



# Mass flow controller (MFC)/mass flow meter (MFM) for liquids

- Flow measurement/control up to 120 kg/h
- · Very high accuracy and measuring range
- · High long-term stability, no zero-point adjustment necessary
- · Highly resistant wetted materials
- · Suitable for numerous liquids







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 ME43** Fieldbus gateway



Type 2871 Direct-acting 2-way standard solenoid control valve



Type 2873 ▶
Direct-acting 2-way standard solenoid control valve

#### Type description

The Mass flow controller (MFC) / mass flow meter (MFM) Type 8756 is particularly suitable for the very precise measurement or control of small quantities of liquid that also require a medium-separated sensor. The measuring principle of the sensor is based on the Coriolis effect and is completely independent of the medium. Pressure and temperature deviations have no impact on the measuring accuracy. In addition to the flow rate, the density and temperature of the liquid are measured. The device design enables a stable flow measurement that is immune to external impacts and does not require a zero-point adjustment when the process conditions change. All materials that come into contact with the medium are highly resistant and enable use with a variety of liquids, whether aggressive or neutral media. Type 8756 is available in the variants MFM, MFC with an interface for a modular actuator, MFC with integrated proportional valve and MFC with integrated micro annular gear pump. The high-precision pump is self-priming and the space in contact with the medium is sealed hermetically. It offers a very large control range and generates extremely low pulsations. This variant is used as a control or dosing system for liquids which have to be conveyed from an unpressurised container.



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# General technical data

Product properties				
Dimensions	Dimensions" on page 8.			
Material <sup>1.)</sup>				
Housing	Aluminium			
Base block (wetted)	Stainless steel 1.4404/316L (optionally with certificate 3.1 according to EN 10204), additionally Alloy C22 for size 1			
Sensor (wetted)	Stainless steel 1.4404/316L, additionally Alloy C	C22 for size 1		
Actuator (wetted)	Further information can be found in the table se	ection Actuator (see below).		
Seal (wetted)	FFKM, metal or PCTFE			
Cleaning/Sterilisation (MFM variant only) <sup>2.)</sup>	With seal material metal or PCTFE: hot water ( $\leq$ With seal material FFKM: hot water ( $\leq$ +90 °C) a	and steam (≤ +121 °C)		
Configuration management	Further information can be found in chapter "8.4 replacement" on page 31.	4. Configuration management for easy device		
Total weight MFM	>3 kg			
Total weight MFC	≤6 kg			
LED display <sup>3.)</sup>	RGB LED according to NAMUR NE107			
Performance data	Size 1 <sup>4)</sup>	Size 2 <sup>4.)</sup>		
Nominal flow rate <sup>4.)</sup>				
MFM	25 kg/h <sup>6.)</sup> (Q <sub>N</sub> ≥1 kg/h)	120 kg/h <sup>6.)</sup> ( $Q_N \ge 5$ kg/h)		
MFC with modular actuator interface	$25 \text{ kg/h}^{6.}$ ( $Q_N \ge 1 \text{ kg/h}$ )	$120 \text{ kg/h}^{6.}$ (Q <sub>N</sub> $\geq 5 \text{ kg/h}$ )		
MFC with proportional valve Type 2873	25 kg/h <sup>6.)</sup> ( $Q_N \ge 4$ kg/h)	- N S /		
MFC with pump Type 7620	8 kg/h <sup>6.)</sup> (higher Q <sub>N</sub> on request, Q <sub>N</sub> ≥2 kg/h)	-		
Minimum measurable flow rate	0.05 kg/h <sup>6.)</sup> (can be reduced to a minimum of 0.01 kg/h with loss of accuracy)	0.25 kg/h <sup>6)</sup> (can be reduced to a minimum of 0.05 kg/h with loss of accuracy)		
Flow rate characteristics				
Measuring accuracy	$\pm 0.2\%$ of reading or $\pm 1.4$ g/h for water under calibration conditions,	$\pm 0.1$ % of reading or $\pm 15$ g/h for water under calibration conditions		
Repeatability	$\pm 0.1$ % of reading or $\pm 0.7$ g/h	$\pm 0.05\%$ of reading or $\pm 7.5$ g/h		
Density <sup>5.)</sup>	\			
Measuring accuracy	$\pm 0.005$ kg/l at Q <sub>N</sub> > 1.5 kg/h	$\pm 0.005$ kg/l at Q <sub>N</sub> >5.7 kg/h		
Repeatability	$\pm 0.0025$ kg/l at $Q_N > 1.5$ kg/h	$\pm 0.0025$ kg/l at $Q_N > 5.7$ kg/h		
Temperature	N - 5	N - 3		
Measuring accuracy	±1.0 K at Q <sub>N</sub> >1.5 kg/h	$\pm 1.0 \text{ K at Q}_{N} > 5.7 \text{ kg/h}$		
Repeatability	$\pm 1.0 \text{ K at } Q_N > 1.5 \text{ kg/h}$ $\pm 0.5 \text{ K at } Q_N > 1.5 \text{ kg/h}$	$\pm 1.0 \text{ K at } Q_N > 5.7 \text{ kg/h}$ $\pm 0.5 \text{ K at } Q_N > 5.7 \text{ kg/h}$		
Tightness to the outside (helium)	<10 <sup>-6</sup> mbar * l/s (depending on seal material)	±0.5 K & Q <sub>N</sub> > 5.7 kg/II		
Actuator	10 mbai 1/3 (depending on Sea material)			
	(anh. fau aire 1)			
Micro annular gear pump Type 7620 Smallest internal displacement volume	48 µl			
Differential pressure of the pump	010 bar (inlet pressure must be ≤200 mbar to	avoid high leakage via pump)		
Wetted parts	Stainless steel 1.4404/316L and 1.4462/318LN,			
Proportional valve Type 2873 (only f	<b>√</b> √ √ (3)√.	(		
Nominal diameter	0.8 mm			
Pressure range	Inlet pressure ≤5 bar			
•				
Wetted parts Stainless steel 1.4404/316L, 1.4305/303, 1.4310/301, 1.4303/305L and 1.4413/S 41500, FFK EPDM				









#### Further control valves

In the MFM variant, any proportional control valve can be controlled via the additional actuator output using a PWM signal (e.g. proportional valve Type 2871 or Type 2873). The integrated PI controller must be parameterised accordingly before commissioning, see "8.2. Bürkert Communicator software" on page 30.

