bürkert
FLUID CONTROL SYSTEMS

Inline positive displacement (PD) flowmeter or Inline batch controller

- Display for indication of flow rate and volume with two totalizers or dosing
- Automatic calibration using teach-in
- Inputs (with batch controller) and all outputs can be checked without the need for actual flow
- Total and day counters for batch quantity and number of dosing, volume or mass counter indicator (with batch controller)

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

Can be combined with

Type 8611
eCONTROL - Universal controller

Type 8619
multiCELL - Multi-channel and multi-function transmitter/controller

Type 8802
ELEMENT continuous control valve systems - overview

Type 8644
AirLINE SP electropneumatic automation system

Type description

The device Type SE35 + S077 is specially designed for continuous flow measurement of highly viscous fluids like glue, honey or oil. The device is provided as flowmeter or batch controller.

The device is made up of a compact Inline sensor-fitting with oval gears (Type S077) and a transmitter with display (Type SE35). The device is quickly and easily assembled thanks to a bayonet mounting and locking system. The Bürkert “Inline quarter-turn” technology ensures a leakage-free operation.

The Bürkert designed sensor-fitting system ensures simple installation of the devices into all pipelines from DN 15...DN 100.

The flowmeter is specially designed to switch a valve and to establish a monitoring system or an On/Off control loop.
The batch controller is designed to carry out a dosing of one or several quantities of liquids, when mounted in series in a pipe with one or two valves.

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1. General technical data

1.1. About the device

The device Type SE35 + S077 is available as an Inline flowmeter or a batch controller in a compact variant.

1.2. All variants

The following data are valid for both the Inline flowmeter and the batch controller.

Product properties	
Material	
Make sure the device materials are compatible with the fluid you are using. Further information can be found in chapter "4.1. Bürkert resistApp" on page 9. Further information on the materials can be found in chapter "4.2. Material specifications" on page 10.	
Non-wetted parts	
Lid	PC
Front panel film	Polyester
Cover	PC
Housing	PC
Screw	Stainless steel
Bayonet system	PC
Cable gland	PA
Wetted parts	
Axis	Stainless steel 316L (1.4401)
Oval gear	Stainless steel 316L (1.4401)
Sensor-fitting body	Aluminium, stainless steel 316L (1.4401)
Cover	Aluminium, stainless steel 316L (1.4401)
Seal	FKM or FEP/PTFE encapsulated
Display	15 × 60 mm, 8-digit LCD, alphanumeric,15 segments, 9 mm high
Compatibility	Any pipe from DN 15...DN 100 which is fitted with Bürkert S077 Inline sensor-fitting. For the selection of the nominal diameter of the Inline sensor-fittings, see **data sheet Type S077** ▶.
Pipe diameter	DN 15...DN 100
Dimensions	Further information can be found in chapter "5. Dimensions" on page 11.
Measuring principle	Oval gear
Measuring range	• Viscosity > 5 mPa.s: 2...1200 l/min (0.53...320 gpm) • Viscosity < 5 mPa.s: 3...616 l/min (0.78...320 gpm)
Performance data	
Measurement deviation	• With K-factor determined with a teach-in procedure or with the specific K-factor marked on the sensor-fitting: ± 0.5 % of the measured value (at Teach-In flow rate value) • With standard K-factor: ± 1 % of the measured value
Repeatability	± 0.03 % of the measured value
Electrical data	
Power source (not supplied)	Limited power source according to UL/EN 62368-1 standards or limited energy circuit according to UL/EN 61010-1 paragraph 9.4
Protection against DC polarity reversal	Yes
Overvoltage protection	Yes
Voltage supply cable	• Cable with maximum operating temperature greater than 80 °C (176 °F) (90 °C (194 °F) for UL Recognized variant) • Max. 50 m length, shielded

