






## Flow transmitter/ pulse divider

- 2-wire (4...20 mA) / 3-wire (NPN/PNP) - operation
- Pluggable to flow sensor 8020, 8030 (SE30+S030), SE30+S077
- Removable display unit

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

### Can be combined with

	<b>Type 8020</b> Insertion flowmeter with paddle wheel for continuous flow measurement	▶
	<b>Type 8030</b> Inline flowmeter for continuous measurements	▶
	<b>Type SE30+S077</b> Positive displacement flowmeter for continuous flow measurement	▶

### Type description

The electronic module Type 8022 operates either

- as a flow transmitter (only with sensors pulse "Low Power" version Type 8020, 8030 (SE30+S030), SE30+S077) or
- as a pulse divider (with all versions of sensors of Type 8020, 8030 (SE30+S030), SE30+S077).

The module operates the output of the sensors, displays the flow value and converts it to the signal output in mA or pulse.

In operation as a flow transmitter, the frequency signal of the sensor is converted in a 4...20 mA signal (2-wire operation).

In operation as a pulse divider, the input frequency is converted into an adjustable output frequency.

The use of the display unit allows the switching between the two modes.

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## 1. General Technical Data

### Product properties

#### Material

Housing	PA (Polyamide)
Cover	PSU (Polysulfone) for version without display PA (Polyamide) and polyester for version with display
Seal	NBR
Cover seal	EPDM
Screws	Steel class 4.8, galvanized with chrome-III thick film passivation

Dimensions Detailed information can be found in chapter "3. Dimensions" on page 4

### Performance data

4...20 mA output uncertainty	± 240 µA
NPN/PNP output uncertainty	± 1 % of measured value

### Electrical data

Operating voltage	12...30 V DC ± 10 %, filtered and regulated, SELV (safety extra low voltage) circuit with a non dangerous energy level
Power Source (not supplied)	Limited power source according to UL/EN 60950-1 standards or limited energy circuit according to UL/EN 61010-1 §9.4
Frequency input	1...600 Hz

### Outputs

4...20 mA output (Flow transmitter)	<ul style="list-style-type: none"> <li>Only if connected with sensor Type 8020, 8030 (SE30 + S030), SE30 + S077 "Low Power" version</li> </ul>
NPN/PNP output (Pulse divider)	<ul style="list-style-type: none"> <li>Max. loop impedance: 1000 Ω at 30 V DC; 700 Ω at 24 V DC; 100 Ω at 12 V DC</li> <li>With all versions of sensor Type 8020, 8030 (SE30 + S030), SE30 + S077</li> <li>1...600 Hz, "open collector", max. 50 mA</li> </ul>
Power consumption	<ul style="list-style-type: none"> <li>Flow transmitter (4...20 mA output, 2-wire operation): 0.6 W</li> <li>Pulse divider (NPN/PNP output, 3-wire operation): 3.2 W with               <ul style="list-style-type: none"> <li>– 0.2 W from the device</li> <li>– 1.5 W max. from the flow sensor<sup>1.)</sup></li> <li>– 1.5 W max. from the PNP/PNP output<sup>1.)</sup></li> </ul> </li> </ul>

### Process/Port connection & communication

Electrical connection	Terminal strip 4 pins or male M12 connector
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### Approvals and certificates

#### Standards

Degree of protection according to IEC/EN 60529	IP65 when device plugged, housing closed, cover screwed tight and cable gland wired or blanked off, or female connector plugged and tightened
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#### Directives

CE directives	The applied standards, which verify conformity with the EU Directives, can be found on the EU Type Examination Certificate and/or the EU Declaration of conformity (if applicable).
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Certification	UL-Recognized for US and Canada
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### Environment and installation

Ambient temperature	- 10...+ 60 °C
Relative air humidity	≤ 80 %, without condensation
Height above sea level	Max. 2000 m
Operating condition	Continuous
Equipment mobility	Fixed
Use	Indoor and outdoor (protect the device against electromagnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions)
Installation category	Category I according to UL/EN 61010-1
Pollution degree	Degree 2 according to UL/EN 61010-1


