bürkert
FLUID CONTROL SYSTEMS



Electronic pressure controller (EPC)

- Precise flow pressure control
- Upstream pressure controller
- Suitable for pressure control up to 4 bar abs
- Integrated PI control algorithm
- Simpler device exchange due to configuration memory

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 8743 ▸
Mass flow controller (MFC)/mass flow meter (MFM) for gases



Type 8744 ▸
Mass flow controller (MFC)/mass flow meter (MFM) for gases

Type description

The Type 8762 is a device for precise pressure control of gas flows. The flow pressure at the inlet of the device (upstream) is controlled.
The actual value supplied by the pressure sensor is compared with the specified set-point value in the digital control electronics; if there is a control difference, the actuating variable output to the proportional valve is modified using a PI control algorithm. This means that the pressure can be kept at a fixed value or followed a predetermined profile, regardless of flow fluctuations or other changes in the system. A low-friction proportional valve as an actuator ensures high response sensitivity and good control characteristics of the device. The Type 8762 is particularly suitable for use in harsh environments, thanks to its high IP protection class.

DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

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Visit product website ▸

Table of contents

1. General technical data 3

2. Approvals and conformities 4

2.1. General notes 4
2.2. Conformity 4
2.3. Standards 4

3. Materials 4

3.1. Bürkert resistApp 4

4. Dimensions 5

4.1. Threaded variant connections 5
Small nominal flow rates, with internal threaded connection 5
Small nominal flow rates, compatible with VCR® 5
Small nominal flow rates, with tri-clamp DN 15... ½" 5
4.2. Threaded variant 6
Threaded variant with büS connection 6
Threaded variant with PROFIBUS DPV1 connection 7
4.3. Sub-base variant 8
Sub-base variant with sub-base connection 8
Sub-base variant with PROFIBUS DPV1 connection 9

5. Device / Process connections 10

5.1. büS/CANopen 10
5.2. PROFIBUS DPV1 10

6. Product operation 11

6.1. Measuring principle 11

7. Product accessories 12

7.1. Bürkert Communicator software 12
7.2. Connecting Type 8762 with the Bürkert Communicator software 13
7.3. Configuration management for easy device replacement 13

8. Ordering information 13

8.1. Bürkert eShop 13
8.2. Bürkert product filter 13
8.3. Ordering chart accessories 14

DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "4. Dimensions" on page 5.
Materials	
Seal	FKM or EPDM (depending on gas)
Housing	Die-cast aluminium (coated)
Base block	Aluminium or stainles steel 1.4401/316L
Total weight	Approx. 500 g (aluminium base block)
Configuration management	Further information can be found in chapter "7.3. Configuration management for easy device replacement" on page 13.
LED display [2.]	RGB-LED according to NAMUR NE107
Performance data	
Pressure range	0...4 bar abs
Nominal flow range (Q_N)	< 200 l/min
Measuring accuracy	± 0.25 % FS (under calibration conditions and after 1 min warm-up time to achieve the best measuring conditions)
Repeatability	± 0.1 % FS
Turndown ratio	1:50
Actuator (proportional valve)	Normally closed
Electrical data	
Operating voltage	24 V DC
Power consumption [1.]	Max. 3...6.5 W
Residual ripple	± 2 %
Voltage tolerance	± 10 %
Electrical connection	
büS/CANopen variant	M12 plug, 5-pin, M12 socket, 5-pin
Medium data	
Operating medium	Neutral, pure gases (others on request)
Calibration medium	Air
Medium temperature	-10 °C...+ 70 °C (-10 °C...+ 60 °C with oxygen)
Process/Port connection & communication	
Digital communication interface	büS/CANopen, PROFIBUS DPV1
Port connection	NPT ¼, G ¼, sub-base or vacuum fitting ¼, tri-clamp
Approvals and conformities	
Protection class	IP65
Certificate	Material certificate 3.1 (optionally)
Environment and installation	
Installation position	Horizontal or vertical
Ambient temperature	-10 °C...+ 50 °C
Accessories	
Software	Bürkert Communicator Further information can be found in chapter "7.3. Configuration management for easy device replacement" on page 13.

