ALMAG-MN

In-Line Electromagnetic Flowmeter
Model ALMAG Series

GENERAL

SMARTMEASUREMENT's ALMAG-MN is an in-line electromagnetic flowmeter ideal for measuring low flows of conductive liquids of 20 µs/cm or greater. The ALMAG-MN comes with ½" NPT or ½" BSPP process connections in sizes and is available with 6, 8, or 10 mm tube I.D.s. The ALMAG-MN is designed for low-flow chemical injection or difficult to meter applications with pulsating flows, corrosive fluids or food and beverage applications.

The ALMAG-MN flow tube is available in ceramic, polyethylene or PEEK materials. The flow meter is available with a built-in temperature sensor, an integrated three line display or in a blind version. The ALMAG-MN can be used in areas where mechanical meters such as turbines or paddle wheels cannot be used due to contamination/particulates in the fluid.

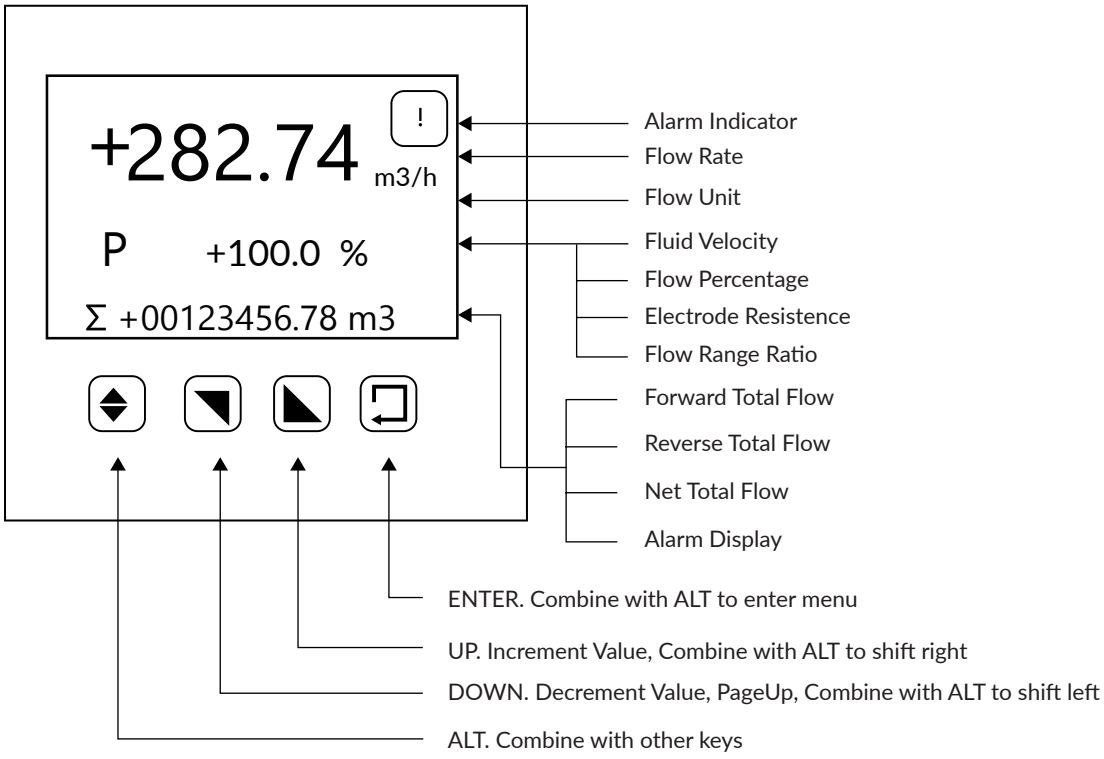
FEATURES

- Liner materials: PE, PEEK or Ceramic
- Fluid velocity range of 0.1m/s – 10m/s; ideal for flow applications
- ½" NPT or BSP process connections
- Ideal for extremely low flow applications
- Features a built in PT1000 temperature sensor; 0.1°F resolution
- Available with SS #316L or Hastelloy C electrodes
- High accuracy – ±0.5% of reading (Velocity > 0.6m/s) or ±3mm/s (Velocity ≤ 0.6m/s)
- Available with 4-20mA and 0-5KHz pulse and 2A relay outputs
- RS485/MODBUS; Optional for version w/ display, standard for blind version

