

IE Metal Tube Rotameters

VARIABLE AREA FLOWMETERS – METAL TUBE

Description

The IE Model 3809 Metal Tube Rotameter is a rugged, all metal flow meter. Indication is provided by means of a magnetic coupling where a magnet, encapsulated in the float, is coupled to a rotary magnet in the rear of the indicator, thus turning the dial indicator mounted on the meter. Optional alarm and Electrical Transmitters are also available. (Refer DS 5000 for Transmitters).



IE METAL TUBE ROTAMETERS

Design Features

- Straight through flow path construction
- No float extension outside meter body
- No spools required
- Flanged connections
- Easy to read scale graduated in flow units
- Permanent magnetic link between metering float and indicator

Specifications

WARNING: Do not operate this instrument in excess of the specifications listed below. Failure to heed warning may result in serious personal injury or damage to equipment.

Performance

Standard Accuracy: +2% Full Scale Optional Accuracy: +1% Full Scale Repeatability 0.5% Full Scale

Flanges

Standard: 316 SS Optional: Steel, 316L SS, HASTELLOYS C, 304 SS, 321 SS

Instrument Case

Standard: Die cast aluminium with Neoprene gasket Optional: Epoxy painted

Limit Switches

Two electronic limit switches can be installed in the indicator of the Model 3809 to allow initiation of signalling or switching functions on pre-set flow values. The limit switch operates using a slot initiator that is inductively actuated by an interrupter mounted on the pointer spindle. Any flow value can be used for setting the limit value by rotating the interrupter around the spindle. Technical Data LIMIT SWITCH POWER SUPPLY: 8 Vdc ACTIVE AREA CLEAR: >2.2mA ACTIVE AREA OBSCURED : < 1mA SELF-INDUCTANCE: 160 H (only relevant for hazardous operation) SELF-CAPACITANCE: 40nF (only relevant for hazardous operation) AMBIENT TEMPERATURE: -25 to 100°C PROTECTION CATEGORY: IP65 Electrical characteristics in conformance with DIN 19 234 or NAMUR.



Threaded

Flange face

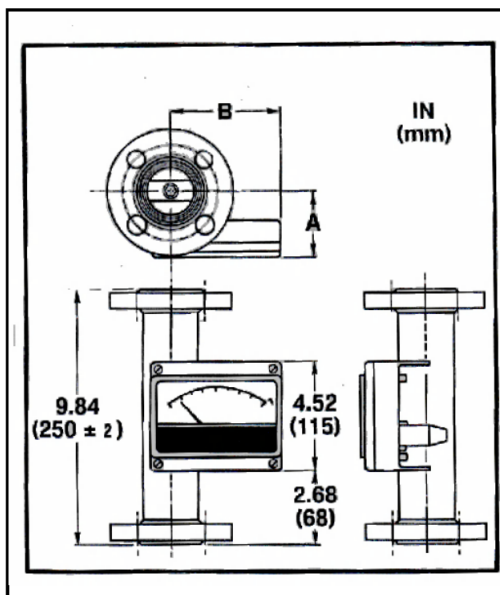
REPRESENTATIVE CONFIGURATIONS

Capacities

Size	FLOAT #	Maximum Flow Capacity		Pressure Drop
		WATER LPM	AIR SLPM ¹⁾	
7	287A	0.19	5.88	40
	287	0.33	10.2 ²⁾	40
	288A	0.60	18.6	38
	288	0.95	29.7 ²⁾	38
	289	1.83	56.9 ²⁾	38
8	283	3.5	109.3 ²⁾	30
	284	5.5	171.3 ²⁾	36
	285	9.5	295.1 ²⁾	38
	286	15	465.6 ²⁾	38
10	279	18.92	569	40
	290	28.33	884	40
	280	37.83	1,212	42
	281	53.33	1,653	42
12	275	80	2,463	55
	276	108.33	3,341	67
	277	150	4,616	78
	278	191.67	5,947	100
13	271	225	6,910	70
	272	266.67	8,269	78
	273	308.33	9,515	82
	274	416.67	12,915	105
15	308A	500	15,533	123
	308B	666.67	20,717	142
16	308C	833.3	25,900	170
	308D	1,000	31,067	210

¹⁾Air flows are given at 14.7 psia, 70°F

²⁾Range 5:1



Connection Size	A	B
1/2"	55mm	80mm
1"	65mm	100mm
1-1/2"	75mm	110mm
2"	80mm	115mm

Figure 1 Dimensions