Flow rate sensor TS-FM

Flow rate 1-80 Ltr./min

Characteristics

- very fast response time
- large overload security
- measurement range 1:80 !
- low pressure loss
- compact dimensions
- high-temperature-type available

Description

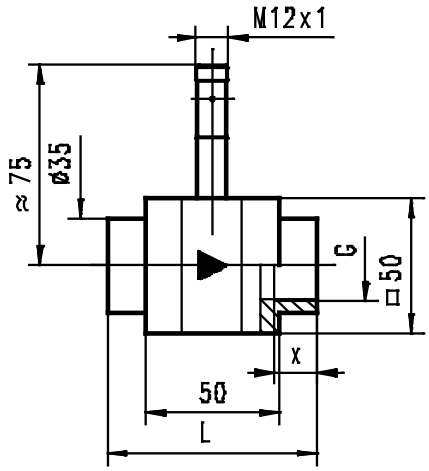
A thin, spring-mounted shutter that covers the entire flow cross-section is displaced by the flow of the liquid. The shutter has a magnet that creates a changing magnetic field when the shutter is displaced. This field is detected by an analogue hall-sensor. Due to the spring properties of the shutter and a molded stop, even strong media impacts can be withstood. The low number of parts coming into contact with media guarantees low soiling properties and reliable operation.

Since the shutter functions only through bending without a rotary bearing, there are no friction effects and thus a very small hysteresis and good reproducibility of the measurement results or switching point. The low mass and evaluation of the entire flow cross-section are responsible for the fast response time and unproblematic pipeline routing.

Full metal type
The basic type is manufactured with a plastic body and is withstanding a pressure of 16 bar. A full metal body (brass, nickel-plated) withstanding 100 bar is available as an option. The use of metal fittings and connection hardware is mandatory due to the increased higher pressure strength. Measurements or switching value adjustments can be done in the range of 1…80 litres/min.

High temperature
If the full metal type is equipped with high-temperature sensors, a media temperature of up to 150˚C can be performed and monitored. The primary sensor element is then placed in the measuring unit, while the evaluation unit is located at the end of a 0,5 m heat resistant cable.

Dimensions



Technical data

Diameter G	PN bar	Range l/min H2O	L mm	X mm	Weight (kos)
G 1/4	16	1 -15 l/min	74	12	0,6
G 3/8	16	1 -25 l/min	74	12	0,6
G 1/2	16	1 -50 l/min	78	14	0,6
G 3/4	16	1 -80 l/min	82	16	0,65
G 1	16	1 -80 l/min	82	18	0,7

Weight applies to plastic housing w/ metal connectors

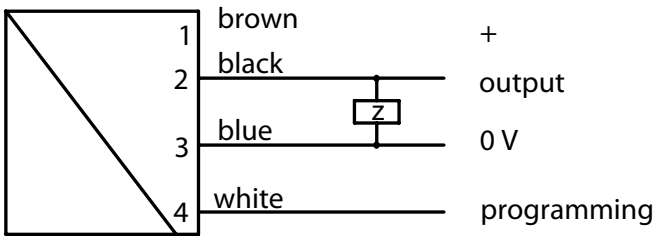
Marketed By: D. K. Instruments Pvt. Ltd. 76/2, Selimpur Road, Kolkata – 700 031
Tel: 91-33-2415 1310, Fax: 91-33-2415 2311, Email: info@dkinstruments.com, Url: www.dkinstruments.com

Flow rate sensor TS-FM

Flow rate 1-80 Ltr./min

Technical data	Type: TS-FM
Measuring range	1 …80 l/min in water, basic ranges: please see Type nomenclature
Accuracy	basic ranges: +/- 3% meas.value or 0,25l/min. Small quantity range: +/- 3% meas.range 0,1 l/min (the respectively higher value is valid)
Pressure loss	max. 0,5 bar at measuring area end point
Operating pressure	plastic body type: 16 bat at 70˚C, Full metal type: 100 bar
Media temperature	0…70˚C, high-temperature option 0…150˚C
Ambient temperature	0...70°C
Storage temperature	-20...80°C
Supply voltage	10…30 V DC, voltage output 10V: 15…30 V DC
Electrical connection	circular plug-in connector M12 x 1, 4-conductor
Output data.	
Current output	4..20 mA
Voltage output	0…10 V, output voltage max. 20mA
Switched output	push-pull output, output current max.200 mA minimum monitoring, maximum switch on reques
Frequency output	push-pull output, output current max.200 mA output frequency depending on measuring range, baic value 500 Imp/l (complies with 666,7 Hz at 80 l/min.) Small quantity range: 5000 Imp/l (complies with 500 Hz at 6 l/min.) other frequency ranges on request. all outputs are short-circuit proof and protected against polarity reversal.
Protection class	IP 67
CE conformity	yes
Material specs.:	
Fluid-wetted	
Plastic body	PPS
Full metal body:	brass, nickel-plated (stainless steel 1.4305 on request)
Connections	POM or brass, nickel-plated (stainless steel 1.4305 on request)
Gaskets:	Viton (others on request)
Bezel:	stainless steel 1.4031 K
Magnet fixture:	PPS
Adhesive	epoxy resin
Not fluid-wetted:	
Sensor tube	brass, nickel-plated
Adhesive	epoxy resin
Flange screws	stainless steel

Terminal assignment



The correct supply voltage value acc. to datasheet values has to be obeyed prior to installation! The use of shielded cable is highly recommended, cable length < 30 m, supply lines < 10m.

Novelties

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