



# ALMAG-WP

## Electromagnetic Flowmeter

### Model ALMAGWP Series

## GENERAL

SMARTMEASUREMENT's ALMAGWP is an inline-type electromagnetic flowmeter with flanged connections. This versatile flow sensor is available for nominal pipe sizes ranging from 3/8" through 80" and can detect fluid velocities ranging from less than 0.1 mps to 10 mps. The ALMAGWP comes with an easy to read OLED display and is available with a wide variety of options including AC or DC power, local or remote display, RS485, HART, and Profibus communications or relay outputs. This broad array of options makes the ALMAGWP an excellent choice for measuring conductive fluid flow rates in many applications and industries including food & beverage, pulp & paper and industrial process control.



## FEATURES

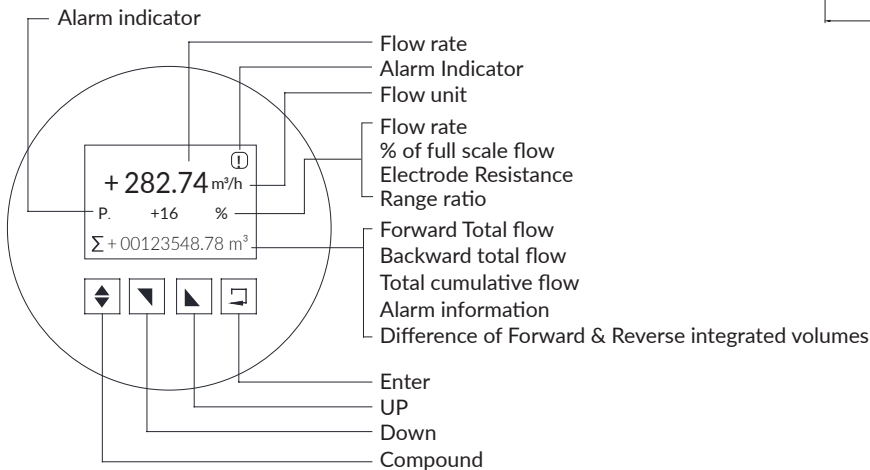
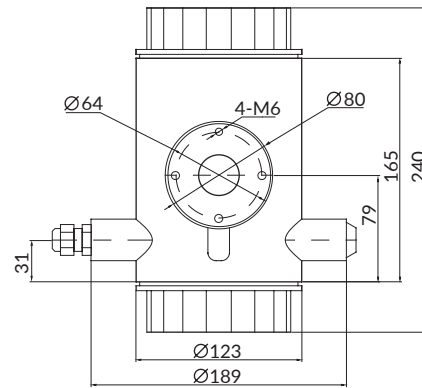
- Various liner materials are available to satisfy nearly all industrial applications.
- Wide fluid velocity range of 0-39 ft/sec with excellent low-flow accuracy.
- Flange-type process connections available in ANSI, DIN, and JIS style
- Optional 5 Amp, form C reley contacts allow high power loads to be controlled directly from the meter.
- Optional IP68 environmental protection class (submersible).
- Easy-to-read OLED display; visible in low light environments and in direct sunlight, no backlighting necessary.
- Excellent accuracy;  $\pm 0.5\%$  of reading standard,  $\pm 0.2\%$  of reading optional
- Upright/reverse flowrate test function standard with every unit.

