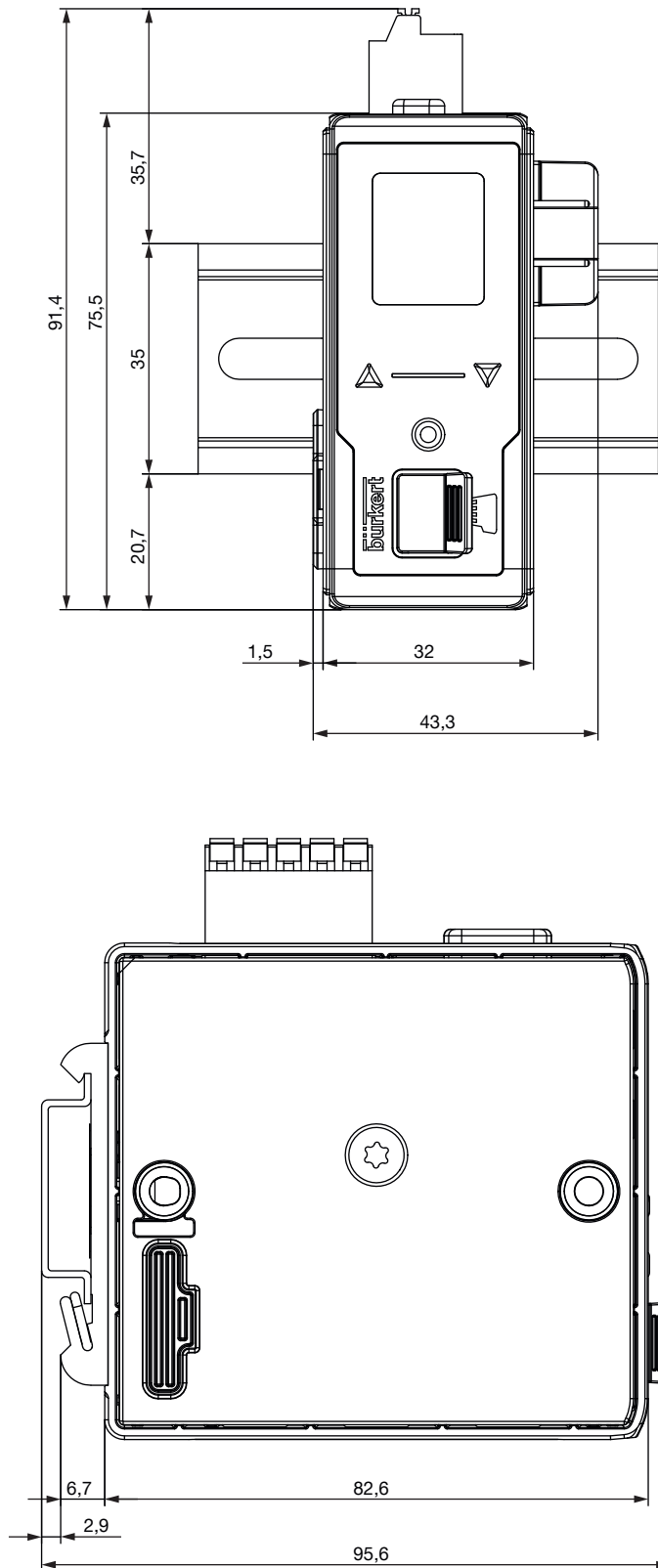To install the software, click on the download button.  **Download**
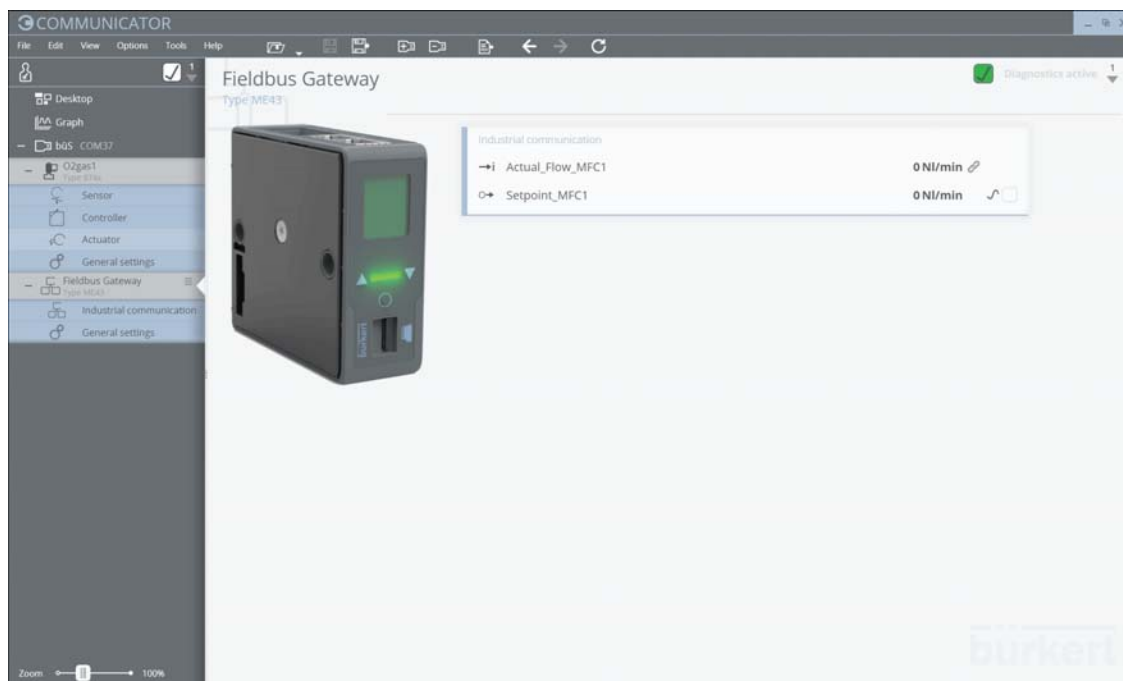


