ALMAG

Electromagnetic Flowmeter

ALMAGIS Series

GENERAL

SMC's ALMAG-IS is an insertion-type electromagnetic flowmeter designed to measure the fluid velocity of conductive liquids in applications where hot-tap or insertion installations are preferred. This insertion mag meter is available in four standard lengths and may be installed in any pipeline with internal diameters ranging from 2" to 120" (50~3000 mm) and in permanent locations where cost or space limitations preclude the use of conventional in-line style meters. Available pipe connections include hot-tapped, DIN and NPT threads. The ALMAGIS is designed for use with conductive fluids including water, raw sewage, and wastewater, clarified water, RAS, WAS, primary sludge and cooling tower water, as long as adequate lengths of straight pipe are available where the sensor is installed.

FEATURES

- Applicable sizes: 2"~120" (50~3000 mm)
- Operating pressure: ≤ 1.6MPa
- Velocity range of 0.5~10m/s
- Accuracy: ±1.5%
- Hot-tap sensor can be installed and retracted from process piping
- Conductivity of measured medium: ≤ 20 μs/cm
- Electrode materials: 316L, Hastalloy, Ti, Ni, Tantalum
- Maximum distance between sensor and converter: ≤50m
- NIST traceable calibration

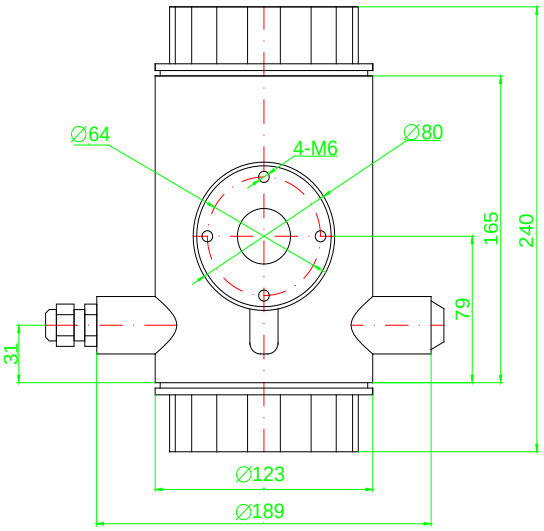
SPECIFICATIONS

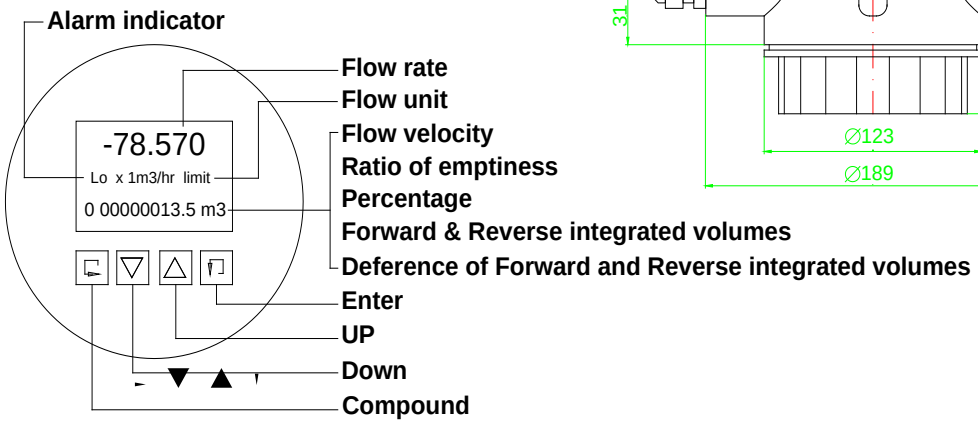
- Line Size : 2"~120" (50~3000 mm)
- Measuring Range : 0.5 - 10 m/s -bi-direction
- Connection : Weld, ball valve(threaded and flange)
- Accuracy : ±1.5% of reading (velocity v≥1m/s)
- Temperature up to 248 °F (120 °C) max.
- Pressure up to 230 psig (1.6 Mpa) max.
- Materials of Construction
  - Transmitter housing : Aluminum
  - Probe : SS #304 (std), 316L, Ti
  - Electrode : 316L，HC-22，HB3，Ti
- Media Conductivity : > 20 μS/cm
- Cable Entry : 2 X PG11
- Ambient Temperature : -13 to 140 °F (-25 to 60 °C)
- Protection : IP 65 - std
  IP 68 (Submersible) - only for remote
- Grounding Resistance : Must be ≤ 10 Ω
- Power requirements : 19-36 V_{DC}, 12-15W
  85-265 V_{AC}, 45-63 Hz, ≤20W
- Outputs : 4-20mA, Pulse,
- Communication : RS232/485/HART, Modbus
- Display : Flow rate, flow velocity, percentage,
  Total flow
  Total flow