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Medium data	
Fluid temperature	With Inline sensor-fitting Type S077 in: • Aluminium: - 20...+ 80 °C (- 4...+ 176 °F) • Stainless steel: - 20...+ 120 °C (- 4...+ 248 °F) See **data sheet Type S077** ▶ for more information.
Fluid pressure	With Inline sensor-fitting Type S077 with: • DN 15: max. 55 bar (798.05 PSI) (threaded process connection) • DN 25: max. 55 bar (798.05 PSI) 1.) • DN 40 or DN 50: max. 18 bar (261.18 PSI) • DN 80: max. 12 bar (174.12 PSI) • DN 100: max. 10 bar (145.1 PSI) See **data sheet Type S077** ▶ for more information.
Dynamic viscosity η	Max. 1 Pa.s (higher on request)
Maximum particle size	250 µm To prevent damage from dirt or foreign matter, we strongly recommend the installation of a 250 µm (60 mesh) strainer as close as possible to the inlet side of the meter.
Product connections	
Pipe connection	With Inline sensor-fitting Type S077 with: • Thread: ½", 1", 1½", 2" or 3" (G or NPT) • Flange: – 25, 40, 50, 80 or 100 mm DIN PN 16 flange – 1", 1½", 2", 3" or 4" ANSI 150LB flange See **data sheet Type S077** ▶ for more information.
Approvals and conformities	
Directives	
CE directive	Further information on the CE Directive can be found in chapter "3.3. Standards" on page 9.
Pressure equipment directive	Complying with article 4, paragraph 1 of 2014/68/EU directive Further information on the pressure equipment directive can be found in chapter "3.4. Pressure Equipment Directive (PED)" on page 9.
North America (USA/Canada)	UL Recognized for the USA and Canada
Environment and installation	
Relative air humidity	≤ 80 %, without condensation
Height above sea level	Max. 2000 m
Operating condition	Continuous
Equipment mobility	Fixed
Application range	Indoor and outdoor Protect the device against electromagnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions.
Degree of protection 2.) according to IEC/EN 60529	IP65 with the following conditions met: • device wired • cover and lid screwed tight • female cable plug or 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.) Or in accordance to the value of the used flanges
2.) Not evaluated by UL

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1.3. Flowmeter

Note:
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.

Product properties	
Material	
Female cable plug/male fixed plug	• Body, contact holder and cable gland in PA • Cable gland seal and flat seal in NBR
Performance data	
4...20 mA output uncertainty	± 1 % of current range
Electrical data	
Operating voltage (V+)	• 12...36 V DC ± 10 %, filtered and regulated Connection to main supply: permanent, through external SELV (Safety Extra Low Voltage) and LPS (Limited Power Source) power supply • 115/230 V AC, 50/60 Hz Voltage supply available inside the device: – supplied voltage: 27 V DC regulated – maximum current: 125 mA – integrated protection: 125 mA time delay fuse
Current consumption	12...36 V DC powered measuring device with standard output signal, with sensor and without pulse output consumption • With relays: ≤ 70 mA • Without relay: ≤ 25 mA
Power consumption	115/230 V AC powered measuring device: 3 VA
Output	• Transistor (pulse): – potential free – NPN or PNP (wiring dependant) – function: pulse output, adjustable pulse value – 0...400 Hz – 5...36 V DC, 100 mA, voltage drop at 100 mA: 2.5 V DC – duty cycle (pulse duration/period): 0.5 – galvanic insulation and protected against overvoltage, polarity reversals and short circuit • Relay: – 2 relays, normally open, hysteresis, adjustable thresholds – non UL recognized device: 230 V AC/3 A or 40 V DC/3 A (resistive load) – UL recognized device: 30 V AC/42 V_{peak}/3 A or 60 V DC/1 A • Current: – 4...20 mA (3-wire with relays, 2-wire without relay) – sourcing or sinking (wiring dependant) – max. loop impedance: 900 Ω at 30 V DC, 600 Ω at 24 V DC, 50 Ω at 12 V DC, 800 Ω with a 115/230 V AC voltage supply – response time (10...90 %) for the measured value: 6 s (default)
Voltage supply cable	• External diameter (cable): – 5...8 mm (with cable plug) – 6...12 mm (1 cable per cable gland) or 3...5 mm when using a multi-way seal (2 cables per cable gland) • Cross section of wires: – 0.25...1.5 mm² (with cable plug) – 0.75 mm² (with cable gland) • Cross section of the local ground wire: max. 0.75 mm²
Product connections	
Electrical connection	Cable plug according to DIN EN 175301-803 or cable glands M20 × 1.5

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Environment and installation	
Ambient temperature	Operation and storage: • variant 12...36 V DC: 0...+ 60 °C (+ 32...+ 140 °F) • variant 115/230 V AC: 0...+ 50 °C (+ 32...+ 122 °F)

1.4. Batch controller

Note:
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.

