

Flow switches for liquids

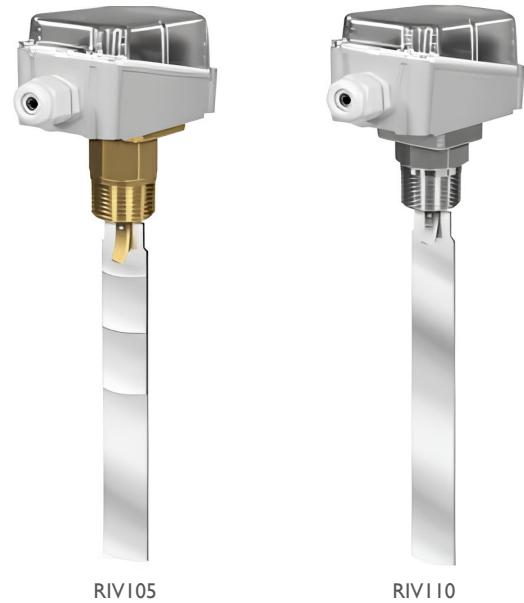
Function

Flow control of corrosive liquids, sea water and normal liquids (depending on model).
Signalling of lack or excessive decrease in flow rate (safety switch).
Made of brass, suitable for normal liquids, and Aisi 316L stainless steel, suitable for sea water and corrosive liquids.

Applications

For use in piping of industrial plants:

- heating and air-conditioning systems;
- refrigeration systems;
- fire protection systems;
- heat pumps;
- oil control equipment;
- lubrication circuits.



RIV105

RIV110

Type	Pipeline Ø	Max. pressure Bar	Normal fluids (brass body)	Corrosive fluids (AISI 316L stainless steel body)	With 'T' fitting	Protection	Flow rate table
RIV105	1...8"	11	•			IP65	1
RIV110	1...8"	30		•		IP65	1
Accessory				DBZ-09 - Aisi 316L stainless steel vanes for liquid flow switch			

1" NPT connection

Technical specifications

Contacts:	dust-proof microswitch, changeover contacts (n.c./n.o.)
Contact rating:	24...250 Vac 15 (8) A
Operation:	-40...+85 °C 10...90% r.h. (without condensation)
Fluid temp:	-40...+120 °C
Max. pressure:	11 bar (SF2: 30 bar)
Connection:	see flow rate table
Body:	see table above
Vane:	stainless steel AISI 316L
Container:	ABS base, transparent PC lid
Storage:	-40...+85 °C < 95% r.h.
Protection:	IP65, class I
Dimensions:	140 x 62 x 65 mm
Weight:	950 g

Installation

The flow switch can be mounted in any position away from elbows or constrictions and with the arrow pointing in the direction of flow. For installations on vertical pipes, the device must be readjusted to compensate for the weight of the paddle. If the unit is mounted downwards, attention must be paid to any deposits that may form. The unit must be mounted in a straight section of pipe without filters, valves, etc., at least 5 times as long as its diameter, both upstream and downstream.

Electrical connections

Valid scheme in the presence of flow

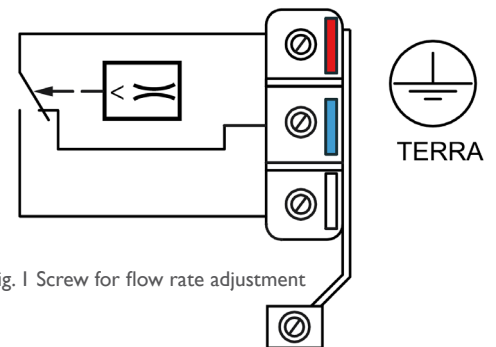


fig. 1 Screw for flow rate adjustment

Connect to the red and white contact of the microswitch (fig.1). The red-white contact opens when the flow drops below the set value. When there is no flow, the red-blue contact closes and can be used as an alarm or signalling contact.

