MFM500A Flow Switch

Features

- OLED screen, switchable display between the progress bar and digital display
- All stainless steel housing, IP67 protection
- Temperature compensation
- There are many output modes to choose form
- No moving parts, maintenance-free
- Switch output, control point setting continuously on panel
- Compact size, support inverted display
- Mounting joint can be equipped with different interfaces for a variety of pipe diameters requirement

Introduction

MFM500A Flow Switch is an intelligent thermal diffusion principle-based flow monitoring sensor. It adopts ARM processing core and combines with high quality sensors and dedicated circuit. With temperature-compensation and calibration, it can ensure measurement accuracy in the case of water temperature change. It is available for real-time monitoring of pipe water flow. It can be used for cooling or lubrication system flow monitoring to realize pre-warning and protection for critical equipment when there is flow fault. It uses fully enclosed design, stainless steel construction to adapt to a variety of application environment. It is with overvoltage, over-current and reverse polarity protection function. With self-luminous OLED screen, it allows switchable display between the progress bar and digital display numbers. MFM500A supports quick action point set, also it has display inversion function that enables installation in any direction, and no need for frequent adjustment and maintenance. It can be applied for operation protection of large equipment in fields such as power generation, metallurgy, steel, paper, boilers etc.

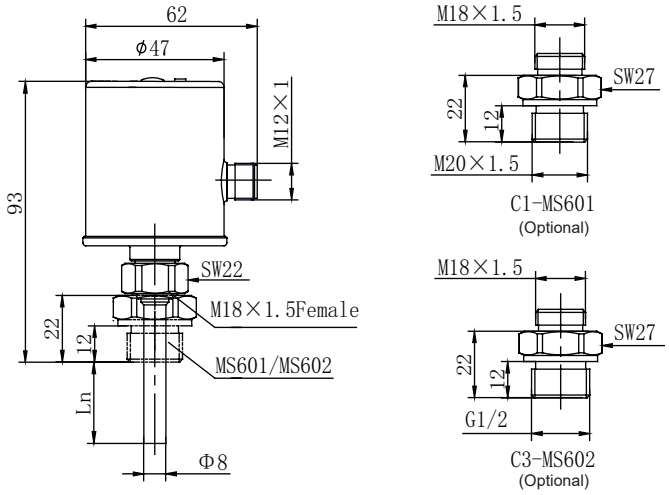
Specification

Measure Range	1cm/s ～ 150cm/s (water);
Optimal Range	3cm/s ～ 100cm/s (water)
Power Supply	(24±4.8)V DC
Working Current	≤ 60mA
Switch Accuracy	±10cm/s
Hysteresis	±2cm/s ～ ±8cm/s
Initial Time	2s ～ 15s, 8s(typ.)
Switch-off Time	1s ～ 15s, 2s(typ.)
Switch-on Time	1s ～ 13s, 2s(typ.)
Output Signal	1relay/2 PNP，2PNP+4 ～ 20mA DC
Output Function	NO, NC(optional)
Relay Characters	Switch voltage: ≤ 250V AC / 30V DC
	Switch current: ≤3A
Transistors Characters	Switch voltage drop: ≤ 1.5V
	Switch current: ≤ 400mA
Display	OLED indicator, resolution 128×32
Electrical Protection	Reverse, short-circuit,over-voltage
Housing	Stainless steel
Button	PP
Probe	Stainless steel
Installation	Joint mounting + adaptor
Endurance Pressure	10MPa
Set	Button
Electrical Connection	M12×1 5-pin plug
Gross weight	265g
Water Temp.	-20℃～ 80℃
Storage Temp.	-30℃～ 85℃
Working Temp.	-20℃～ 70℃
Protection	IP67
Temperature Compensation	5℃～ 50℃ (water)
Electromagnetic Compatibility	GB/T17626.2/4-2018, GB/T 17626.3-2016
Shock	≤3g (GB/T 2423.10-2019)
Impact	≤ 50g/11ms (GB/T 2423.5-2019)

Note: The above specification test medium is water; 5cm/s ～ 100cm/s; 20℃ (Factory defaults)

