ifm electronic

Montageanleitung
Installation Instructions
Notice de Montage

efector300®

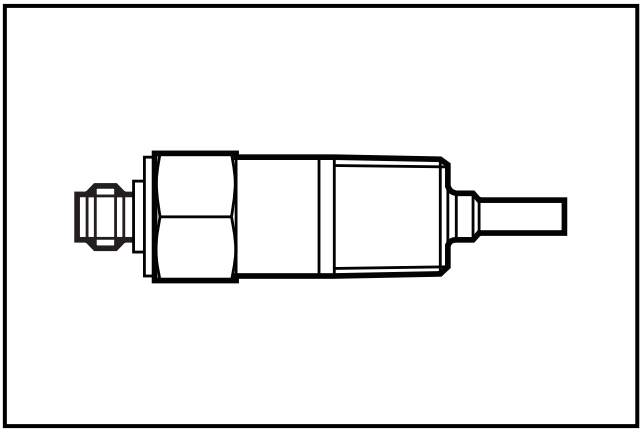
Strömungswächter
Flow monitor compact
Contrôleur de débit compact

SC0505

DEUTSCH

ENGLISH

FRANÇAIS



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Function and features

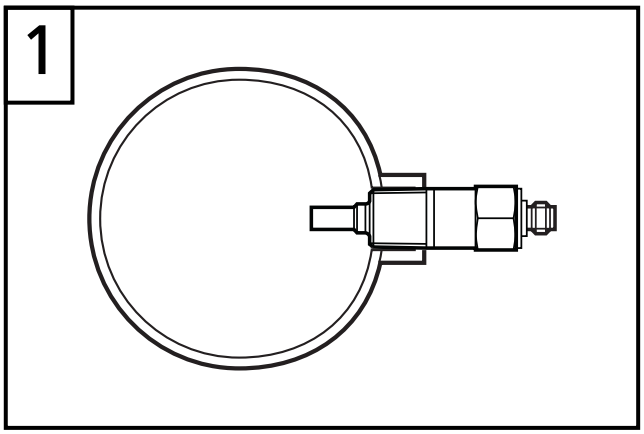
The flow monitor monitors liquid media. It senses whether there is a preset flow and provides a switching signal.
The switch point can be set: minimum value (< 10) - 10 - 15 - 20 ... 55 - 60 - maximum value (> 60).
This value is valid for water and installation in pipes 4". It changes with other media/other pipe diameters.

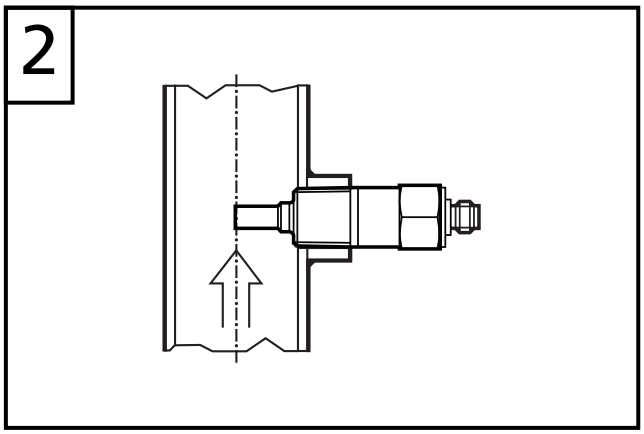
Installation

The sensor tip must be completely immersed in the medium.

- In the case of horizontal pipes mount the unit from the side, if possible (fig. 1).
  When the unit is to be mounted at the bottom of the pipe, it should be free from deposits. When the unit is to be mounted at the top of the pipe, it should be completely filled with the medium to be monitored.
- In the case of vertical pipes mount the unit in a place where the medium flows upwards (fig. 2).

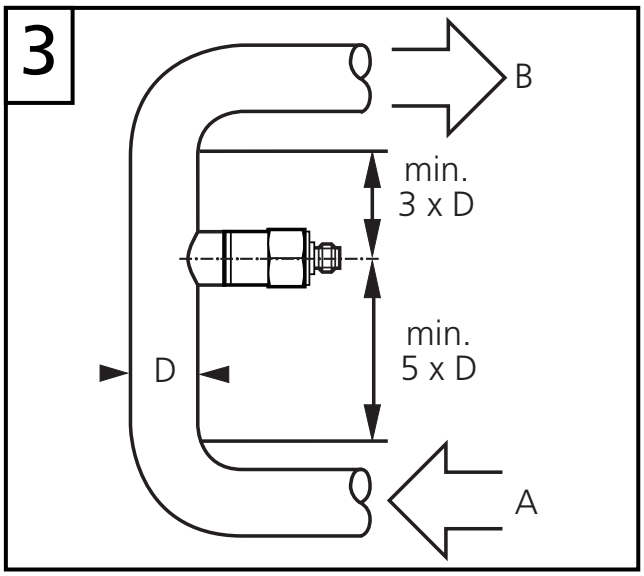
Use only a correctly-sized spanner (or torque wrench) to fasten the unit. Tightening torque max. 100 Nm (with stainless steel adapter) or ANSI B1.20.1.





To avoid malfunction a minimum distance between the flow monitor and bends, valves, changes in cross-section or such like must be observed:

- Min. 5 x pipe diameter upstream (A),
- min. 3 x pipe diameter downstream (B).



