

In-Line Flowmeter for Monitoring, Switching and Display

SE32

For use with fitting S030, DN15-50 mm

- Monitor, switch and transmit functions
- Large display
- Free configurable switching point

Please see fitting S030



The 8032 flowmeter consists of a SE32 transmitter and a S030 fitting. It is used for measuring clean, neutral or aggressive liquids. It is available with freely configurable switching outputs (transistor or relay) or 4-20 mA process output value.

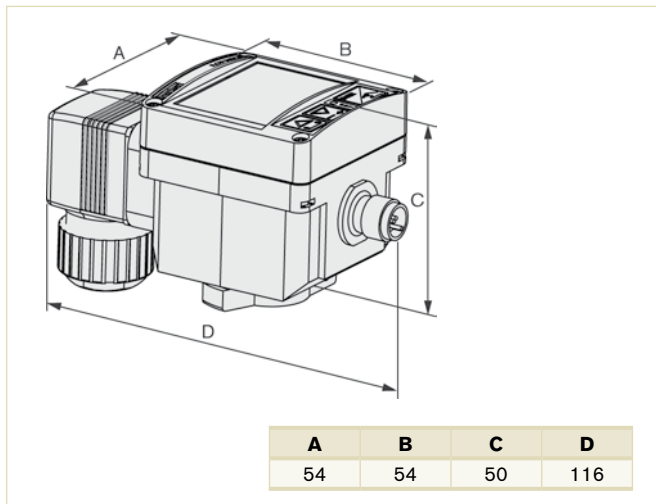
Technical Data

General data	
Compatibility	With fittings S030 (see corresponding data sheet)
Materials	
Housing, cover	PC, glass fibre reinforced
Front panel folio/Screws	Polyester / Stainless steel
Cable plug/connector M12	PA / PA or CuZn, nickel-plated
Wetted parts materials:	
Fitting, sensor armature/ Seal	Brass, stainless steel, PVC, PP or PVDF / FKM (EPDM option)
Paddle-wheel / Axis, bearings	PVDF / Ceramics
Display	8-digit LCD with backlighting
Electrical connections	Cable plug acc. to EN 175301-803, free positionable male M12 connector, 5 pins or male M12 connector, 8 pins (included in delivery)
Voltage supply cable	0.5 mm ² max. cross section; max. 100 m long, shielded
Remote sensor connection	0.5 mm ² max. cross section; max. 50 m long, shielded
Complete device data (fitting S030 + electronic module SE32)	
Pipe diameter	DN06 to DN65
Measuring range	0.3 to 10 m/s
Medium temperature	0 to 50°C (with PVC fitting) / 0 to 80°C (with PP fitting) / -15 to 100°C (with stainless steel, brass or PVDF fitting)
Fluid pressure max.	PN10 (145.1 PSI) (with plastic fitting) PN16 (232.16 PSI) (with metal fitting)
Viscosity / Pollution	300 cSt. max. / 1% max. (particle size 0.5 mm max.)
Measurement error	
Teach-In	±1% of Reading ¹⁾ (at the teach flow rate value)
Standard K-factor	±3% of Reading ¹⁾
Operating mode	Threshold: window or hysteresis
Linearity¹⁾	±0.5% of F.S.*
Repeatability¹⁾	±0.4% of Reading

* F.S. = Full scale (10 m/s)

¹⁾ Under reference conditions i.e. measuring fluid = water, ambient and water temperature = 20°C, applying the minimum inlet and outlet pipe straights, matched inside pipe dimensions.

Envelope Dimensions [mm] (compact version)



Options

- Wall or cabinet mounting
- AS-i Connection (on request)
- Hygienic clamp and ASME weld end connections
- ANSI flange connection
- PVDF and PP fittings
- Various sealing materials
- Individual calibration certificate,

Technical Data (cont.)

