



JLC International
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LMX Pelton Wheel Flow Meter

Extreme low flow, chemically resistant flowmeter

The LMX series of flowmeters are manufactured from 316 stainless steel and provide accurate flow measurement down to less than 4 ml/min. The LMX flowmeters employ a single size, straight bladed rotor, manufactured from chemically resistant PFA and use sapphire bearings. These bearings run in hemispherical sapphire bearing cups, which form a “floating”, low friction, precise unit. Sealed ferrites are mounted within the tips of the rotor and are sensed by the Litre Meter pick-up sensor suitable for high pressures.

The integral upstream/downstream straight lengths ensure the correct flow profile conducive with accurate measurement in the field. With the chemically resistant materials of construction, combined with their ability to work with pressures up to 230 bar (3336 psi) and temperatures up to 100 °C (212 °F), the LMX series of flowmeters are suitable for most low flow applications.



Features

- Manufactured in 316 stainless steel with PFA rotor
- Measurement down to 4 ml/min (0.0011 gpm)
- High pressure versions up to 230 bar (3336 psi)
- High temperature rating
- NPT, BSP or 8mm OD connections
- High accuracy and repeatability
- Several choices of pulse outputs
- Intrinsically safe optional
- Optional remote display



Flow Ranges and Pulse

Model	Range lpm	Range gpm	K-factor ppl	K-factor ppg
LMX.003	0.004.....0.060	0.0011.....0.0159	45000	170343
LMX.005	0.006.....0.100	0.0016.....0.0264	35000	132489
LMX.01	0.01.....0.25	0.0026.....0.0660	26000	98421
LMX.05	0.02.....1.30	0.005.....0.343	13000	49210
LMX.24	0.03.....4.30	0.008.....1.136	6500	24605
LMX.45	0.04.....6.30	0.011.....1.664	5500	20820
LMX.48	0.06.....8.00	0.016.....2.113	3000	11356
LMX.90	0.08.....15.0	0.021.....3.963	1800	6814
LMX.220	0.1.....28.0	0.026.....7.397	1600	6057
LMX12.5	1.0.....65.0	0.26.....17.17	500	1893



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Technical Specifications

- Accuracy: $\pm 2\%$ of actual reading for 10 to 100% of range
 $\pm 0.5\%$ FSD for 0 to 10% of range (LMX.003 and LMX.005 linearization required)
- Repeatability: $\pm 0.2\%$ reading over top 90% of range
- Pulse output: PNP, NPN (Open Collector) and TTL
Intrinsically Safe – EEx ia IIC T5 – pulse output optional
- Pressure rating: 30, 100 and 230 bar (435, 1450 and 3336 psi)
- Viscosity / particles: up to 10 cP / less than 90 micron
- Temperature rating: $-20\text{ }^{\circ}\text{C}$ ($-4\text{ }^{\circ}\text{F}$) up to $100\text{ }^{\circ}\text{C}$ ($212\text{ }^{\circ}\text{F}$)
- Calibration: fully calibrated for water @ $20\text{ }^{\circ}\text{C}$ ($68\text{ }^{\circ}\text{F}$), incl. calibration certificate with K-factors

- Body and internals: 316 stainless steel
- Rotor: Teflon PFA
- Bearings: Sapphire/Sapphire
- Ferrites: Sealed
- Seals: PTFE Gasket (8mm OD LMX003 and 005 use Viton O ring)
- External materials: 316 stainless steel and anodized aluminum
- Connections: $\frac{1}{2}$ " NPT male or $\frac{1}{2}$ " BSP male
8 mm OD tube [LMX.003 and LMX.005 only; max. pressure 30 bar (435 psi)]

- Power supply: 5 – 28 VDC / 80 mW
- Current consumption: 3.5 mA
- Protection class: IP68 (> NEMA 4X)
- Electrical connection: 4 pin M12 connector; contra connector with 1 meter (3 feet) cable

