



# ALMAG

## Electromagnetic Flowmeter

### Model ALMAGWP Series

## GENERAL

The **ALMAGWP** is a flange type electromagnetic flowmeter ideal for conductive liquids. A wide variety of sizes are available accommodate nominal pipe diameters ranging from ½" through 80". The ALMAGWP may be used in many applications including tap-water, waste water, food & beverage, and pulp & paper. The ALMAGWP magmeter is available in a stand-alone configuration and may also be used with various SMC transmitter and display packages.



## FEATURES

- Various liner materials are available to accommodate most industrial applications
- Fluid Velocity range of 0-32 feet/sec, with good results for low flow applications
- Flange-type process connections are standard; ANSI, DIN, JIS style available
- Ideal for high pressure applications
- IP68 protection class available; the sensor may be immersed in water.
- FEP liner suitable in vacuum tube applications
- High accuracy -  $\pm 0.5\%$  of reading standard or  $\pm 0.2\%$  of range
- Feature for upright/opposite flowrate test function.

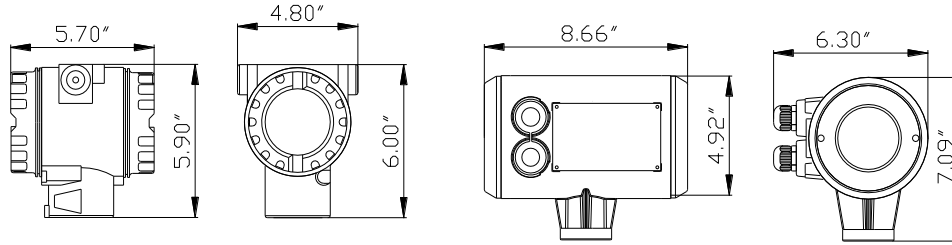


## SPECIFICATION

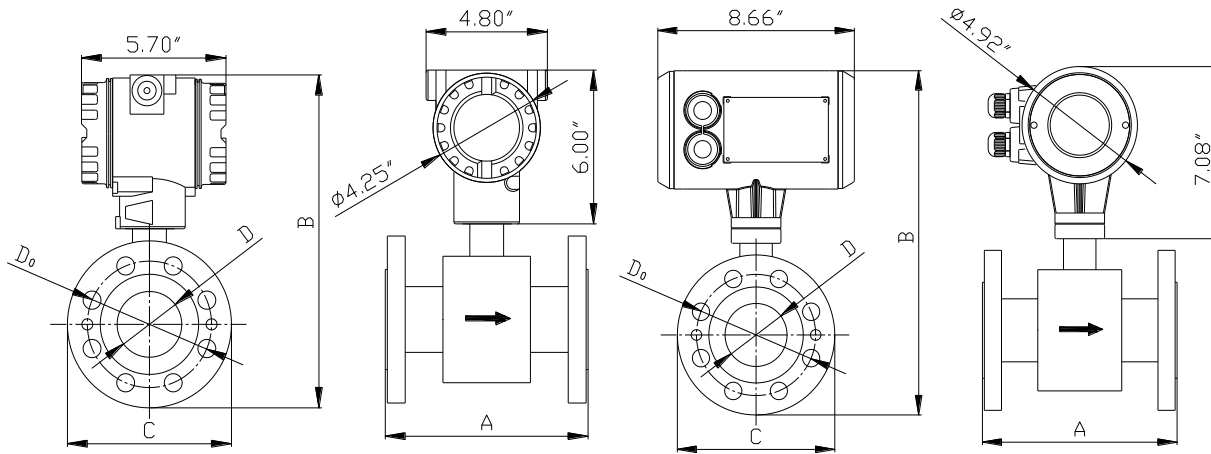
- Size : ½" ~ 80" (10 ~ 2000mm)
- Temperature: w/ integral electronics: 15~140 °F (-10~60 °C)  
w/ remote electronics: 15~300 °F (-10~150 °C)
- Measuring Range : 0.3 - 32 feet/sec (0.1 - 10 m/s)
- Material
  - Measuring Tube : Carbon Steel (standard)  
Stainless Steel 304 (optional)  
Stainless steel 316 (optional)
  - Housing : Aluminium (standard)  
Carbon Steel (optional)  
Stainless Steel #304 (optional)  
Stainless Steel #316 (optional)
- Liner : Polyurethane  
Neoprene  
FEP (½"-12" only)  
PTFE
- Electrode & Grounding : Stainless Steel 316L  
Hastelloy B  
Hastelloy C  
Titanium  
Tantalum  
Tungsten Carbide
- Cable Entry : 2 X PG11
- Ambient Temperature : -15~140 °F (-25~60 °C)
- Process Connection : Flange, wafer  
Flanges type : JIS , ANSI , PN
- Grounding Resistance : Must be less than 10  $\Omega$
- Accuracy :  $\pm 0.5\%$  of reading  
 $\pm 0.2\%$  of FS
- Protection : IP 65, IP 67  
IP 68 (Submersible)
- Conductivity : must be  $\geq 5 \mu\text{S/cm}$

➤ INTEGRAL TYPE DIMENSIONS

● TRANSMITTER



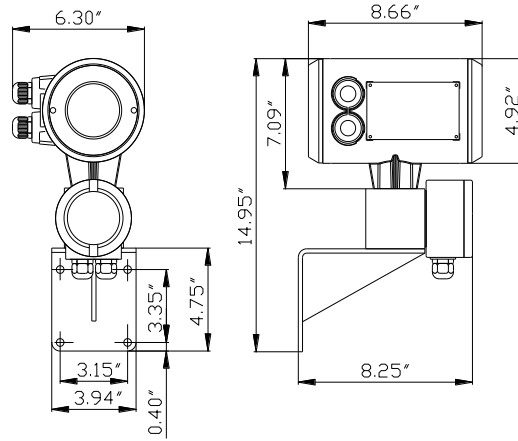
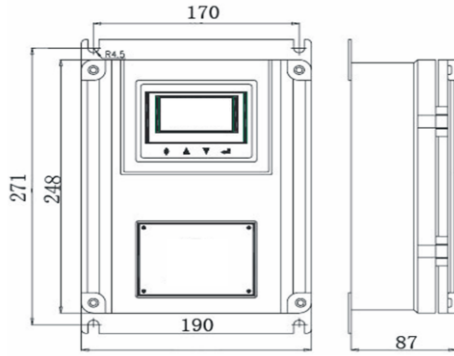
● FLOWMETER



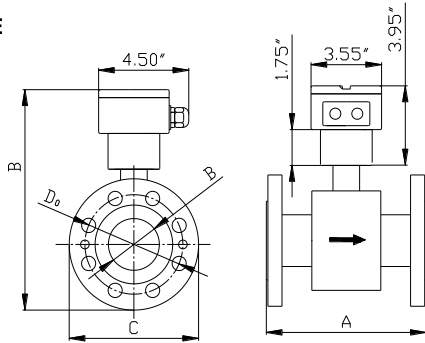
Nom. Pipe Diameter - in. (mm)	Rated pressure psig (bar)	Instrument outline dimension inches (mm)			Flange connection dimension inches (mm)			Weight lbs. (kg)
		a	b	c	D	D0	nxA	
3/8" (10)	580 (40)	7.87 (200)	12.60 (320)	3.54 (90)	3/8" (10)	2.36 (60)	4 x 0.55 (14)	13.25 (6)
1/2" (15)	580 (40)	7.87 (200)	12.67 (322)	3.74 (95)	1/2" (15)	2.56 (65)	4 x 0.55 (14)	13.25 (6)
3/4" (20)	580 (40)	7.87 (200)	12.87 (327)	4.13 (105)	3/4" (20)	2.95 (75)	4 x 0.55 (14)	13.25 (6)
1" (25)	580 (40)	7.87 (200)	13.26 (337)	4.52 (115)	1" (25)	3.35 (85)	4 x 0.55 (14)	15.5 (7)
1 1/4" (32)	580 (40)	7.87 (200)	13.78 (350)	5.51 (140)	1 1/4" (32)	3.94 (100)	4 x 0.71 (18)	20 (9)
1 1/2" (40)	580 (40)	7.87 (200)	13.94 (354)	5.90 (150)	1 1/2" (40)	4.33 (110)	4 x 0.71 (18)	22 (10)
2" (50)	580 (40)	7.87 (200)	14.80 (376)	6.50 (165)	2" (50)	4.92 (125)	4 x 0.71 (18)	26.5 (12)
2 1/2" (65)	580 (40)	7.87 (200)	15.20 (386)	7.28 (185)	2 1/2" (65)	5.71 (145)	4 x 0.71 (18)	37.5 (17)
3" (80)	580 (40)	7.87 (200)	16.18 (411)	7.87 (200)	3" (80)	6.30 (160)	8 x 0.71 (18)	37.5 (17)
4" (100)	230 (16)	9.85 (250)	16.97 (431)	8.67 (220)	4" (100)	7.09 (180)	8 x 0.71 (18)	48.5 (22)
5" (125)	230 (16)	9.85 (250)	17.51 (445)	9.84 (250)	5" (125)	8.27 (210)	8 x 0.71 (18)	53 (24)
6" (150)	230 (16)	11.81 (300)	19.33 (491)	11.22 (285)	6" (150)	9.45 (240)	8 x 0.87 (22)	77.25 (35)
8" (200)	145 (10)	13.78 (350)	21.65 (550)	13.38 (340)	8" (200)	11.61 (295)	8 x 0.87 (22)	99.25 (45)
10" (250)	145 (10)	15.75 (400)	22.83 (580)	15.55 (395)	10" (250)	13.78 (350)	12 x 0.87 (22)	185 (84)
12" (300)	145 (10)	19.68 (500)	25.31 (643)	17.52 (445)	12" (300)	15.75 (400)	12 x 0.87 (22)	225 (102)
14" (350)	145 (10)	19.68 (500)	27.72 (704)	19.88 (505)	14" (350)	18.11 (460)	16 x 0.87 (22)	271 (123)
16" (400)	145 (10)	23.62 (600)	30.08 (764)	22.25 (565)	16" (400)	20.28 (515)	16 x 1.02 (26)	324 (147)
18" (450)	145 (10)	23.62 (600)	32.05 (814)	24.21 (615)	18" (450)	22.25 (565)	20 x 1.02 (26)	467 (212)
20" (500)	145 (10)	23.62 (600)	33.86 (860)	26.37 (670)	20" (500)	22.40 (620)	20 x 1.02 (26)	461 (209)
24" (600)	145 (10)	23.62 (600)	38.11 (968)	30.71 (780)	24" (600)	28.54 (725)	20 x 1.18 (30)	556 (252)
28" (700)	145 (10)	27.56 (700)	(1077)	35.25 (895)	28" (700)	33.07 (840)	24 x 1.18 (30)	776 (352)
32" (800)	145 (10)	31.50 (800)	(1188)	39.96 (1015)	32" (800)	37.40 (950)	24 x 1.37 (35)	1018 (462)

