

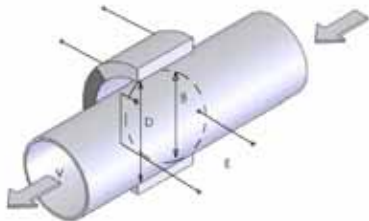
Malema Electromagnetic Flowmeter Series MLD

Malema's electromagnetic flowmeter is an advanced microprocessor based instrument suitable for measuring flow of conductive liquids used in chemical, pharmaceutical, refineries, power, steel, pulp & paper, waste water and HVAC industries. Series MLD is the latest electromagnetic flow meter offered by Malema Sensors based on its two decades of flow measurement and control experience.

Each flow meter is individually calibrated and passes through a rigorous inspection program laid out by the Malema inspection team. Malema engineers will help you select appropriate models for your challenging applications. This affordable high quality flow meter combined with Malema's excellent customer support offers you the best of the flow measurement solutions in the market.

Principle of measurement:

Malema's Electromagnetic flowmeters are based on Faraday's law of electromagnetic induction principle. A pulsed DC current is passed to the coil surrounding the flow tube to create a magnetic field in the flow path. When a conductive liquid, slurry or paste passing through the tube cuts this magnetic field a voltage proportional to the velocity of the medium is produced. Electrodes inside the flow tube pick up the voltage which is then processed in the signal converter for local display and signal transmission purposes.



$$E = BLV$$

$$Q = EA$$

Where

B is the magnetic field

L is the distance between electrodes

V is the velocity of the medium

A is the area of cross section of the tube

E is the voltage induced

Q is the volume flow rate



Separated version:



Compact version

Applications:

- Water and waste water
- Chemicals, acids and alkalis
- Pulp and Slurries

Features and Benefits:

- Flow through construction; no obstruction to flow path hence low pressure drop
- Flow accuracy is unaffected by the changes in the physical parameters like, pressure, temperature, density or viscosity.
- High accuracy and reliability
- Low cost of ownership
- Wide rangeability
- Wide choice of liner and electrodes to meet application requirement
- All flow meters are individually wet calibrated

General Specification:

Primary head (flow tube) specification:

Size: 3/8" to 88" and DN 10 to DN 2200

End Connection: Flanged to DIN and ANSI standard

Pressure rating: DN 10 to DN 50; 3/8" to 2" – 40 Kg/cm²
DN 65 to DN 150; 2 1/2" to 6" – 16 Kg/cm²
DN 200 to DN 2200; 8" to 40" – 10 kg/cm²

* For higher pressure ratings for meter sizes up to 6"/DN150

please refer factory for details.

Temperature rating: Compact Version:
PTFE (-25 deg C to +120 Deg C)
Neoprene (<80 deg C)
PVC (< 90 deg C)

Remote version:
PTFE (-25 to 180 deg C)
Neoprene (<80 deg C)
PVC (< 90 deg C)

Materials: Flow tube: SS 304
Flanges: Steel
Housing: Sheet Steel

Liner material: PTFE – for sizes up to DN 1000; 40"
Neoprene – for sizes DN 25 to DN 2200; 1" to 40"
PVC- for sizes DN 25 to DN 1000; 1" to 40"

Electrodes: SS 316L, Hastalloy C, Hastalloy B, Titanium, and Tantalum

Signal Converter (flow transmitter):

Type: Microprocessor based; remote and compact options available

Display: Local LCD board with programming keys

Accuracy: +/-0.5% of the reading

Power supply: 220 Vac 50 Hz

Output: Current: 0/4- 20mA (max. 750 ohms)
Frequency: 1 KHz
Pulse: 5000 p/sec

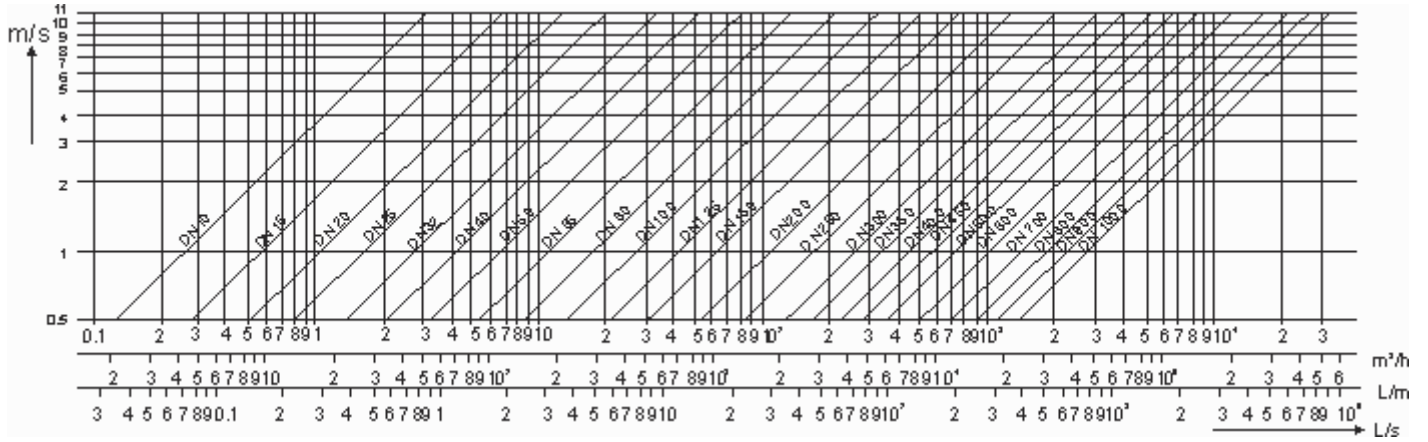
Protection: IP 65 (Standard); Optional: IP 67 or IP 68

