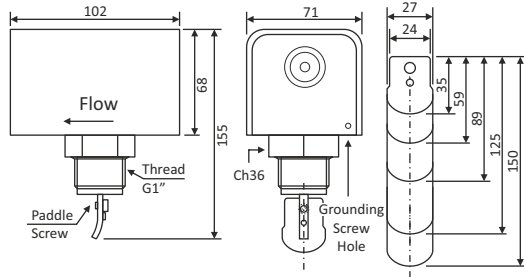


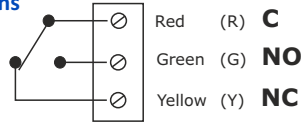
Flow switch for flow control in pipes of Ø1" to 6". It includes 5 paddles stainless steel AISI 301. Horizontal installation by fitting thread G1 inch.

Flow switches are intended to control equipment under normal operating conditions. Where failure or malfunction of a flow switch could lead to an abnormal operating condition that could cause personal injury or damage to the equipment or other property, other devices (limit or safety controls) or systems (alarm or supervisory) intended to warn of, or protect against, failure or malfunction of flow switch must be incorporated into & maintained as part of the control system.

Measures

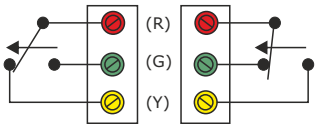


Connections



Switch Action According Flow

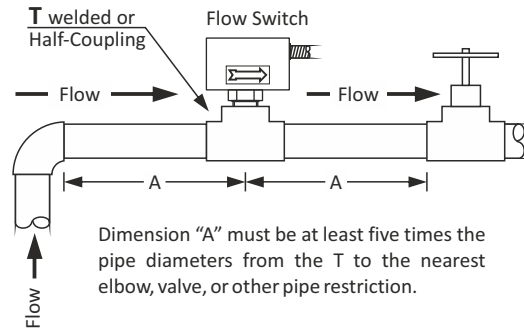
Increase in flow above setpoint, closes contacts red and yellow (C <-> NC)
Decrease in flow above setpoint, closes contacts red and green (C <-> NO)



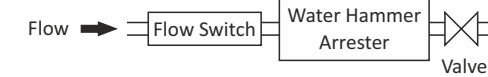
Guarantee Conditions

This appliance has a three-years guarantee limited to replacement of defective parts. Transports not included.
We will not accept any responsibility for damage caused to the appliance by poor handling.
The guarantee does not include:
Appliances with a damaged, effaced or altered series number.
Appliances which have not been connected or used following the instructions that accompany it.
Appliances which have been altered without the prior consent of the manufacturer.
Appliances damaged by blows of liquid spills or gaseous emissions.
For the rest of general conditions visit our web.

Installation



Flow Switch installation with a fast-closing valve



Do not subject the flow switches to water hammer. Use a suitable water hammer arrester if a fast-closing valve is located downstream of the flow switch.

Mount the flow switch in a horizontal pipeline or a vertical pipeline with upward fluid flow. Do not use in a vertical pipeline with downward flow. When mounted in a vertical pipe with downward flow, the switch strips at a slightly higher flow, due to the effect of gravity on the switch mechanism.

IMPORTANT: To allow the switch to detect changes in the fluid flow, the flow paddle must not touch the pipe or any restrictions in the pipe.

Adjust flow paddles to the size of the pipe used. If needed, trim the large flow paddle at the arc corresponding to pipe size and install.

To avoid damaging the switch, do not tighten the switch to the tee by grasping the switch enclosure. Use only the wrench flats provided. Mount the flow switch using the following guidelines:

Important

Before opening the box, to access the connection, make sure the voltage switch. Failure to follow this precaution may result in electrical shock or death.
This controller is not a safety device, or can be used as such, it is the responsibility incorporate adequate protection to every type of installation (**homologated**) installer.
Reserved the right of modify without prior notice.