Electrical data	
Operating voltage	24 V DC
Power consumption	MFM: <2 W (as MFM) MFC: <10 W (with proportional valve Type 2873), <16 W (with pump)
Voltage tolerance	±10%
Residual ripple	±2%
Medium data	
Operating medium	Further information can be found in chapter "3.1. Bürkert resistApp" on page 7.
Calibration medium	Water
Medium temperature	MFM: -10 °C+70 °C MFC: -10 °C+60 °C
Viscosity (dynamic)	>0.3 m·Pas ≤200 m·Pas (for variant with pump Type 7620) ≤40 m·Pas (for variant with proportional valve Type 2873)
Process/Port connection & comm	nunication
Port connection	G $\frac{1}{8}$ , NPT $\frac{1}{8}$ , VCR $\frac{1}{8}$ , VCR $\frac{1}{4}$ , compression fitting $\frac{1}{8}$ ", $\frac{1}{4}$ ", 4 mm, 6 mm, sub-base
Electrical connection	
büS/CANopen variant	1 x M12 plug, 5-pin
Analogue variant	020 mA, 420 mA, 05 V, 010 V 1 x M12 plug, 5-pin and 1 x M12 socket, 5-pin
Industrial Ethernet variant	1 x M12 plug, 5-pin, 2 x M8 socket, 4-pin
Approvals and conformities	
Protection class	IP65 IP40 (as MFC with pump)
Certificate	Material certificate 3.1 (optionally)
Explosion protection	Further information can be found in chapter "2.4. Explosion protection (MFM)" on page 6.
North America (USA/Canada)	Further information can be found in chapter "2.5. North America (USA/Canada)" on page 6.
Foods and Beverages/Hygiene	Further information can be found in chapter "2.6. Foods and beverages/Hygiene" on page 6.
Environment and installation	
Installation position	Any, to prevent the accumulation of gas bubbles in the medium: horizontal upright/horizontal over- head
Ambient temperature	-10+50 °C (other temperature ranges on request)
Accessories	
Software	Bürkert Communicator Further information can be found in chapter "8.2. Bürkert Communicator software" on page 30.

- 1.) The components in contact with the medium do not contain any type of silicone.
- 2.) For 30 min with the device unpowered, followed by a cooling time of 2 hours
- 3.) For a detailed description of LED colours operating instructions Type 8756 >.
- 4.) For highly viscous media this value may not be achieved.
- 5.) Applies to water unter calibration conditions
- 6.) Factory settings









# 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.

#### 2.4. Explosion protection (MFM)

Approval	Description
(c)	Optional: Explosion protection
(\tex\	ATEX:
	EPS 22 ATEX 1 278 X
	II 3G Ex ec nC IIC T5 Gc
<i>IEGE</i> <sub>X</sub>	II 3D Ex tc IIIC T100 °C Dc
IECEX TM	IECEx:
	IECEx EPS 22.0067X
	Ex ec nC IIC T5 Gc
	Ex tc IIIC T100 °C De

#### 2.5. North America (USA/Canada)

Approval	Description
CULUS	Optional: UL Listed for the USA and Canada The products are UL Listed for the USA and Canada according to:  • UL 61010-1 (ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE – Part 1: General Requirements)
	CAN/CSA-C22.2 No. 61010-1

#### 2.6. Foods and beverages/Hygiene

Conformity	Description
FDA	FDA – Code of Federal Regulations (valid for variable code PL02, P03)  All wetted materials are compliant with the Code of Federal Regulations published by the FDA (Food and Drug Administration, USA) according to the manufacturer's declaration.
USP	United States Pharmacopeial Convention (USP) (valid for variable code PL04)  All wetted materials are biocompatible according to the manufacturer's declaration.
77	EC Regulation 1935/2004 of the European Parliament and of the Council (valid for variable code PL01, P02) All wetted materials are compliant with EC Regulation 1935/2004/EC according to the manufacturer's declaration.





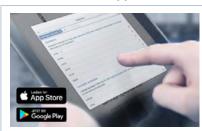






#### 3. **Materials**

#### 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** 



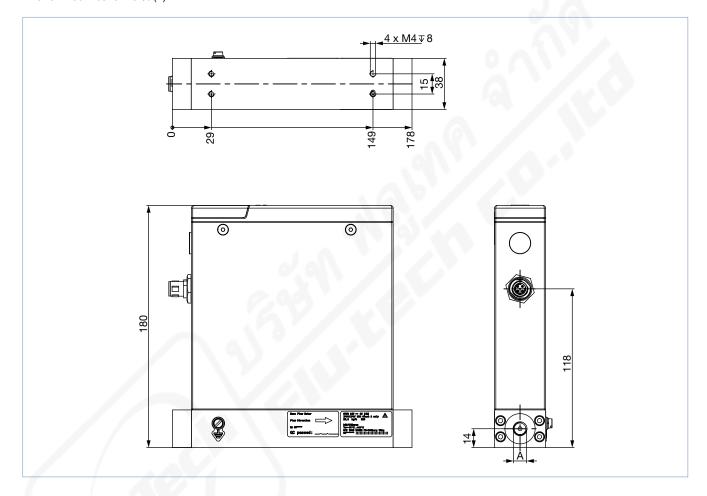


#### **Dimensions**

#### 4.1. MFM variant with büS/CANopen interface

#### Size 1

- Dimensions in mm
- Shown connection: G 1/8 (A)





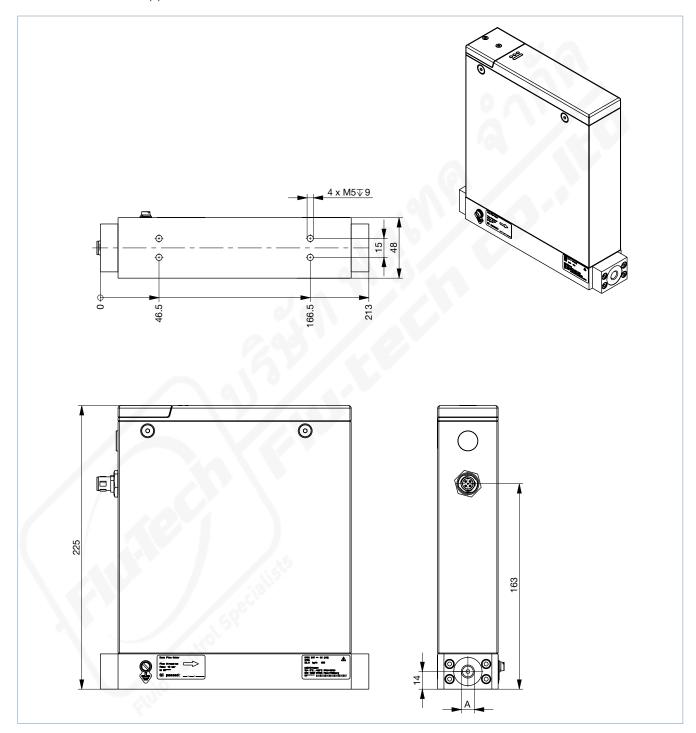






#### Size 2

- · Dimensions in mm
- Shown connection: G 1/8 (A)