1.) depending on the customer configuration

## 2. Approvals

### 2.1. Certification UL

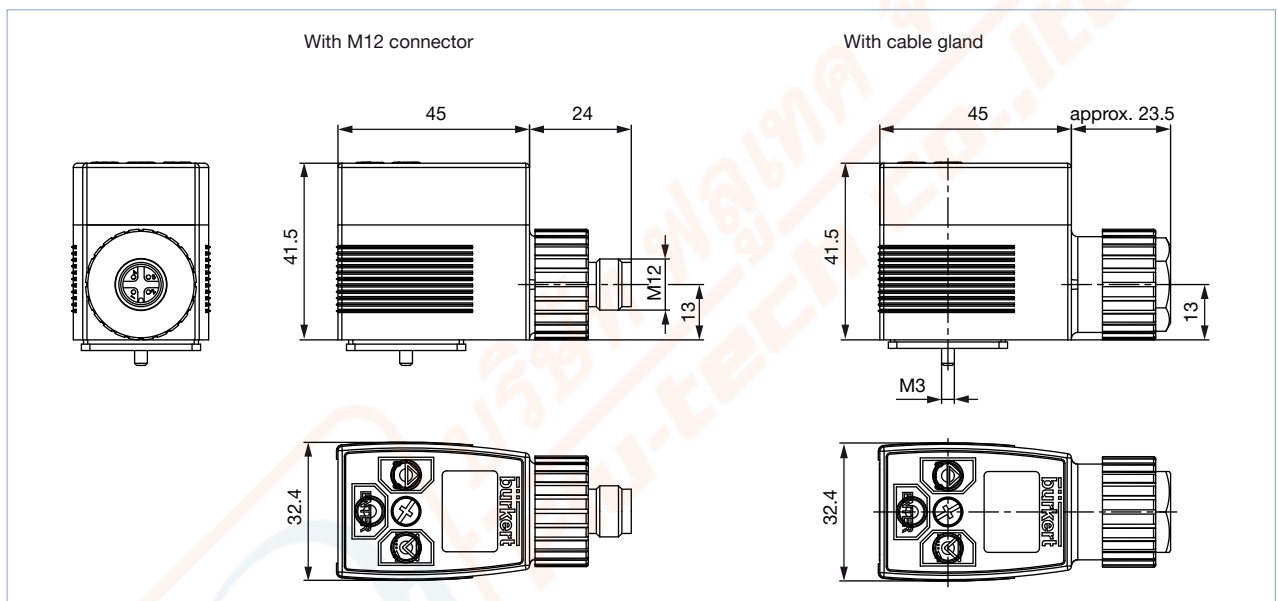
**Note:**

Not all available devices can be supplied with the certification below.

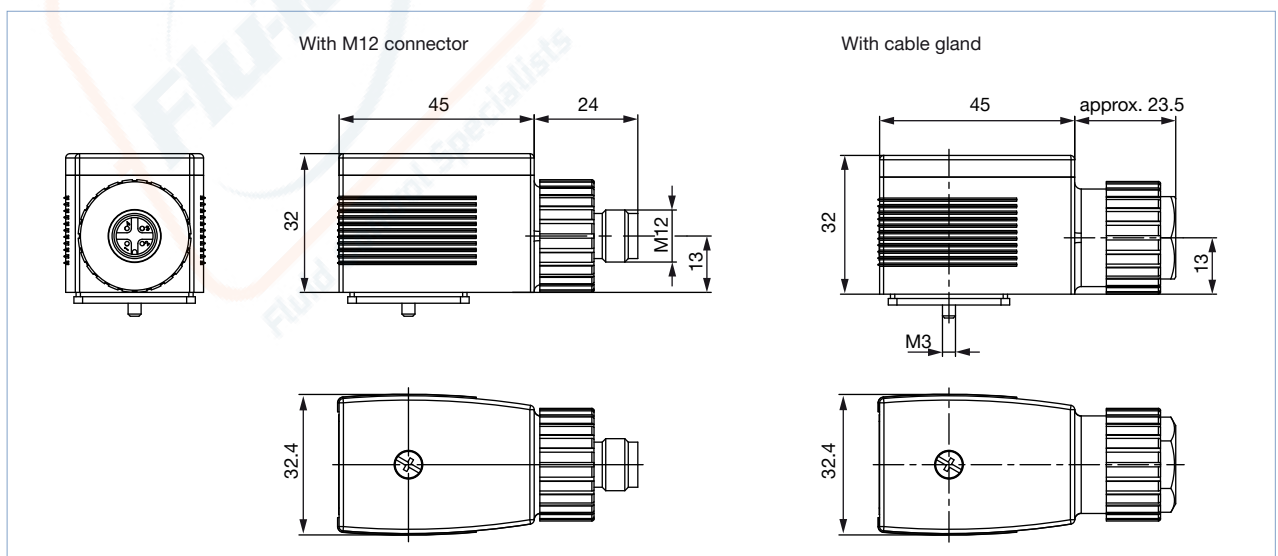
Certificate	Description
	<b>UL-Recognized for USA and Canada</b> Products are UL-certified products and comply also with the following standards: <ul style="list-style-type: none"> <li>• UL 61010-1</li> <li>• CAN/CSA-C22.2 No.61010-1</li> </ul>

## 3. Dimensions

### 3.1. With display unit



### 3.2. Without display unit



## 4. Product operation

### 4.1. Functional overview

- Transmitter operation:
  - conversion of the input frequency into a 4...20 mA signal (2-wire operation)
  - scalable 4...20 mA signal
- Pulse divider operation: transforms the input to an adjustable output frequency (3-wire operation)
- Displays the flow in a selectable unit
- Removable display unit (is only required to configure or to display)

## 5. Ordering information

### 5.1. Bürkert eShop – Easy ordering and quick delivery



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### 5.3. Ordering chart

#### Note:

The device has both a 4...20 mA current output and a transistor output. Thus it can operate either as a flow transmitter (4...20 mA current output) or as a pulse divider. **But it only functions as a flow transmitter (4...20 mA current output), when connected to a sensor in the "Low Power" version.**

Version	UL certification	Article no.
Flow transmitter / pulse divider without display unit, PG connection	No	215644 ☒
Flow transmitter / pulse divider with display unit, PG connection	No	215645 ☒
Flow transmitter / pulse divider without display unit, PG connection	Yes	563223 ☒
Flow transmitter / pulse divider with display unit, PG connection	Yes	563224 ☒
Flow transmitter / pulse divider without display unit, male M12 connector	No	215646 ☒
Flow transmitter / pulse divider with display unit, male M12 connector	No	215647 ☒

## 5.4. Ordering chart accessories

Description	Article no.
Display unit for Type 8022	562876 ฿
Cover set (for operating without display unit)	670549 ฿
Right-angle female M12 connector, 4 pins	784301 ฿
Straight female M12 connector, 4 pins, with 5 m cable	918038 ฿