1.) For a detailed description of LED colours see **operating instructions Type 8762** ▸

2.) Information in relation to the typical power consumption (at + 23 °C ambient temperature, nominal flow and 30 min closed-loop control mode). Information according to UL 61010 - 1 may vary (see **operating instructions Type 8762** ▸).

DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

2. Approvals and conformities

2.1. General notes

Note:

- 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 variants can be supplied with the below mentioned approvals or conformities.

2.2. Conformity

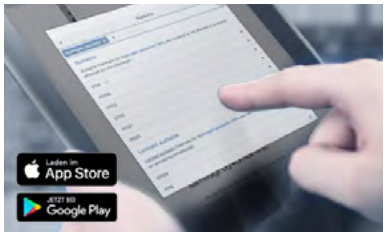
In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

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.

3. Materials

3.1. Bürkert resistApp



Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

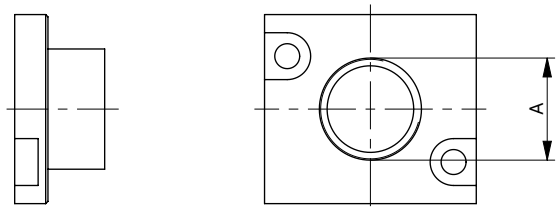
Start chemical resistance check

DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

4. Dimensions

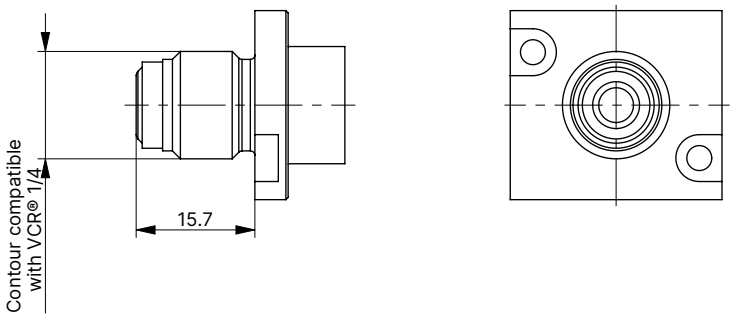
4.1. Threaded variant connections

Small nominal flow rates, with internal threaded connection

Dimensions	Thread (A)	Thread depth [mm]
	G ¼	12
	NPT ¼	12

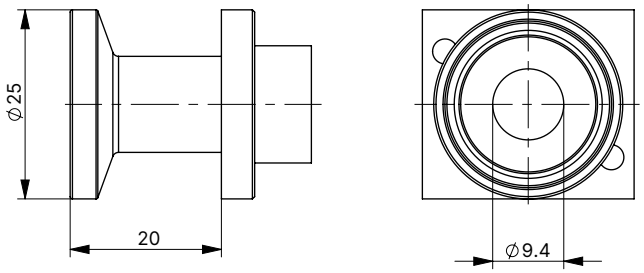
Small nominal flow rates, compatible with VCR®

Note:
Dimensions in mm



Small nominal flow rates, with tri-clamp DN 15... ½"