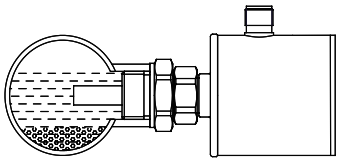
Outline Connection(Unit: mm)

Outline Construction and Installation are shown below:

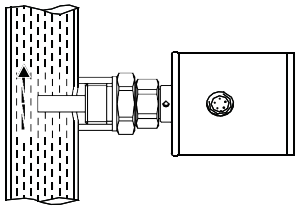


Suggested installation method:

Horizontal Pipe:



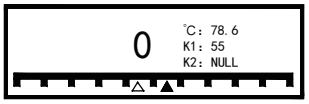
Vertical Pipe:



Two Display:

Progress Bar

Digital Display

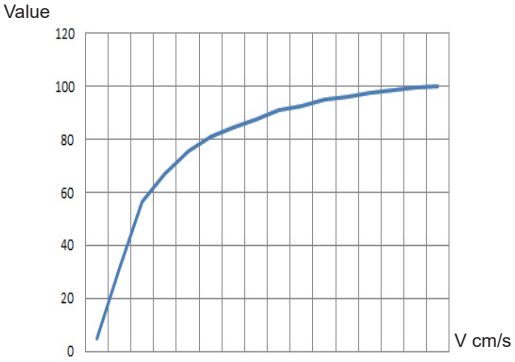


▲Switch Point K1

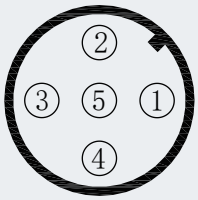
Δ Switch Point K2

When Switch Point Sign light is flashing, it indicates that the velocity exceeds the switch action velocity

Curvilinear relation between digital indication and velocity:

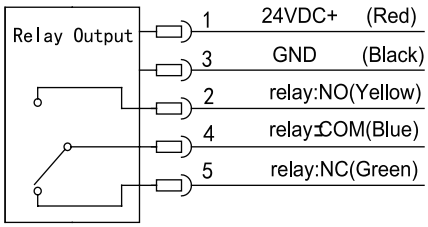


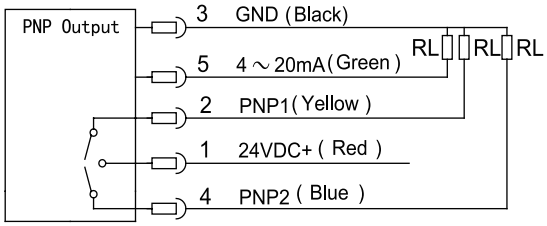
Electrical Connection

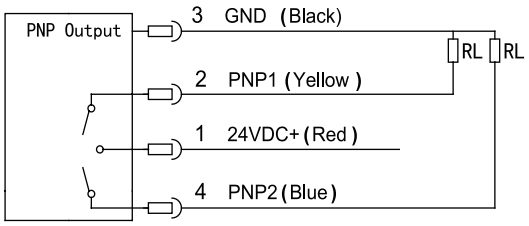


M12×1

Color	Pin	Relay output	PNP output	PNP+4 ～ 20mA DC Output
Red	1	IN+（24V DC+）		
Black	3	IN-（GND）		
Yellow	2	Relay: NO	PNP1	PNP1
Green	5	Relay: NC	/	4mA ～ 20mADC
Blue	4	Relay: COM	PNP2	PNP2







Order Guide

MFM500A	Flow Switch									
	Code	Power Supply								
	DC	24VDC								
		Code	Process Connection							
		C1	M20×1.5 male adaptor(MS601)							
		C3	G1/2 male adaptor(MS602)							
			Code	Output						
			J	1×Relay Output						
			P	2×PNP Transistor Output						
			PE	2×PNP + 4mA ～ 20mADC						
				Code	Probe Length					
				L1	15mm					
				L3	21mm					
				T（X）	Custom-made Xmm（special review）					
MFM500A	DC	C3	J	L1	Whole Spec.					

Notes：

1. Pressure port can be customized for users. Please note in the purchase order.
2. If users have special requirement for the specification or function, please contact us freely.
3. Optional accessories:
   MS601 M20×1.5 male adaptor
   MS602 G1/2 male adaptor