10437 Innovation Drive, Suite 315, Milwaukee, WI 53226, USA
URL : http://www.smartmeasurement.com
TEL：+1-414-299-3896 FAX：+1-414-433-1606
E-mail : sales@smartmeasurement.com

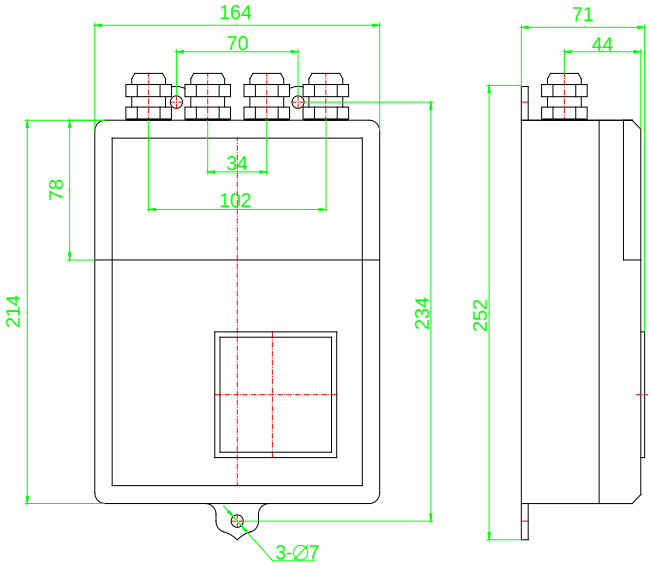
Mounting drawing

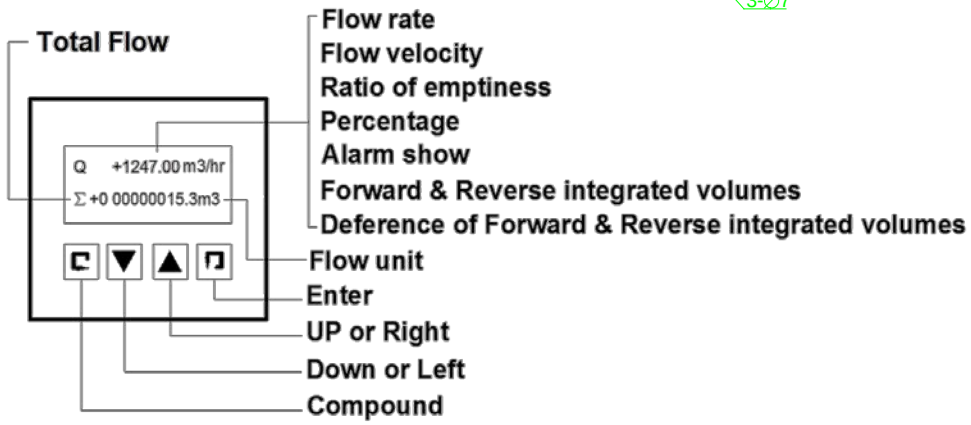
- **Standard Integral type**





- **Standard Remote type**





DIMENSIONS - Insertion

Calculation of Insertion Height for fixed and retractable types

$$H = L - A - B$$

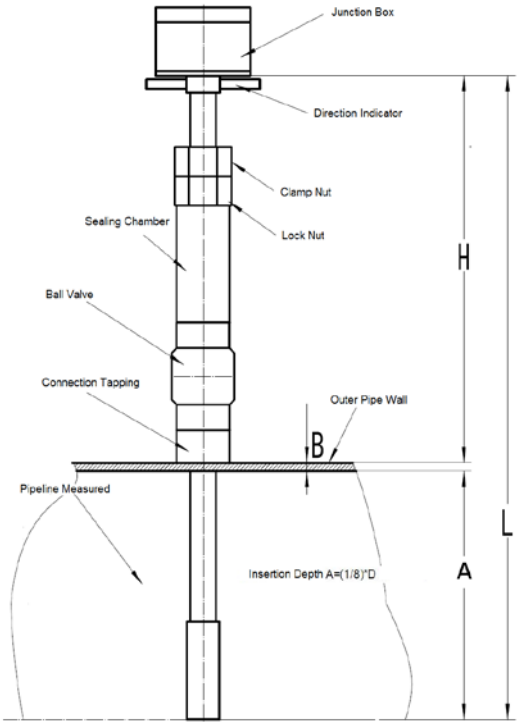
H --- insertion height, mm

L --- nominal length of the sensor; L=600mm, 900mm, 1200mm,1500mm

A --- insertion depth (D/8), mm

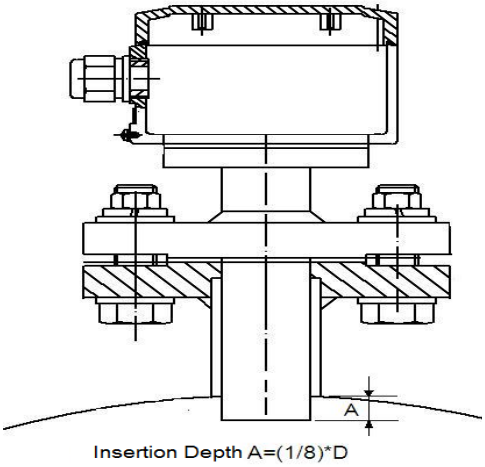
B --- thickness of the pipe wall, mm

Retractable type

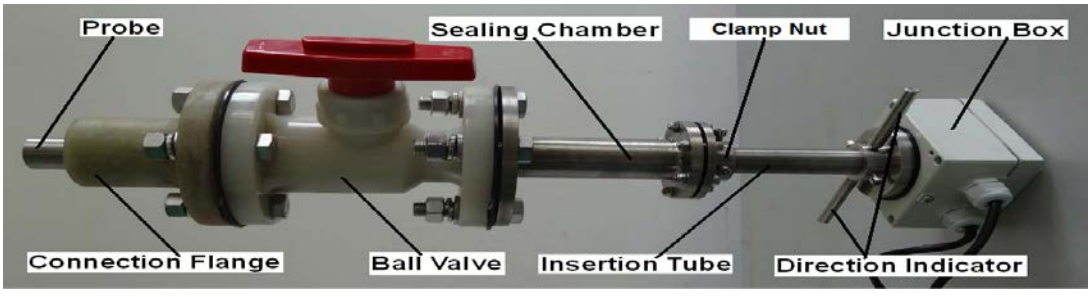


Model	Probe Length (mm)	DN Size
		Insertion Depth (⅛) *D
EMF-B-600	600	DN50 ~ DN1600
EMF-B-900	900	DN450 ~ DN4800
EMF-B-1200	1200	DN1400 ~ DN7200
EMF-B-1500	1500	DN2000 ~ DN8000

Flanged type



Pipe Size	Insertion Depth (D)= pipe inner diameter
DN50~DN150	(⅛)*D
DN200~DN600	(⅛)*D or (½)*D
DN700~DN8000	(⅛)*D



**** Please contact your local Smart Measurement application engineer**

You also need to provide the following information:

Type of Fluid	**Please provide the name of your fluid**
Full Scale Flow	**Maximum and minimum flow rates; units must be in GPM, LPM or m^3/hr, etc..**
Line Size	**Please provide pipe size as well connection type (flanged, threaded, etc..)**