Note:
Dimensions in mm

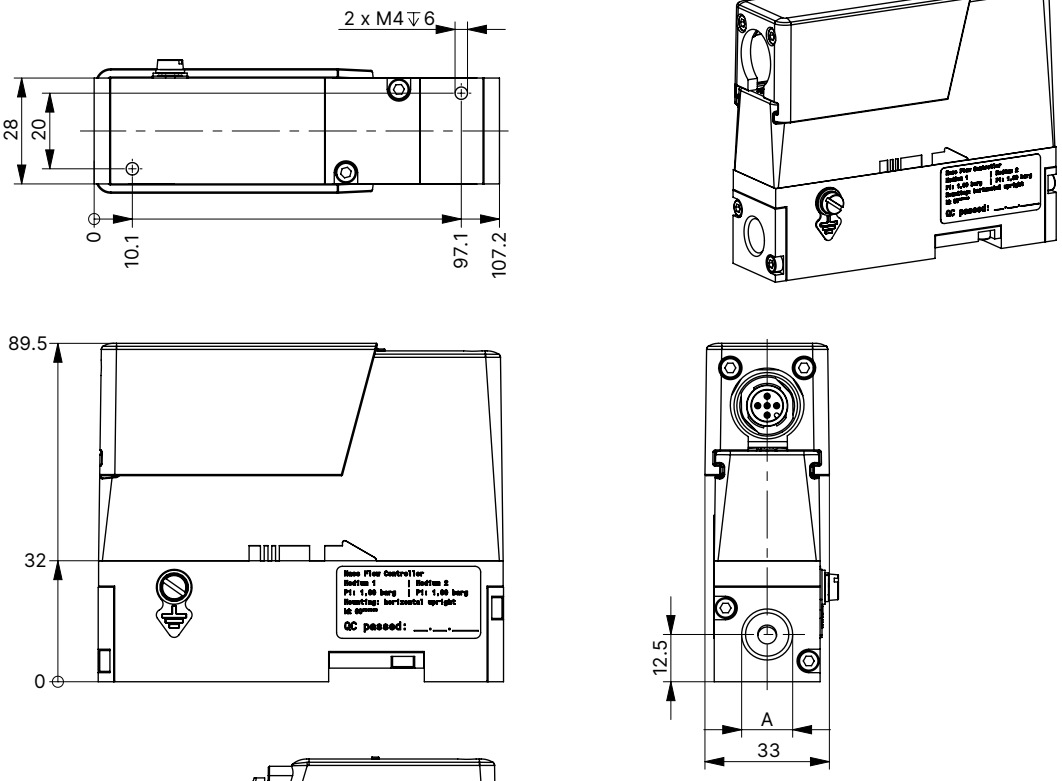


DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

4.2. Threaded variant

Threaded variant with büS connection

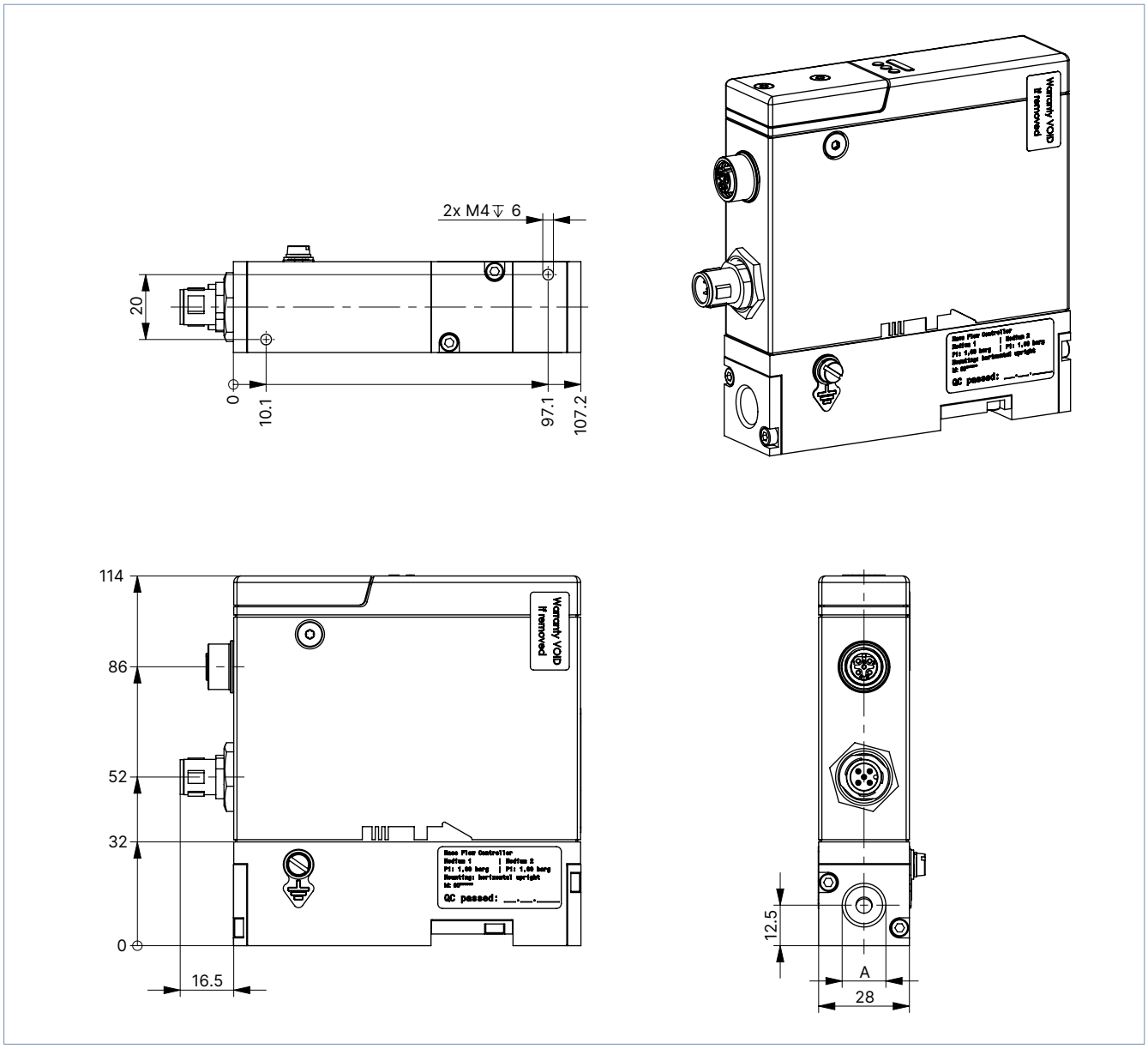
Note:
Dimensions in mm



DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

Threaded variant with PROFIBUS DPV1 connection