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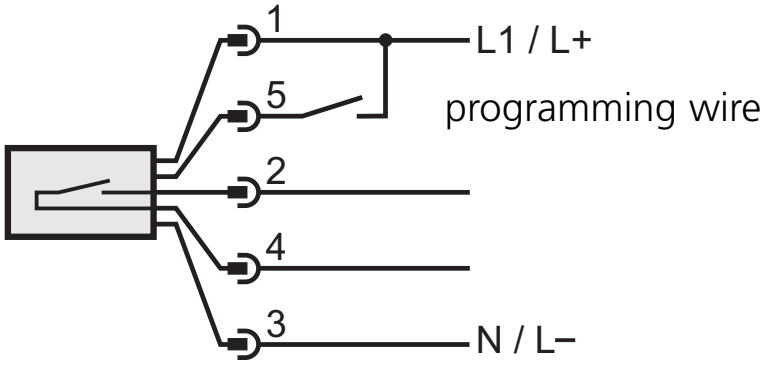
Electrical connection

The unit must only be mounted by an electrician.
The national and international regulations for the installation of electrical equipment must be observed.
Voltage supply and contact rating for the relay to EN50178, SELV, PELV.
The device shall be supplied from an isolating transformer having a secondary Listed fuse rated as noted in the following table.

Overcurrent protection		
Control-circuit wire size		Maximum protective device rating Ampere
AWG	(mm^2)	
26	(0.13)	1
24	(0.20)	2
22	(0.32)	3
20	(0.52)	5
18	(0.82)	7
16	(1.3)	10

Disconnect power before connecting the unit as follows (max. cable length: < 10 m).



Operating voltage [V] . . . . . 24 AC / DC ± 15% (AC: 47...63 Hz)
Contact rating [V] . . . . . 30 AC / 42 DC
Current rating [mA]. . . . . 45 AC / 65 DC
Voltage drop [V] . . . . . < 0,8
Current consumptio [mA] . . . . . < 50
Output . . . . . normally open

The maximum current rating must not be exceeded.
Even if it is exceeded for a short time the unit is destroyed.

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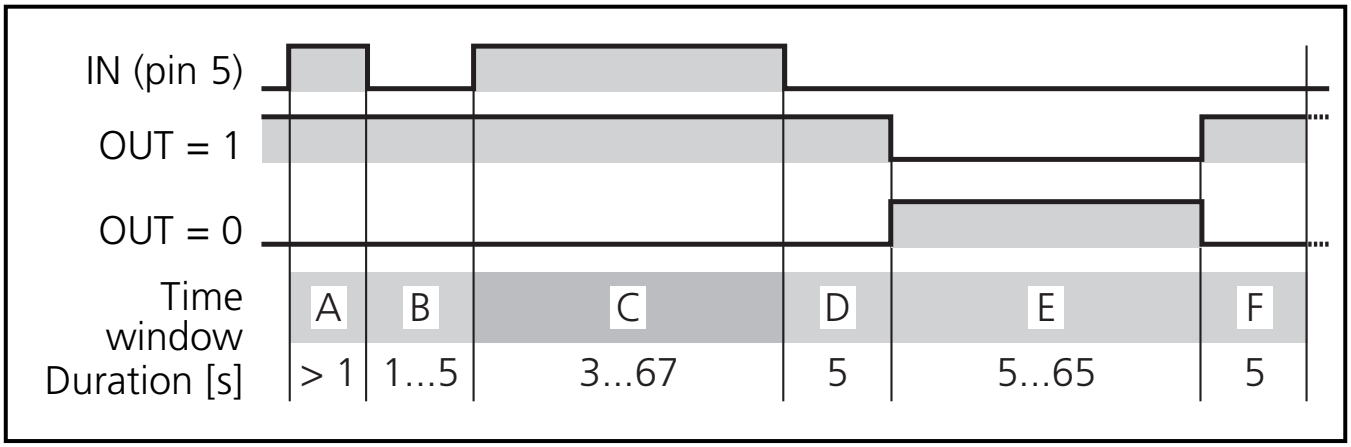
Switch point setting

Apply the operating voltage (+U**B**) to pin 5 for the specified time.



Within the time windows A, B, C the output is switched depending on the flow: output closed (OUT = 1) if flow ≥ SP / output open (OUT = 0) if flow < SP.
If the flow rises or falls within the time windows A, B, C, the switching status can change.
In the time windows D, E, F the output is used for feedback signals (→ table below). It does not react to flow changes.

Time window	Operation
A	Inititalisation of the setting operation
B	Confirmation of the initialisation
C	Switch point setting*
	Signal U**B** at pin 5 [s]: 5 10 15 20 ... 55 60 65
	results in SP [cm/s]: min 10 15 20 ... 55 60 max
D	Last switching status from C is maintained (= internal monitoring).
E	Output signal is inverted (confirmation of the setting); duration = setting time of the selected switch point).
F	Output signal is inverted again (= internal monitoring). After this SP_{NEW} is active.

*Accuracy: ± 1 s; factory setting: SP = 15 cm/s

Operation

After mounting and wiring check whether the unit operates correctly.
Recommended maintenance:
Check the sensor tip for build-up from time to time. Clean it with a soft cloth. If necessary, build-up which adheres firmly (e.g. lime) can be removed with a common vinegar cleansing agent.

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