

FLOW INDICATORS & SIGHT GLASSES

Description

IE Thru-Flow 3800 series (3804-Screwed & 3809-flanged) is a rugged, all metal flowmeter. Indication is provided by means of a magnetic coupling where a magnet, encapsulated in the float, is coupled to a rotatable magnet in the rear of the indicator, thus turning the dial indicator mounted on the meter. Optional Electrical Transmitter model 5000 is available for transmitting flow reading as a 4 to 20 mA signal. .



IE THRU-FLOW INDICATOR WITH ELECTRICAL TRANSMITTER

Design Features

- Straight-through flow path construction
- No float extension outside the meter body
- No spools required
- Flanged/Screwed connections
- Easy-to-read scale graduated in flow units or percent of maximum flow with factor
- Permanent magnetic link between metering float and indicator/transmitter

Principle Of Operation

The Model 5000 Two Wire Smart Flow Transmitter provide remote electrical signal linear with flow rate. The angular movement of pointer is sensed by a non-contact sensor. The signal obtained is linearised by a low power micro controller. The micro controller retransmits the signal as a 4-20 mA Analog signal linearly, proportional to the flow indication. Micro Controller also has facility to adjust the dampening constant for pulsating flows.

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

Materials Of Construction

METER TUBE, FLOAT AND FLANGES Standard: 316 SS
Optional: 316L SS, HASTELLOY C, 304 SS, 321 SS

Flanges

Standard: 150 lbs. RF ANSI B 16.5 Optional: 300 lbs. RF, 600 lbs. RF – for higher ratings , consult factory.

Instrument Case

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

Technical Data for Transmitter

Power Supply : 12 TO 36 Vdc

Current Consumption : Approximately 25 mA

Ambient Operating Temperature : 0-55°C

Protection Category: To DIN 400 050: IP65

Two-Wire System: 4 TO 20 mA/max. 600 Ohm

Temperature Influence: <0.05% °C (0.03%°F)

Power Influence: <0.2% for 12V to 36V change at Input terminals.

Load Resistance Dependence: <0.2% for 0 to RA (max).

Max. Load Resistance Two-Wire System.

$$R_A = \frac{U_B - 12}{I_A}$$

I_A

R_A = Load Resistance in K ohms

U_B = power supply Voltage in Volts.

I_A = max. output current in mA

Capacities

Size	Conn. Size	Float	Maximum Flow Capacity		Pre. Drop " WC
			Water LPM	Air SLPM ¹⁾	
7	1/2"	287	0.33	10.2 ²⁾	78
		288	0.95	29.7 ²⁾	48
		289	1.83	56.9 ²⁾	60
8	1/2"	283	3.5	109.3 ²⁾	30
		284	5.5	171.3 ²⁾	36
		285	9.5	295.1 ²⁾	60
		286	15	465.6 ²⁾	64
10	1"	279	18.92	569	42
		290	28.33	884	48
		280	37.83	1,212	55
		281	53.33	1,653	90
12	1-1/2"	275	80	2,463	66
		276	108.33	3,341	78
		277	150	4,616	90
		278	191.67	5,947	132
13	2"	271	225	6,910	121
		272	266.67	8,269	139
		273	308.33	9,515	163
		274	416.67	12,915	181
15	3"	308A	500	15,533	164
		308B	666.67	20,717	199
16	4"	308C	833.3	25,900	247
		308D	1,000	31,067	289

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

²⁾ Range 5:1

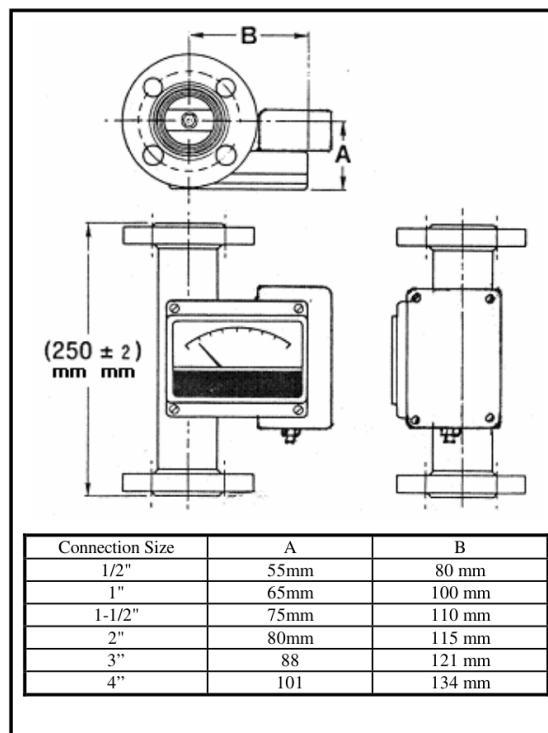


Figure 1 Dimensions

ORDERING INFORMATION

1. Model
2. Size
3. Quantity required
4. Minimum, normal and maximum flow rate with flow units.
5. Process fluid, density and viscosity at operating conditions
6. Scale graduation
7. Minimum, normal and maximum operating temperature and pressure.
8. Wetted material

Specifications subject to change without notice.