Display – optional



For display specifications refer to data sheet 101A



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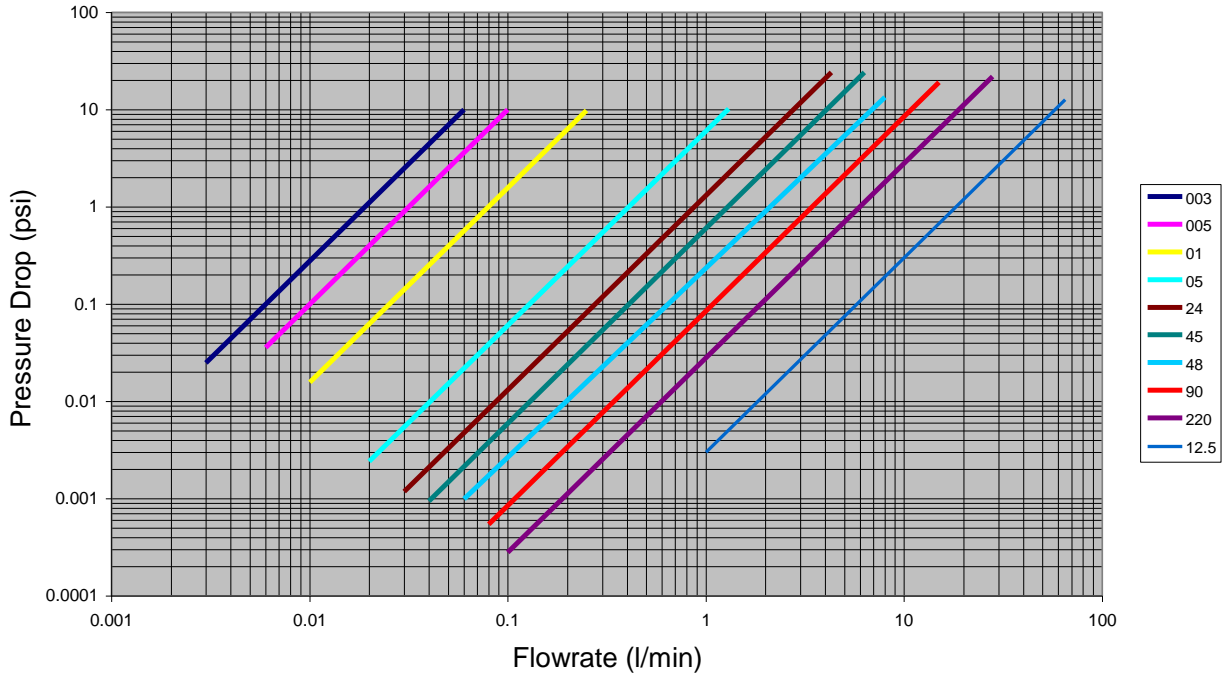
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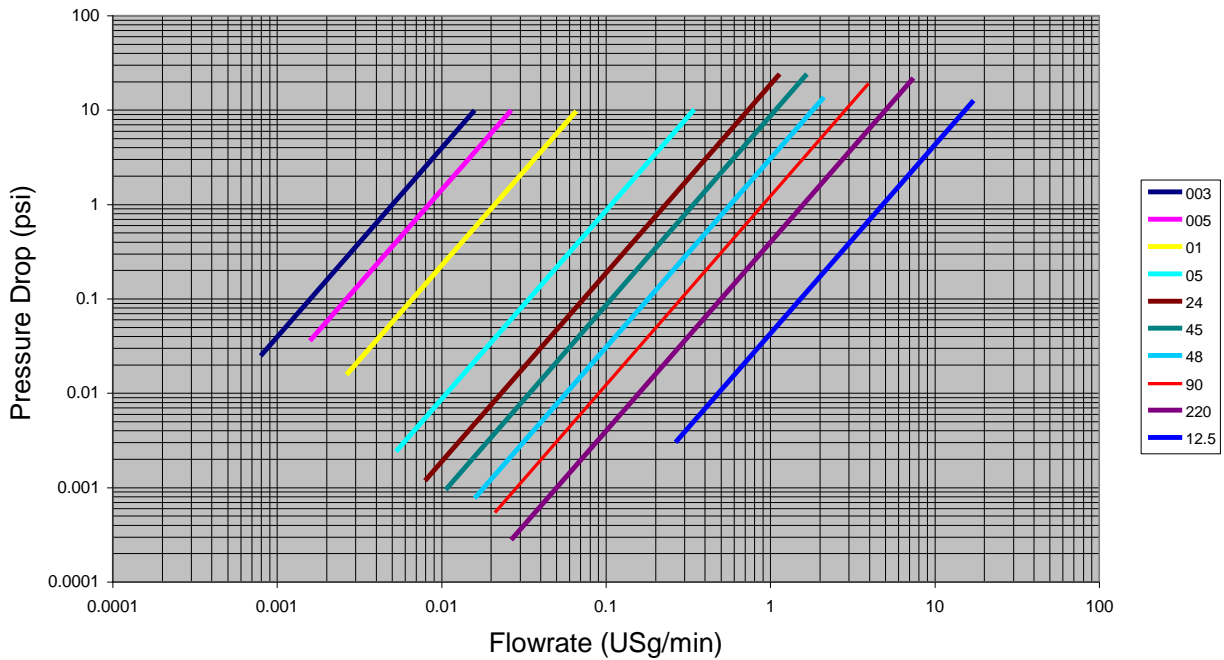
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Pressure Drop Curves