Electrical data	
Operating voltage (V+)	• 12...36 V DC, max tolerance: - 5 % or + 10 % at 12 V DC, ± 10 % at 36 V DC, filtered and regulated Connection to main supply: permanent, through external SELV (Safety Extra Low Voltage) and LPS (Limited Power Source) power supply • 115/230 V AC, 50/60 Hz Voltage supply available inside the device: – supplied voltage: 27 V DC regulated – maximum current: 125 mA – integrated protection: 125 mA time delay fuse
Current consumption	With sensor, without consumption of digital input and pulse output • With relays: – ≤ 100 mA (at 12 V DC) – ≤ 50 mA (at 36 V DC) – ≤ 55 mA (115/230 V AC) • Without relay: – ≤ 70 mA (at 12 V DC) – ≤ 35 mA (at 36 V DC) – ≤ 40 mA (115/230 V AC)
Power consumption	115/230 V AC powered measuring device: 3 VA
Input	• DI (1 to 4) • Switching threshold V_{on}: 5...36 V DC • Switching threshold V_{off} max.: 2 V DC • Min. pulse duration: 100 ms • Input impedance: 9.4 kΩ • Galvanic insulation, protected against polarity reversals and voltage spike
Output	• Transistors (digital outputs DO1 and DO4): – potential-free – NPN or PNP (wiring dependant) – function: pulse output (by default for DO1), batch state (by default for DO4), configurable and parametrisable – 0...300 Hz – 5...36 V DC, 100 mA max., voltage drop at 100 mA: 2.7 V DC – duty cycle (pulse duration/period): > 0.45 – galvanic insulation, protected against overvoltage, polarity reversals and short-circuits • Relays (digital outputs DO2 and DO3): – 2 relays, normally open, parametrisable (by default: DO2 always configured to control the valve, parametrized of 100 % of the batch quantity and DO3 configured as alarm) – non UL recognized device: 230 V AC/3 A or 40 V DC/3 A (resistive load) – UL recognized device: 30 V AC/42 V_{peak}/3 A or 60 V DC/1 A – max. cutting power of 750 VA (resistive load)
Voltage supply cable	• External diameter (cable): – 6..12 mm (1 cable per cable gland) or – 4 mm when using a multi-way seal (2 cables per cable gland) • Cross section of wires: 0.75 mm²

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Product connections	
Electrical connection	Cable glands M20 × 1.5
Environment and installation	
Ambient temperature	Operation and storage: • variant 12...36 V DC: 0...+ 60 °C (+ 32...+ 140 °F) • variant 115/230 V AC: 0...+ 50 °C (+ 32...+ 122 °F)

2. Product variants

2.1. Flowmeter

Flowmeter with standard output signal
The device operates on a 2- or 3-wire system and needs a 12...36 V DC or a 115/230 V AC power supply.
The device is equipped with:
- an analogue output (4...20 mA current output)
- a digital output (pulse output) and
- two totalizers.

Some variants are also fitted with two fully configurable relay outputs.

The device allows:
- through the digital or relay outputs
  - to switch a solenoid valve
  - to activate an alarm
  - to generate a flow rate proportional frequency
- through the analogue output to establish a control loop

2.2. Batch controller

The device needs a voltage supply of 12...36 V DC or 115/230 V AC.
The device is equipped with:
- four digital inputs (DI1 to DI4),
- two transistor outputs (DO1 configured as a pulse output and DO4 configured as state output, by default),
- two relay outputs (DO2 always configured to control the valve and by default parametrise of 100 % of the batch quantity and DO3 configured as alarm output by default),
- two volume or mass totalizers and two totalizers for the number of batches performed.

The second relay output can be used to activate another valve, to initiate alarms or to generate warnings.

When mounted in a pipe in series with one or two valves, the batch controller makes it possible to carry out a dosing of one or several quantities of liquids. The unit controls the opening of the valves and measures the quantity of the fluid which flows. The unit also closes the valves when the pre-set quantity has been delivered.

3. Approvals and conformities

3.1. 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.

3.2. Conformity

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

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3.3. 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.

3.4. 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

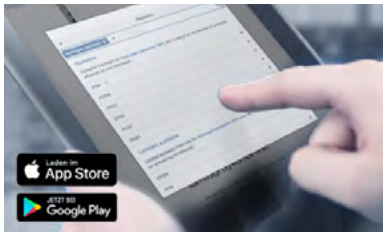
Type of fluid	Conditions
Fluid group 1, Article 4, Paragraph 1.c.i	DN ≤ 25
Fluid group 2, Article 4, Paragraph 1.c.i	DN ≤ 32 or PS*DN ≤ 1000
Fluid group 1, Article 4, Paragraph 1.c.ii	DN ≤ 25 or PS*DN ≤ 2000
Fluid group 2, Article 4, Paragraph 1.c.ii	DN ≤ 200 or PS ≤ 10 or PS*DN ≤ 5000

3.5. North America (USA/Canada)

Approval	Description
c UL us	**Optional: UL Recognized for the USA and Canada** The products are UL Recognized 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