Note:
Dimensions in mm

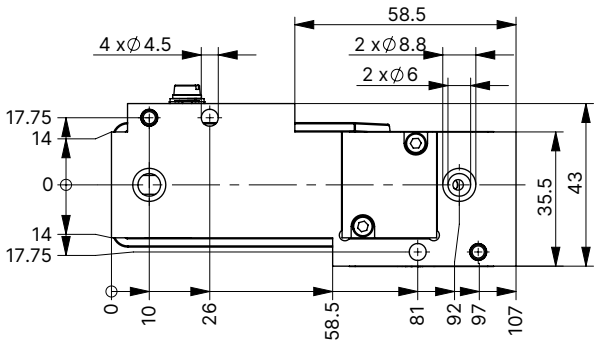


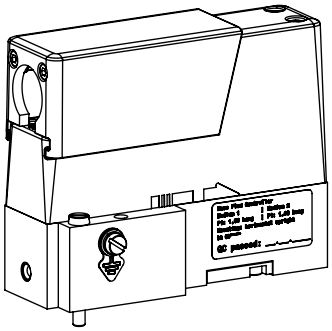
DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

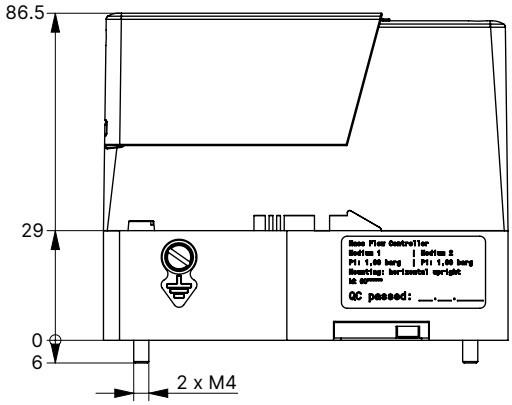
4.3. Sub-base variant

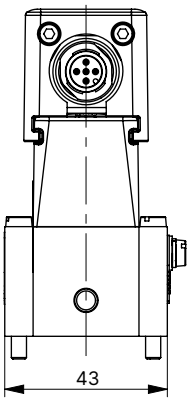
Sub-base variant with sub-base connection

