

Brief introduction

Thermal flow switch adopts the precision electronic components generally applied in aerospace and automobiles, as well as the reliable and stable circuit design, to ensure a precise and stable flow signal. The products have been widely used in iron and steel, metallurgy, pharmaceutical and chemical industries etc.

As an upgraded version of model RMD-F1, RMD-FE thermal dissipation flow switch has made a great improvement in probe signal procession that makes it more powerful in operation and control, easier in operation and more convenient in installation. The same as RMD-F1 thermal flow switch, RMD-FE thermal dissipation flow switch is designed based on the heat exchange principle, with heating modules and thermal modules embedded in the the probes. The heat dissipation of heating module is closely related to the velocity of the measured flow. If there is no medium flow, the thermal circuit will receive a fixed value. If the medium flows through the probe, the thermal circuit will receive a signal changeable with the flow velocity of the medium. The thermal circuit converts the temperature difference signals of heating module and thermal module into electrical signals, while the processor converts them into PNP/NPN/4-20mA/relay signals and outputs.

The switch is designed for both gas and liquid. It can be used for the cutoff monitoring of gas and hydraulic system, circulating water, cutting fluid and lubricant, as well as the idling protection of pumps.



Thermal flow switch features

- Digital display flow percentage
- Microcomputer based
- No movable parts, free maintenance
- Easy to operate, easy installation
- Gas liquid dual use
- High sensitivity
- PNP/NPN/RELAY/4...20mA
- One type for various pipe diameters
- Continuously adjustable switch value
- Almost no pressure loss
- Overall protection grade Ip67

Technical parameters

Measuring range: Water:3~300cm/s ; Air:200~3000cm/s ; Oil:3~300cm/s

Accuracy: $\pm 1 \sim \pm 10$ cm/s

Warm up time: 3 minutes

Working pressure: 100Bar

Medium temperature: -20 to 80°C

Install: G1/2 ,G1/4 Male thread ,M18 Female thread

Output signal: PNP / NPN / Relay / 4-20mA

Power: 24VDC , 85~265VAC , 120~370VDC

Sensor length: 15mm , 20mm , 30mm , 40mm ,50mm, 60mm

Display: 7 segment LED digital display

Consumption current: < 80mA

Setting: Button

Response time: 2(2-10)s

Load: Current : 250mA Relay : 30VDC/5A ,85~265VAC/5A,
120~370VDC/5A

Max.temperature gradient of medium: 300K/min

Output protection: Reverse / Short-Circuit / Overload

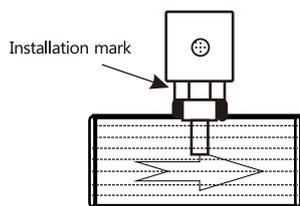
Protection grade: Ip67

Wiring: M12 with 1m cable

Material: Sensor : ANSI316L

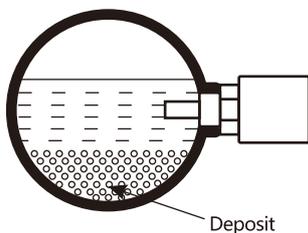
ATO Flow Switch Installation Diagram

Horizontal installation



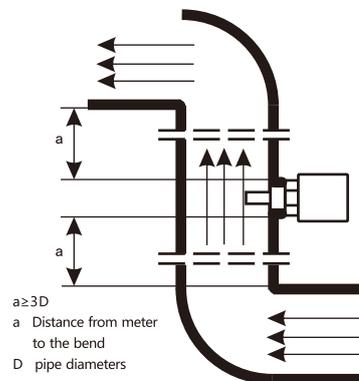
The mark is in opposite direction with flow

Side installation

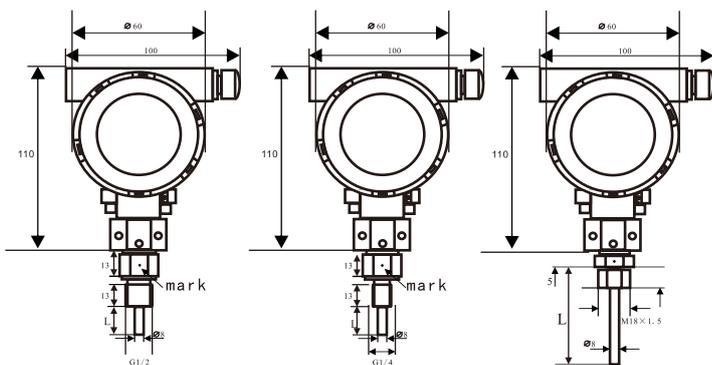


If there is deposit in the pipe please use side mount

Installation with bend pipe



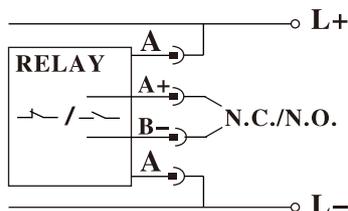
Dimensions



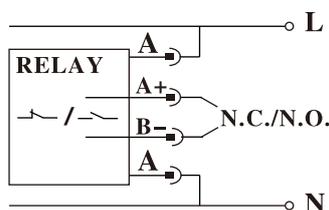
The length of Y has two types according to the power:
 (the 24VDC:Y=45mm;85-265VAC:Y=60mm)
 The length of L is determined by the middle of the products, which include five types, ie,
 (15mm, 20mm, 30mm, 45mm, 60mm)

Wiring Diagram

24VDC



85-265VAC





MODEL:RMD-FE



Connection

G1/2 male thread	G1
G1/4 male thread	G2
M18*1.5 female thread	M
customized	N



Sensor length

15mm	15	40mm	40
20mm	20	60mm	60
30mm	30	customized	N



Power supply

-F	18~30VDC	-T	85~265VAC
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Output

P	PNP	N	NPN
D	RELAY	A	4...20mA



Electrical connector

M12×5 pin	straight type	G	M12×5 pin	elbow type	W
M12×8 pin	straight type	G	M12×8 pin	elbow type	W



Standard model:RMD-FEG120-FD