4. Materials

4.1. 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

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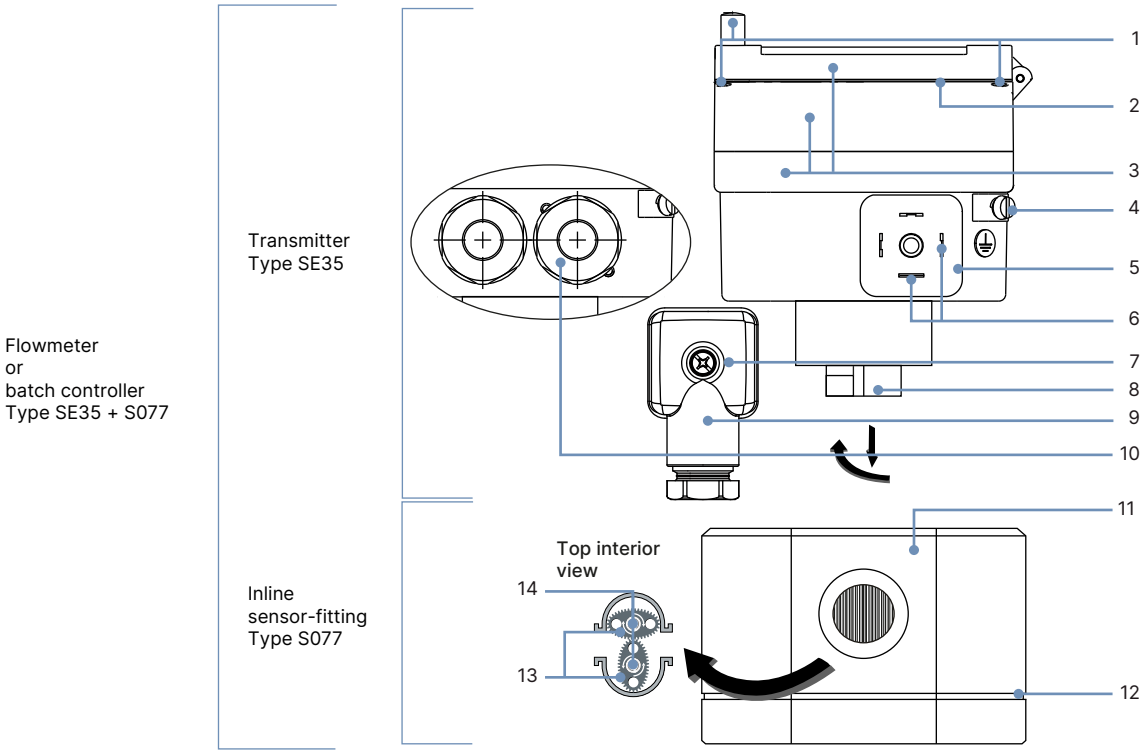
4.2. Material specifications

Note:
Flowmeter with standard output signal or batch controller



No.	Element	Material
1	Screws	Stainless steel
2	Front panel folio	Polyester
3	Housing, cover, lid	PC
4	Screws	Stainless steel
5	Male fixed plug (DIN EN 175301-803)	PA
6	Electrical contact	Sn
7	Screw	Stainless steel
8	Quarter turn system	PC
9	Female cable plug (DIN EN 175301-803)	• Body, contact holder and cable gland in PA • Cable gland seal and flat seal in NBR
10	M20 × 1.5 cable gland	PA
11	Sensor-fitting body	Stainless steel
12	Seal	FKM or FEP/PTFE encapsulated
13	Oval gear	PPS, aluminium or stainless steel (316L)
14	Axis	Stainless steel (316L)

