

INSTALLATION, OPERATION & MAINTENANCE MANUAL

Liquid Flow Switch



Ref. GENE BRE: 2848 – 2850

INSTRUCTIONS FOR INSTALLATION, OPERATION & MAINTENANCE MANUAL

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1. Product Description

Safety device for detection and distance transmission in case of lack of flow of any non-corrosive liquid, such as water, oil, etc.

1. Pumps protection in case decrease or lack of flow occurs.
2. Sequential control of pumps performance.
3. Self-starting of auxiliary pumps and machines.
4. Action on alarm and signalling systems.
5. Disconnection of water flow cooling processes and equipment when flow is interrupted.
6. It switches off the sprayers when air supply fails in the heating coil.
7. Disconnects machine tools if freezing oil flow fails

2. Technical Features & Data

1. Connection: 1" male thread ISO7/1(EN 10226-1).
2. Suitable for pipes from 1" to 8".
3. Maximum working pressure: 10 bar.
4. Maximum flow temperature: 110°C.
5. Storage temperature: -20°C - 80°C.
6. Rated voltage / current: 250VAC / 10A.
7. Protection: IP64 (Ref.2848) and IP54 (Ref.2850).
8. Galvanized aluminium alloyed box (Ref.2848) , Coated steel (Ref.2850).
9. Brass connector.
10. Blade: stainless steel.
11. Water tightness bellows: alloy copper zinc.

12. Adjustment screw, fixation screw and spring made of steel.

13. Applicable to cool/ heat fluid system.

3. Safety Instructions

The scope of this manual is to enable a competent user to install, operate, adjust and inspect a Liquid Flow Switch. These instructions must be observed, otherwise a safe operation of the device no longer warranted.



As electric device, during electrical operation certain parts inevitably carry lethal voltages and currents (ELECTRICAL RISKS). Work on the electrical system or equipment must only be carried out by a skilled electrician himself or by specially instructed personnel, in accordance with the applicable electrical engineering rules, health and safety Directives and any other national legislation applicable.



Under no circumstances should any modification or alteration be carried out on the device as this could very well invalidate the conditions which the device was designed.

4. Transport and Storage

- **All products are packed in sturdy packing. During transport measures should be adopted in order to prevent impacts, hits.**
- **Storage must be off the floor, covered with a sealed dust protector.**
- **While commissioning, Genebre, S.A. recommend a visual inspection in order to detect any anomaly caused during the transport, handling or during the storage.**

5. Pre-Installation Inspection

- Verify the product nameplate to insure correct model number, before installation or use.



VERY IMPORTANT NOTICE: Follow these instructions carefully to avoid damage.



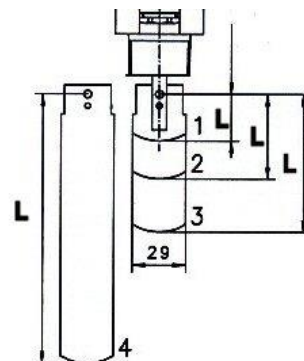
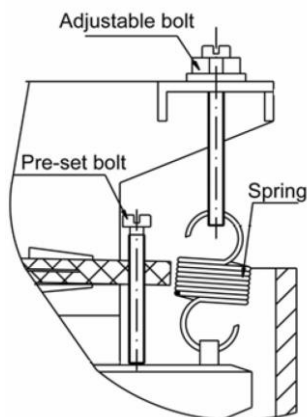
Safety instructions on chapter 3 must be observed. Work on electrical system or equipment must only be carried out by skilled electrician.

6. Installation

- Reserve the space for maintenance routines and tasks.
1. Mount on return pipes.
 2. Mount on horizontal pipes.
 3. Keep a certain distance from sources of turbulences (Elbows, valves, pumps, etc) to ensure steady working flow. Recommended minimum distance is equal to 5 times of the pipe's diameter.

6.1 Flow Adjust

Fully loosen the screw shown in the picture to have maximum flow rate setting. The flow switch is supplied ex-factory with the setting screw fully tightened (minimum setting). The following table gives the flow range in relation to the pipe diameter and the blade length.



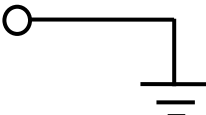
DIMENSIONS		FLOW FOR DETENSIONING SPRING (m³/h)		FLOW FOR MAXIMUM TIGHTENED SPRING (m³/h)	
"Ø" PIPE	"L" BLADE (mm)	SWITCH ACTION	SWITCH RETURN	SWITCH ACTION	SWITCH RETURN
1"	34 (1)	1.1	0.5	2.0	1.6
1 1/4"	34 (1)	1.2	0.7	2.6	2.0
1 1/2"	57 (2)	1.6	1.0	3.3	2.6
2"	57 (2)	3.2	2.2	6.6	6.1
2 1/2"	88 (3)	4.2	3.2	8.0	7.0
3"	88 (3)	6.3	4.7	12.0	11.0
4"	88 (3)	8.5	6.0	18.0	17.0
5"	167 (4)	13.1	9.0	27.0	25.0
6"	167 (4)	17.2	12.0	33.0	31.0
8"	167 (4)	47	39.0	94.0	91.0

6.2 Wiring Diagram

Brown + Blue: is normally opened (the contacts will connect when action).

Brown  COM.

Blue  N.O.

Yellow & Green 

Brown COM.

Black N.C.

Yellow & Green

These actuators are free maintenance, but when conditions are more severe, more frequent inspections may be advisable.

- Insure wiring is insulated, connected and terminated properly.
- Insure all screws are present and tight.