



ALMAG-HP

Electromagnetic Flowmeter

Model ALMAG Series

GENERAL

SMARTMEASUREMENT's ALMAGHP is an electromagnetic flowmeter designed to measure the flow rates of conductive liquids in applications with high operating pressures. The robust design of the ALMAGHP allows it to be used in applications with pressures in excess of 6000 psig (42 MPa). A wide selection of options are also available including integral or remote mounting, 110/220 V_{AC} or 24 V_{DC} power, and optional HART or RS485 communications. The ALMAGHP's unique ability to withstand high pressures, combined with its wide array of available features make it an ideal choice for conductive fluids. The ALMAGHP has been successfully used in high pressure applications mainly in the oil and gas industries as well as a variety other of industrial high pressure applications.



FEATURES

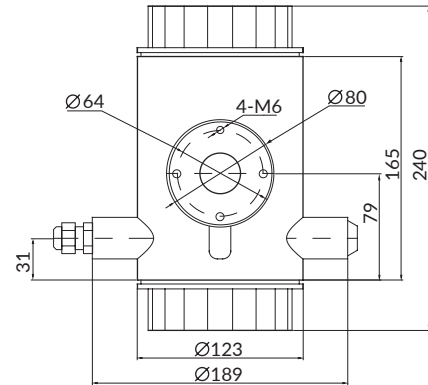
- Various liner and electrode materials are available to achieve chemical compatibility with different fluids.
- Wide fluid velocity range of 0-10m/sec with excellent low-flow accuracy.
- Flange-type process connections available in ANSI, DIN, and other styles.
- Suitable for high pressure operation in excess of 6000 psig.
- Optional IP68 environmental protection class (submersible).
- Excellent accuracy; $\pm 0.5\%$ of reading standard.
- Upright/reverse flowrate test function standard with every unit.

SPECIFICATIONS

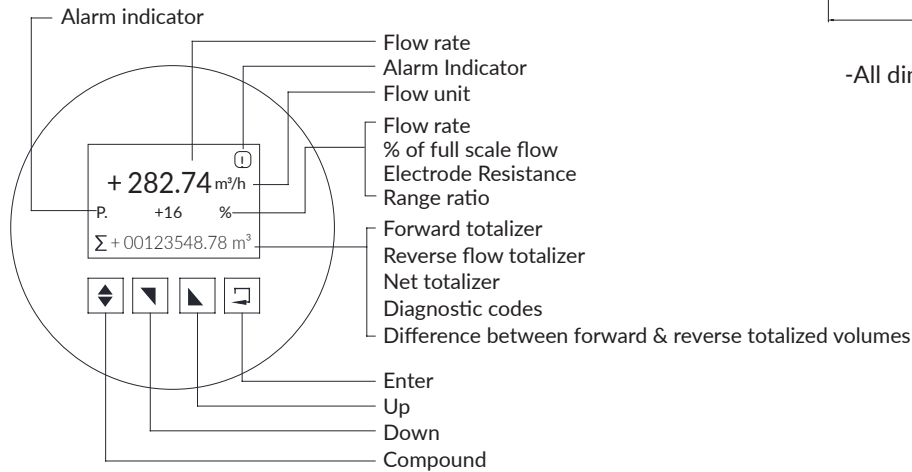
• Size:	1"~8" (DN25~DN200)-Std	• Communication:	HART RS485/Modbus
• Measuring Range:	0.32ft/s (0.1m/s) min. fluid velocity 33 ft/s (10 m/s) max	• Electrode & Grounding:	Stainless Steel 316L Hastelloy C Titanium Tantalum
• Material:		• Pressure:	Up to 6100 psi (42 mPa)
Measuring Tube:	Stainless Steel #304	• Ambient Temperature:	-5 ~ +130 °F (-20 ~ 55 °C)
Flange material:	Carbon Steel (Standard) Stainless Steel #304 (Optional) Stainless Steel #316 (Optional)	• Process Connection:	Flanged
Coil Housing:	Carbon Steel (standard) Stainless Steel #304 (Optional) Stainless steel #316 (Optional)	Flange types:	ANSI Flange
• Liner:	Polypropylene (PP) -Std F46, PTFE	Options:	DIN Flange JIS Flange
• Protection:	IP65 IP68 (remote type only)	• Grounding Resistance:	< 10 Ω
• Conductivity:	$\geq 5 \mu\text{S/cm}$	• Accuracy:	$\pm 0.5\%$ of reading (Velocity ≥ 0.5 m/s) ± 0.005 m/s (Velocity < 0.5 m/s)
• Power Requirements:	110/220 V _{AC} or 24 V _{DC}	• Temperature:	14~176 °F (Polypropylene) -5~212 °F (F46)
• Outputs:	4-20mA, pulse		