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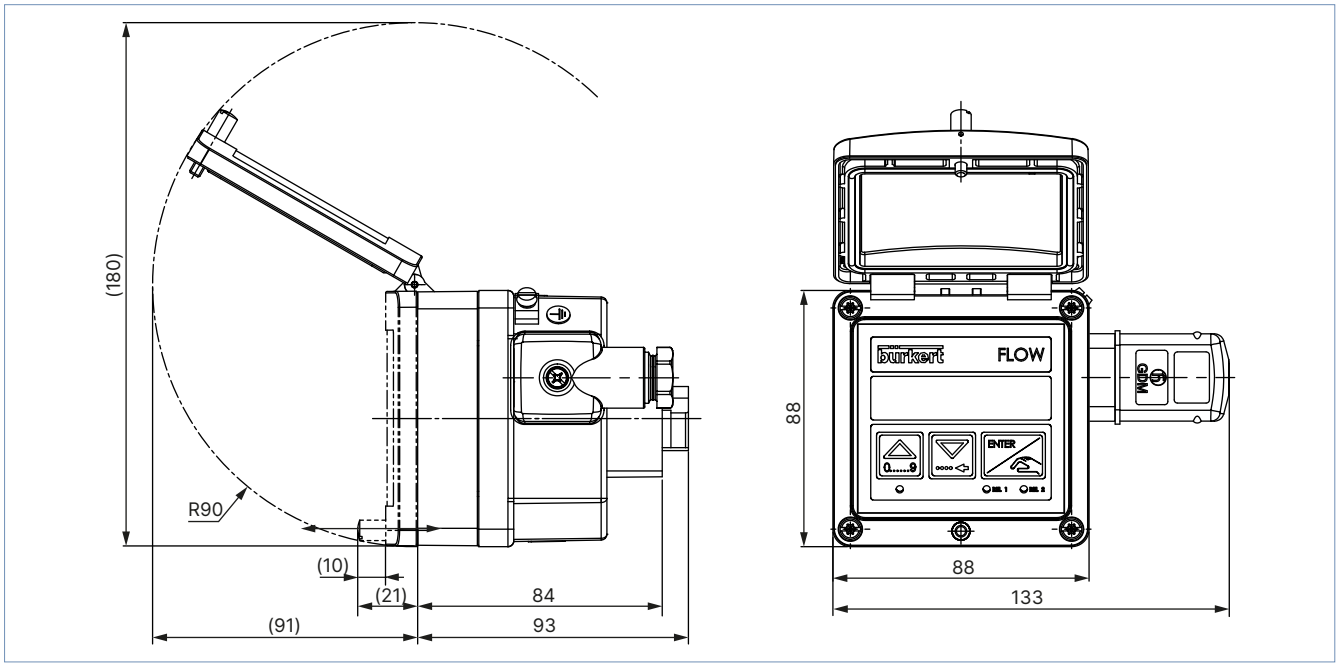
5. Dimensions

5.1. Transmitter Type SE35

With cable plug (DIN EN 175301-803)

Note:

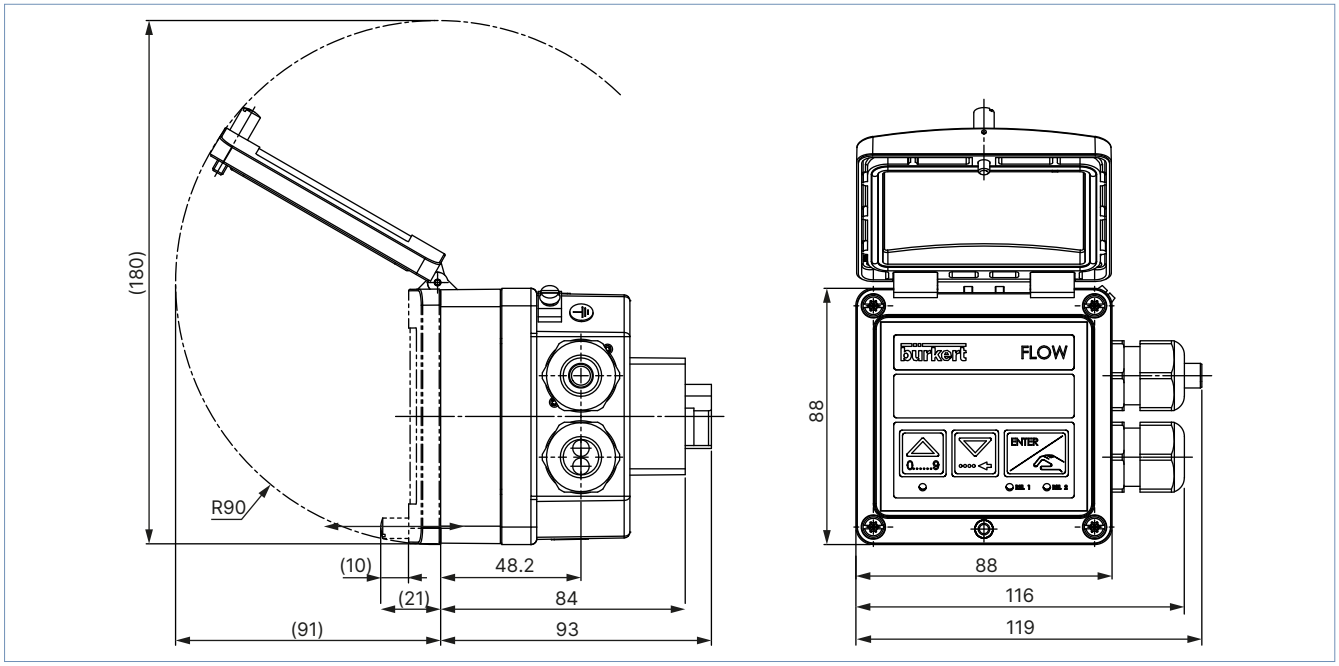
- Dimensions in mm, unless otherwise stated
- Flowmeter with standard output signal