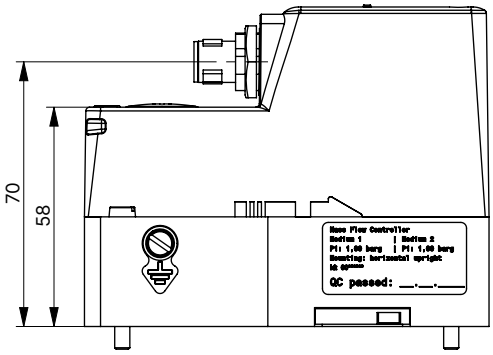
Note:
Dimensions in mm







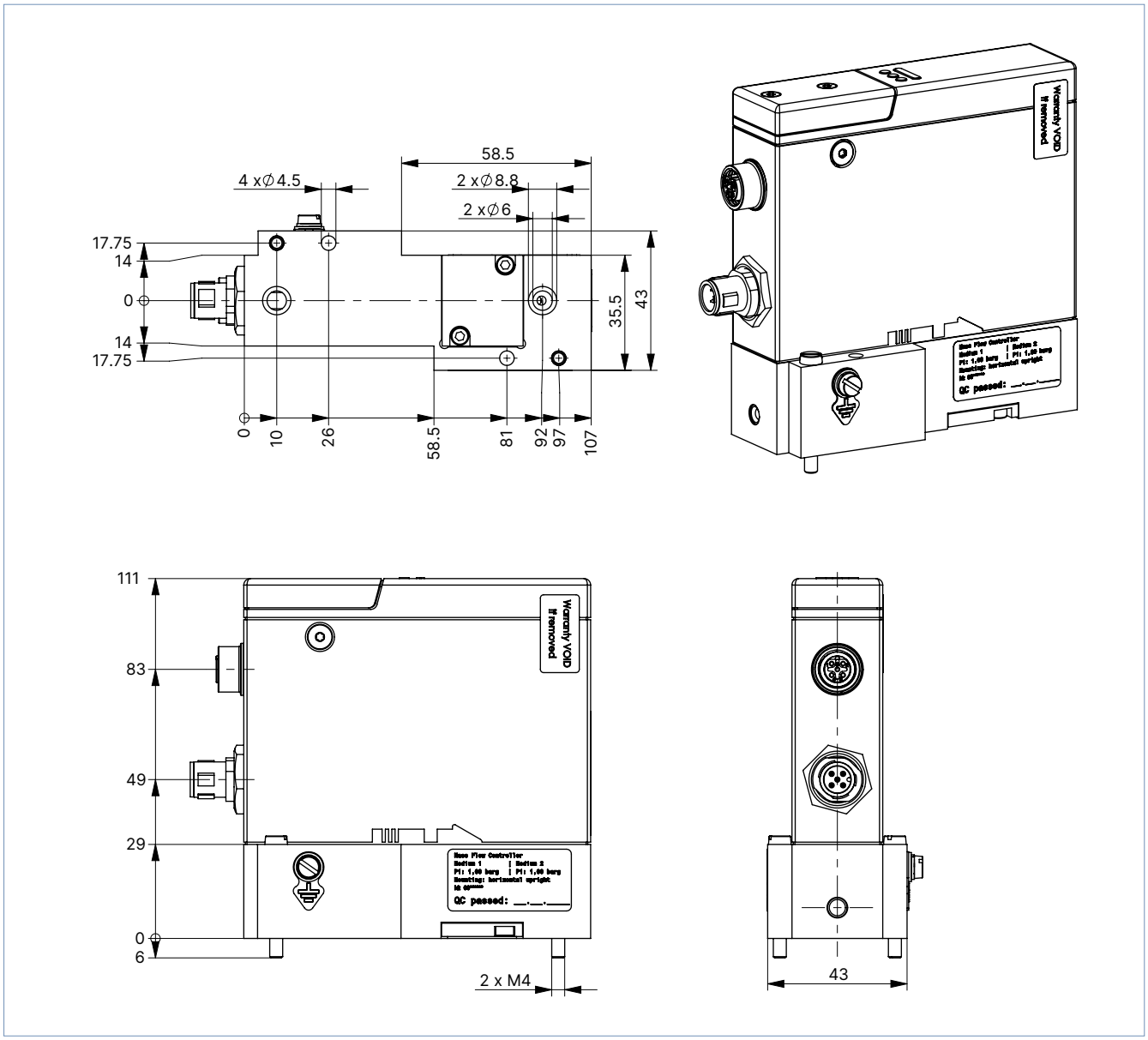




DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

Sub-base variant with PROFIBUS DPV1 connection

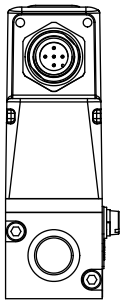
Note:
Dimensions in mm

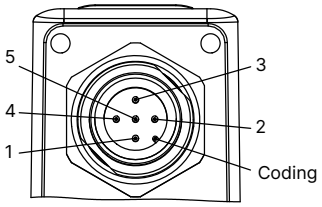


DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

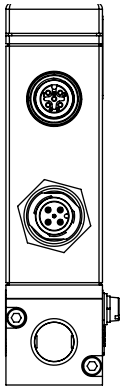
5. Device / Process connections

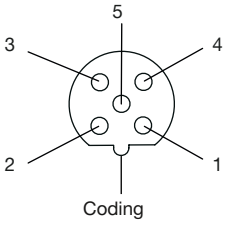
5.1. büS/CANopen

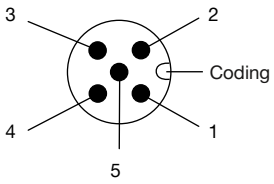


M12 plug, 5-pin (A-coded)	Pin	Assignment
	1	Shielding
	2	24 V
	3	DGND
	4	CAN_H
	5	CAN_L

5.2. PROFIBUS DPV1



M12 socket, 5-pin (B-coded)	Pin	Assignment
	1	5 V
	2	RxD / TxD (Line A)
	3	DGND
	4	RxD / TxD (Line B)
	5	Not connected

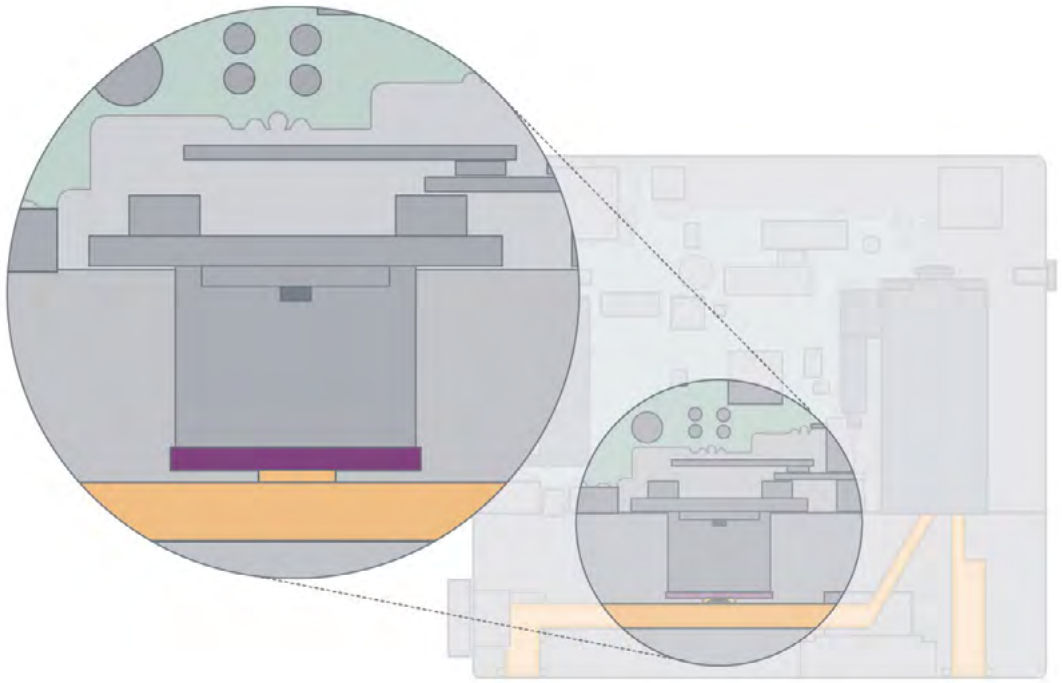
M12 plug, 5-pin (A-coded)	Pin	Assignment
	1	Shielding
	2	24 V
	3	GND
	4	Not connected
	5	Not connected

DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

6. Product operation

6.1. Measuring principle

A pressure measuring cell is used as sensor in the flow channel. The key part of the pressure measuring cell is the pressure diaphragm (highlighted in purple) with its piezoelectric resistors which are located on the surface of the diaphragm as strain gauges. For the measurement, four piezoelectric resistors are connected to form a Wheatstone bridge. The position of the resistors is selected so that a deflection of the diaphragm leads to a change in resistance in the same direction (positive or negative) for two opposing resistors.
If this measuring bridge is fed with a constant current, the output bridge voltage is proportional to the measured bridge voltage (absolute pressure). The pressure sensor provides a precise and temperature-compensated pressure value.