DISPLAY TYPES

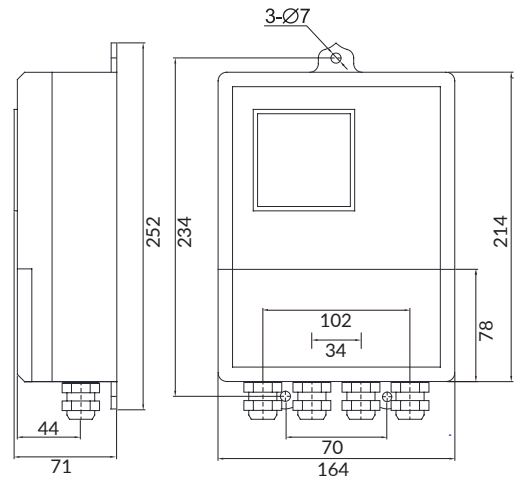
STANDARD INTEGRAL TYPE



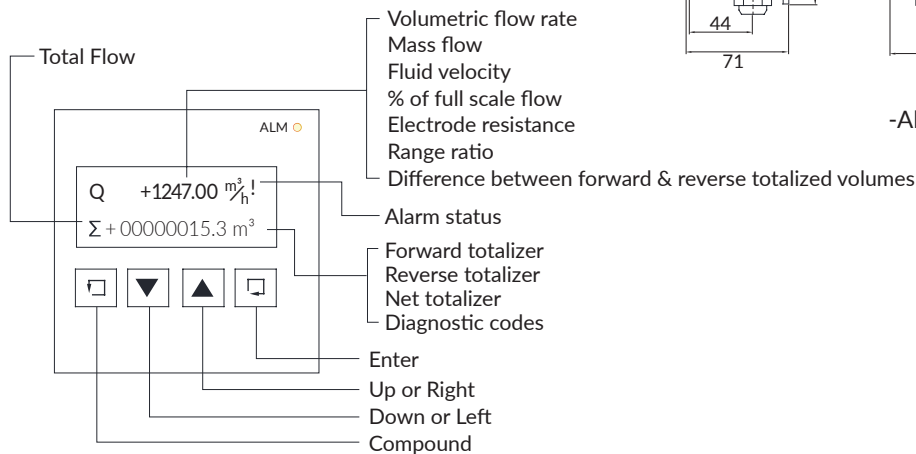
-All dimensions in mm-



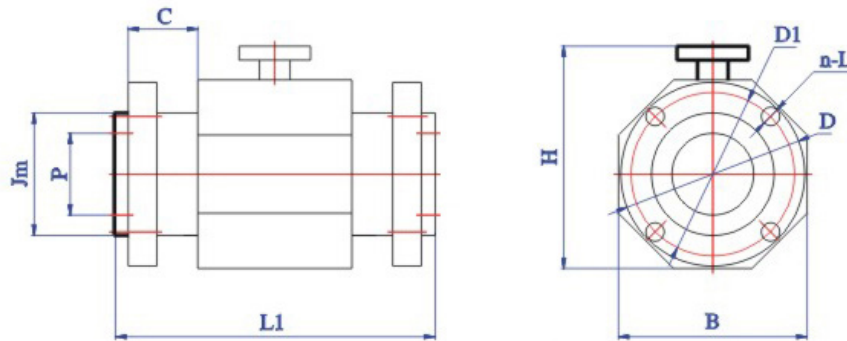
STANDARD REMOTE TYPE



-All dimensions in mm-



DIMENSIONS - Inline Type



NOM. PIPE DIAMETER - IN. (mm)	RATED PRES-SURE PSIG (bar)	INSTRUMENT OUTLINE DIMENSION INCHES (mm)			WEIGHT LBS. (Kg)
		L	H	B	
1" (25)	10Mpa	10.23 (260)	9.44 (240)	6.29 (160)	37 (17)
1½" (40)		10.23 (260)	9.84 (250)	6.29 (160)	39 (18)
2" (50)		10.23 (260)	10.63 (270)	7.67 (195)	44 (20)
2½" (65)		11.02 (280)	11.41 (290)	7.87 (200)	52 (24)
3" (80)		11.02 (280)	11.81 (300)	8.27 (210)	61 (28)
4" (100)		11.81 (300)	12.20 (310)	10.83 (275)	97 (44)
1" (25)	16Mpa	11.81 (300)	9.44 (240)	6.29 (160)	48 (22)
1½" (40)		11.81 (300)	9.44 (240)	7.08 (180)	52 (24)
2" (50)		12.59 (320)	10.43 (265)	8.46 (215)	70 (32)
2½" (65)		12.59 (320)	11.41 (290)	9.65 (245)	92 (42)
3" (80)		12.59 (320)	11.41 (290)	9.44 (240)	83 (38)
4" (100)		13.78 (350)	12.01 (305)	10.63 (270)	105 (48)
1" (25)	25Mpa	11.81 (300)	9.44 (240)	6.29 (160)	48 (22)
1½" (40)		11.81 (300)	9.44 (240)	7.08 (180)	52 (24)
2" (50)		12.59 (320)	10.43 (265)	8.46 (215)	70 (32)
2½" (65)		12.59 (320)	11.41 (290)	9.65 (245)	92 (42)
3" (80)		13.78 (350)	12.01 (305)	10.63 (270)	105 (48)
4" (100)		15.75 (400)	12.79 (325)	12.01 (305)	136 (62)
1" (25)	42Mpa	11.81 (300)	9.84 (250)	6.29 (160)	60 (27)
1½" (40)		13.78 (350)	10.04 (255)	8.07 (205)	70 (32)
2" (50)		13.78 (350)	11.02 (280)	9.25 (235)	90 (41)
2½" (65)		14.56 (370)	11.81 (300)	10.43 (265)	114 (52)
3" (80)		15.75 (400)	12.79 (325)	12.01 (305)	136 (62)
4" (100)		17.72 (450)	13.67 (347)	13.19 (335)	167 (76)

*For Sizes 4" or Larger, consult factory.

FLOW RANGE

Flow Range (m³/hr)	NOM. PIPE DIAMETER (mm) - INCH	Inside Flowtube Diameter	Pressure
0.6-6	½", 1 ½", 2" (25/40/50)	13mm	10-42MPa
1-10	1 ½", 2" (40/50)	17mm	10-42MPa
2-20	2", 2 ½" (50/65)	31mm	10-42MPa