With M20 × 1.5 cable glands

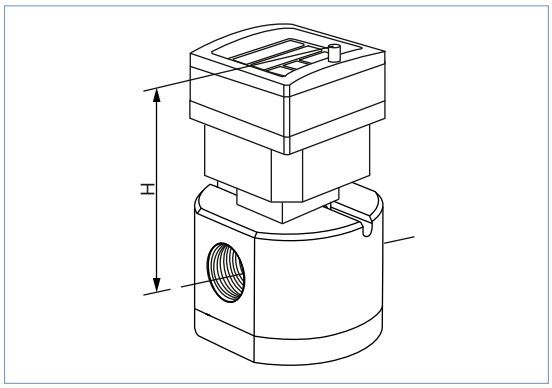
Note:

- Dimensions in mm, unless otherwise stated
- Flowmeter with standard output signal or batch controller



5.2. Transmitter Type SE35 mounted in an Inline sensor-fitting Type S077

Note:
Dimensions in mm, unless otherwise stated



DN	H
15	126
25	135
40	147
50	157
80	207
100	223

DN 15 DN 25 DN 40 DN 50 DN 80
Threaded connection

DN 25 DN 40 DN 50 DN 80 DN 100
Flanged connection

6. Product installation

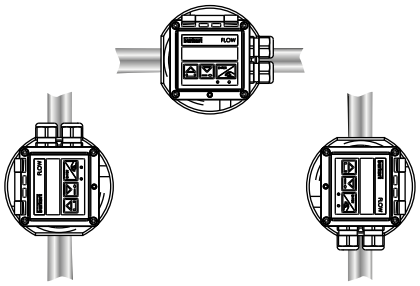
6.1. Installation notes

Flow measurement

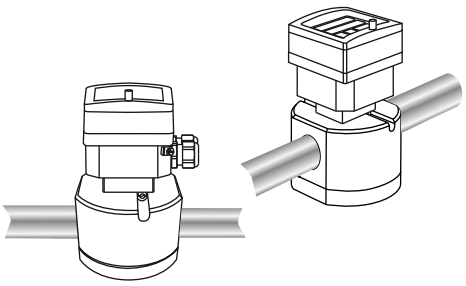
Note:
The device is not suitable for use in gaseous media and steam.

The sensor fitting can be installed in any orientation as long as **the rotor shafts are always in a horizontal plane**.

Correct



Incorrect



The following installation conditions must also be observed:

- 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.
- We recommend the installation of a 250 µm strainer as close as possible to the inlet side of the meter, to prevent damage from particles,
- Air purges can damage the appliance and should therefore be avoided.

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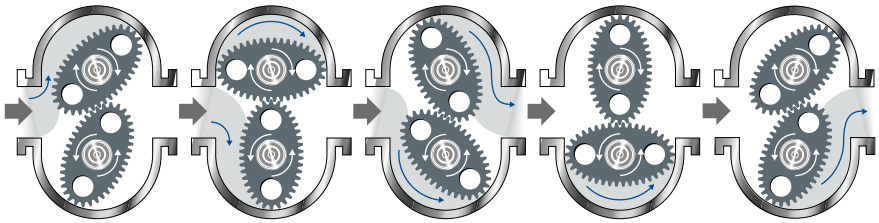
7. Product operation

7.1. Measuring principle

When liquid flows through the pipe, the rotors turn. This rotation produces a measuring signal in the associated Hall sensor. The rotation frequency of this signal is proportional to the flow velocity of the fluid. The volume of the fluid being transferred in this way is exactly determined through the sensor geometry.



A conversion coefficient, specific to each meter size, enables the conversion of this frequency into a flow rate. The standard K factor depending on the meter size is available in the flowmeter's operating instructions, see **Type S077** ▶. To improve the measurement deviation, a device-specific K factor is given on the device label.

Flowmeter:

The electronic component converts the measured signal into several outputs (according to the device variant) and displays the actual value. Totalizers are used to obtain the volume of fluid passed through the pipe.
The electrical connection for the flowmeter with standard output signal is provided via a cable plug according to DIN EN 175301-803 or two cable glands (according to the flowmeter variant).

Batch controller:

The electronic component converts the measured signal and displays the actual value of the volume or mass. The electrical connection is provided via two cable glands.