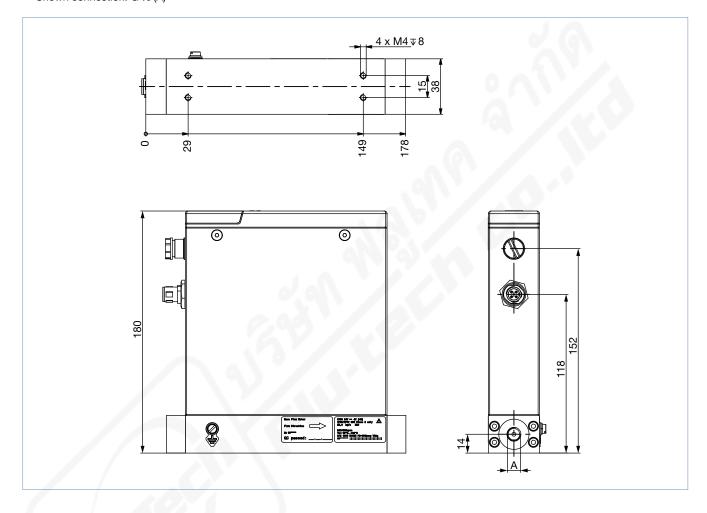




# 4.2. MFM variant with analogue interface

#### Size 1

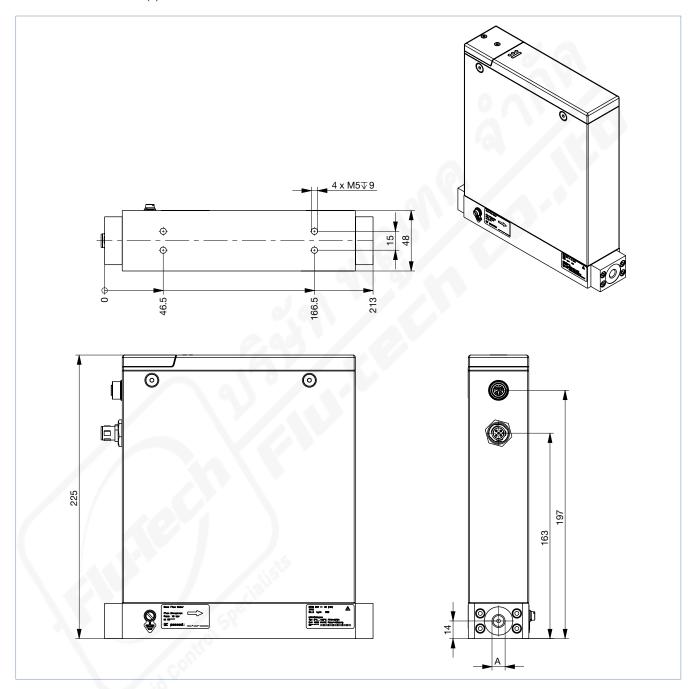
- Dimensions in mm
- Shown connection: G 1/8 (A)





#### Size 2

- · Dimensions in mm
- Shown connection: G 1/8 (A)







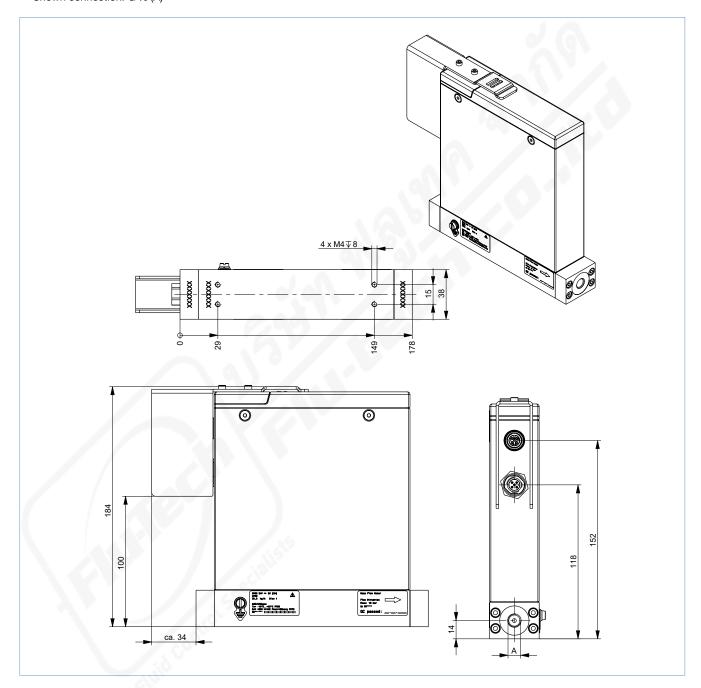




# 4.3. MFM variant with ATEX conformity

#### Size 1

- Dimensions in mm
- Shown connection: G 1/8 (A)

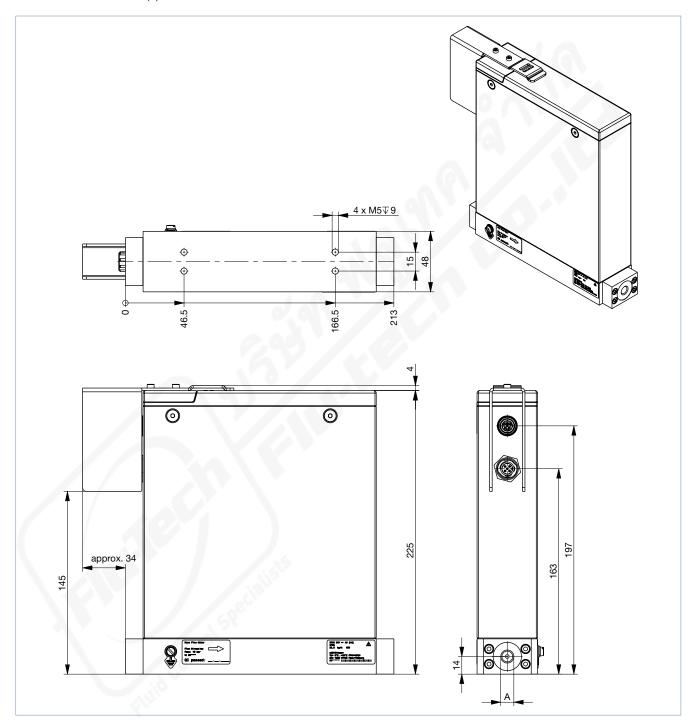






#### Size 2

- · Dimensions in mm
- Shown connection: G 1/8 (A)