- Install the flow switch so that the cover and interior are accessible.
- Mount the flow switch so that the flow of fluid is in the direction of the arrow on the switch casing.
- Use a pipe union on each side of the flow switch to allow easy removal or replacement.
- Use pipe thread sealer on male threads only.
- Do not remove the wire grommet from the conduit casing.
- For 1 inches pipe installation, mount the flow switch in a standard 1 in. x 1 in. x 1 in. tee. for bigger sizes of pipe, use a reducing tee to keep the flow switch close to the pipe and provide adequate paddle length in the flow stream.
- Mount the flow switch so the terminals or wire leads are easily accessible for wiring. Screw the flow switch in position so the flat of paddle is at a right angle to the flow. The arrow on the side of the case must point in the direction of the flow.

Flow rates tables for connection/disconnection

Flow rates for the switch with 1-3 inches paddles.

		m ³ /H Required to actuate switch					
Pipe	Inches	1	1-1/4	1-1/2	2	2-1/2	3
Minimum	Flow ↑ (R <->A)	0.95	1.32	1.7	3.11	4.09	6.24
Adjust	Flow ↓ (R <->V)	0.57	0.84	1.14	2.16	2.84	4.32
Maximum	Flow ↑ (R <->A)	2	3.02	4.36	6.59	7.84	12
Adjust	Flow ↓ (R <->V)	1.93	2.84	4.09	6.13	7.27	11.4

Flow rates for the switch with 6 inches paddle.

		m ³ /H nRequired to actuate switch			
Pipe	Inches	4	5	6	8
Minimum	Flow ↑ (R <->A)	8.40	12.9	16.8	46.6
Adjust	Flow ↓ (R <->V)	6.13	9.31	12.3	38.6
Maximum	Flow ↑ (R <->A)	18.4	26.8	32.7	94.3
Adjust	Flow ↓ (R <->V)	17.3	25.2	30.7	90.8

Where paddle size is larger than pipe size, values are for paddle trimmed to fit pipe.

Technical Specifications

Installation: **racor Thread G1"**
Electrical connection: **SPDT**
Maximum Fluid Pressure: **10 bar**
Minimum Fluid Temperature: **0°C**
Maximum Fluid Temperature: **+120°C**
Maximum environment Temperature: **50°C**
Net weight: **0,705Kg**
Switched contacts: **16A(C-NC)**
..... **8A(C-NO)**
Environment pollution: **2**

Adjusting the setting of the flow switch

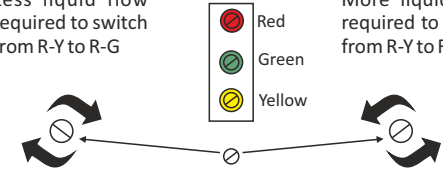
1. Disconnect the power supply before making electrical connections.
 2. Remove the flow switch cover .
 3. Turn the adjusting screw clockwise to raise the flow rate. Turn the adjusting screw counterclockwise to lower the flow rate. See diagram.
 4. Replace the cover after completing adjustments. Tighten the cover screw.
- Note: Do not lower the flow rate unless it has been raised from the factory setting.

Lower Flow Rates

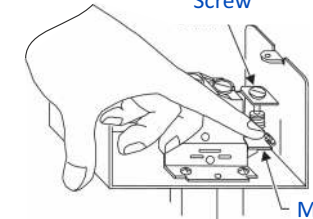
Less liquid flow required to switch from R-Y to R-G

Higher Flow Rates

More liquid flow required to switch from R-Y to R-G



Range Adjustment Screw



Main lever

To verify that the flow rate is set above the factory minimum:

1. Depress the main lever numerous times. If the lever fails to click upon return at any time, the flow rate is set below the factory-set-minimum.
2. Raise the flow rate to approximately the factory minimum by turning the adjusting screw clockwise until the lever clicks upon return every time.

Sonder Regulación, S.A.



Avda. La Llana, 93
08191 RUBÍ
(Barcelona) Spain
www.sonder.es