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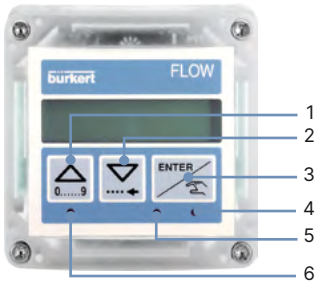
7.2. Functional overview

Display and operating keys

The display is used to:

- read the value of certain parameters e.g. for the flowmeter, the measured flow rate, the main totalizer
- set parameters of the device by means of 3 keys
- read the configuration of the device
- be warned of certain events.

Display and operating keys	No.	Description
	**1**	"Back" key: • to change the value (0...9) of the selected digit • to go back to the previous function • Read the batches history (only for batch controller)
	2	"Next" key: • to select the digit at the left • to go to the next function • read messages (only with Inline flowmeter as battery powered indicator/totalizer and with batch controller)
	3	"Confirm" key: • to confirm the function displayed • to confirm the parameters set
	4	• For Inline flowmeter with a standard output signal – status LED of relay 2 • For batch controller – status LED of relay DO3 (LED ON = contact closed)
	5	• For Inline flowmeter with a standard output signal – status LED of relay 1 • For batch controller – status LED of relay DO2 (LED ON = contact closed)
	6	Status of device • No status for Inline flowmeter with a standard output signal • For Inline flowmeter as a battery powered indicator/totalizer – off: the device operates correctly. – blinking orange: a warning message is generated in the information menu. – blinking red: a fault message is generated • For batch controller – green: the device operates correctly. – orange: a dosing related alarm and/or a warning messages is generated in the information menu. – red: a fault message is generated in the information menu.. – blinking, whatever the colour: - slow blinking: the dosing is interrupted. - Fast blinking during a dosing: a dosing related alarm is generated. - Fast blinking when no dosing is being done: the information menu has been remote-consulted or a check for the correct behaviour of the inputs/outputs is running

The device can be calibrated by means of the K factor (proportionality factor) of the fitting, or via the teach-in function. User adjustments, such as engineering units, output, filter and bar graph are carried out on site.

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Operating levels

Flowmeter with a standard output signal

The device has 2 operating levels:

- the process level
- the configuration level, which comprises the parameters and the test menus

Operating level	Functions
Process	• Indication of – the value of the measured flow – the value of the 4...20 mA output – the value of the main totalizer – the value of the daily totalizer • Reset the daily totalizer • Access to the Parameters and Test menus of the Configuration level
Configuration - parameters menu	• To make the settings needed for operation: – language – engineering units (International measuring units) – K-factor/Teach-in function – 4...20-mA-current output – pulse output – relay (on devices with relays) – filter (damping) – reset both totalizers
Configuration - test menu	• To adjust the Offset and Span of the 4...20 mA current output • To read the rotational frequency of the paddle wheel • To check the correct operating of the outputs with simulating a flow rate

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Batch controller

The device has 2 operating levels:

- The process level
- The configuration level, which includes the parameters, the test, the information and the history menus

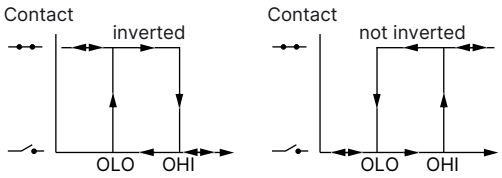
Operating level	Functions
Process	• Starting a dosing • Indication of – The value of the main totalizers of the quantity of fluid counted – The value of the daily totalizers of the quantity of fluid counted – The value of the main totalizers of the performed dosings – The value of the daily totalizers of the performed dosings • Reset – The daily volume or mass totalizer – The daily totalizer of the performed dosings • Access to the parameters, test, information and history menus of the configuration level
Configuration - parameters menu	• To make the settings needed for operation: – language – engineering units (International measuring units) – K-factor/Teach-in function – Optional/dosing mode – Overfill – Alarm – Outputs – Resetting the 2 volume or mass totalizers – Resetting the 2 totalizers of the performed dosings – Resetting the history menu – Backlight
Configuration - test menu	• Checking: – The inputs functions – The outputs functions – The paddle-wheel operation • Monitoring: – The flow rate in the pipe – The value of the daily volume or mass totalizer – The number of performed dosings • Saving/ Restoring: – The current user configuration – The saved configuration – The default configuration of the device
Configuration - history menu	To consult the quantities dosed in the last 10 dosings performed
Configuration - information menu	To read the fault and warning messages generated

7.3. Function modes

Flowmeter with standard output signal

- 4...20 mA output + Pulse
- 4...20 mA output + Pulse + relay output
  Hysteresis switching mode (both relays) for the output, inverted or not

