ProSense®

CE

Operating instructions
ProSense Flow Transmitters

FSA75-42-6H
FSA75-42-10H
FSA1-42-27H

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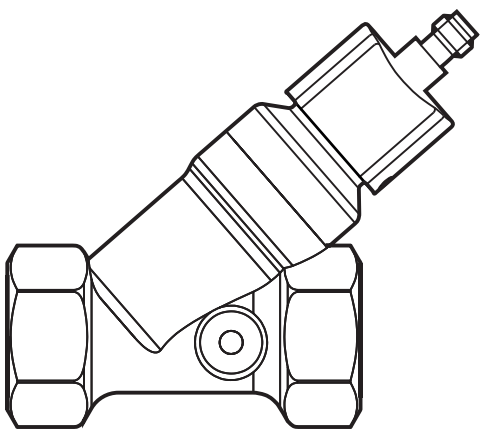

by Automationdirect.com

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1 Preliminary note

▶ Instructions
> Reaction, result
→ Cross-reference

Important note
Non-compliance can result in malfunction or interference.

Information
Supplementary note.

2 Safety instructions

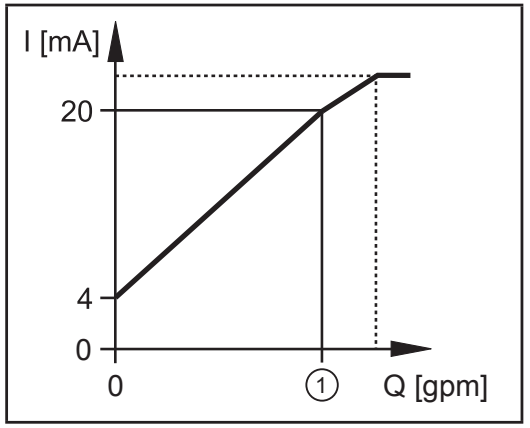
- Please read this document prior to set-up of the unit. Ensure that the product is suitable for your application without any restrictions.
- Improper or non-intended use may lead to malfunctions of the unit or to unwanted effects in your application. That is why installation, electrical connection, set-up, operation and maintenance of the unit must only be carried out by qualified personnel authorised by the machine operator.
- In order to guarantee the correct condition of the device for the operating time the device must only be used in media with which the wetted parts are compatible (→ Technical data).
- The responsibility whether the measurement devices are suitable for the respective application lies with the operator. The manufacturer assumes no liability for consequences of misuse by the operator. Improper installation and use of the devices result in a loss of the warranty claims.
- During installation or in case of a fault (housing damage) media under high pressure or hot media can leak from the system.
  ▶ Install the unit according to the applicable rules and regulations.
  ▶ Ensure that the system is free of pressure during installation.
  ▶ Ensure that no media can leak at the mounting location during installation.
  ▶ Equip the unit with suitable protection (e.g. cover) to avoid hazard to personnel from leaking media.

3 Functions and features

The unit monitors liquid media (water, glycol solutions, industrial oils, coolants).

It detects the flow rate on the principle of differential pressure and converts it into an analog output signal (4...20 mA).

4 Function



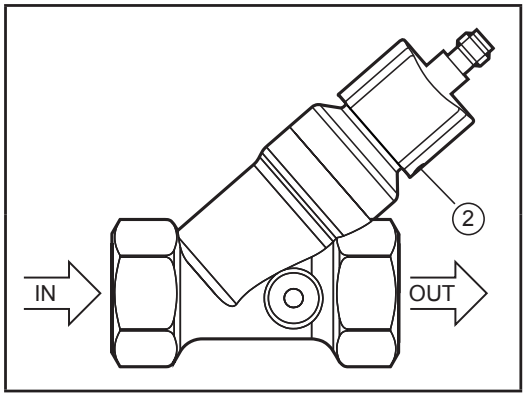
1: final value of the measuring range

The analog signal for water (20 °C) is linear from 4 mA (= no flow) to 20 mA (= final value of the measuring range → Technical Data).

For an output signal > 20 mA the flow rate is above the final value of the measuring range.

5 Installation

Loosening the socket head screw (2) and moving the cap does not change the setting of the sensor. However, moving the cap may be useful to read the label.



▶ Insert the unit into the pipe according to the direction of flow (arrow) and tighten.

IN = inlet
OUT = outlet

Baffled pipes on the sensor's inlet or outlet side are not necessary.

▶ Ferromagnetic materials in the surrounding environment should be at least 50 mm from the housing of the unit. Ferromagnetic piping may be used on the inlet and outlet connections.

▶ Do not operate the unit in the vicinity of magnetic constant and alternating fields (e.g. welding systems).