## Operation in a network

Example of a network with Gateway ME43 and MFCs

Industrial Ethernet

24VDC, GND, CAN-L, CAN-H

**burkert**

## Dimensions [mm]

**Example with spring terminal block for büS connection**

avrora-arm.ru
**+7 (495) 956-62-18**

**bürkert**

## Ordering chart for accessories

p. 6

| Article | Item No. |
|---|---|
| büS cable extension M12 0.1m | 772 492 |
| büS cable extension M12 0.2m | 772 402 |
| büS cable extension M12 0.5m | 772 403 |
| büS cable extension M12 1m | 772 404 |
| büS cable extension M12 3m | 772 405 |
| Connector M12, female, straight [1] | 772 416 |
| Connector M12, male, straight [1] | 772 417 |
| Connector M12, female, angled [1] | 772 418 |
| Connector M12, male, angled [1] | 772 419 |
| Y connector | 772 420 |
| Y connector for connecting two separately powered segments of a büS network | 772 421 |
| Termination resistor (directly pluggable) | 303 833 |
| Termination resistor 120 Ohm M12 male | 772 424 |
| Termination resistor 120 Ohm M12 female | 772 425 |
| Power supply Type 1573 for rail mounting, 100-240 V AC/ 24V DC, 1.25A, NEC Class 2 (UL 1310) | 772 438 |
| Power supply Type 1573 for rail mounting, 100-240 V AC/ 24V DC, 1A, NEC Class 2 (UL 1310) | 772 361 |
| Power supply Type 1573 for rail mounting, 100-240 V AC/ 24V DC, 2A, NEC Class 2 (UL 1310) | 772 362 |
| Power supply Type 1573 for rail mounting, 100-240 V AC/ 24V DC, 4A | 772 363 |
| Micro SD Card | on request |
| büS-Stick Set 1 (incl. cable (M12)), stick with integrated termination resistor, power supply and software | 772 426 |
| büS-Stick Set 2 (incl. cable (M12)), stick with integrated termination resistor | 772 551 |
| License for graphical programming (only when > 10 blocks are required) | 567 713 |
| Software Bürkert Communicator | http://www.burkert.com/en/type/8920 |

[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.