





# **Electromagnetic Insertion flowmeter**

- Sensor without moving parts
- Flowmeter with 2-point control function •
- Application-specific calibration via teach-in functionality
- Clean in place (CIP) compatible
- **FDA-compliant materials**



#### Product variants described in the data sheet may differ from the product presentation and description.

## Can be combined with



#### Type 8025 Insertion flowmeter or batch controller with paddle wheel and flow transmitter or



**ELEMENT** continuous control valve systems - overview



#### Type 8619

multiCELL - multi-channel/ multi-function transmitter/ controller Type 8644

▶ AirLINE SP electropneumatic automation system

Type description

The electromagnetic flowmeter Type 8041 consists of an electronic module and a sensor made from PVDF or stainless steel. It is suitable for pipelines with nominal diameter of DN 06...DN 400 and neutral or aggressive liquids with conductivity greater than 20 µS/cm.

Type 8041 is fitted with a 4...20 mA current output, a frequency output and a relay output. The device is configured using 5 DIP switches, a push button, and a 10-segment LED bar graph.

This flowmeter is available with either a G 2" connection for a PVDF sensor or a G 2" or clamp connection for a stainless steel sensor, both of which are designed for use with a Type S020 Insertion fitting.

The variant with stainless steel sensor is for applications with higher pressures (PN 16) and higher temperatures (150 °C).

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FLU-TECH CO. LTD.

Tel: 02-384-6060, 086-369-5871-3 Fax: 02-384-5701 LINE OA: @flutech.co.th Address (HQ): 845/3-4, Moo 3, Theparak Rd., T. Theparak, A. Mueang Samut Prakan, Samut Prakan, 10270, Thailand



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# Type 8041



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## 1. General technical data

#### Note:

**Product properties** 

If the device is mounted in a humid environment or outside, then the maximum voltage allowed is **35 V DC** instead of 36 V DC.

| Material                   |   |
|----------------------------|---|
|                            | erials are compatible with the fluid you are using.   |
| Further information can be | found in chapter "3.1. Bürkert resistApp" on page 8.  |
| Further information on the | materials can be found in chapter "3.2. Material specifications" on page 8.   |
| Non-wetted parts           |   |
| Front panel film           | Polyester   |
| Cover                      | Variant with flow sensor in PVDF: PC  |
|                            | <ul> <li>Variant with flow sensor in stainless steel: back PPA (glass fibre reinforced)</li> </ul>  |
| Housing                    | <ul> <li>Variant with flow sensor in PVDF: PC (glass fibre reinforced)</li> </ul>   |
|                            | <ul> <li>Variant with flow sensor in stainless steel: back PPA (glass fibre reinforced)</li> </ul>  |
| Screw                      | Stainless steel   |
| Union nut                  | Variant with flow sensor in PVDF: PC  |
|                            | <ul> <li>Variant with flow sensor in stainless steel: back PPA (glass fibre reinforced)</li> </ul>  |
| Mounting ring              | Polysulphone, glass fibre reinforced  |
| Seal                       | NBR   |
| Armature                   | Stainless steel 1.4404/316L (for flowmeter with clamp process connection, over the clamp)   |
| Cable gland                | PA with neoprene seal   |
| Wetted parts               |   |
| Clamp connection           | Stainless steel 1.4404/316L   |
| Sensor armature            | PVDF  |
|                            | Stainless steel 1.4404/316L   |
| Electrode holder           | Only with variant with flow sensor in stainless steel: PEEK (conform to FDA)  |
| Electrode                  | Stainless steel 1.4404/316L   |
|                            | Alloy C22   |
| Earth ring                 | Only with variant with flow sensor in PVDF:   |
|                            | Stainless steel 1.4404/316L   |
|                            | Alloy C22   |
| Seal                       | For flowmeter with G 2" process connection:   |
|                            | <ul> <li>FKM (approved FDA)</li> </ul>  |
|                            | – EPDM (conform to FDA)   |
|                            | For flowmeter with clamp process connection:  |
|                            | (to be ordered separately, further information can be found in chapter "10.5. Ordering chart  |
|                            | accessories" on page 19.)   |
|                            | – EPDM  |
|                            | – FEP   |
| Surface quality            | For flowmeter with clamp process connection: Ra < 0.8 $\mu$ m   |
| Compatibility              | <ul> <li>For flowmeter with G 2" process connection: Any pipe from DN 06DN 400 which is fitted with<br/>Bürkert Type S020 Insertion fitting with G 2" sensor connection.</li> </ul> |
|                            | For flowmeter with clamp process connection: Any pipe from DN 32DN 100 which is fitted with<br>Bürkert Type S020 Insertion fitting with clamp sensor connection.                    |
|                            | For the selection of the nominal diameter of the Insertion fittings, see <b>data sheet Type S020</b> .  |
| Pipe diameter              | <ul> <li>For flowmeter with G 2" process connection: DN 06DN 400</li> </ul>   |
|                            | <ul> <li>For flowmeter with clamp process connection: DN 32DN 100</li> </ul>  |
| Dimensions                 | Further information can be found in chapter "4. Dimensions" on page 9.  |
| Measuring element          | Electrodes  |
| Measuring principle        | Electromagnetic   |
| Measuring range            | Flow rate: 0.475000 I/min   |
|                            | Flow velocity: 0.210 m/s  |
|                            |   |

