

LPM PADDLEWHEEL SERIES

Inline Flow Meters for Liquid Measurement



The Metri LPM range of industrial inline paddlewheel flow meters provides a cost-effective and accurate means of monitoring liquid flow rates.

- Cost effective meters for a broad range of liquids
- Accurate with low pressure drop
- Robust stainless steel construction
- Versatile, adaptable design with custom options
- High pressure rating up to 100 bar
- High temperature option up to 350°C
- Selection of flow instruments and displays for compact or remote installation
- Choice of outputs including pulse, 4-20 mA ATEX rated option



Rugged
Compact or Remote
Adaptable Versatile
Repeatable Accurate



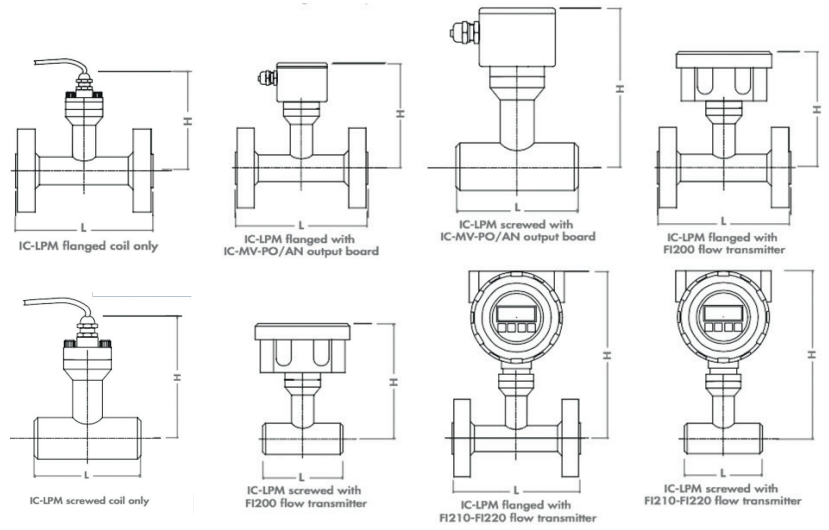
SPECIFICATION DETAILS

Nominal size	DN15, DN20, DN25, DN40, DN50
Process connection	BSPP (parallel) & BSPT (taper) female threaded, DIN & ANSI flanged; other on request eg PNXX, ti-clamp, NPT, RJT
Flange rating	PN 16, 40, 100 (BS EN 1092-1); ANSI 150, 300, 600 RF (ANSI B16.5)
Compatibility	Solids free and partially contaminated liquids including water, chemicals, hydrocarbons, mineral oils, alcohols
Flow range	05.5 to 1200 l/min, various range
Operating temperature	Standard: -40 to 120°C Medium: -40 to 230°C High: -40 to 350°C
Max operating pressure	All threaded bodies: up to 100 bar Flanged bodies: depends on flange rating and operating temperature range Higher pressure rating on request
Frequency range	25-750 Hz
Pressure drop	Typically less than 125 mbar at maximum flow rate (standard ranges without flow restrictor)
Linearity	±0.5% FSD
Repeatability	±0.1% of reading
Materials	Body: 304 stainless steel (standard); 316 (optional); other materials available on request Rotor: 431 stainless steel Rotor shaft: Tungsten carbide; other materials on request Bearings: Tungsten carbide and jewel bearings (standard & medium temperature); stainless steel ball race (high temperature) O-ring: Buna N (standard); Viton (optional)
Output/display	Coil only (mV); pulse / analogue output modules; flow transmitter
Installation	Horizontal or vertical flow rising, full pipe only

VERSATILE CONFIGURATIONS

Ordering information for the Paddlewheel Flow Meter

IC-LPM	Nominal size, flow range (based on H2O at 20°C)
015A	15 mm (1/2") 0.5 - 5 l/min
015B	15 mm (1/2") 1-10 l/min
015C	15 mm (1/2") 2-20 l/min
015D	15 mm (1/2") 4-40 l/min
020A	20 mm (3/4") 6-60 l/min
020B	20 mm (3/4") 12-120 l/min
025A	25 mm (1") 15-150 l/min
025B	25 mm (1") 30-300 l/min
040A	40 mm (1.5") 30-300 l/min
040B	40 mm (1.5") 60-600 l/min
050A	50 mm (2") 60-600 l/min
050B	50 mm (2") 120-1200 l/min
OZ0Z	Other sizes and flow rates on request
Process connection	
A	BSPP (parallel) female
B	BSPT (taper) female
C	PN16
D	PN40
E	PN100
F	ANSI 150 RF
G	ANSI 300 RF
H	ANSI 600 RF
Z	Other on request (eg. PNXX, tri-clamp, NPT, RJT etc)
Max operating temperature	
S	Standard: 120°C
M	Medium: 230°C
H	High: 350°C
Approvals	
0	General purpose
1	ATEX
Output/display	
0	Coil only
P	IC-MV-PO (PNP/NpN) pulsed output
A	IC-MV-AN (4-20 mA) analogue output
D	Flow transmitter / display (specify separately)
Mounting of instrument	
0	No instrument
C	Compact (locally mounted on flow sensor, excl. high temp version)
R	Wall mounted, incl. bracket (up to 3m from sensor, please specify)
Options	
0	None
1	Specify options



Dimensions

Nominal Size	L mm		H mm				Weight kg *	
	Screwed	Flanged	Coil only	IC-MV-PO/AN	FI200	FI220/FI210	Screwed	Flanged
15 mm (1/2")	90	152	100	115	130	192	1.2	2.8
20 mm (3/4")	90	152	100	115	130	192	1.2	3.7
25mm (1")	100	181	106	121	136	198	1.5	4.8
40 mm (1.5")	120	185	110	125	140	202	2.5	8.9
50 mm (2")	120	205	115	130	145	207	3.0	10.1

* approximate weight based on IC-MV-PO/AN output board and ANSI 300/PN40 if flanged

Instrument Options available

Type	Coil only	IC-MV-PO pulse output module	IC-MV-AN analogue output module	FI110/FI210/FI220 battery/ powered flow transmitter	E & F Series ATEX
Input	-	20-200mV peak to peak	20-200 mV peak to peak	mV/Pulse/4-20 mA	mV/Pulse/4-20 mA
Frequency range	50-2500 Hz	30-1000 Hz	25-2500 Hz	0-10000 Hz	0-60 Hz (E Series) 0-500 Hz (F Series)
Supply voltage	-	5-24 Vdc	24 Vdc	Battery/24 Vdc 110/240VAC	24 Vdc 110/240VAC
Outputs	mV	Open collector PNP/NPN selectable	4-20 mA, 2 wire current loop	Open collector pulse, 4-20 mA, relay/external loop powered	Open collector pulse, 4-20 mA relay, Hart & Modbus
Operating temp	-	-10 to 55°C	-10 to 55°C	-10 to 55°C	-40 to 70°C
Rating	IP65, ATEX* (optional)	IP65	IP65	FI110:IP67 FI210:IP67, ATEX (consult factory)	IP67

* ATEX rating optional



Order code example

IC-LPM	015B	D	S	0	A	C	0
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Calibration certificates are available for entire LPM product range



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