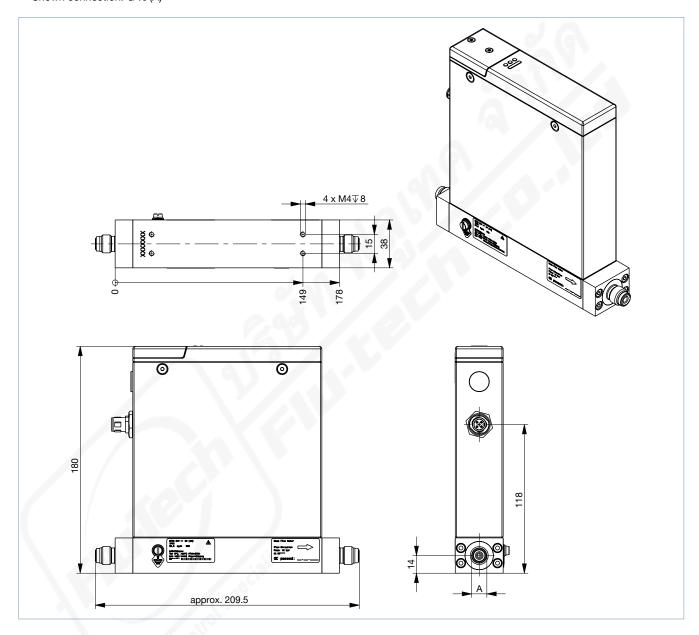




# 4.4. MFM variant with screw connection with metal sealing washer

#### Size 1

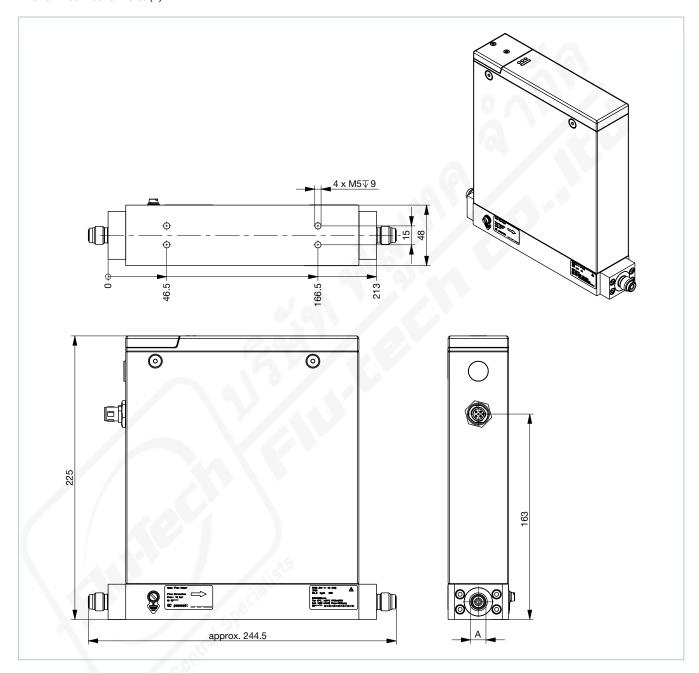
- Dimensions in mm
- Shown connection: G 1/8 (A)





#### Size 2

- · Dimensions in mm
- Shown connection: G 1/8 (A)







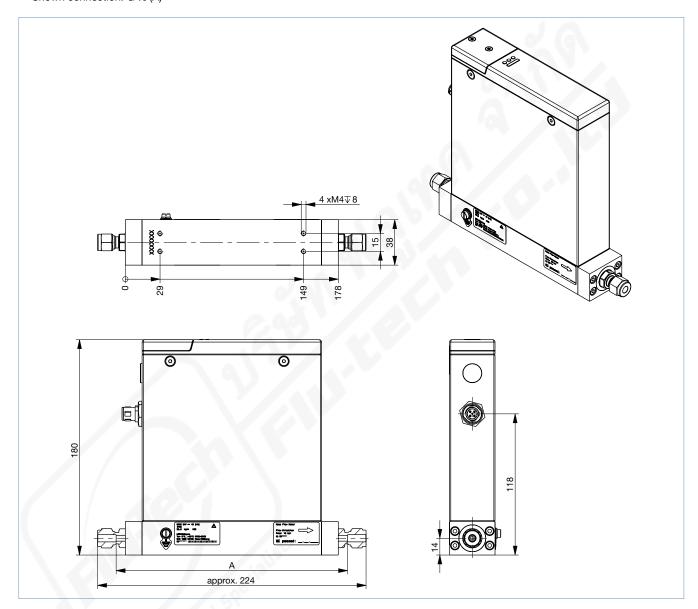




# 4.5. MFM variant with double clamp ring

#### Size 1

- Dimensions in mm
- Shown connection: G 1/8 (A)

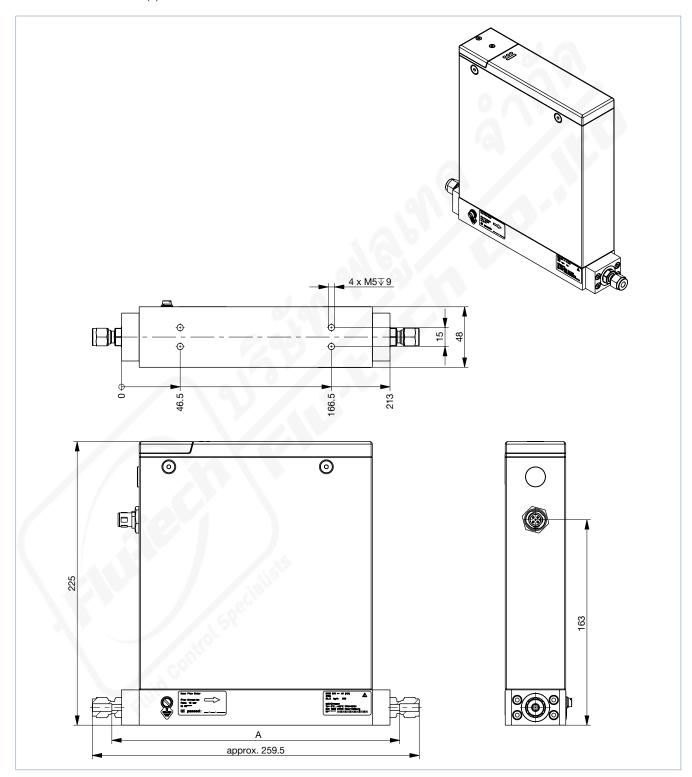






#### Size 2

- · Dimensions in mm
- Shown connection: G 1/8 (A)





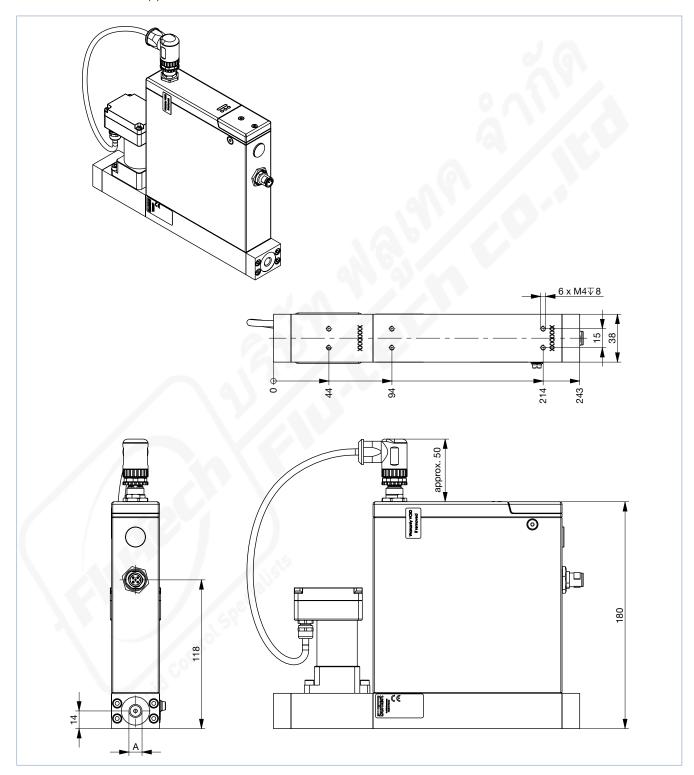






# 4.6. MFC with micro annular gear pump Type 7620 (size 1)

- Dimensions in mm
- Shown connection: G 1/8 (A)