Pressure & Temperature	**We will calibrate your flowmeter as close to your operating conditions as possible**

Model Selection Guide

ALMAG Series														
Example: ALMAGIS-BF-50-0-3-IN-2.5-65-0-DC-0-EXI-NN-NN														
ALMAGIS-	*-	*	*-	*	*-	*	*-	*	*-	*	*-	**-	**	Description
Weld	W													Connection
Ball valve - Welded	BW													
Ball valve - thread	BT													
Ball valve - Flanged	BF													
2"~120" (DN50~DN3000)		**												Size
304 stainless steel			0											Probe
316 stainless steel			1											
Ti			2											
Hastalloy C			3											
316 stainless steel				0										Electrode
Nickel				1										
Hastalloy C				2										
Tan				3										
Ti				4										
Integral type					IN									Transmitter
Remote type - with 5m cable					RE									
Max Pressure 1.6Mpa						1.6								Pressure
IP65							65							Protection
IP68 flow body and IP65 transmitter, only for remote type							68							
Not Needed								0						Grounding rings
11-40V_{DC}									DC					Power supply
85~265V_{AC}, 50/60 Hz									AC					
Non communication										0				Communication
HART										1				
RS485 - Modbus										2				
RS485 - Profibus DP										3				
None											NX			Explosion proof
Explosion Proof - for integral type											EXI			
Explosion Proof - for remote type											EXR			
Aluminum Enclosure, SS #304 probe												NN		Materials
None													NN	Options
With welding installation part													WP	