Electric Data	
Operating voltage	Filtered and regulated
Compact version	12-36 V DC \pm 10%
Reversed polarity of DC	Protected
Current consumption	
Compact version	\leq 90 mA (without load)
Input	
Frequency (remote version)	Pulse signal: 2 to 400 Hz input impedance: 10 k Ω
Outputs	
Transistor	NPN and/or PNP (selectable), open collector, max. 700 mA, 500 mA max. per transistor if both transistor outputs are wired, 0 to 300 Hz NPN-output: 0.2 - 36 V DC PNP-output: Power supply protected against short circuit.
Relay (compact version)	3 A/250 V AC or 3 A/30 V DC; [3 A/48 V AC or 3 A/30 V DC]2.
Process value (compact version)	4 to 20 mA, galvanic insulation Loop resistance: 1300 Ω at 36 V DC, 1000 Ω at 30 V DC, 700 Ω at 24 V DC, 450 Ω at 18 V DC, 200 Ω at 12 V DC
4 to 20 mA measurement error	\pm 1%
Environment	
Ambient temperature	-10 to + 60 °C (operating and storage)
Relative humidity	\leq 80%, without condensation
Standards, directives and approvals	
Protection class	IP65 with connector plugged-in and tightened correctly
Standard, directives	
EMC	EN 610006-2, 610006-3
Security	EN 61010-1
Pressure (Fitting S030, DN06 to DN65, in PVC, PP, PVDF, stainless steel or brass)	Complying with article 3 of Chap. 3 from 97/23/CE directive.*
Vibration / Shock	EN 60068-2-6 / EN 60068-2-27

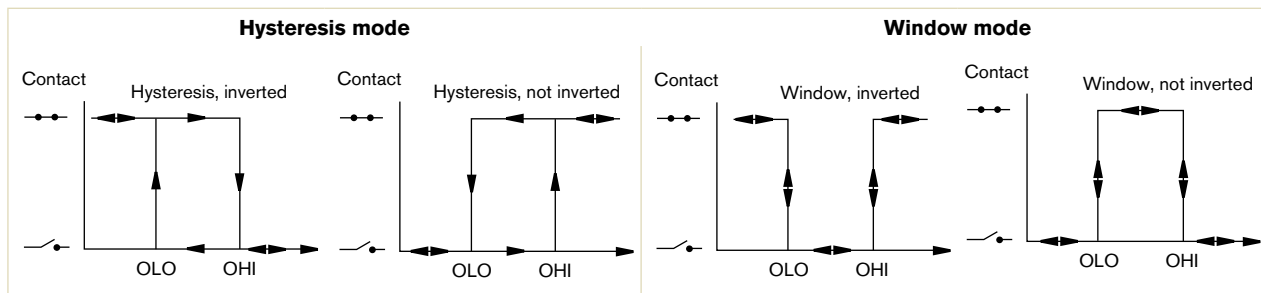
* For the 97/23/CE pressure directive, the device can only be used under following conditions (depend on max. pressure, pipe diameter and fluid

Type of fluid	Conditions
Fluid group 1, §1.3.a	DN \leq 25 only
Fluid group 2, §1.3.a	DN \leq 32 or DN > 32 and PN*DN \leq 1000
Fluid group 1, §1.3.b	PN*DN \leq 2000
Fluid group 2, §1.3.b	DN \leq 200

Main Features

8032 with standard On/Off output

- 2 switching modes for the output, either hysteresis or window, inverted or not



- Configurable delay before switching
- Possible outputs depending on the version: relay, transistor NPN, transistor PNP

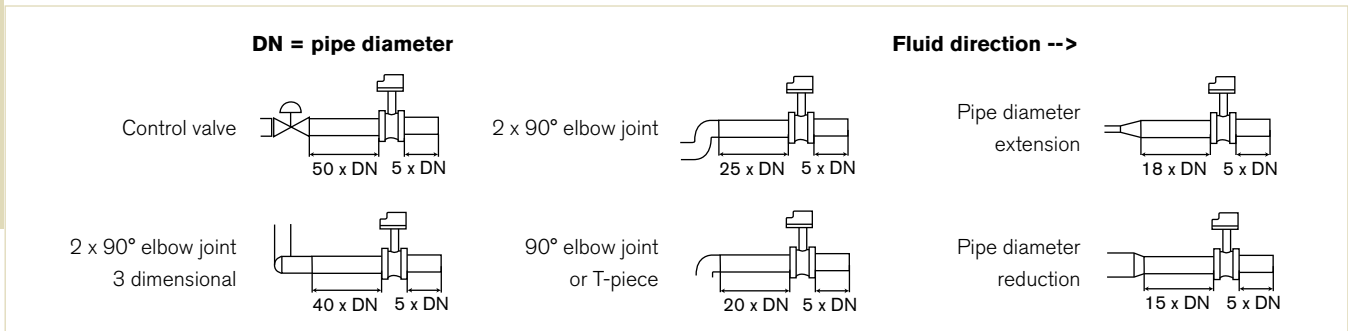
8032 with current output for the measurement value

