Inductive Ring Sensor

ALARM OPTIONS: 7430

Inductive Ring Sensor

7400 Series flowmeters with metallic floats can be ordered with an inductive ring sensor that is able to detect a predetermined rate of flow.

Inductive ring sensors are 2-wire, DC, low current devices and are designed to be used with a remote intrinsic safety barrier /switch isolator. Sensors are available as either proximity or latching devices . The sensor threaded on the screw can be positioned to trigger at any point on the scale. It is able to detect the metal float (see table below) by producing and electromagnetic field that senses the float within its sensing zone.

The inductive sensor connects to a barrier/switch isolator which powers the sensor and provides the desired switching option. Barrier/switch isolators are available with 220VAC, 110VAC or 24VDC supply voltage requirements, contain single pole double throw (SPDT) relays, and are DIN rail mountable. See barrier/switch isolator specifications for electrical connections and further details.

Note: We can supply switch isolator/barriers upon request. User power supply voltage must be provided.

Electrical Specifications:

Type: Inductive Proximity or Latching
Supply Voltage: 5-25V DC (Switch Isolator)
Output: NAMUR
Output Load Current:
<=1 mA – Float Present
>= 3 mA (15 mA max) – Float Absent
Switching Frequency: 2 kHZ
Housing Rating: IP67
Wiring: PVC Covered, 2 Conductor, 26 AWG, 6.5 Feet Long. Brown (+), Blue (–)
Pepperl & Fuchs Ring Sensor Approvals:
UL: General Purpose
FM: Intrinsically Safe
CSA: Intrinsically Safe
CENELEC: Intrinsically Safe
Electrical Connections: See barrier/switch isolator specifications for details.

Fiber Optic Sensor

The fiber optic alarm sensor is an available option for all 7400 Series flowmeters. The sensor is used to detect a predetermined rate of flow. The sensor can interface directly to a Programmable Logic Controller (PLC) or when connected to a separate relay can trigger a local or remote alarm.

The fiber optic sensor is mounted in a junction box attached to the side of the flowmeter. The sensor uses a pair of plastic transparent cables, an emitter and receiver, to transmit the light generated by the sensor. Each cable is terminated in the housing shown below. The housing is threaded on a screw and can be positioned at any point on the scale.

Electrical Specifications:

Supply Voltage: 10-30 VDC
Supply Current: 25 mA
Output: NPN Sinking, N.O. & N.C.
PNP Sourcing, N.O. & N.C.
Output Rating: 150 mA Max Total Load
Output Response Time: 1ms
Off State Leakage Current:
1 MICOAMP @ 30 VDC
Output Saturation Voltage:
< 1 V at 10 mA DC
< 1.5 V at 150 mA DC
Repeatability: 0.25 ms
Housing Rating: IP67; NEMA 6
Operating Temperature: -5° to +131° F

Part Number	Type	Float Size	Float Material
SE7410	Proximity	1/8″	SS, CB
SE7415	Proximity	1/4″	SS, CB
SE7410B	Latching	1/8″	SS, CB
SE7415B	Latching	1/4″	SS, CB

ORDERING:

Use the following guide to determine the specific product number you require.

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Meter Series	**Tube Number**	**Float Material**	**Fitting Material**	**O-ring Material**	**Scale**	**Valve Option**	**Optional Alarm Switch**
	See Specifications	Glass - 1	316L SS - 1/8" F NPT - 1	EPR - 1	Millimeter - 1	316L SS - Inlet - 1	Without Alarm - 0
	Table	Sapphire - 2	316L SS - 1/4" FNPT - 2	Buna-N - 2	GPH Water@70°F - 2	316L SS - Outlet - 2	Fiber-Optic NPN (Proximity) - 1
		316 SS - 3	PVC - 1/4" FNPT - 3	Viton® - 3	LPH Water@70°F - 3	No Valve - 3	Fiber-Optic PNP (Proximity) - 2
		Carboloy - 4	PVC - 1/8″ FNPT - 4	Kalrez® No Valve - 4	CC/MIN Water@STP - 4	PVC - Inlet - 4	Inductive Ring Sensor (Proximity) - 3
		Tantalum - 5	PVDF - 1/4" FNPT - 5	Kalrez® Valve - 5	SCFH Air@STP - 5	PVC - Outlet - 5	Inductive Ring Sensor (Latching) - 4
			PVDF - 1/8" FNPT - 6		SLPH Air@STP - 6	PVDF - Inlet - 6	
			Hastelloy® C -1/4" FNPT - 7		SCC/MIN Air@STP - 7	PVDF - Outlet - 7	
			Hastelloy® C -1/8" FNPT - 8		Non standard - 8	Hastelloy® C - Inlet - 8	
						Hastelloy® C - Outlet - 9	