LMX Pressure Drop Curves psi / lpm



LMX Pressure Drop Curves psi / gpm





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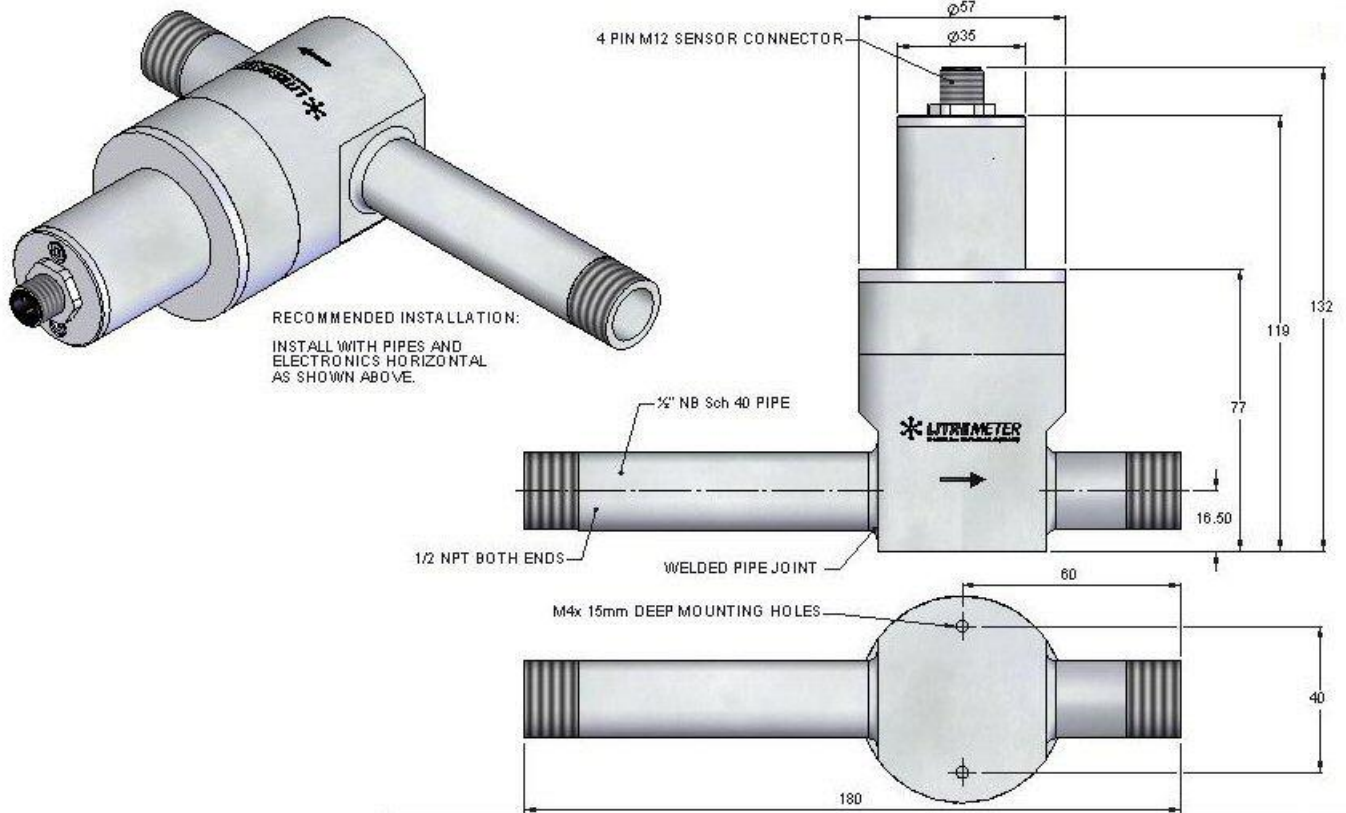
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Dimensional Drawing

Note: dimensions in mm



End to end length of 180 mm can be reduced to 80 mm for LMX.003 and 005. version with 8 mm OD tubing.

Weight approx. 1.8 kg (4 lbs)



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Model Numbering System

LMX



<u>Range</u>	<u>Code</u>
0.004 to 0.06 l/min	003
0.006 to 0.1 l/min	005
0.01 to 0.25 l/min	01
0.02 to 1.3 l/min	05
0.03 to 4.3 l/min	24
0.04 to 6.3 l/min	45
0.06 to 8.0 l/min	48
0.08 to 15 l/min	90
0.1 to 28 l/min	220
1.0 to 65 l/min	12.5

<u>Pressure rating</u>	<u>Code</u>
30 bar (435 psi) *	30
100 bar (1450 psi)	100
230 bar (3336 psi)	230

* 8 mm OD only

<u>Connections</u>	<u>Code</u>
½ NPT male	NPT
½" BSP male	BSP
8 mm OD **	OD

** LMX.003/005 only

<u>Output 1)</u>	<u>Code</u>
Open collector (NPN)	F
TTL	T
PNP	P
Intrinsically safe	E

1) An optional display for flow rate and total flow is available. This unit will linearize the pulse output for the smaller meters and provides an analogue output of 4 – 20 mA or Vdc. Refer to data sheet 101A