➤ REMOTE TYPE DIMENSIONS

● TRANSMITTER



● FLOWMETER



Nom. Pipe Diameter - in. (mm)	Rated pressure psig (bar)	Instrument outline dimension inches (mm)			Flange connection dimension inches (mm)			Weight (kg)
		a	b	c	D	D0	nxA	
3/8" (10)	580 (40)	7.87 (200)	7.36 (187)	3.54 (90)	3/8" (10)	2.36 (60)	4 x 0.55 (14)	8.75 (4)
1/2" (15)	580 (40)	7.87 (200)	7.44 (189)	3.74 (95)	1/2" (15)	2.56 (65)	4 x 0.55 (14)	8.75 (4)
3/4" (20)	580 (40)	7.87 (200)	7.64 (194)	4.13 (105)	3/4" (20)	2.95 (75)	4 x 0.55 (14)	8.75 (4)
1" (25)	580 (40)	7.87 (200)	8.03 (204)	4.52 (115)	1" (25)	3.35 (85)	4 x 0.55 (14)	11 (5)
1 1/4" (32)	580 (40)	7.87 (200)	8.50 (216)	5.51 (140)	1 1/4" (32)	3.94 (100)	4 x 0.71 (18)	15.5 (7)
1 1/2" (40)	580 (40)	7.87 (200)	8.70 (221)	5.90 (150)	1 1/2" (40)	4.33 (110)	4 x 0.71 (18)	17.75 (8)
2" (50)	580 (40)	7.87 (200)	9.57 (243)	6.50 (165)	2" (50)	4.92 (125)	4 x 0.71 (18)	22 (10)
2 1/2" (65)	580 (40)	7.87 (200)	9.96 (253)	7.28 (185)	2 1/2" (65)	5.71 (145)	4 x 0.71 (18)	33 (15)
3" (80)	580 (40)	7.87 (200)	10.94 (278)	7.87 (200)	3" (80)	6.30 (160)	8 x 0.71 (18)	33 (15)
4" (100)	230 (16)	9.85 (250)	11.73 (298)	8.67 (220)	4" (100)	7.09 (180)	8 x 0.71 (18)	44 (20)
5" (125)	230 (16)	9.85 (250)	12.50 (318)	9.84 (250)	5" (125)	8.27 (210)	8 x 0.71 (18)	48.50 (22)
6" (150)	230 (16)	11.81 (300)	14.09 (358)	11.22 (285)	6" (150)	9.45 (240)	8 x 0.87 (22)	72.75 (33)
8" (200)	145 (10)	13.78 (350)	16.37 (416)	13.38 (340)	8" (200)	11.61 (295)	8 x 0.87 (22)	95 (43)
10" (250)	145 (10)	15.75 (400)	19.29 (490)	15.55 (395)	10" (250)	13.78 (350)	12 x 0.87 (22)	181 (82)
12" (300)	145 (10)	19.68 (500)	20.08 (510)	17.52 (445)	12" (300)	15.75 (400)	12 x 0.87 (22)	220.5 (100)
14" (350)	145 (10)	19.68 (500)	22.48 (571)	19.88 (505)	14" (350)	18.11 (460)	16 x 0.87 (22)	226.75 (121)
16" (400)	145 (10)	23.62 (600)	24.84 (631)	22.25 (565)	16" (400)	20.28 (515)	16 x 1.02 (26)	320 (145)
18" (450)	145 (10)	23.62 (600)	26.81 (681)	24.21 (615)	18" (450)	22.25 (565)	20 x 1.02 (26)	463 (210)
20" (500)	145 (10)	23.62 (600)	28.75 (730)	26.37 (670)	20" (500)	22.40 (620)	20 x 1.02 (26)	456 (207)
24" (600)	145 (10)	23.62 (600)	32.91 (836)	30.71 (780)	24" (600)	28.54 (725)	20 x 1.18 (30)	551 (250)
28" (700)	145 (10)	27.56 (700)	37.16 (944)	35.25 (895)	28" (700)	33.07 (840)	24 x 1.18 (30)	772 (350)
32" (800)	145 (10)	31.50 (800)	41.54 (1055)	39.96 (1015)	32" (800)	37.40 (950)	24 x 1.37 (35)	1014 (460)
36" (900)	145 (10)	35.43 (900)	46.06 (1170)	43.90 (1115)	36" (900)	41.33 (1050)	28 x 1.37 (35)	1213 (550)
40" (1000)	145 (10)	39.37 (1000)	50.39 (1280)	48.43 (1230)	40" (1000)	45.67 (1160)	28 x 1.37 (35)	1500 (680)
48" (1200)	87 (6)	47.25 (1200)	57.48 (1460)	55.31 (1405)	48" (1200)	52.75 (1340)	32 x 1.37 (35)	1698 (770)
56" (1400)	87 (6)	55.12 (1400)	71.77 (1823)	60.00 (1524)	56" (1400)	61.41 (1560)	36 x 1.42 (36)	2712 (1230)
64" (1600)	87 (6)	63.00 (1600)	80.04 (2033)	67.95 (1726)	64" (1600)	69.30 (1760)	40 x 1.42 (36)	3417 (1550)
72" (1800)	87 (6)	70.87 (1800)	87.67 (2227)	75.83 (1926)	72" (1800)	77.65 (1970)	44 x 1.54 (39)	4586 (2080)
80" (2000)	87 (6)	78.75 (2000)	95.59 (2428)	85.43 (2170)	80" (2000)	85.83 (2180)	48 x 1.65 (42)	5732 (2600)