Hysteresis mode



Batch controller

The following dosing modes are possible:

- **Locally started dosing of**
  - **free quantity:** the user enters the quantity to be filled and starts the dosing from the keypad.
  - **pre-set quantity:** the user selects a quantity which has been pre-set and starts the dosing from the keypad.
- **Dosing controlled by a PLC unit:** the user selects a quantity which has been pre-set and starts the dosing using binary inputs.
- **Locally/remote selection of pre-set quantity and dosing controlled by a PLC unit**: the user selects a quantity which has been pre-set from the keypad or using binary inputs and starts the dosing using binary inputs.
- **Automatic dosing controlled by variation of pulse duration:** the volume to be dosed is directly proportional to the duration of a pulse.
- **Locally/remote dosing determined by** teach-in:
  - teach-in of the dosing quantity from the keypads
  - teach-in of the dosing quantity using binary inputs.

8. Product design and assembly

8.1. Product assembly

Note:

- The device Type SE35 + S077 is made up of a Bürkert Inline sensor-fitting Type S077 equipped with a sensor with oval gears and a transmitter Type SE35.
- The Inline sensor-fitting Type S077 ensures simple installation into pipes from DN 15...DN 100. The transmitter Type SE35 can be mounted on any Inline sensor-fitting Type S077 and fastened with a bayonet catch, see **data sheet Type S077** ▶ for more information.

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9. Networking and combination with other Bürkert products

9.1. Flowmeter with a standard output signal

Example:

Type SE35 + S077

4...20 mA output	Transistor output	Relay output
Type 8802 ▸ (2301 and 8693) ELEMENT Continuous control valve systems	**Type 6212 ▸** Servo-assisted 2/2-way diaphragm valve	**Type 6281 ▸** Servo-assisted 2/2-way diaphragm valve

9.2. Batch controller

Example:

Type SE35 + S077	**Type 6212 ▸** Servo-assisted 2/2-way diaphragm valve	**Type 6281 ▸** Servo-assisted 2/2-way diaphragm valve

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10. Ordering information

10.1. 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

10.2. Recommendation regarding product selection

A complete flowmeter Type SE35 + S077 consists of a flow transmitter Type SE35 and an Inline sensor-fitting Type S077.

See **data sheet Type S077** ▶ for more information.

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

- **Article no.** of the compact Type SE35 flow transmitter or batch controller (see chapter "10.4. Ordering chart" on page 19)
- **Article no.** of the selected Type S077 Inline sensor-fitting (see **data sheet Type S077** ▶)

10.3. 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

10.4. Ordering chart

Flowmeter

Note:
The following variants have at least 2 volume totalizers.

Operating voltage	Sensor variant	Output	UL approval	Electrical connection	Article no.
Flow transmitter Type SE35 with standard output signal					
12...36 V DC	Hall	4...20 mA (2 wires) + Pulse	—	Female cable plug DIN EN 175301-803	444005
			UL Recognized		570477
			—	2 cable glands	444006
			UL Recognized	2 cable glands	553432
	Hall	4...20 mA (3 wires) + Pulse + 2 relays	—	2 cable glands	444007
			UL Recognized	2 cable glands	553433
115/230 V AC	Hall	4...20 mA (2 wires) + Pulse	—	2 cable glands	423922
	Hall	4...20 mA (3 wires) + Pulse + 2 relays	—	2 cable glands	423924

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Batch controller

Note:
The following variants have at least 2 volume or mass totalizers and 2 totalizers of the number of dosing performed.

Operating voltage	Sensor variant	Input	Output	UL approval	Electrical connection	Article no.
12...36 V DC	Hall	4 digital inputs (DI1...DI4)	2 transistor outputs (DO1 and DO4) + 2 relay outputs (DO2 and DO3)	–	2 cable glands	443360
				UL Recognized		564398
115/230 V AC				–		423926

10.5. Ordering chart accessories

Description	Article no.
For flowmeter or batch controller	
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
Set with a stopper for unused cable gland M20 × 1.5, a multi-way seal 2 × 6 mm for cable gland, a black EPDM seal for the sensor and a mounting instruction sheet	551775
For flowmeter	
Female cable plug, 4-pin (3 conductors + protective conductor), form A according to DIN EN 175301-803 with cable gland (**Type 2518** ▶)	572264
Female cable plug 32 mm, 4-pin (3 conductors + protective conductor), form A according to DIN EN 175301-803, with NPT ½" reduction without cable gland (**Type 2509** ▶)	162673
For batch controller	
Set with 8 FLOW front panel films	553191

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