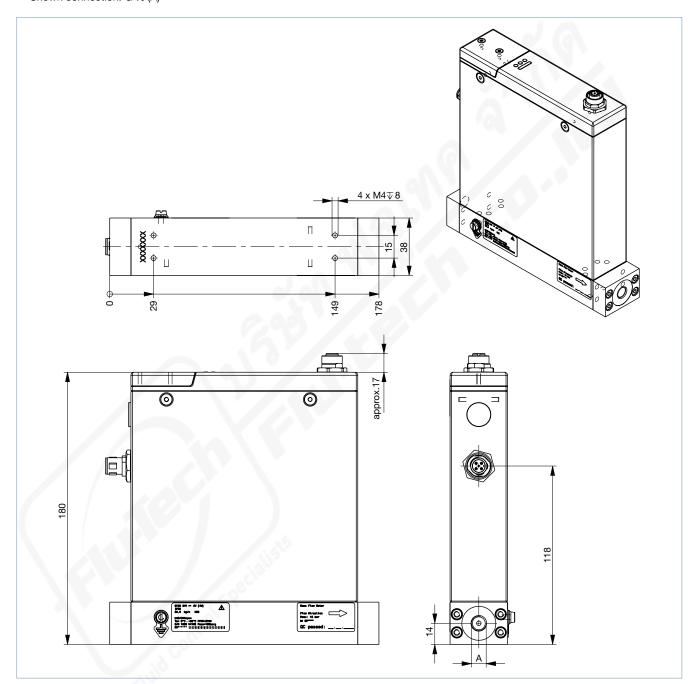




#### 4.7. MFC with modular actuator interface

#### Size 1

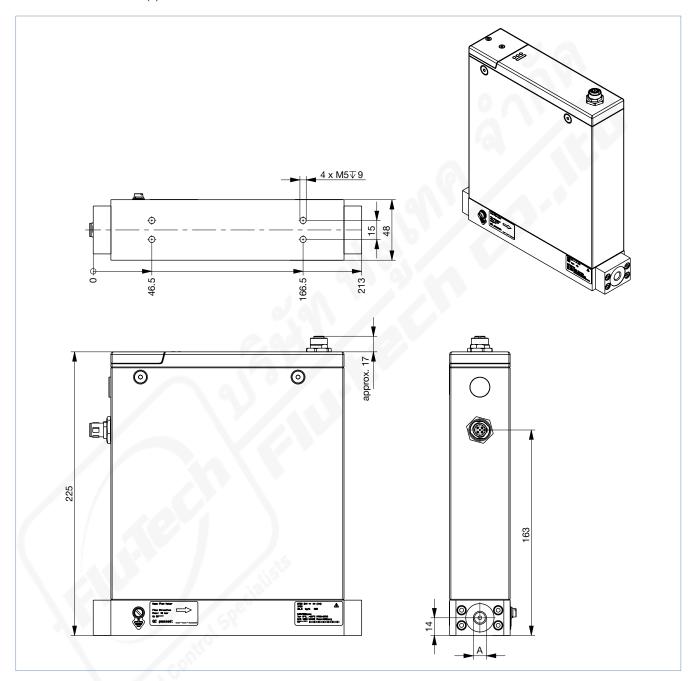
- Dimensions in mm
- Shown connection: G 1/8 (A)





#### Size 2

- · Dimensions in mm
- Shown connection: G 1/8 (A)

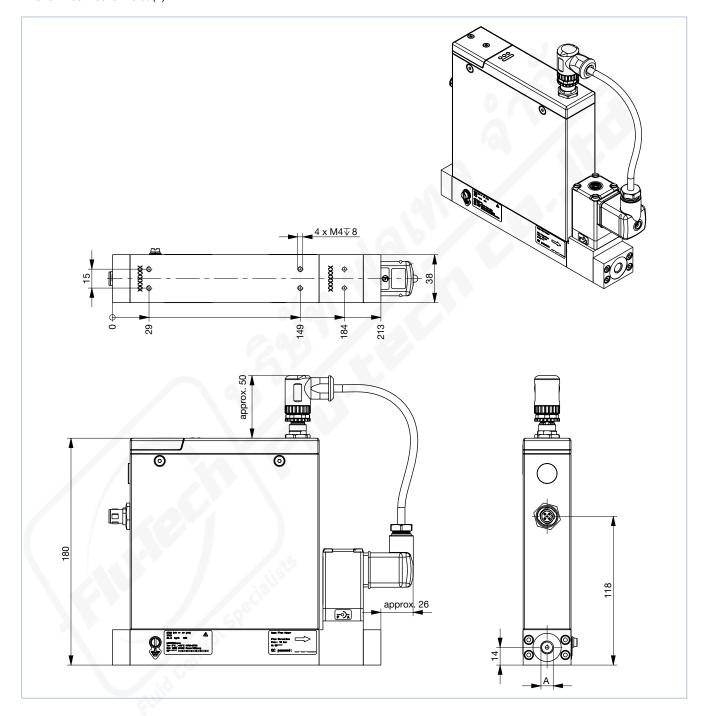






# 4.8. MFC with integrated proportional valve Type 2873 DN 0.8 (size 1)

- Dimensions in mm
- Shown connection: G 1/8 (A)





#### **Device/Process connections**

#### 5.1. büS/CANopen



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

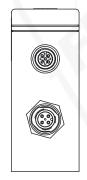
# 5.2. Industrial Ethernet



2 x M8 socket, 4-pin (D-coded)	Pin	Assignment
3 4	1	TX +
	2 RX +	RX +
Coding Coding	3	TX –
Coding Coding  Coding	4	RX –

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

# 5.3. Analogue



M12 socket, 5-pin (A-coded)	Pin	Assignment
5	1	Digital input GND
4 .1	2	Digital input +
	3	Relay, reference contact
Coding	4	Relay, normally closed contact
	5	Relay, normally open contact
3 / 2		

M12 plug, 5-pin (A-coded)	Pin	Assignment
32	1	Set-point value input GND (not connected for MFM)
	2	24 V
Coding	3	GND
	4	Set-pont value input (not connected for MFM)
4	5	Analogue output for the measured value
5		







#### 5.4. MFC with modular actuator interface

#### Note:

External actuators (e.g. proportional valves) can be connected directly to Type 8756 via the modular actuator interface. Thus, a closed control loop with sensor, actuator and integrated PI controller can be realised in a modular way. Before initial commissioning, the PI controller must be parameterised accordingly. The Bürkert Communicator with its simple commissioning script can be used for this purpose, see "8.2. Bürkert Communicator software" on page 30.