Temperature limits: -10 deg C to +50 deg C

Humidity: < 85% RH

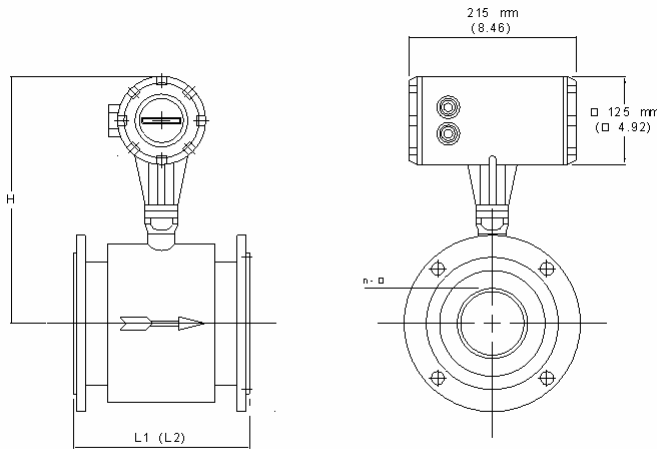
Selection:

Ideally you need to select the magnetic flow meter with its maximum flow velocity between 3-5 m/s (10-17 ft/sec). However, in some cases higher velocities are also acceptable based on the application. Please check with us for correct selection of the meter.

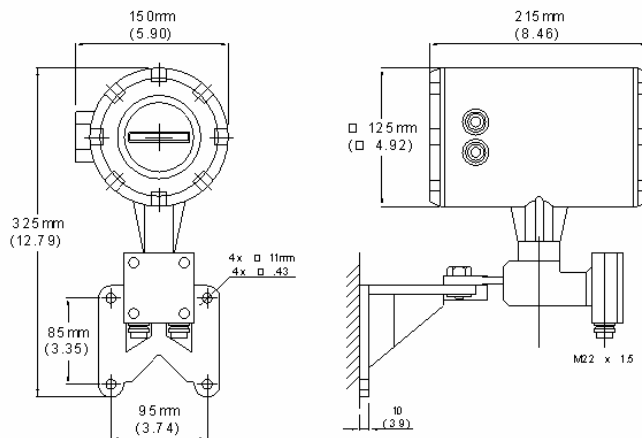


Dimensions: (For flange dimensions please contact factory)

Compact (Integral) Version:



Remote (Separated) Version:



Model Code:

MODEL SELECTION:	MLD									For meter size in	
SIZE	OPTIONS										inches use mm equivalent
	0010										mm
	... 2200										inch
											0010
											3/8
											0015
											1/2
VERSION											0020
											3/4
INTEGRATED (COMPACT)	Y										0025
SEPARATED (REMOTE)	F										1
											0032
											1 1/4
											0040
											1 1/2
CONVERTER MODEL											0050
DEFAULT	ZA										2
											0065
											2 1/2
											0080
											3
OUTPUT SIGNAL											0100
											4
CURRENT 4-20MA	I										0125
											5
FREQUENCY 1KHz	F										0150
											6
RS 485	R										0200
											8
CONTROL OUTPUT	C										0250
											10
											0300
											12
PROTECTION											0350
HAZARDOUS (Ex)	E										14
NON-HAZARDOUS	N										0400
											16
											0450
											18
											0500
											20
TEMPERATURE RATING											0600
											24
<= 65 DEG C	T1										0700
											28
<= 120 DEG C	T2										0800
											32
											0900
											36
LINER											1000
NEOPRENE	N										40
PTFE	T										1200
											48
POLYVINYL CHLORIDE	P										1400
											56
											1600
											64
											1800
											72
ELECTRODE MATERIAL											2000
											80
SS 316 L	SS										2200
											88
HASTALLOY C	HC										
HASTALLOY B	HB										
TITANIUM	TI										
TANTALUM	TA										

Ordering Information:

Please give us the complete information on your application details with appropriate units. We will need the following to size and quote the right flow meter for your application:

- flow rate (minimum/normal/maximum);
- operating pressure (normal/maximum);
- operating temperature (normal/maximum);
- pipe line size;
- outputs desired and mounting requirements

All specifications are subject to change. Please check the factory for latest specifications.

Represented by:

