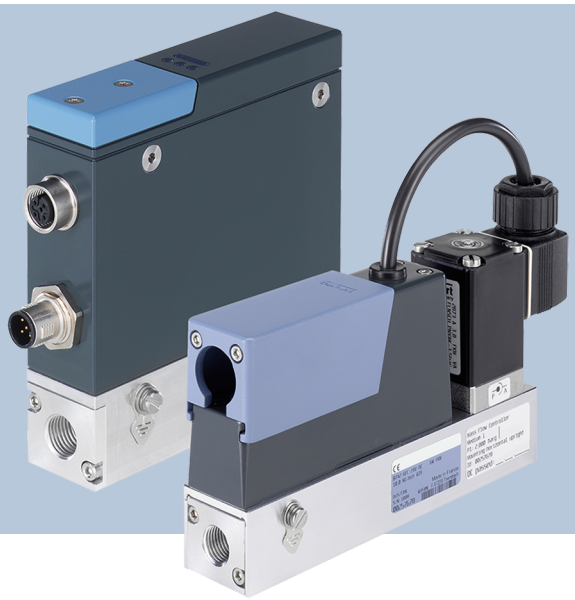
bürkert
FLUID CONTROL SYSTEMS

MAN 1000292137 EN Version: J Status: RL (released | freigegeben) printed: 09.04.2026

Type 8742 - 8744 - 8746

MFM / MFC with ATEX/IECEx certification



Supplement to Operating Instructions

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Technical documentation 2604/06_GBen_00567738_953648267_27021598718242699 / Original EN

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1 About this document

This document is additional instructions to the operating instructions. It describes safety instructions and information for the use in a potentially explosive environment.

- Before using the product for the first time, read and observe the whole safety chapter.
- Before starting any work on the product, read and observe the respective sections of the document.
- Keep the document available for reference and give it to the next user.
- Contact the Bürkert sales office for any questions.

Further information in the Operating Instructions at country.burkert.com.

▸ Enter the article number from the type label in the search bar.

1.1 Symbols

DANGER!

Warns of a danger that leads to death or serious injuries.

WARNING!

Warns of a danger that can lead to death or serious injuries.

CAUTION!

Warns of a danger that can lead to minor injuries.

NOTICE!

Warns of property damage on the product or the installation.

Indicates important additional information, tips and recommendations.

Refers to information in this document or in other documents.

▸ Indicates a step to be carried out.

✓ Indicates a result.

Menu Indicates a software user-interface text.

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1.2 Terms and abbreviations

The terms and abbreviations are used in this document to refer to following definitions.

Device	Type 8742
Device	Type 8744
Device	Type 8746
MFM	Mass flow meter
MFC	Mass flow controller
büS	Bürkert system bus, a communication bus developed by Bürkert and based on the CANopen protocol
bar, bar (g)	Unit for relative pressure
bar abs	Unit for absolute pressure
Ex area	Potentially explosive atmosphere
Ex approval	Approval for potentially explosive atmosphere

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2 Intended use

Incorrect use of the device can be dangerous to people, nearby equipment and the environment.

The device MFM is used exclusively to measure the mass flow of clean dry gases.

The device MFC is used exclusively to control the mass flow of clean dry gases.

- The device was designed for the use in explosion group II 3G Ex ec IIC T4 Gc / Ex ec IIC T4 Gc and in explosion group II 3D Ex tc IIIC T135°C Dc / Ex tc IIIC T135°C Dc (see the information given on the certification sticker and in Ambient temperature and temperature [▶ 9]).
- Observe the admissible data, the operating conditions and conditions of use specified in the contract documents, in the Operating Instructions and on the Type label of the device.
- Use the device only in conjunction with third-party instruments and components recommended and authorized by Bürkert.
- Correct transportation, storage and installation, as well as careful use and maintenance are essential for reliable and faultless operation.
- Use the device as intended.
- Only operate devices with V-code PX70 and with characteristic "GEHB=EXTV" (cable plug 2513) in a mechanically non-stressing installation position.

2.1 Identification of an Ex-certified

The variable key PX70 on the Type label identifies an Ex-certified product variant.

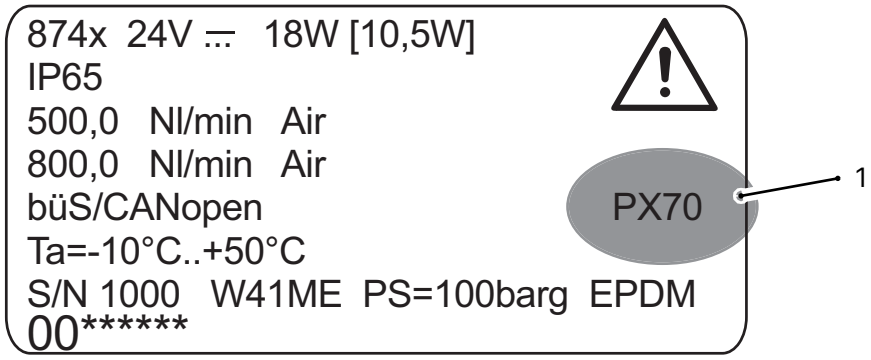

Fig. 1: Location of the variable key PX70 on the Type label

1	Identification of an Ex-certified product variant

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3 Particular safety instructions

DANGER!

Risk of explosion when removing the female connector

- After wiring of the product, screw the impact protection cover to protect the M8 or M12 female connector from disconnection without tools.
- Before removing the female connector disconnect the power supply.

DANGER!