**\*\* Please contact your local SMC application engineer**

**You also need to provide the following information:**

Type of Fluid	Please provide the name of your fluid, including operating PH, corrosiveness & conductivity.
Full Scale Flow	Please provide maximum and minimum flow rates in units must of Lb/hr, LPM, or GPM
Line Size	Specify pipe size as well connection type (flanged, threaded, etc..)
Pressure & Temperature	We will calibrate your flowmeter as close to your operating conditions as possible
Type of Electronics	Indicate if you want integral or remote electronics as well protection class
Power Requirements	Specify your power requirements (24 V <sub>DC</sub> or 230 V <sub>AC</sub> )

**Model Selection Guide**

ALMAGWP Series															
Example:															
ALMAGWP-	*_	**_	*	*_	*	*_	*	*_	*	*_	*	*_	**_	**	Description
Flanged	F														Type
Clamped	C														
3/8"-80" (DN10~DN2000)		**													Size
316 stainless steel			1												Electrode
Hastalloy B			2												
Hastalloy C			3												
Pt			4												
Ti			5												
Other			9												
Chloroprene rubber (CR)				A											Linner material
Polyurethane rubber (PU)				B											
Polytetrafluoroethylene (PTEE, F4)				C											
Solubility Polytetrafluoroethylene(PFA)				D											
FEP (F46)				E											
PTFE-withstand negative pressure				F											
PFA-withstand negative pressure				G											
FEP (F46) withstand negative pressure				H											
580 psig (40 bar) - 3/8"-3" line sizes			1												Working pressure
230 psig (16 bar) - 4"-6" line sizes			2												
145 psig (10 bar) - 8"-40" line sizes			3												
87 psig (6 bar) - 48"-80" line sizes			4												
None				A											Earthing ring
General earth ring, material 1Gr18Ni9Ti				B											
Earth ring with neck, material 1Gr18Ni9Ti				C											
General earth ring, material 316L stainless steel				D											
Earth ring with neck, material 316L stainless steel				E											
Other				Y											
IP65				A											Protection
IP67				B											
IP68 (Submersible, separate with converter only)				C											
4~20mA			1												Output
0~3KHz			2												
Pulse X..XXX m <sup>3</sup> /cp			3												
None			0												Communication
RS485			1												
RS232C			2												
220V <sub>AC</sub>								T							Power supply
24V <sub>DC</sub>								W							
±0.5%									5						Accuracy
Integral type										1					Converter
Remote type										4					
Explosion Proof											EX				Approval
Non- Hazardous											NX				
Options												**			Option