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| Performance data               |   |
|--------------------------------|---|
| Measurement deviation          | <ul> <li>Teach-in: ± 0.5 % of the measured value <sup>1,)</sup> at teach-in flow rate value</li> </ul>  |
|                                | <ul> <li>Standard K-factor: ± 3.5 % of the measured value <sup>1</sup>)</li> </ul>  |
| Linearity                      | ± 0.5 % of full scale <sup>1,)</sup>  |
| Repeatability                  | ± 0.25 % of the measured value <sup>1)</sup>  |
| 420 mA output uncertainty      | ±1% of range  |
| Electrical data                |   |
| Operating voltage              | 1836 V DC ± 0.5 %, filtered and regulated (3 wires)   |
| Power source (not supplied)    | Limited power source according to UL/EN 62368-1 standards or limited energy circuit according to UL/<br>EN 61010-1 paragraph 9.4  |
| DC reverse polarity protection | Yes   |
| Current consumption            | ≤ 220 mA (at 18 V DC)   |
| Output                         | Frequency:  |
|                                | – 0240 Hz   |
|                                | <ul> <li>Duty cycle (pulse duration/period) = 50 % ± 1 %</li> </ul>   |
|                                | – 100 mA max.   |
|                                | <ul> <li>Protected against short-circuits and polarity reversals</li> </ul>   |
|                                | Relay:  |
|                                | <ul> <li>Normally open or normally closed (depending on wiring)</li> </ul>  |
|                                | <ul> <li>Non UL recognized device: 250 V AC/3 A or 40 V DC/3 A (resistive load)</li> </ul>  |
|                                | <ul> <li>UL recognized device: 30 V AC/42 Vpeak/3 A or 60 V DC/1 A</li> </ul>   |
|                                |   |
|                                | Current:  |
|                                | - 420 mA  |
|                                | <ul> <li>Sink or source (by wiring)</li> </ul>  |
|                                | <ul> <li>100 ms refresh time</li> </ul>   |
|                                | – Max. loop impedance: 1100 $\Omega$ at 36 V DC; 330 $\Omega$ at 18 V DC  |
| Fault signal                   | Full scale exceeding: 22 mA and 256 Hz  |
|                                | Fault signalling: 22 mA and 0 Hz  |
| Voltage supply cable           | Shielded  |
|                                | <ul> <li>External diameter (cable): 612 mm (1 cable per cable gland) or 45 mm when using a multi-way<br/>seal (2 cables per cable gland)</li> </ul>                                   |
|                                | Cross section of wires: 0.51.5 mm <sup>2</sup>  |
| Medium data                    |   |
| Fluid temperature              | <ul> <li>Variant with flow sensor in PVDF: 0+ 80 °C (+ 32+ 176 °F) (depends on Insertion fitting)</li> </ul>  |
|                                | • Variant with flow sensor in stainless steel: - 15+ 150 °C (+ 5+ 302 °F) (depends on Insertion fitting   |
|                                | Further information can be found in chapter <b>"5.1. Pressure temperature diagram" on page 11</b> and in the data sheet of the Insertion fitting, see <b>data sheet Type S020 ▶</b> . |
| Fluid pressure                 | <ul> <li>Variant with flow sensor in PVDF: max. PN 10 (145.1 PSI)</li> </ul>  |
|                                | Variant with flow sensor in stainless steel:  |
|                                | <ul> <li>Max. PN 10 (145.1 PSI) (with plastic Insertion fitting)</li> </ul>   |
|                                | <ul> <li>Max. PN 16 (232.16 PSI) (with metal Insertion fitting)</li> </ul>  |
|                                | Further information can be found in chapter "5.1. Pressure temperature diagram" on page 11 and in the   |
|                                | data sheet of the Insertion fitting, see <b>data sheet Type S020 ▶</b> .  |
| Viscosity                      | < 1000 mPa.s  |
| Minimum conductivity           | 20 μS/cm  |
| Process/Pipe connection and c  |   |
| Process connection             | G 2" for use with Type S020 Insertion fitting   |
|                                | Clamp for use with Type S020 Insertion fitting or any pipe equipped with our clamp sensor connec-<br>tion   |
|                                | See data sheet Type SO20 > for more information.  |
| Electrical connection          | 2 cable glands M20 × 1.5  |
| User parameter                 | Saved in EEPROM   |



| Approvals and conformities                    |  |
|---|--|
| Directives                                    |  |
| CE directive                                  | Further information on the CE Directive can be found in chapter "2.3. Standards" on page 7.  |
| Pressure equipment directive                  | Complying with article 4, paragraph 1 of 2014/68/EU directive<br>Further information on the pressure equipment directive can be found in chapter "2.4. Pressure<br>Equipment Directive (PED)" on page 7. |
| North America (USA/Canada)                    | UL Recognized for the USA and Canada   |
| Foods and beverages/Hygiene                   | FDA declaration of conformity (only for stainless steel or PVDF sensor with FKM or EPDM seals)   |
|   | ECR1935/2004 declaration (only for stainless steel sensor with EPDM seals)   |
| Environment and installation                  |  |
| Ambient temperature                           | <ul> <li>Operation: -10+ 60 °C (+14+ 140 °F)</li> </ul>  |
|   | • Storage: - 20+ 60 °C (- 4+ 140 °F)   |
| Relative air humidity                         | ≤ 80 %, without condensation   |
| Height above sea level                        | Max. 2000 m  |
| Operating condition                           | Continuous   |
| Equipment mobility                            | Fixed  |
| Application range                             | Indoor and outdoor<br>Protect the device against electromagnetic interference, ultraviolet rays and, when installed outdoors,<br>against the effects of climatic conditions.                             |
| Degree of protection <sup>2.)</sup> according | IP65 with the following conditions met:  |
| to IEC/EN 60529                               | device wired   |
|   | cover screwed tight  |
|   | cable glands mounted and tightened   |
|   | with blind plug on unused cable glands   |
| Installation category                         | Category I according to UL/EN 61010-1  |
| Pollution degree                              | Degree 2 according to UL/EN 61010-1  |

1.) Under reference conditions i.e. measuring medium = water, ambient and water temperature = + 20 °C (+ 68 °F), observing the minimum the minimum inlet and outlet sections and the appropriate inner diameter of the pipe.

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2.) Not evaluated by UL



## 2. Approvals and conformities

#### 2.1. General notes

- 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 of the device 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. Pressure Equipment Directive (PED)

The device conforms to article 4, paragraph 1 of the Pressure Equipment Directive (PED) 2014/68/EU under the following conditions:

#### Device used on a pipe

#### Note:

- The data in the table is independent of the chemical compatibility of the material and the fluid.
- PS = maximum admissible pressure (in bar), DN = nominal diameter of the pipe

| Type of fluid                              | Conditions  |
|--|---|
| Fluid group 1, Article 4, Paragraph 1.c.i  | DN ≤ 25   |
| Fluid group 2, Article 4, Paragraph 1.c.i  | DN ≤ 32 or PS*DN ≤ 1000                                       |
| Fluid group 1, Article 4, Paragraph 1.c.ii | DN ≤ 25 or PS*DN ≤ 2000                                       |
| Fluid group 2, Article 4, Paragraph 1.c.ii | $DN \le 200 \text{ or } PS \le 10 \text{ or } PS*DN \le 5000$ |

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

| Approval                    | Description  |
|-----------------------------|--|
| c <b>FL</b> <sup>®</sup> us | <ul> <li>Optional: UL Recognized for the USA and Canada</li> <li>The products are UL Recognized for the USA and Canada according to:</li> <li>UL 61010-1</li> <li>CAN/CSA-C22.2 No. 61010-1</li> </ul> |

#### 2.6. Foods and beverages/Hygiene

| Conformity | Description  |
|------------|--|
| FDA        | <b>FDA – Code of Federal Regulations</b><br>Only devices with stainless steel or PVDF sensor and FKM or EPDM seals are compliant with the Code of Federal<br>Regulations published by the FDA (Food and Drug Administration, USA) according to the manufacturer's declaration. |
| זי         | <b>EC Regulation 1935/2004 of the European Parliament and of the Council</b><br>Only devices with stainless steel sensor and EPDM seals are compliant with EC Regulation 1935/2004/EC according to the manufacturer's declaration.   |

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## 3. Materials

## 3.1. Bürkert resistApp



#### Bürkert resistApp - Chemical resistance chart

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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

#### 3.2. Material specifications



- G 2" process connection and sensor holder in PVDF or



- G 2" process connection and sensor holder in stainless steel or



- Clamp process connection and with sensor holder in stainless steel



| No. | Element              | Material  |  |
|-----|----------------------|---|--|
| 1   | Screws               | Stainless steel   |  |
| 2   | Cover                | <ul> <li>PC for variant with flow sensor in PVDF</li> </ul>   |  |
|     |                      | Black PPA, glass fibre reinforced for variant with flow<br>sensor in stainless steel                      |  |
| 3   | Front panel foil     | Polyester   |  |
| 4   | Seal                 | NBR   |  |
| 5   | Screw                | Stainless steel   |  |
| 6   | Cable glands         | PA with neoprene seal   |  |
| 7   | Housing              | <ul> <li>PC, glass fibre reinforced for variant with flow sensor in<br/>PVDF</li> </ul>                   |  |
|     |                      | <ul> <li>Black PPA, glass fibre reinforced for variant with flow<br/>sensor in stainless steel</li> </ul> |  |
| 8   | Nut                  | PC for variant with flow sensor in PVDF   |  |
|     |                      | <ul> <li>PPA glass fibre reinforced for variant with flow sensor in<br/>stainless steel</li> </ul>        |  |
| 9   | Mounting ring (open) | Polysulphone, glass fibre reinforced  |  |
| 10  | Seals                | FKM (approved FDA)  |  |
|     |                      | EPDM included, but not mounted (conform to FDA)   |  |
| 11  | Sensor holder        | PVDF  |  |
| 12  | Earth ring           | Stainless steel 1.4404/316L or  |  |
|     |                      | Alloy C22   |  |
| 13  | Sensor holder        | Stainless steel 1.4404/316L   |  |
| 14  | Holder               | Stainless steel 1.4404/316L   |  |
| 15  | Clamp connection     | Stainless steel 1.4404/316L   |  |
| 16  | Sensor holder        | Stainless steel 1.4404/316L   |  |
| 17  | Electrode holder     | PEEK (conform to FDA)   |  |
| 18  | Electrodes           | Stainless steel 1.4404/316L or  |  |
|     |                      | Alloy C22   |  |



## 4. Dimensions

#### 4.1. Flowmeter

#### With G 2" process connection

#### Note:

- Dimensions in mm, unless otherwise stated
- The length of the flow probe depends on the used Insertion fitting Type S020 and its nominal diameter.

See data sheet Type S020 > for more information or chapter "9.2. Combination of the device with available Type S020 Insertion fittings DN" on page 16.