1.5-30	2", 2 ½" (50/65)	31mm	10-42MPa
4-40	2 ½", 3" (65/80)	40mm	10-42MPa
2.5-50	2 ½", 3" (65/80)	40mm	10-42MPa
5-55	2 ½", 3" (65/80)	40mm	10-42MPa

TYPE OF FLUID

Please provide the name of your fluid media, the operating PH, and conductivity

FULL SCALE FLOW

Please provide the max and min flow rate, in units of Lb/hr, GPM or LPM

LINE SIZE

Please provide the nominal pipe size as well process connection type (flange, threaded, etc.)

PRESSURE & TEMPERATURE

We will calibrate your flow meter as close to your operating conditions as possible

ALMAGHP SERIES

EXAMPLE: ALMAGHP-AS-50-0-9-IN-16-65-0-DC-0-NX-NN-NN

ALMAG HP	*_	*	*_	*	*_	*	*_	*	*_	*	*_	*	*_	**_	**	DESCRIPTION
ANSI Flanged	AS															Connection
JIS Flanged	JS															
DIN Flanged	DN															
Other type flange	**															
1" ~ 8" (DN25~DN200)		**														Size
316 stainless steel			0													Electrode
Nickel			1													
Hast C			2													
Tan			3													
Ti			4													
PTFE				5												Liner
PFA				6												
F46				7												
Integral type					IN											Transmitter
Remote type - with 5m cable					RE											
Max Pressure 1450 psi (10 Mpa)						10										Pressure
Max Pressure 2300 psi (16 Mpa)						16										
Max Pressure 3600 psi (25 Mpa)						25										
Max Pressure 4640 psi (32 Mpa)						32										
Max Pressure 6100 psi (42 Mpa)						42										
Standard - IP65							65									Protection
IP68 flowbody and IP65 transmitter, only for remote type							68									
Not Needed								0								Grounding rings
Grounding electrode								1								
SS# 304 grounding ring								2								
24 V _{DC}									DC							Power supply
58 ~ 265 V _{AC} , 50/60Hz									AC							
No digital 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			
Aluminium enclosure, SS# 304 flow tube, CS coil housing and flange														NN		Materials
None															NN	Options
With CS install flange															IF	