The illustration shows the sub-base variant of the EPC Type 8762.

DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

7. Product accessories

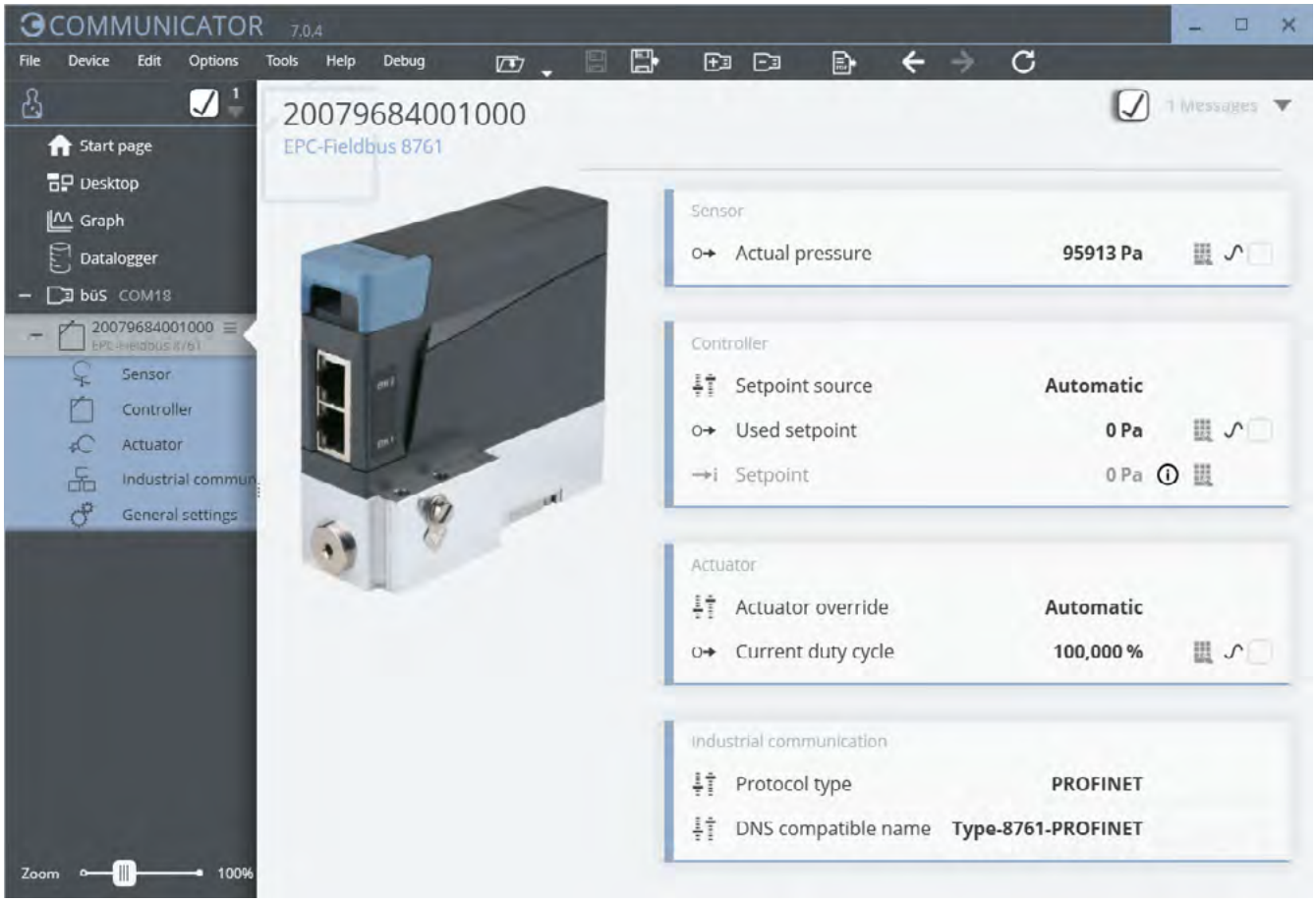
7.1. Bürkert Communicator software

Note:
The corresponding communication software can be downloaded from the website **Type 8920** ▶.