SPECIFICATIONS

- Size: ½" npt/BSPP6, 8 or 10mm I.D.
- Temperature: 140°F (60°C) for PE, 195°F (90°C)
- Pressure: Up to 150 psig (10 barg)
- Measuring Range: 0.1m/s - 10 m/s, bi-directional
- Material: Measuring Tube: PE, PEEK or Ceramic
- Housing: Aluminum (standard)
- Process connection: G-½" or ½"NPT aluminum (standard)
  Stainless Steel #316 (optional)
- Display: LCD Flow rate, fluid velocity, % Full scale, total flow, diagnostics and various alarms
- Blind version: All parameters via standard RS485 communicator
- Electrode & Grounding: Stainless Steel #316L Hastelloy C
- Cable Entry: 2 X PG11
- Ambient Temperature: -15 ~ 140°F (-25 ~ 60°C)
- Grounding Resistance: Must be less then 10 Ω
- Accuracy: ±0.5% of reading for Velocity > 0.6m/s
  Or ±3mm/s (Velocity ≤ 0.6m/s)
- Protection: IP65
- Conductivity: Must be ≥ 20µS/cm
- Power Supply: 24 V_{DC}, ≤ 100mA

DISPLAY

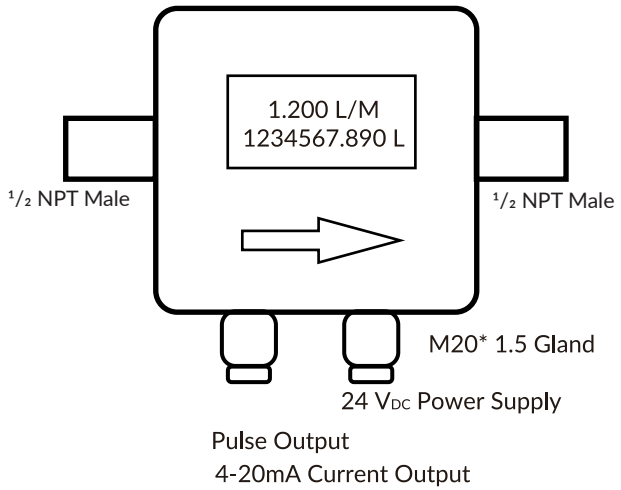


SIZE MM (IN)	ACCURACY: ±0.5% OF RS (VELOCITY > 0.6M/S)		ACCURACY: ±1% OF RS (0.3M/S <VELOCITY<0.6M/S)		ACCURACY: ±3% OF RS (0.1M/S <VELOCITY<0.3M/S)	
	FLOW RANGE LPM	Flow Range GPM	FLOW RANGE LPM	Flow Range GPM	FLOW RANGE LPM	Flow Range GPM
6mm (1/4")	1-6.7	0.27-1.76	0.5-1	0.13-0.27	0.16-0.5	0.04-0.13
8mm (1/3")	1.8-11.7	0.48-3.08	0.9-1.8	0.24-0.48	0.3-0.9	0.08-0.24
10mm (3/8")	2.8-16.7	0.75-.4.4	1.4-2.8	0.27-0.75	0.47-1.4	0.12-0.37

CABLE ENTRY AND EXIT

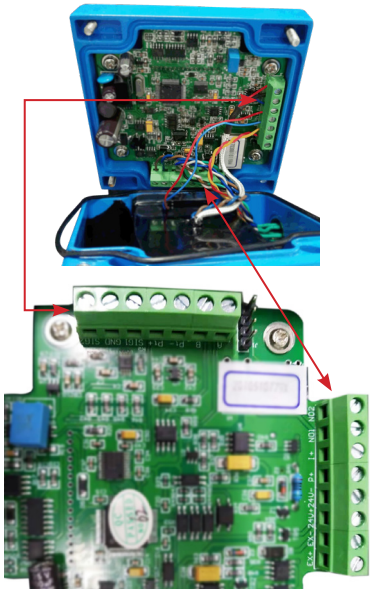
***Note: for the display style use the display diagram

Dimension: 3.93"×3.9"×2.75" Thick (100mm×100mm×70mm Thick)

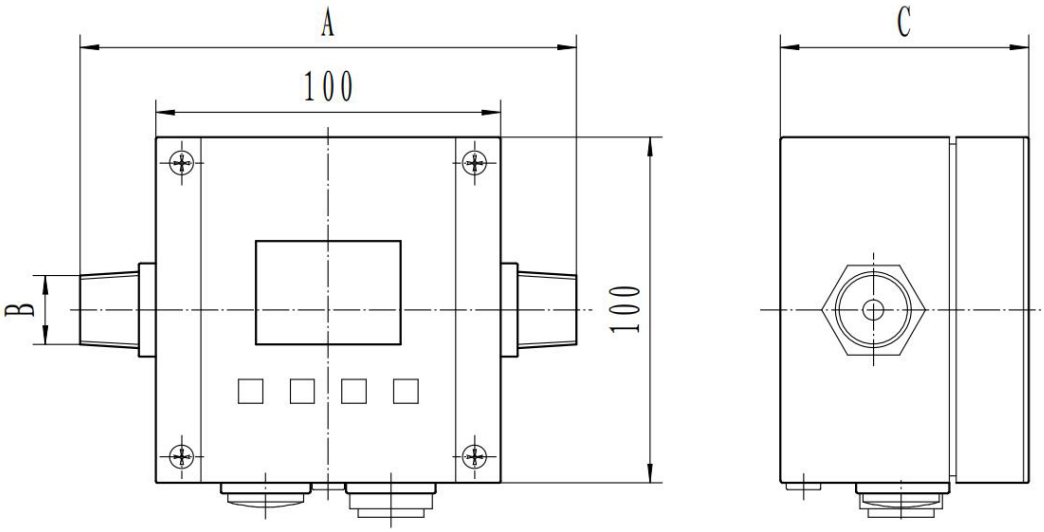


WIRING DIAGRAM

CONNECTOR LABEL	CABLE COLOR	CABLE DEFINITION	CABLE DESCRIPTION
7	Gray	+24V_{DC}	External 24V_{DC} Power +
8	Blue	COM	Common Ground
6	White	P+	Pulse +
5	Brown	I+	4-20mA Current Output +
3	Green	NO1	Relay NO Contact 1
4	Black	NO2	Relay NO Contact 2
1	Red	A	RS485 A
2	Yellow	B	RS485 B



OVERALL INSTALLATION SIZE



DN(mm)	A(mm) (in)	B	C(mm) (in)
DN2	130 (5.12)	G 3/8″	72 (2.83)
DN3	130 (5.12)	G 3/8″	
DN4	130 (5.12)	G 3/8″	
DN6	130 (5.12)	G 3/8″	
DN8	140 (5.51)	G 1/2″	
DN10	140 (5.51)	G 1/2″	
DN15	140 (5.51)	G 1/2″	
DN20	150 (5.91)	G 3/4″	

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TYPE OF LIQUID	Please provide the name of your fluid, including operating density and viscosity
FULL-SCALE FLOW RATE	Please provide the max and min flow rate
LINE SIZE	Please provide the line size and connection
PRESSURE & TEMPERATURE	We will calibrate your flow meter as close to your operating conditions as possible

ALMAG MN SERIES

EXAMPLE: ALMAGMN-N-6-2-0-L-1.0-65-DC-2-NX-NN-N

ALMAG MN	**-	*	*-	**	**-	*	*	*-	*	*	*-	*	*	*	DESCRIPTION
½″ NPT Male	N														Process Connection
G ½″ Male	G														
Other connection	**														
(1/3") 6 mm		6													Flow Tube Inside Diameter
(1/4") 8 mm		8													
(3/8") 10 mm		10													
SS# 316			0												Electrode Material
Hast C			2												
PEEK				3											Liner Material
PK				4											
Other Liner				**											
LCD Display with 4-20 mA					L										Transmitter
Blind Type with 4-20 mA					B										
Max Pressure 145 psi (1.0 MPA)						1.0									Pressure
Other Pressure						**									
Standard - IP65							65								Protection
Not needed							0								
Not Needed								0							Grounding electrode/ring
24VDC ± 20%, 200mA									DC						Power supply
Non Digital Communication										0					Communication
RS485 - Modbus										2					
None											NX				Explosion proof
Aluminum enclosure, SS # 304 flow tube and process connection												NN			Materials
Aluminum enclosure, SS # 316 flow tube and process conection												316			
Aluminum, other materials flow tube and process connection												**			
None													N		Option
With temperature sensor in flow body													T		
Relay output = 1 relay 250VAC, 5A / 30VDC, 5A													R		