FINE CONTROLS (UK) LTD

Fine Controls have been supplying process controls & instrumentation equipment since 1994, & now serves an ever expanding customer base, both in the UK & globally.

We offer a full range of valve & instrumentation products & services, with our product rangerepresenting leading technologies & brands:

Flow: Flow Meters & Transmitters, Flow Switches, Flow Control Valves & Batch Control Systems

Temperature: Temperature Probes & Thermowells, Temperature ransmitters,Temperature Regulators & Temperature Displays

Level: Level Transmitters & Switches

Pressure: Pressure Gauges &Transmitters, Precision & High Pressure Regulators & I-P Converters, Volume boosters.

Precision Pneumatics: Pressure Regulators, I-P Converters, Volume Boosters, Vacuum Regulators

Valves: Solenoid & Pneumatic Valves, Control Valves & Positioners, Actuated Ball, Globe or Diaphragm Valves & Isolation Valves

Services: Repair, Calibration, Panel Build, System Design & Commissioning

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bürkert
FLUID CONTROL SYSTEMS

Positive displacement Flow sensor for continuous flow measurement

- High accuracy
- Medium with high viscosity
- Mounting and dismounting of the sensor head by a quarter-turn
- Connection to Bürkert devices in remote versions

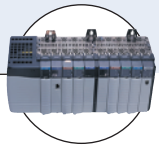
Type 8070 can be combined with...

Type 8025
Flow transmitter remote version

Type 8025 Konti-Dos
Batch control system

Type 8611
PI flow controller

Type 2712 (8630)
Continuous TopControl system



PLC

The positive displacement flow sensor for continuous flow measurement is especially designed for use in highly viscous fluid like glue, honey or oil. The sensor is made up of a compact fitting (S070) with integrated oval rotor and an electronic module (SE30) with pulse signal (Hall transducer), quickly and easily connected together by a Quarter-Turn.
The Bürkert designed fitting system ensures simple installation of the sensors into all pipes from DN 15 to 100.
The sensor produces frequency signal (pulse), proportional to the flow rate, which can easily be transmitted and processed by:
- a Bürkert remote transmitter/indicator (type 8025/8034/8032 remote versions)
- a batch control system 8025 Konti-Dos.
- a PLC

Technical data

General data	
Compatibility	with fittings S070 (see corresponding data sheet)
Materials	
Housing, cover	PC
Cable plug	PA
Materials wetted parts	
Fitting	Aluminium, stainless steel (316F/1.4401)
Rotor	PPS, aluminium, stainless steel (316F/1.4401)
Shaft / Seal	Stainless steel / FKM (EPDM or PTFE on request)
Electrical connection	Cable plug EN 175301-803
Connection cable	max. 1.5 mm² cross section; max. 50 m length, shielded (for pulse sensor version)

Complete device data (fitting + electronic module)	
Pipe diameter	DN 15 to 100
Measuring range	
Viscosity >5 cps	1 to 1200 l/min (0.26 to 320 gpm)
Viscosity <5 cps	3 to 616 l/min (0.78 to 320 gpm)
Medium temperature max.	
Aluminium body	80°C *(176°F)*
Stainless steel body	100°C *(212°F)*
Fluid pressure max.	
DN 15	55 *(798.05 PSI)* bar (threaded process connection)
DN 25	55 bar *(798.05 PSI)* (or flanges rules where fitted)
DN 40 / DN 50	18 bar *(261.18 PSI)*
DN 80	12 bar *(174.12 PSI)*
DN 100	10 bar *(145.1 PSI)*
Viscosity	1000 cps. max (higher on request)
Accuracy	±0.5% of Reading
Repeatability	0.03% of Reading