- 4 to 20 mA output
- 4 to 20 mA output + relay output

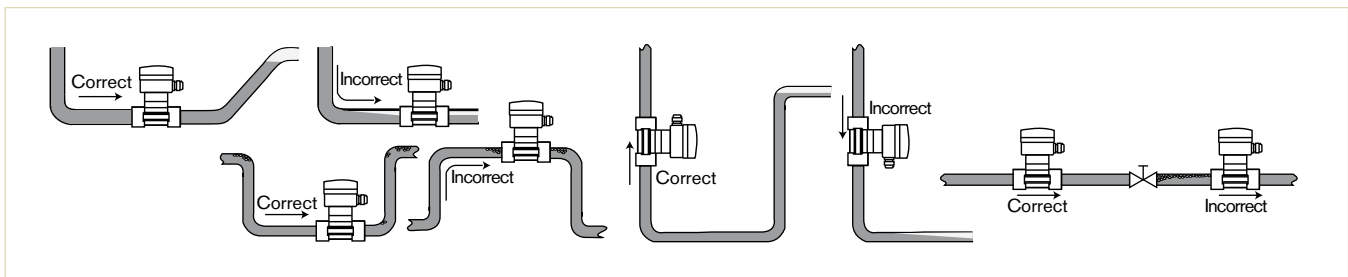
Installation



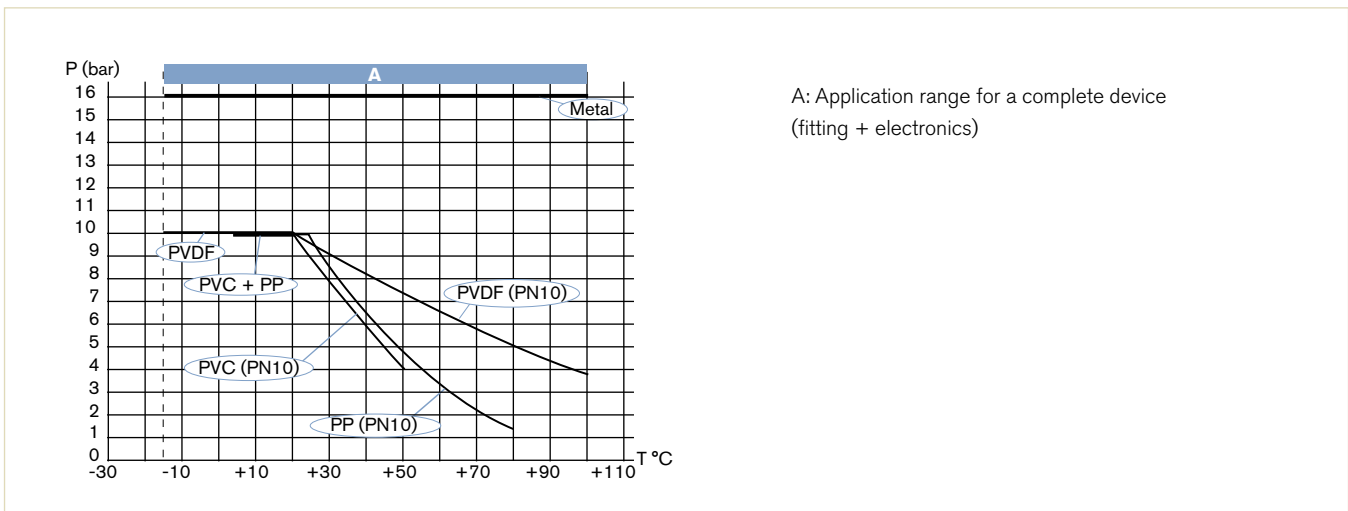
EN ISO 5167-1 specifies the straight inlet and outlet distances that must be complied with when installing fittings in pipelines in order to achieve calm flow conditions. The most important layouts that could lead to turbulence in the flow are shown below, together with the associated minimum inlet and outlet distances. These ensure calm, problem-free measurement conditions at the measurement point.



The device can be installed into either horizontal or vertical pipes.



Pressure/temperature Chart



Ordering Charts

Output	Connection	Item No.
NPN	Cable plug	436 474
PNP	Cable plug	434 871
NPN & PNP	M12 connection	436 473
Relay	Cable plug & M12	436 475
4 - 20 mA & Relay	Cable plug & M12	560 547

Note: other cable lengths on request

The SE32 electronic module and the S030 fitting must be ordered separately.

Accessories

Connection	Type	Item No
5-pin M12 plug for NPN/PNP	Plug only	917 116
5-pin M12 plug for NPN/PNP	5 m, prewired	560 365
8-pin M12 plug for 4 - 20 mA	Plug only	444 799
8-pin M12 plug for 4 - 20 mA	10 m, prewired	555 675