M12 socket, 8-pin (A-coded)	Pin	Assignment
7 2 3	1	24 V
	2	GND
	3	Not used
	4	Not used
	5	Not used
	6	PWM (open collector)
	7	Do not connect (internal use)
	8	Not used

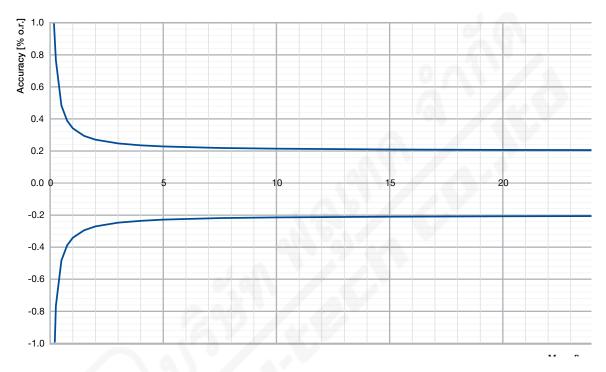


# **Performance specifications**

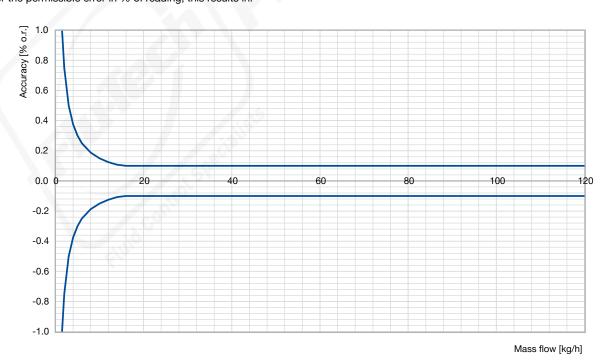
#### 6.1. MFM flow accuracy diagram

# Size 1:

The permissible measuring error is  $\pm 0.2\%$  of reading  $\pm 1.4$  g/h (zero point applies to water under calibration conditions). For the permissible error in % of reading, this results in:



Size 2: The permissible measuring error is  $\pm 0.1\%$  of reading  $\pm 15$  g/h (zero point applies to water under calibration conditions, for flow rates of <15 kg/h and a different medium, please consult your Bürkert partner). For the permissible error in % of reading, this results in:



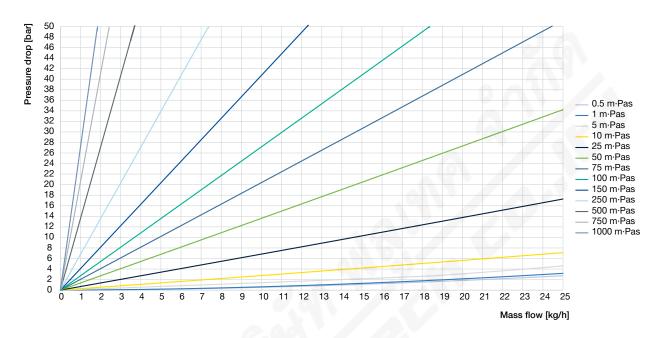




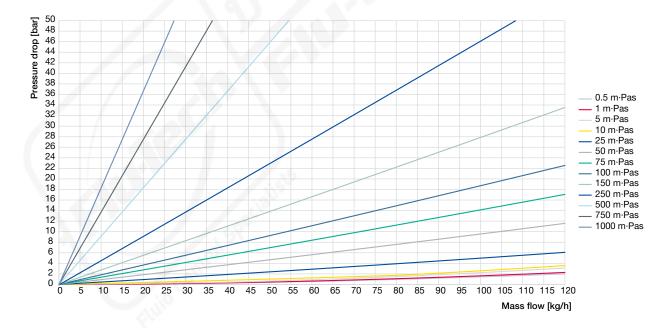
#### 6.2. MFM pressure loss diagram

The diagram shows pressure loss curves across the sensor at different viscosities. As an example for size 1: when 12.5 kg/h water flow through at +20 °C and 1 m·Pas dynamic viscosity, the pressure loss is approximately 1 bar.

#### Pressure loss, size 1



#### Pressure loss, size 2



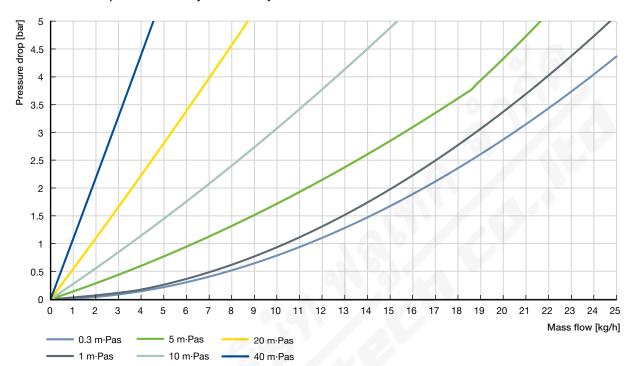




# 6.3. Pressure loss diagram of the MFC with integrated proportional valve

The diagram shows pressure loss curves over the sensor and the proportional valve Type 2873 DN 0.8 at different viscosities.

#### Pressure drop as a function of dynamic viscosity





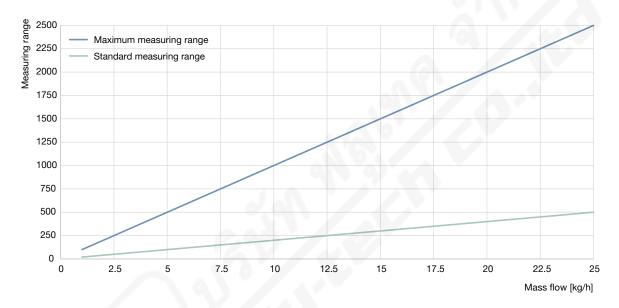
#### 6.4. MFM measuring range diagram

#### Example for determining the measuring range for an MFM with nominal flow rate 10 kg/h:

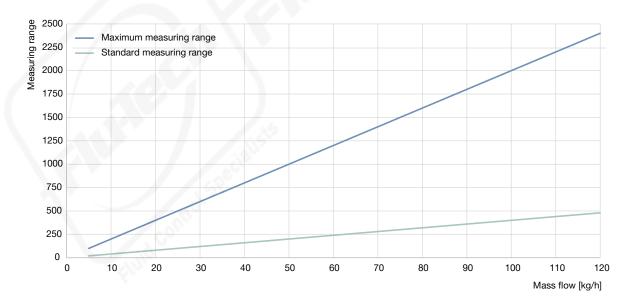
- 1. Select 10 kg/h in the diagram on the x-axis.
- 2. The grey characteristic curve applies to the standard measuring range (minimum measurable flow = 0.05 kg/h). Reading the measuring range on the y-axis results in a measuring span of 1:200.
- The blue characteristic curve can be used if the minimum measuring range has been reduced to 0.01 kg/h.

At a reduced nominal flow rate  $Q_N = 10$  kg/h, the measuring span is 1:200 (only applies to size 1).

Size 1



#### Size 2

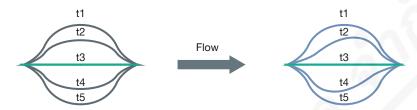




#### 7. **Product operation**

#### 7.1. Measuring principle

The measuring principle of this flow sensor is based on the Coriolis effect. The core of the measuring system is a thin, S-shaped measuring tube which is set in high-frequency vibration by an external exciter coil. The measuring tube can vibrate freely between two fixed points. If a liquid flows through the vibrating measuring tube, the Coriolis force acts on the medium and leads to a change in the tube vibration (see figure). 1) This phase shift is dependent on the mass flow of the medium and is directly proportional to it. With the help of sensors, the pipe vibrations are continuously recorded and electronically evaluated. In addition to the flow rate, information on the density and temperature of the medium is also available in the Bürkert Communicator software .