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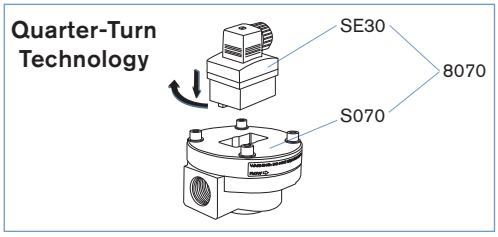
Electrical data	
Power supply	
Pulse version	12 - 36 V DC, filtered and regulated
Pulse “Low Power” version	12 - 36 V DC filtered and regulated (via Bürkert transmitter)
Current consumption with sensor	
Pulse version	< 30 mA
Pulse “Low Power” version	< 0.8 mA
Output: Frequency	
Pulse version	Transistor NPN/PNP, open collector, max. 100 mA, frequency: 0...300 Hz; duty cycle 50%
Pulse “Low Power” version	Transistor NPN, open collector, max. 10 mA, frequency: 0...300 Hz; duty cycle 50%
Reversed polarity of DC	Protected

Environment	
Ambient temperature	0 up to +60°C *(32 to 140°F)* (operating and storage)
Relative humidity	≤ 80%, without condensation

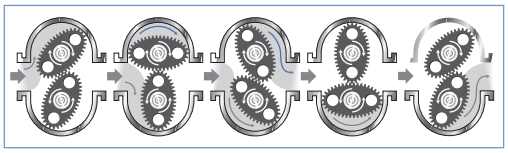
Standards and approvals	
Protection class	IP65 with connector plugged-in and tightened
Standard	
EMC	EN 50081-1, 50082-2

Design and principle of operation

The flow sensor 8070 is built up with an electronic module SE30 associated to a fitting S070 with integrated measurement oval rotor.
This connection is made by means of a Quarter-Turn.



In a 3-wire system (transistor output), the signal can be displayed or processed directly. The output signal is provided via cable plug according to EN 175301-803.



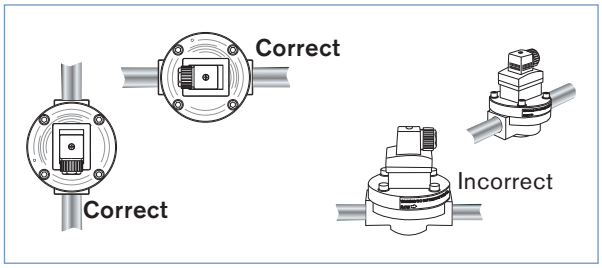
When liquid flows through the pipe, the rotor turn. This rotation produces a measuring signal in the transducer. The frequency and amplitude are proportional to the flow.

Two electronic module versions with frequency output are available:

- with one pulse output (either NPN or PNP transistor output).
  An external power supply of 12-36 V DC is required.
  It is designed for connection to any system with open collector NPN or PNP frequency input.
- with one pulse “low power” output (NPN transistor output).
  An external power supply of 12-36 V DC is required.
  Can only be connected to separate versions of flow transmitters Type 8025/8032, to 4-20 mA module Type 8023 or a universal controller eCONTROL Type 8611.

Installation

The fitting can handle particle sizes up to 250 µm. To prevent damage from dirt or foreign matter, we strongly recommend the installation of a 250 µm strainer as close as possible to the inlet side of the meter.
The pipe must be filled with liquid and free from air bubbles. Avoid air purge of the system.
Ensure the fitting is installed so that the rotor shafts are always in a horizontal position. Flow direction is marked by an arrow on the body.



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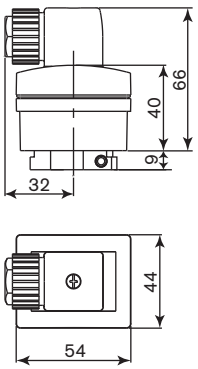
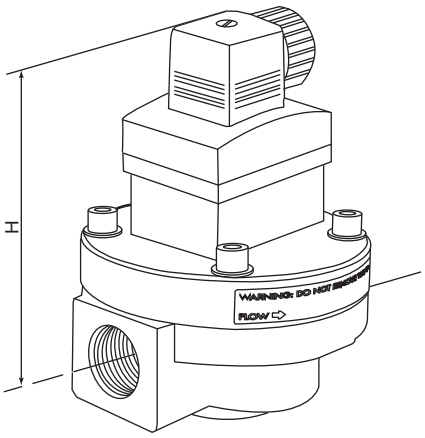
Dimensions