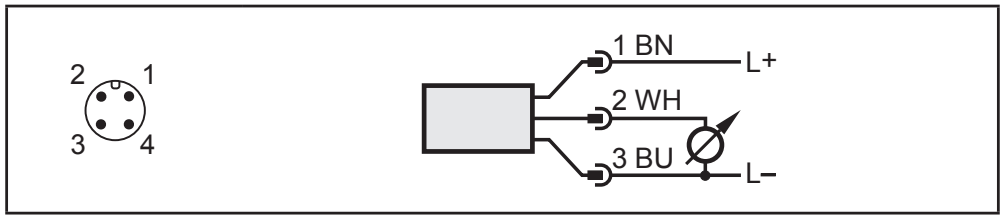
▶ If the sensors are installed side by side, observe a minimum distance of 50 mm between the sensor axes.

6 Electrical connection

The unit must be connected by a qualified electrician.
The national and international regulations for the installation of electrical equipment must be adhered to.
Voltage supply according to EN 50178, SELV (safety extra-low voltage), PELV (protected extra-low voltage).

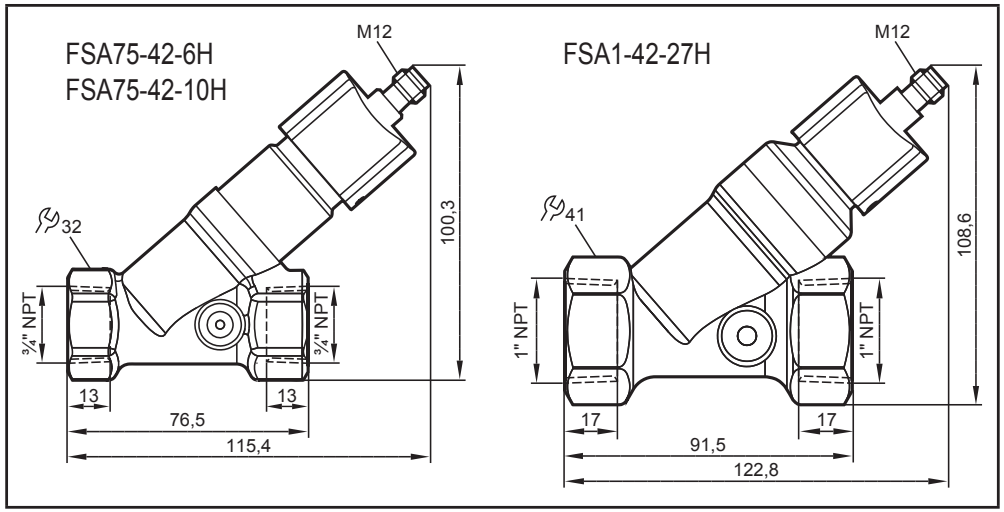
▶ Disconnect power.

▶ Connect the unit as follows:



1 = BN (brown), 2 = WH (white), 3 = BU (blue); Colors to DIN EN 60947-5-2

7 Scale drawing



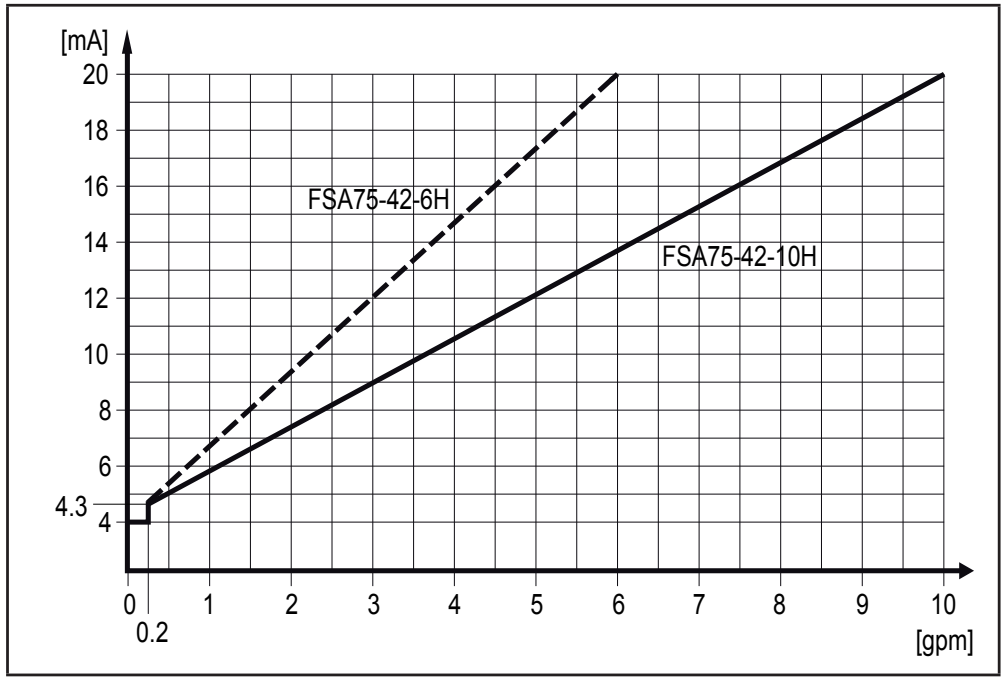
8 Technical data

	FSA75-42-6H	FSA75-42-10H	FSA1-42-27H
Measuring range	0...6.0 gpm	0...10 gpm	0...27 gpm
Max. flow rate	26.4 gpm	26.4 gpm	52.8 gpm
Process connection	3/4" FNPT	3/4" FNPT	1" FNPT
Operating voltage	18...32 VDC (SELV / PELV)		
Output function	4...20 mA		
Short-circuit protection	yes		
Reverse polarity protection	yes		
Overload protection	yes		
Maximum load	500 Ohm		
Current consumption	< 35 mA		

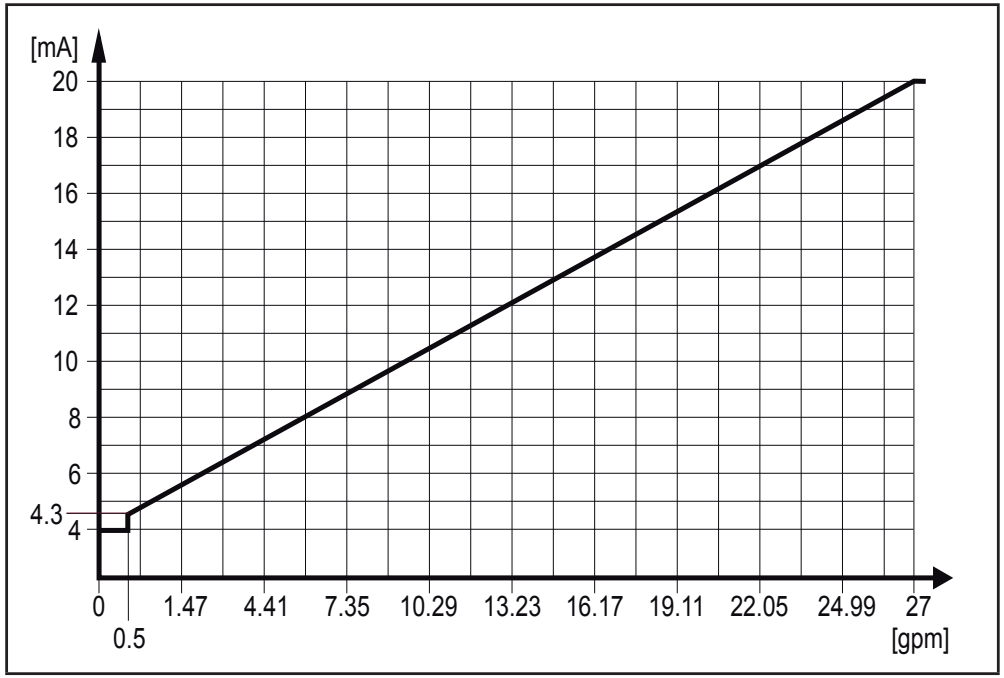
	FSA75-42-6H	FSA75-42-10H	FSA1-42-27H
Repeatability *	± 1 % of the final value		
Accuracy *	± 5 % of the final value		
Pressure loss (dP) / flow rate *	0.7 psi / 0.2 gpm 2.3 psi / 6.0 gpm		1.5 psi / 0.5 gpm 7.3 psi / 27 gpm
Housing materials	Brass chemically nickel-plated; PP; stainless steel 316L / 1.4404; aluminium anodised; PA		
Materials (wetted parts)	Stainless steel 316 / 1.4401; Brass chemically nickel-plated; PP; PPS		
Protection	IP 67 III		
Cycles min.	10 million		
Ambient temperature	32...140 °F (0...60 °C)		
Pressure rating	362 psi		

* For water 68°F (20°C)

Characteristics of the analog output FSA75-42-6H and FSA75-42-10H:



Characteristics of the analog output FSA1-42-27H:



9 Maintenance, repair, disposal

If used correctly, no maintenance and repair measures are necessary.

In case of strongly polluted media: mount a filter before the inlet (IN).

Recommendation: use a 200-micron filter.

After use dispose of the unit in an environmentally friendly way in accordance with the applicable national regulations.

More information at www.automationdirect.com