#### With clamp process connection

## Note:

Dimensions in mm, unless otherwise stated





## 4.2. Flowmeter installed in an Insertion fitting Type S020

-

## With G 2" process connection

## Note:

Dimensions in mm, unless otherwise stated



| DN  | H         |        |                |              |
|-----|-----------|--------|----------------|--------------|
|     | T-Fitting | Saddle | Plastic spigot | Metal spigot |
| 06  | 163       | -      | - 0/-(         | 8-           |
| 08  | 163       | -      | -              | -            |
| 15  | 168       | -      | -              | -            |
| 20  | 166       | -      | -2 ( ) (       | -            |
| 25  | 166       | -      | -              | -            |
| 32  | 169       | -      | -              | -            |
| 40  | 173       | -      |                | 169          |
| 50  | 179       | 204    | -              | 174          |
| 65  | 179       | 203    | 187            | 180          |
| 80  | -         | 207    | 193            | 185          |
| 100 | -         | 212    | 200            | 195          |
| 110 | -         | 208    | -              | -            |
| 125 | -         | 215    | 235            | 206          |
| 150 | -         | 225    | 242            | 217          |
| 180 | -         | 249    | -              | -            |
| 200 |           | 261    | 263            | 238          |
| 250 |           |        | 281            | 298          |
| 300 |           | -      | 293            | 317          |
| 350 |           |        | 306            | 329          |
| 400 | -         |        | 321            | _            |

#### With clamp process connection

#### Note:

Dimensions in mm, unless otherwise stated



| DN  | Н         |
|-----|-----------|
|     | T-Fitting |
| 32  | 181       |
| 40  | 186       |
| 50  | 191       |
| 65  | 199       |
| 80  | 205       |
| 100 | 211       |



#### 5. **Performance specifications**

#### 5.1. Pressure temperature diagram

#### Flowmeter with a PVDF sensor

#### Note:

Take into account the dependence between fluid pressure and temperature according to the fitting and flowmeter material shown in the following diagram.

See data sheet Type S020 > for more information.



#### Flowmeter with a stainless steel sensor

#### Note:

DTS 1000021534 EN Version: X Status: RL (released | freigegeben | validé) printed: 04.04.2025

Take into account the dependence between fluid pressure and temperature according to the fitting and flowmeter material shown in the following diagram.

See data sheet Type S020 > for more information.





## 6. Product installation

#### 6.1. Installation notes

#### Flow measurement

#### Note:

The device is not suitable for use in gaseous media and steam.

Minimum straight distances upstream and downstream of the sensor must be observed. These stabilizing distances depend on the pipe's design. Increasing these distances or installing a flow conditioner may be necessary to obtain the best accuracy. Fore more information, refer to EN ISO 5167-1.

EN ISO 5167-1 specifies the straight inlet and outlet distances that must be complied with when installing fittings in pipe lines in order to achieve calm flow conditions. The most commonly used elements that could lead to turbulence in the flow are shown below. The related minimum inlet and outlet distances that ensure a calm flow are also specified.

Make sure that the measuring conditions at the point of measurement are calm and problem-free.



If the valve cannot be mounted after the measuring device, the minimal distances have to be respected.
 If an expansion cannot be avoided, the minimal distances have to be respected.
 Please note minimum flow velocity

- The device can be installed in either horizontal or vertical pipes, but following additional conditions should be respected:
- The pipe always has to be filled with fluid at all times near the device.
- The pipe design must be such that no air bubbles or cavitation can form within the medium near the device at any time.



Pressure and temperature ratings must be respected according to the selected fitting material. The suitable pipe size is selected using the diagram in the chapter "Nominal size selection" of the **data sheet Type S020** .

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## 6.2. Mounting options

It is advisable to mount the flowmeter at a 45° angle to the horizontal centre of the pipe to avoid having deposits on the electrodes and false measurements due to air bubbles



## 7. Product operation

#### 7.1. Measuring principle

The E-shaped magnetic system inside the sensor induces a magnetic field into the fluid, which is perpendicular to the direction of flow. Two electrodes are in galvanic contact with the liquid.