Pipe vibrations without medium

Pipe vibrations at fluid flow



<sup>1.)</sup> t1...t5; deflections of the measuring tube at the respective point in time

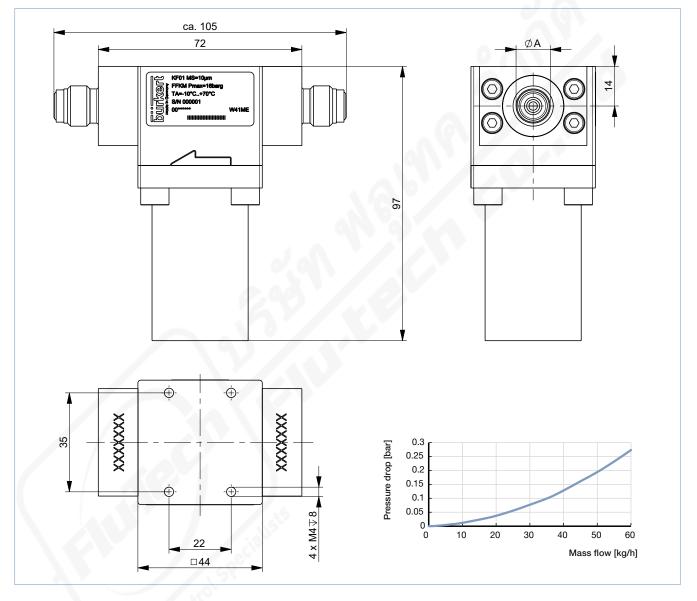


#### 8. **Product accessories**

#### 8.1. Medium filter

To avoid contamination in narrow areas of the device, close-meshed filters can be installed in front of these areas. The design of the filters allows the filter insert to be replaced without having to remove the complete filter from the pipeline.

The mesh size of the standard filter insert is 10 µm, the pressure drop reaches 30 mbar at 20 kg/h (measured with water at 20 °C). All parts in contact with the medium are made of stainless steel 1.4404/316L. This filter is available in different variants made of soft or hard sealing, as well as with different line connections.



Metal seals cannot be replaced in the field.

Port connections	Seal material	Article no.
VCR 1/8	FFKM	573992 ≒
VCR ¼	FFKM	573993 ≒
Compression fitting, for 4 mm tube	FFKM	573996 ≒
Compression fitting, for 6 mm tube	FFKM	573997 ≒
Compression fitting, for 1/8" tube	FFKM	573994 ≒
Compression fitting, for 1/4" tube	FFKM	573995 ≒
VCR 1/8	Metal ring, silver-coated	573986 ≒
VCR ¼	Metal ring, silver-coated	573987 ≒
Compression fitting, for 4 mm tube	Metal ring, silver-coated	573990 ≒









Port connections	Seal material	Article no.
Compression fitting, for 6 mm tube	Metal ring, silver-coated	573991 ≒
Compression fitting, for 1/8" tube	Metal ring, silver-coated	573988 ≒
Compression fitting, for 1/4" tube	Metal ring, silver-coated	573989 ≒

#### 8.2. Bürkert Communicator software

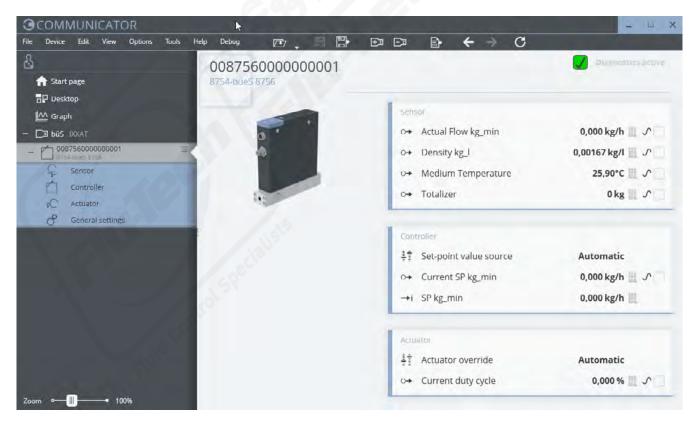
#### Note:

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 "9.6. Ordering chart accessories" on page 33).

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











#### 8.3. Connecting Type 8756 Standard with the Bürkert Communicator software

The Bürkert Communicator interface is based on CANopen. The appropriate bus termination is mandatory. Activate the termination resistor switch on the büS stick.

The connection is established via the device's micro USB socket (USB büS interface set 2 contains the necessary accessories). Please note: no external power supply may be connected to the micro USB socket. The device must be provided with power as described in chapter "5. Device/Process connections" on page 22.

#### 8.4. Configuration management for easy device replacement

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. A memory card is available as an accessory and must be ordered separately (see "9.6. Ordering chart accessories" on page 33).

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.

#### **Ordering information** 9.

#### 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

#### 9.2. Recommendation regarding product selection

Use the Product Enquiry Form (see "9.4. Bürkert Product Enquiry Form" on page 32) for the device details and send it to us once completed.

For optimum design of the actuator in the MFC (nominal valve size), the pressure values immediately before and after the MFC (p,, p,) at the Q<sub>N</sub> flow rate should be known in addition to the required maximum Q<sub>N</sub> flow rate. These are not identical with the inlet and outlet pressure of the entire system, because there are usually additional flow resistances (pipelines, additional shut-off valves, nozzles, etc.) both upstream and downstream of the MFC.

In the Product Enquiry Form, the pressure values immediately before and after the MFC must always be indicated. If these are not known or accessible by measurement, an estimate must be made taking into account the approximate pressure drops across the flow resistances before and after the MFC at  $Q_N$ . The specification of the maximum expected inlet pressure  $p_{1max}$  is necessary to ensure the leak-tight function of the actuator in all operating conditions.

#### 9.3. 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











# 9.4. Bürkert Product Enquiry Form



#### Bürkert Product Enquiry Form - Your enquiry quickly and compactly

Would you like to make a specific product enquiry based on your technical requirements? Use our Product Enquiry Form for this purpose. There you will find all the relevant information for your Bürkert contact. This will enable us to provide you with the best possible advice.