Risk of explosion when opening the product

- Only open the blind plug if no Ex. atmosphere is present.
- No Ex. atmosphere must be present when setting the type of field bus or replacing the configuration memory.
- Before commissioning tighten the mounting screws to protect the shock protection cover against removal without tools.

DANGER!

Risk of explosion due to electrostatic discharge

In the event of a sudden discharge, electrostatically charged products or persons present a risk of explosion in the Ex. area.

- Take appropriate measures to ensure that there can be no electrostatic charging in the Ex. area.
- Only clean the product surface by gently wiping with a damp or anti-static cloth.

DANGER!

To prevent the risk of explosion, observe not only the safety instructions in the Operating Instructions for operation in the Ex. area, but also the following:

- Observe information on temperature class, ambient temperature, protection rating, torque and voltage.
- Do not use the product in areas where there is gas or dust with a lower ignition temperature than indicated on the label for Ex. area.
- Installation, operation and maintenance must be performed by qualified technicians only.
- Observe the applicable safety regulations (also national safety regulations) as well as the general rules of technology for construction and operation.
- Do not repair the product yourself, but replace it with an equivalent product.
- The product must only be repaired by the manufacturer.
- Do not expose the product to any mechanical and/or thermal loads which will exceed the limits given in the Operating Instructions.
- Use only cables which have been approved for the respective application area and which have been connected according to the related mounting instructions.

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DANGER!

To prevent the risk of explosion, observe not only the safety instructions in the Operating Instructions for operation in the Ex. area, but also the following:

- The IP protection rating is only guaranteed if a round connector compliant with IEC 61076-2-101 or the provided M8 or M12 sealing cap is used.
- In an Ex. atmosphere, the M8 or M12 fixed connector must be equipped with a female connector compliant with IEC 61076- 2-101, overmolded with plastic, or with the provided M8 or M12 sealing cap.

DANGER!

- The mechanical strength is only guaranteed if the shock protection cover is mounted and securely tightened with the fastening screws.
- Use adequate measures to prevent transient overvoltages greater than 40% of the rated voltage.

3.1 Particular conditions

Observe the special ambient temperatures for use in Ex. areas. Refer to Ambient temperature and temperature [▶ 9].

3.2 Instructions for use in Ex. areas

3.2.1 Safety instructions

Use in an Ex. area (Gas) 2 gives rise to:

DANGER!

Risk of explosion in Ex. areas due to sudden discharge of electrostatically charged products or persons.

- Take appropriate measures to ensure that there can be no electrostatic charging in the Ex. area.
- Only clean the product surface by gently wiping with a damp or anti-static cloth.

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3.2.2 Adhesive label for Ex. areas

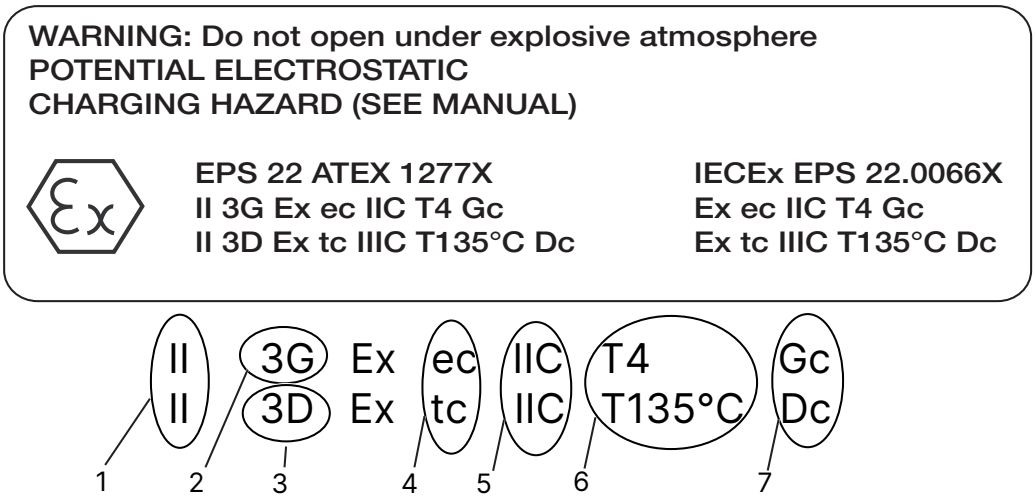

Fig. 2: Label for Ex. areas

1	Explosion group	2	Marking for gas explosion protection
3	Marking for dust explosion protection	4	Ignition protection category
5	Gas group	6	Temperature class
7	Product protection level		

3.2.3 Ambient temperature and temperature

Product Type	Ambient temperature range
Type 8742	–10 °C...+50 °C
Type 8746	–10 °C...+50 °C
Type 8744	–10 °C...+40 °C

Tab. 1: Ambient temperature range for products with temperature class T4 / 135 °C

3.2.4 IP code in Ex. areas

Type 8742 Ex, Type 8744 Ex, Type 8746 Ex: IP65

3.2.5 Media in the Ex. area

The use of potentially explosive media can result in an additional risk of explosion.

3.2.6 Cleaning in the Ex. area

Check that cleaning agent have approval for use in explosive atmospheres.

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3.2.7 Tightening torque of the M8 or M12

When screwing on the M8 or M12 sealing cap again, apply a tightening torque 0.4 N·m (0.29 lbf·ft).

3.3 Ex. certification

The Ex. certification is only valid if the Bürkert product is used as described in these additional instructions.

If unauthorized changes are made to the product, the Ex. certification becomes invalid.

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