Based on the Faraday law a voltage can be measured between these electrodes once a liquid (min. conductivity of 20  $\mu$ S/cm) flows along the pipe. This voltage is proportional to the flow velocity.

Using the K-factor for the individual pipe diameter the speed of flow is converted into volume per time.



#### 7.2. Functional overview

#### Display on the electronic board (PCB)

The settings needed for operation are made directly on the printed circuit board by means of 5 switches, a push button, a green LED, a red LED and a bar graph.



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The device can be calibrated by means of the K factor (proportionality factor) of the fitting, or via the teach-in function.



### **Operating levels**

The device has 2 operating levels:

- The Read level
- The Configuration level

| Operating level | Functions  |
|-----------------|--|
| Read            | This level allows to read:   |
|                 | the fluid velocity measured by the device.   |
|                 | the values set for the relay function.   |
| Configuration   | This level allows to set the required operation parameters:  |
|                 | Device using as a flowmeter  |
|                 | <ul> <li>programming of the full scale</li> </ul>  |
|                 | <ul> <li>selection of a predefined measuring range: 02, 05 or 010 m/s</li> </ul>                               |
|                 | - selection by teach-in: with the actual max. flow velocity of the application                                 |
|                 | <ul> <li>420 mA current output</li> </ul>  |
|                 | <ul> <li>0240 Hz frequency output</li> </ul>   |
|                 | - relay output: switching mode either window or hysteresis, on low or high switching threshold                 |
|                 | <ul> <li>relay time delay before switching</li> </ul>  |
|                 | – filter   |
|                 | – alarm:   |
|                 | <ul> <li>for full scale exceeding with 22 mA and 256 Hz</li> </ul>   |
|                 | <ul> <li>for fault signalling with 22 mA and 0 Hz</li> </ul>   |
|                 | Device using an ON/OFF control   |
|                 | <ul> <li>flow detection with switching thresholds, defined as a percentage of max. flow rate.</li> </ul>       |
|                 | <ul> <li>adjustment of the full scale of the device accordingly to the customer process full scale.</li> </ul> |

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#### 8. Product design and assembly

#### 8.1. Product assembly

Note:

- The device Type 8041 is installed into a Bürkert Insertion fitting Type S020 and fastened with a union nut. •
- The Insertion fitting Type S020 ensures simple installation into pipes from DN 06...DN 400, see data sheet Type S020 > for more • information.

The device is equipped with a PVDF or stainless steel measurement sensor which comprises two electrodes and a magnetic system and is available in long or short variant (dependent on the size of the used fitting). The sensor holder is plugged-in to the housing, which contains containing the electronic module.

The connection of the device to the process is made depending on the variant, either by a G 2" nut or a clamp.

The electrical connection is provided via two cable glands on a 6-pin terminal block.





## 9. Networking and combination with other Bürkert products

### 9.1. Networking and combination of the device

Example:



## 9.2. Combination of the device with available Type S020 Insertion fittings DN

| F             | itting with G 2" process connection                                    | DN06DN08 | DN32         | DN50 DN65 | DN100        | DN200      | DN350DN400 | С |
|---------------|--|----------|--------------|-----------|--------------|------------|------------|---|
|               | T-fitting  | 1.)      | short sensor |           |              |            |            |   |
| s DN          | Welding socket   |          |              |           | short sensor | long se    | ensor      |   |
| S020 fittings | Fusion spigot  |          |              | shor      | t sensor     | long senso | pr         |   |
| S020          | Screw-on spigot  |          |              |           |              | long sens  | or         |   |
| ailable       | Saddle   |          |              | l         | ong sensor   |            |            |   |
| Ava           | itting with clamp process connection<br>T-fitting or<br>welding socket | - Decial |              |           |              |            |            |   |

1.) DN06 and DN08: S020 in stainless steel only and 8041 with stainless steel sensor recommended

## 9.3. Remote transmitters Type 8025 which can be connected to the Type 8041 flowmeter

A remote electronic Type 8025 can be connected to the flowmeter Type 8041. For the selection of the article, see chapter "Remote transmitters Type 8025 which can be connected to the Type 8041 flowmeter" on page 19.