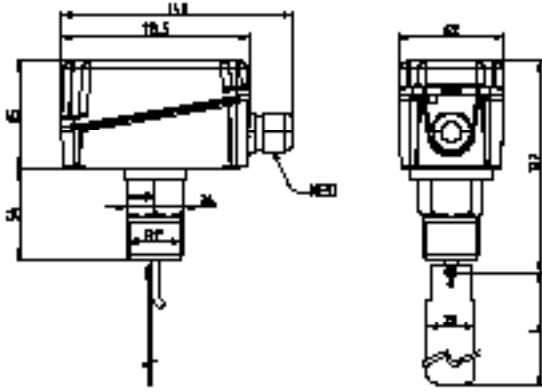
Note

The flow switch is calibrated at the factory with reference to the minimum cut-off value. To increase this value, turn the adjustment screw clockwise. The cut-off value must be \geq the minimum flow required to guarantee the protection of the system. With devices without T-piece, 4 vanes are supplied (see vane drawing), which must be cut according to the pipework. All units with T-piece can be supplied on request.

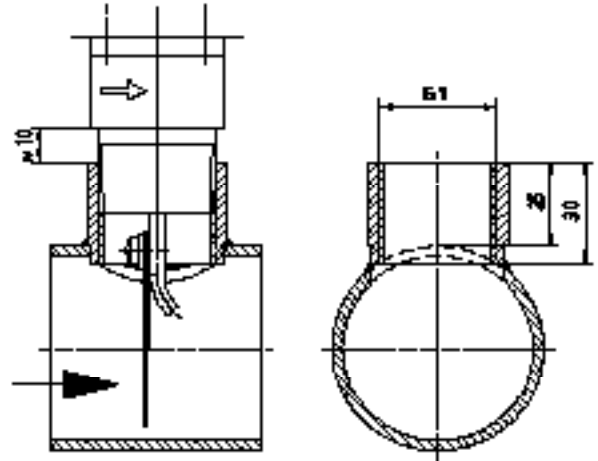
Attention

If the device is used as a minimum flow controller, an additional control device must be placed downstream to activate the alarm condition.

Overall dimensions (mm)



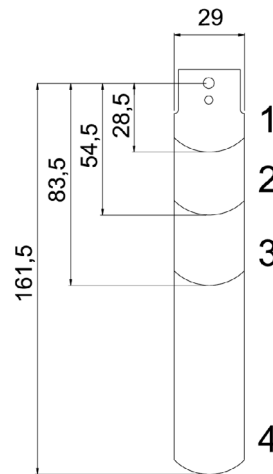
Installation instructions



1- H2O flow rate table RIV105/RIV110

Pipeline β	Qmax. m3/h recommended	Min. adj. m3/h outlet (connection)	Max. adj. m3/h outlet (connection)
1"	3,6	0,6 (1,0)	2,0 (2,1)
1 1/4"	6,0	0,8 (1,3)	2,8 (3,0)
1 1/2"	9,0	1,1 (1,7)	3,7 (4,0)
2"	15,0	2,2 (3,1)	5,7 (6,1)
2 1/2"	24,0	2,7 (4,0)	6,5 (7,0)
3"	36,0	4,3 (6,2)	10,7 (11,4)
4"	60,0	11,4 (14,7)	27,7 (29,0)
4" Z	60,0	6,1 (8,0)	17,3 (18,4)
5"	94,0	22,9 (28,4)	53,3 (55,6)
5" Z	94,0	9,3 (12,9)	25,2 (26,8)
6"	120,0	35,9 (43,1)	81,7 (85,1)
6" Z	120,0	12,3 (16,8)	30,6 (32,7)
8"	240,0	72,6 (85,1)	165,7 (172,5)
8" Z	240,0	38,6 (46,5)	90,8 (94,2)

Palettes



Pipeline	Palettes
1"	1
1 1/4"	1
1 1/2"	1
2"	1+2
2 1/2"	1+2
3"	1+2+3
4"	1+2+3
4" Z	1+2+3+4
5"	1+2+3
5" Z	1+2+3+4
6"	1+2+3
6" Z	1+2+3+4
8"	1+2+3
8" Z	1+2+3+4

For models with the 'Z' addition, the longer vane must be used to obtain the values given in the table. Pressure drop at maximum flow rate (Qmax): 0.08 bar