M9.00

2-Wires Flow Monitor and Transmitter

aliaxis

M9.00

FLS M9.00 is a powerful flow monitor and transmitter based on 2-wire technology, designed to convert the frequency signal of flow sensors into flow rate. The M9.00 monitor is equipped with a large 4" display which shows measured values clearly. In addition, the standard backlighting further improves the visibility of the display. The main parameters can be configured with a first wizard. A reference flow rate can be used for recalibration or for an alignment through an intuitive "in-line calibration". A 4-20 mA 2-wire analogue signal combined with a solid-state relay allows you to remotely manage the instantaneous flow rate or an alarm. The M9.00 monitor is equipped with a USB port that facilitates the updating of the instrument software by the customer.

2-WIRES FLOW MONITOR AND TRANSMITTER

APPLICATIONS

- Water treatment plants
- Industrial wastewater treatment and recovery
- Water distribution
- Filtration systems
- Swimming pools and spas
- Irrigation and fertilization
- Leak detection

MAIN CHARACTERISTICS

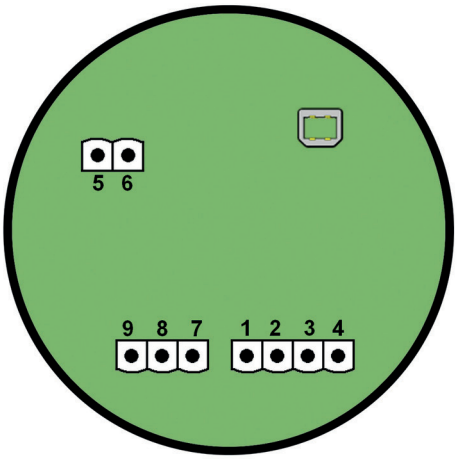
- Large display
- Extremely bright backlighting
- Installation flexibility
- Solid-state relays for programmable alarms
- Multilingual menu
- USB port for software upgrade

TECHNICAL DATA	
General information	**Compatible sensors**: Hall - effect flow sensors with frequency output, ULF Reed
	Materials: – Case: ABS – Display: PC – Panel and wall gasket: silicone rubber – 5-button keyboard: silicone rubber
	Display: – Transflective technology – Backlight version:monochrome – Backlighting activation: available without activation of analogue output – Update rate: 1 second – Protection class: IP65 front
	Flow input range (frequency): from 0.5 to 500 Hz
	Flow input accuracy (frequency): 0.5%
Electrical data	**Supply voltage:** from 12 to 24 VDC ±10% regulated
	Max electrical consumption: < 20 mA (backlighting off); < 30 mA (backlighting on)
	Hall effect flow sensor power supply: – 3.8 VDC at < 20 mA – Optically isolated from current loop – Short circuit protected
	1 current output (not available with active backlighting): – 4-20 mA,isolated, fully adjustable and reversible – Max loop impedance:800 Ω @ 24 VDC - 250 Ω @ 12 VDC
	1 solid state relay outputs: – User selectable as MIN alarm, MAX alarm, pulse output, window alarm, off – Optically isolated, 50 mA max sink, 24 VDC max pull-up voltage – Max pulse/min: 300 – Hysteresis: user selectable

Environmental data	**Operating temperature:** from –10°C to 70°C (from 14°F to 158°F)
	Storage temperature: from -30°C to +80°C (from -22°F to +176°F)
	Relative humidity: from 0 to 95% not condensing
Standards & Approvals	Manufactured under ISO 9001 Manufactured under ISO 14001 CE RoHS Compliance EAC

ELECTRICAL CONNECTIONS

Rear view of electrical connections



1	+ VDC
2	+ LOOP
3	- LOOP
4	- VDC

SENSOR	
7	GND
8	IN
9	V+

SSR	
5	NO
6	COM

PRODUCT CODES

M9.00.PX - M9.00.WX

2-wires Flow Monitor and Transmitter

Code	Mounting	Power supply	wires power Technology	Sensor Input	Output	Weight (gr.)
M9.00.P1	Panel	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	500
M9.00.W1	Wall	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	550
M9.00.W2	Wall	110 - 230 VAC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	650

S.S.R: solid state relay

M9.00.XX

2-wires Flow Monitor and Transmitter Field mounting

Code	Power supply	wires power Technology	Sensor Input	Output	Length	Main Wetted Materials	Weight (gr.)
M9.00.01	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L0	C-PVC EPDM	550
M9.00.02	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L0	C-PVC FKM	550
M9.00.03	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L1	C-PVC EPDM	550
M9.00.04	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L1	C-PVC FKM	550
M9.00.05	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L0	PVDF EPDM	550
M9.00.06	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L0	PVDF FKM	550
M9.00.07	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L1	PVDF EPDM	550
M9.00.08	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L1	PVDF FKM	550
M9.00.09	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L0	316L SS EPDM	600
M9.00.10	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L0	316L SS FKM	600
M9.00.11	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L1	316L SS EPDM	600
M9.00.12	12 - 24 VDC	2 wires	Flow (Frequency)	1*(4-20mA) 1*(S.S.R.)	L1	316L SS FKM	600

S.S.R: solid state relay