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## 10. Ordering information

## 10.1. Bürkert eShop



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#### 10.2. Recommendation regarding product selection

#### Flowmeter with G 2" process connection

A complete 8041 flowmeter consists of a 8041 flowmeter with G 2" process connection and a Bürkert Type S020 Insertion fitting with G 2" sensor connection .

See **data sheet Type S020** ▶ for more information.

Two different components must be ordered in order to select a complete device. The following information is required:

- Article no. of the desired compact flowmeter with G 2" process connection Type 8041 (see chapter "Flowmeter with G 2" process connection" on page 18)
- Article no. of the selected Type S020 Insertion fitting with G 2" sensor connection (see data sheet Type S020 ▶)

#### Flowmeter with clamp process connection

A complete 8041 flowmeter consists of a 8041 flowmeter with clamp process connection and a Bürkert Type S020 Insertion fitting with clamp sensor connection .

See data sheet Type S020 > for more information.

Four different components must be ordered in order to select a complete device. The following information is required:

- Article no. of the desired flowmeter with clamp process connection Type 8041(see chapter "Flowmeter with clamp process connection" on page 18)
- Article no. of the selected Type S020 Insertion fitting with clamp sensor connection (see data sheet Type S020 ▶)
- Article no. of the selected fitting/flowmeter seal, in EPDM or FEP (see chapter "10.5. Ordering chart accessories" on page 19)
- Article no. of the clamp collar (see chapter "10.5. Ordering chart accessories" on page 19)

#### 10.3. Bürkert product filter

| 2   | Process C | annection<br>Star | 7<br>Votinge / Prequency                  | Process | Pressure /<br>grature | Soaling    |
|-----|-----------|-------------------|---|---------|-----------------------|------------|
| -   | Accessed  | -                 | Colupse al liters<br>Nominal prossure max |         | Nominal pr            | essure max |
|     | a.        | bar               | 2   | bar     | (gas)                 | 25         |
| A., |           | 0.5               | 2 4                                       | 5       |                       | 6.5        |

#### Bürkert product filter – Get quickly to the right product

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#### 10.4. Ordering chart

#### Flowmeter with G 2" process connection

#### Note:

The following variants

- have at least
  - a FKM process seal
  - an 18...36 V DC operating voltage
- are supplied with an accessories set (Article no. 551775) including an EPDM seal and with a relay connection set (Article no. 552812).

Further information regarding the sets can be found in chapter "10.5. Ordering chart accessories" on page 19.

| Sensor  | Output                            | Material |   | Approval and conformity |          |                                 | Electrical connec-          | Article no. |
|---------|-----------------------------------|----------|---|-------------------------|----------|---------------------------------|-----------------------------|-------------|
| variant |                                   | Housing  | Sensor / Earth ring /<br>Electrode          | UL                      | FDA      | ECR1935/<br>2004 <sup>1.)</sup> | tion                        |             |
| Short   | Frequency,<br>relay and<br>420 mA | and      | PVDF / Stainless steel /<br>Stainless steel | -                       | Yes      |                                 | 2 cable glands<br>M20 × 1.5 | 558064 🛒    |
| Long    |                                   |          |   | UL Recognized           |          |                                 |                             | 570482 🛒    |
|         |                                   |          |   | -                       |          |                                 |                             | 558065 🛒    |
|         |                                   |          |   | UL Recognized           |          |                                 |                             | 570483 🛒    |
| Short   |                                   |          | PVDF / Alloy C22 /<br>Alloy C22             | -                       | -<br>Yes |                                 |                             | 560751 🛒    |
| Long    |                                   |          |   |                         |          |                                 |                             | 560752 🛒    |
| Short   |                                   |          | Stainless steel / – /<br>Stainless steel    |                         |          | Yes                             |                             | 552779 🛒    |
| Long    |                                   |          |   | UL Recognized           |          |                                 |                             | 561606 🛒    |
|         |                                   |          |   | -                       |          |                                 |                             | 552780 🛒    |
|         |                                   |          |   | UL Recognized           |          |                                 |                             | 561607 🛒    |

1.) Only if the FKM seal mounted as standard at factory is replaced with the EPDM seal included in the delivery.