Orifice	H
15	101
25	116
40	133
50	151
80	191
100	192

DN15 DN25 DN40 DN50 DN80
Threaded connection

DN25 DN40 DN50 DN80 DN100
Flanged connection

Ordering chart for sensor Type 8070

The flow sensor Type 8070 consists of:

- a sensor electronic module with pulse signal type SE30
- an Inline fitting S070 (DN15 - DN100) (Refer to corresponding data sheet)

Sensor Type SE30 - for fitting Type S070 (to be ordered separately)

Description	Voltage supply	Output	Electrical connection	Item no.
Pulse sensor version (pluggable to PLC)	12-36 V DC	Frequency with pulse PNP or NPN, open collector	Cable plug EN 175301-803	423 913
Pulse “Low Power” sensor version (only pluggable to Type 8025, 8032, 8023, or 8611)	from associated transmitter	Frequency with pulse NPN, open collector	Cable plug EN 175301-803	423 914

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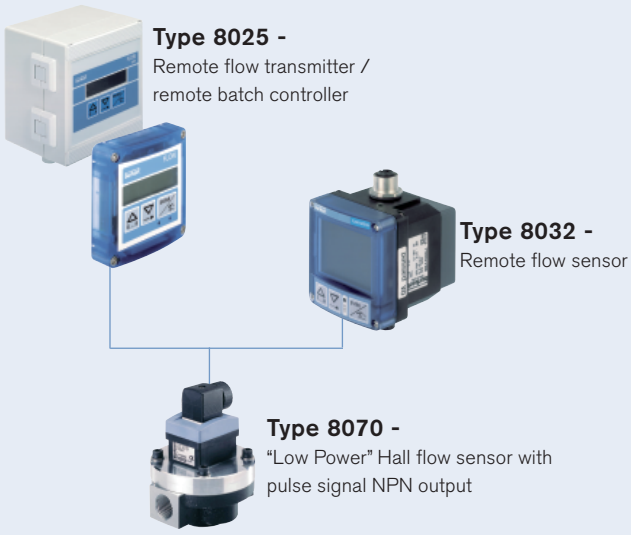
Ordering chart for accessories for sensor type 8070 (to be ordered separately)

Version	Specifications	Power supply	Outputs	Relays	Electrical connection	Item no.
Compatible remote transmitter						
Panel-mounted	Flow controller Type 8032	12 - 30 V DC	NPN and NPN	-	Terminal strip	558 181
	Universal flow transmitter Type 8025, 2 totalisators	13 - 30 V DC	4-20 mA (3-wire) + pulse	-	Terminal strip	419 538
				2	Terminal strip	419 537
	Flow controller Type 8025, 2 totalisators and 1 flowrate	12 - 30 V DC	-	2	Terminal strip	419 536
Wall-mounted	Flow controller Type 8032	12 - 30 V DC	NPN and NPN		Swivel male M12, 5 pins and female M12, 4 pôles	448 861
	Universal flow transmitter Type 8025, 2 totalisators	13 - 30 V DC	4-20 mA (3-wire) + pulse	-	3 cable glands	419 541
				2	3 cable glands	419 540
		115 - 230 V AC	4-20 mA (3-wire) + pulse	-	3 cable glands	419 544
				2	3 cable glands	419 543
	Flow controller Type 8025, 2 totalisators and 1 flowrate	13 - 30 V DC	-	2	5 cable glands	433 740
		115 - 230 V AC	-	2	5 cable glands	433 741

Specifications	Item no.
4 pin M12 female connector moulded on cable (2m., shielded)	448 857
4 pin M12 female connector with plastic threaded locking ring	917 116
5 pin M12 female connector moulded on cable (2m., shielded)	438 680
8 pin M12 female connector moulded on cable (2m., shielded)	444 800

Interconnection possibilities with the sensor Type 8070



To find your nearest Bürkert facility, click on the orange box → **www.burkert.com**

In case of special application conditions, please consult for advice.

Subject to alteration.

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