Fill out the form now

#### 9.5. Ordering chart

#### Note:

Other variants on request

Variant	Size Materia	Material	Seal material	Port connection	Article no.	
					büS/ CANopen	420 mA
Mass flow meter	Size 1	316L	Stainless steel	G 1/8	371787 ≒	374113 ≒
Mass flow meter	Size 1	316L	Stainless steel	VCR ¼	378460 ≒	378502 ∖≔
Mass flow meter	Size 1	316L	Stainless steel	Compression fitting for 4 mm pipe	374105 ≒	374121 ≒
Mass flow meter	Size 1	316L	Stainless steel	Compression fitting for 6 mm pipe	379565 ≒	379885 ≒
Mass flow meter	Size 1	316L	Stainless steel	Compression fitting for 1/8" pipe	379642 ≒	379887 ≒
Mass flow meter	Size 1	316L	Stainless steel	Compression fitting for 1/4" pipe	379773 ≒	379946 ≒
Mass flow meter	Size 1	316L	FFKM	G 1/8	374108 ≒	374122 ∖≕
Mass flow meter	Size 1	316L	FFKM	VCR ¼	374110 ≒	378506 ≒
Mass flow meter	Size 1	316L	FFKM	Compression fitting for 4 mm pipe	374112 ≒	374128 ≒
Mass flow meter	Size 1	316L	FFKM	Compression fitting for 6 mm pipe	379836 ≒	379950 ≒
Mass flow meter	Size 1	316L	FFKM	Compression fitting for 1/8" pipe	379882 ≒	379954 ≒
Mass flow meter	Size 1	316L	FFKM	Compression fitting for 1/4" pipe	379884 ≒	379964 ≒
Mass flow controller with pump	Size 1	316L	FFKM	G 1/8	376743 ≒	378450 ≒
Mass flow controller with pump	Size 1	316L	FFKM	VCR ¼	378445 ≒	378452 ≒
Mass flow controller with pump	Size 1	316L	FFKM	Compression fitting for 6 mm pipe	378429 ≒	378454 ≒
Mass flow controller, modular	Size 1	316L	FFKM	G 1/8	389134 ≒	391155 ≒
Mass flow controller, modular	Size 1	316L	FFKM	VCR 1/4	389147 ≒	391169 ≒
Mass flow controller, modular	Size 1	316L	FFKM	Compression fitting for 4 mm pipe	389162 ≒	391174 🖼
Mass flow controller, modular	Size 1	316L	FFKM	Compression fitting for 6 mm pipe	389176 ≒	391176 ≒
Mass flow controller, modular	Size 1	316L	FFKM	Compression fitting for 1/8" pipe	389177 ≒	391178 🖼
Mass flow controller, modular	Size 1	316L	FFKM	Compression fitting for 1/4" pipe	389178 ≒	391182 🖼
Mass flow controller with proportional valve	Size 1	316L	FFKM	G 1/8	20001921 🛱	574077 ≒
Mass flow controller with proportional valve	Size 1	316L	FFKM	VCR ¼	574071 🖫	574078 ≒
Mass flow controller with proportional valve	Size 1	316L	FFKM	Compression fitting for 4 mm pipe	574073 🖫	574080 ≒
Mass flow controller with proportional valve	Size 1	316L	FFKM	Compression fitting for 6 mm pipe	574074 🖫	574081 ≒
Mass flow controller with proportional valve	Size 1	316L	FFKM	Compression fitting for 1/8" pipe	574075 ≒	574082 ≒
Mass flow controller with proportional valve	Size 1	316L	FFKM	Compression fitting for 1/4" pipe	574076 🖫	574083 ≒
Mass flow meter	Size 2	316L	Stainless steel	G 1/8	575180 ≒	575188 ≒
Mass flow meter	Size 2	316L	Stainless steel	VCR ¼	575182 ≒	575190 ≒
Mass flow meter	Size 2	316L	Stainless steel	Compression fitting for 4 mm pipe	575184 🔄	575192 ≒
Mass flow meter	Size 2	316L	Stainless steel	Compression fitting for 6 mm pipe	575185 🛱	575193 ≒
Mass flow meter	Size 2	316L	Stainless steel	Compression fitting for 1/8" pipe	575186 🛱	575194 ≒
Mass flow meter	Size 2	316L	Stainless steel	Compression fitting for 1/4" pipe	575187 🛱	575195 🖼





Variant	riant Size Material Seal material Port connection		Article no.			
					büS/ CANopen	420 mA
Mass flow meter	Size 2	316L	FFKM	G 1/8	575220 ≒	575228 📜
Mass flow meter	Size 2	316L	FFKM	VCR 1/4	575222 ≒	575230 ≒
Mass flow meter	Size 2	316L	FFKM	Compression fitting for 4 mm pipe	575224 ≒	575232 ≒
Mass flow meter	Size 2	316L	FFKM	Compression fitting for 6 mm pipe	575225 ≒	575233 ≒
Mass flow meter	Size 2	316L	FFKM	Compression fitting for 1/8" pipe	575226 ≒	575234 ≒
Mass flow meter	Size 2	316L	FFKM	Compression fitting for 1/4" pipe	575227 ≒	575234 ≒
Mass flow controller, modular	Size 2	316L	FFKM	G 1/8	575236 ≒	575244 ≒
Mass flow controller, modular	Size 2	316L	FFKM	VCR 1/4	575238 ≒	575246 ≒
Mass flow controller, modular	Size 2	316L	FFKM	Compression fitting for 4 mm pipe	575240 ≒	575248 ≒
Mass flow controller, modular	Size 2	316L	FFKM	Compression fitting for 6 mm pipe	575241 ≒	575249 ≒
Mass flow controller, modular	Size 2	316L	FFKM	Compression fitting for 1/8" pipe	575242 📜	575250 ≒
Mass flow controller, modular	Size 2	316L	FFKM	Compression fitting for 1/4" pipe	575243 ≒	575251 ≒
Mass flow meter	Size 1	Alloy C22	PCTFE	Compression fitting for 1/4" pipe	575316 ≒	575317 ≒
Mass flow controller, modular	Size 1	Alloy C22	PCTFE	Compression fitting for 1/4" pipe	575318 ≒	575319 ≒

# 9.6. Ordering chart accessories

For details on items related to the medium filter, see "8.1. Medium filter" on page 29.

Description	Article no.
General accessories	
Accessory cable for external proportional valve (angled M12 plug, 8-pin (A-coded) on cable plug)	60021535 ≒
Power supply unit Phoenix Class2 (Type 1573), 85240 V AC/24 V DC, 1.25 A, NEC Class 2 (UL 1310)	772438 📜
Power supply unit for standard rail (Type 1573), 100240 V AC/24 V DC, 1 A, NEC Class 2 (UL 1310)	772361 ≒
Power supply unit for standard rail (Type 1573), 100240 V AC/24 V DC, 2 A, NEC Class 2 (UL 1310)	772362 ≒
Power supply unit for standard rail (Type 1573), 100240 V AC/24 V DC, 4 A	772363 ∖≕
USB büS interface set 1 (Type 8923) for connection to the Bürkert Communicator software: includes connection cable (M12 and micro USB), stick with integrated terminating resistor, power supply and software	772426 📜
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 ≒
Memory card	On request
Software Bürkert Communicator	Download from <b>Type 8756</b> ▶
For Type 8756 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: 3 m	772405 ≒
büS socket, M12, straight, A-coded 1.)	772416 ≒
büS plug, M12, straight, A-coded 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 networking of 2 separately supplied segments of a büS network	772421 ≒
büS plug, M12, terminating resistor 120 $\Omega$	772424 ≒
büS plug, M12, terminating resistor 120 $\Omega$	772425 ≒
LabVIEW device driver	On request
EDS file	Download from <b>Type 8756</b> ▶
For Type 8756 Industrial Ethernet	





Description	Article no.
M8 plug, D-coded, to M12 plug, D-coded, cable length: 0.3 m	575443 ≒
For Type 8756 Analogue	
M12 plug with cable, on strand, A-coded, cable length: 5 m	566923 ≒
M12 plug with cable, on strand, A-coded, cable length: 10 m	571393 ≒
M12 plug shielded, 5-pin, cable length: 5 m	560365 ≒
M12 plug shielded, 5-pin, cable length: 10 m	563108 ≒
Modular actuator interface	
M12 plug angled, 8-pin, A-coded	775070 📜

<sup>1.)</sup> It is possible that the M12 connectors cannot be used together on the same side of a Y-junction. If that is the case, please use a prefabricated cable which uses typically a thinner