#### Flowmeter with clamp process connection

Note:

The following variants

- have at least an 18...36 V DC operating voltage
- are supplied with an accessories set (Article no. 565384) and with a relay connection set (Article no. 552812).

Further information regarding the sets can be found in chapter "10.5. Ordering chart accessories" on page 19.

| Output                            | Material |                                   |  |     | oval and<br>prmity              | Electrical connec-<br>tion  | Article no. |
|-----------------------------------|----------|-----------------------------------|--|-----|---------------------------------|-----------------------------|-------------|
|                                   | Housing  | Sensor / Electrode                | Fitting/flowmeter seals <sup>1.)</sup> | FDA | ECR1935/<br>2004 <sup>2.)</sup> |                             |             |
| Frequency,<br>relay and<br>420 mA | PC       | Stainless steel / Stainless steel | EPDM or FEP                            | Yes | -                               | 2 cable glands<br>M20 × 1.5 | 564688 🛒    |

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1.) Has to be ordered separately.

2.) Only for mounting with EPDM seal



#### Remote transmitters Type 8025 which can be connected to the Type 8041 flowmeter

| Description                       | Operating voltage | Output  | Relay | Electrical connection | Article no. |
|-----------------------------------|-------------------|---------|-------|-----------------------|-------------|
| Panel-mounted variant             |                   |         |       |                       |             |
| "Universal", 2 totalizers         | 1830 V DC         | 420 mA, | -     | Terminal strip        | 419538 🛒    |
|                                   |                   | pulse   | 2     |                       | 419537 🛒    |
| "Batch", 2 totalizers, 1 flowrate |                   | -       |       |                       | 419536 🛒    |
| Wall-mounted variant              |                   |         |       |                       |             |
| "Universal", 2 totalizers         | 1830 V DC         | 420 mA, | -     | 3 cable glands        | 419541 🛒    |
|                                   |                   | pulse   | 2     |                       | 419540 🐖    |
|                                   | 115230 V DC       |         | -     |                       | 419544 🐖    |
| "Batch", 2 totalizers, 1 flowrate | 1830 V DC         | _       | 2     | 5 cable glands        | 433740 🛒    |

#### 10.5. Ordering chart accessories

| Description   | Article no |
|---|------------|
| For flowmeter with G 2" or clamp process connection   |            |
| Set with two cable glands M20 × 1.5, two neoprene flat seals for cable gland or plug, two screw plugs M20 × 1.5 and two multi-way seals 2 × 6 mm                | 449755 🛱   |
| Set with two adaptors M20 × 1.5 /NPT ½", two neoprene flat seals for cable gland or plug and two screw plugs M20 × 1.5  | 551782 👾   |
| Relay connection set with a terminal strip, a protective cap, a cable tie and a mounting instruction sheet  | 552812 👾   |
| 3-point flow calibration certificate <sup>1,)</sup>   | 550676 ቛ   |
| FDA declaration of conformity <sup>2.)</sup>  | 803724 🕅   |
| For flowmeter with G 2" process connection  |            |
| Set with a stopper for unused cable gland M20 × 1.5, a multiway seal 2 × 6 mm for cable gland, a green FKM seal for the sensor and a mounting instruction sheet | 558102 🛒   |
| Set with a green FKM seal and a black EPDM seal   | 552111 🛒   |
| Fastening ring (open) for Type S020 Insertion fitting   | 619205 🦷   |
| PC union nut for Type S020 Insertion fitting  | 619204 🛒   |
| PPA union nut for Type S020 Insertion fitting   | 440229 ়   |
| For flowmeter with clamp process connection   |            |
| Set with a stopper for unused cable gland M20 × 1.5 and a multiway seal 2 × 6 mm for cable gland  | 565384 ቛ   |
| 1 EPDM fitting/measuring device seal  | 730837 🛒   |
| 1 FEP fitting/measuring device seal   | 730839 👾   |
| Clamp collar  | 731164 🛒   |

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1.) Measuring device combined with a Type S020 Insertion fitting, only for DN  $\leq$  200

2.) For stainless steel or PVDF sensor with FKM or EPDM seal