The Bürkert Communicator is the most important software component of the EDIP (Efficient Device Integration Platform). Various features of this universal tool simplify the configuration and parametrisation 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 diagnostic data. The integrated graphical programming environment enables the creation of decentralised sub-system control functions. The connection to the PC is established with a USB büS interface set. The adapter is available as an accessory (see "8.3. Ordering chart accessories" on page 14).

The Bürkert Communicator enables:

- Configuration, parametrisation and diagnosis of EDIP devices / networks
- Switching between defined gases
- Easy and comfortable mapping of cyclic values
- Graphic display, monitoring and storage of process values
- Firmware update of the connected EDIP devices
- Saving and restoring device configurations
- Zero-point adjustment in case of changed ambient conditions
- Guided re-calibration routine



DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

7.2. Connecting Type 8762 with the Bürkert Communicator software

The Bürkert Communicator software interface is based on CANopen. The appropriate bus termination is mandatory. For Type 8762 PROFIBUS DPV1, activate the termination resistor switch on the büS stick. For Type 8762 büS/CANopen, the termination resistor must not be activated in case the device is already integrated in a properly terminated bus network.

- For Type 8762 PROFIBUS DPV1, the connection is established via the device's micro USB socket (USB büS interface set 2 contains the necessary accessories).
- For Type 8762 büS/CANopen, the connection is established via the 5-pin M12 plug (USB büS interface set 1 contains the necessary accessories).

Please note: no external power supply must be connected to the micro USB socket. The device must be provided with power as described in chapter "5. Device / Process connections" on page 10.

7.3. Configuration management for easy device replacement

Depending on the electrical connection of the EPC, the following options for device replacement are available:

- If a device needs to be replaced, the memory card can be removed from the defective device and inserted into the new one. This transfers all data of the device to be replaced to the new device. The memory card is available as an accessory and must be ordered separately (see "8.3. Ordering chart accessories" on page 14).
- Option for Type 8762 büS/CANopen: The device is exchanged via the configuration provider of the higher-level gateway control (ME43). In the gateway, a memory card is required. The memory card is available as an accessory and must be ordered separately (see "8.3. Ordering chart accessories" on page 14).

In order to successfully exchange the device, it is necessary that both the new device and the device to be replaced possess the same device ID.

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

DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025

8.3. Ordering chart accessories

Description	Article no.
General accessories	
USB büS interface set 2 (Type 8923) for connection to the Bürkert Communicator software: including büS stick, connection cable to M12 plug, M12 connection cable on micro USB for the büS service interface and Y-distributor, cable length: 0.7 m	772551
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, 4 A	772363
Memory card	On request
Device description files for software interfaces	Download from **Type 8762** ▶
Bürkert Communicator software	Download from **Type 8920** ▶
For Type 8762 büS/CANopen	
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: 1 m	772405
büS socket, M12, straight, A-coded [1.)]	772416
büS plug, M12, straight, A-code [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 two separately supplied segments of a büS network	772421
büS plug, M12, terminating resistor 120 Ω	772424
büS plug, M12, terminating resistor 120 Ω	772425
LabVIEW device driver	On request
EDS file	Download from **Type 8762** ▶
For Type 8762 PROFIBUS DPV1	
M12 socket with cable, on strand, A-coded, cable length: 5 m	560365
M12 socket with cable, shielded, 5-pin, cable length: 10 m	563108
büS socket, M12, straight, A-coded [1.)]	772416
M12 plug, 5-pin, B-coded, straight	918198
M12 socket, 5-pin, straight (coupling)	918447
PROFIBUS DPV1 T distributor	918531
PROFIBUS DPV1 terminating resistor, M12 plug, B-coded	902553
GSD file	Download from **Type 8762** ▶

DTS 1000613083 EN Version: B Status: RL (released | freigegeben | validé) printed: 09.01.2025