## SPECIFICATIONS

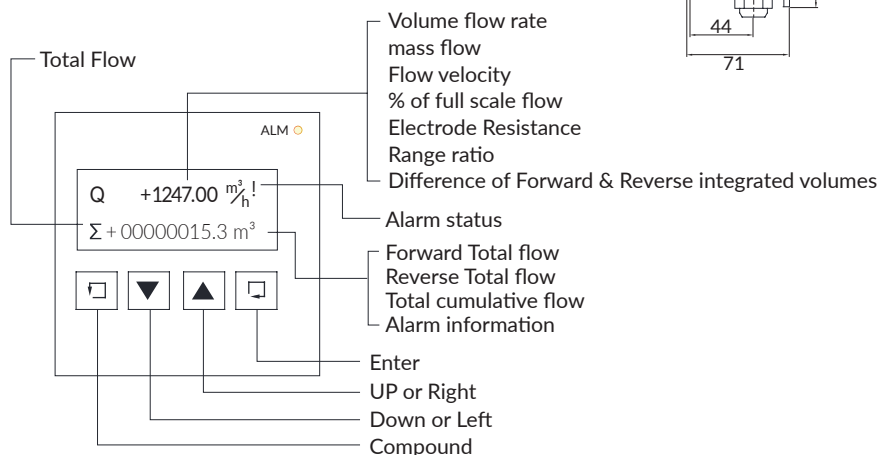
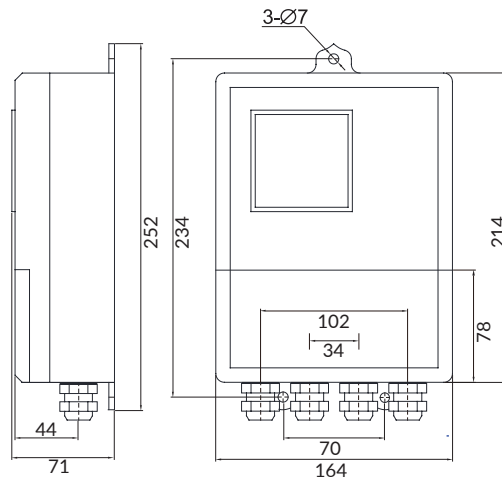
- |                       |   |                          |   |
|-----------------------|---|--------------------------|---|
| • Size:               | 3/8"~80" (DN15~DN2000)  | • Communication:         | HART<br>RS485/Modbus<br>Profibus-DP   |
| • Measuring Range:    | 0.32ft/s (0.1m/s) min. fluid velocity<br>39 ft/s (12 m/s) max.                                | • Electrode & Grounding: | Stainless Steel 316L<br>Nickel<br>Hastelloy C<br>Titanium<br>Tantalum   |
| • Material:           |   | • Ambient Temperature:   | -5 ~ +130 °F (-20 ~ 55 °C)  |
| Measuring Tube:       | Stainless Steel #304  | • Process Connection:    | Flanged   |
| Flange material:      | Carbon Steel (standard)<br>Stainless Steel 304(Optional)<br>Stainless Steel 316(Optional)     | Flange types:            | Standard ANSI 150#  |
| Coil Housing:         | Carbon Steel (standard)<br>Stainless Steel #304 (optional)<br>Stainless steel #316 (optional) | Options:                 | JIS 10K / JIS 20K / JIS 40K<br>ANSI 300# / ANSI 600#<br>DIN PN10 / PN16 / PN25 / PN40   |
| • Liner:              | Chloroprene Rubber(Neoprene)<br>Polyurethane, Hard Rubber(Ebanite)<br>PTFE, F46, PFA          | • Grounding Resistance:  | < 10 $\Omega$   |
| • Protection:         | IP65<br>IP68 (remote type only)   | • Accuracy:              | $\pm 0.5\%$ of reading (Velocity $\geq 0.5$ m/s)<br>$\pm 0.005$ m/s (Velocity < 0.5 m/s)  |
| • Conductivity:       | $\geq 5 \mu\text{S/cm}$   | • Temperature:           | 14~140 °F (-10~60 °C) - Polyurethane<br>-5~160 °F (-20~71 °C) - Neoprene<br>-40~356 °F (-40~180 °C) - PFA<br>-40~356 °F (-40~180 °C) - PTFE |
| • Power Requirements: | 110-240VAC or 16-36 VDC   |                          |   |
| • Outputs:            | 4-20mA, pulse,<br>(2) open collector switches or<br>(2) Form C, 5 Amp relay contacts          |                          |   |

## MOUNTING DRAWING

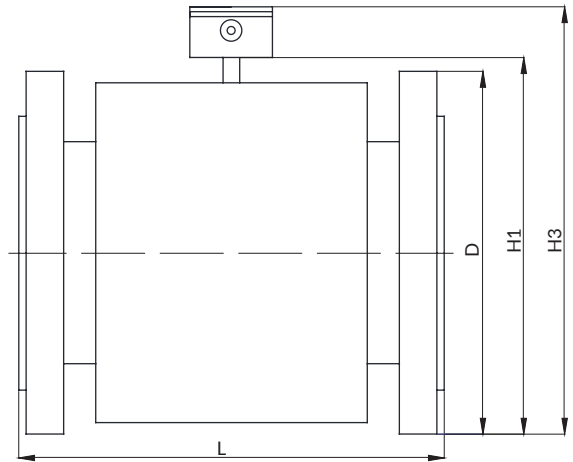
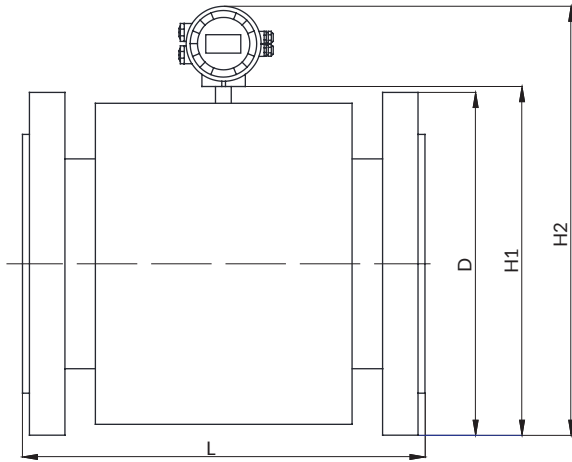
### STANDARD INTEGRAL TYPE



### STANDARD REMOTE TYPE



## DIMENSIONS - Inline (ANSI flange)



NOM. PIPE DIAMETER - IN. (mm)	RATED PRESSURE PSIG (bar)	INSTRUMENT OUTLINE DIMENSION INCHES (mm)				FLANGE CONNECTION DIMENSION INCHES (mm)	WEIGHT LBS. (Kg)	
		L	H1	H2	H3		Integral	Remote
½" (15)	363 (25)	7.87 (200)	6.10 (155)	11.22(285)	8.46 (215)	3.74 (95)	12.12(5.5)	7.71(3.5)
¾" (20)		7.87 (200)	6.29 (160)	11.41(290)	8.66 (220)	4.13 (105)	14.33(6.5)	9.92(4.5)
1" (25)		7.87 (200)	6.49 (165)	11.61(295)	8.85 (225)	4.52 (115)	15.43(7)	11.02(5)
1¼" (32)		7.87 (200)	7.08 (180)	12.20(310)	9.44 (240)	5.51 (140)	18.73(8.5)	14.33(6.5)
1½" (40)		7.87 (200)	7.48 (190)	12.59(320)	9.84 (250)	5.90 (150)	19.84(9)	15.43(7)
2" (50)		7.87 (200)	7.87 (200)	12.99(330)	10.23 (260)	6.49 (165)	24.25(11)	19.84(9)
2½" (65)		9.85 (250)	8.66 (220)	13.77(350)	11.02 (280)	7.28 (185)	28.66(13)	24.25(11)
3" (80)		9.85 (250)	9.44 (240)	14.56(370)	11.81 (300)	7.87 (200)	33.06(15)	28.66(13)
4" (100)	230 (16)	9.85 (250)	9.84 (250)	14.96(380)	12.20 (310)	8.66 (220)	37.47(17)	33.06(15)
5" (125)		9.85 (250)	11.02 (280)	16.14(410)	13.38 (340)	9.84 (250)	37.47(21)	41.88(19)
6" (150)		11.81 (300)	12.59 (320)	17.71(450)	14.96 (380)	11.22 (285)	57.32(26)	52.91(24)
8" (200)	145 (10)	13.78 (350)	14.96 (380)	20.07(510)	17.32 (440)	13.38 (340)	74.95(34)	70.54(32)
10" (250)		17.71 (450)	16.92 (430)	22.04(560)	19.29 (490)	15.35 (390)	108.02(49)	103.61(47)
12" (300)		19.68 (500)	19.29 (490)	24.40(620)	21.65 (550)	17.51 (445)	130.07(59)	125.66(57)
14" (350)		19.68 (500)	21.65 (550)	26.77(680)	24.01 (610)	19.88 (505)	154.32(70)	149.91(68)
16" (400)		19.68 (500)	23.62 (600)	28.74(730)	25.98 (660)	22.24 (565)	191.80(87)	187.39(85)
18" (450)		21.65 (550)	25.19 (640)	30.31(770)	27.55 (700)	24.21 (615)	224.87(102)	220.46(100)
20" (500)		21.65(550)	27.55 (700)	32.67(830)	29.92 (760)	26.37 (670)	268.96(122)	264.55(120)
24" (600)		23.62 (600)	31.49 (800)	36.61(930)	33.85 (860)	30.70 (780)	357.14(162)	352.73(160)
28" (700)	87 (6)	27.56 (700)	33.85 (860)	38.97(990)	36.22 (920)	33.85 (860)	676.82(307)	672.40(305)
32" (800)		31.50 (800)	38.38 (975)	43.50(1105)	40.74 (1035)	38.38 (975)	919.33(417)	914.91(415)
36" (900)		35.43 (900)	42.32 (1075)	47.44(1205)	44.68 (1135)	42.32 (1075)	1161(527)	1157(525)
40" (1000)		39.37 (1000)	46.25 (1175)	51.37(1305)	48.62 (1235)	46.25 (1175)	1503(682)	1499(680)
48" (1200)		47.25 (1200)	55.31 (1405)	60.43(1535)	57.67 (1465)	55.31 (1405)	1647(747)	1642(745)
56" (1400)		55.12 (1400)	64.17 (1630)	69.29(1760)	66.53 (1690)	64.17 (1630)	2441(1107)	2436(1105)
64" (1600)		63.00 (1600)	72.04 (1830)	77.16(1960)	74.40 (1890)	72.04 (1830)	3146(1427)	3141(1425)
72" (1800)		70.87 (1800)	80.51 (2045)	85.62(2175)	82.87 (2105)	80.51 (2045)	4314(1957)	4310(1955)
80" (2000)		78.75 (2000)	89.17 (2265)	94.29(2395)	91.53 (2325)	89.17 (2265)	5472(2482)	5467(2480)

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<b>TYPE OF FLUID</b>	Please provide the name of your fluid media, the operating PH, and conductivity
<b>FULL SCALE FLOW</b>	Please provide the max and min flow rate, in units of Lb/hr, GPM or LPM
<b>LINE SIZE</b>	Please provide the nominal pipe size and process connection type (flange, threaded, etc.)
<b>PRESSURE &amp; TEMPERATURE</b>	We will calibrate your flow meter as close to your operating conditions as possible

### ALMAGWP SERIES

EXAMPLE: ALMAGWP-F-50-0-3-IN-2.5-65-0-DC-0-EXI-NN-NN																DESCRIPTION
ALMAGWP-	*_	*	*_	*	*_	*	*_	*	*_	*	*_	**_	**			
ANSI 150# Flange	F														Connection	
Ceramic - 4Mpa (DN15~DN200) ½"~8"	C															
Sanitary type (DN15~DN200) ½"~4"	S															
Threaded type (DN15~DN200) ¾"~2"	T															
Wafer type (DN15~DN200) ¾"~8"	W															
DN10-DN 2000 (¾"~80")	**														Size	
316 stainless steel	0														Electrode	
Nickel	1															
Hastelloy C	2															
Tan	3															
Ti	4															
Ceramic	C															
Chloroprene Rubber(Neoprene)	3														Liner material	
PU(Polyurethane)	4															
PTFE	5															
PFA	6															
F46	7															
Hard Rubber (Ebanite)	8															
Ceramic	C															
Integral type	IN														Transmitter	
Remote type - with 5m cable	RE															
Max Pressure (362 psi) 2.5Mpa with flanges up to 3"/DN80	2.5														Pressure	
Max Pressure (232 psi) 1.6Mpa with flanges up to 6"/DN150	1.6															
Max Pressure (145 psi) 1.0 Mpa with flanges up to 36"/DN900	1.0															
Max Pressure (87 psi) 0.6Mpa with flanges up to 80"/DN2000	0.6															
Standard - IP65	65														Protection	
IP68 flow body and IP65 transmitter, only for remote type	68															
Not Needed	0														Grounding rings	
Grounding electrode	1															
304SS grounding ring	2															
16~30 V <sub>DC</sub>	DC														Power supply	
85~265 V <sub>AC</sub> @ 45-63 Hz	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															
Aluminum Enclosure, 304SS flow tube, CS coil housing and process connection	NN														Materials	
Aluminum Enclosure, 304SS flow tube, CS coil housing and 304SS process connection	C304															
Aluminum Enclosure, 304SS flow tube, coil housing and 304SS process connection	304															
None	NN														Options	
With CS install flange	IF															

