



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

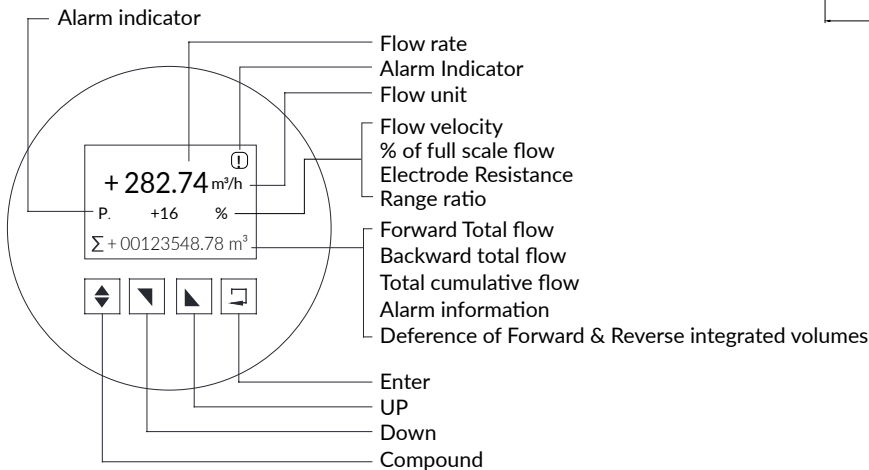
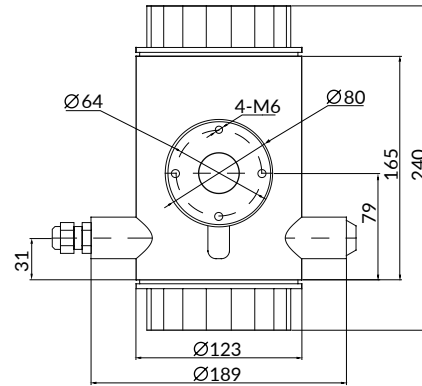
- Various liner materials are available to satisfy nearly all industrial applications.
- Wide fluid velocity range of 0-39 ft/sec with excellent low-flow accuracy.
- Flange-type process connections available in ANSI, DIN, and JIS style
- Optional 5 Amp, form C relay contacts allow high power loads to 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

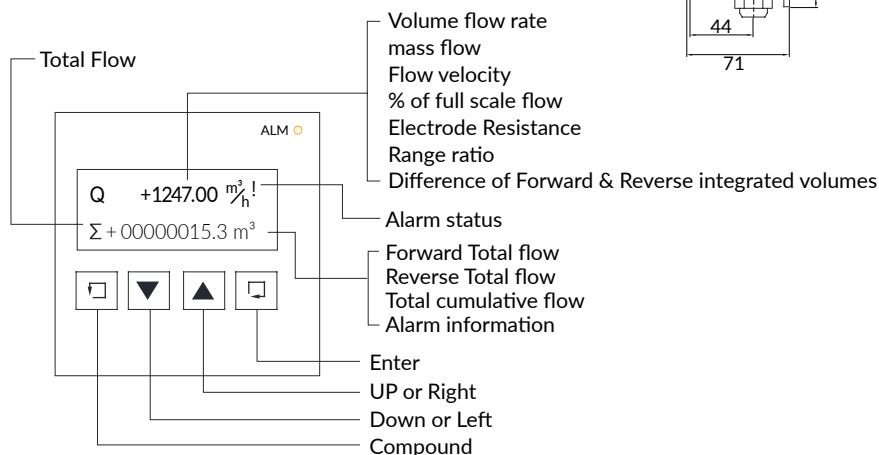
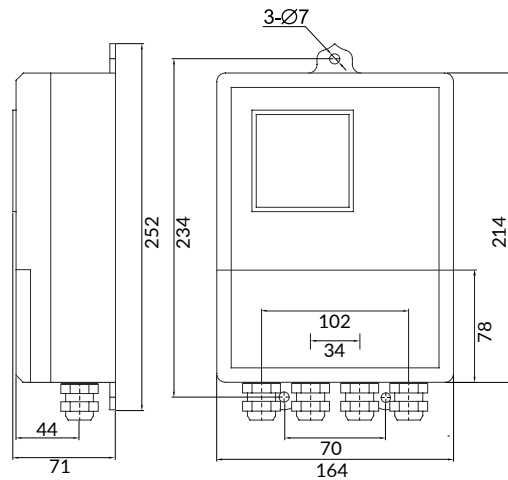
- | | | | |
|-----------------------|---|--------------------------|---|
| • Size: | 3/8"~80" (DN15~DN2000) | • Communication: | HART RS485/Modbus Profibus-DP |
| • Measuring Range: | 0.32ft/s (0.1m/s) min. fluid velocity 39 ft/s (12 m/s) max. | • Electrode & Grounding: | Stainless Steel 316L Nickel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

MOUNTING DRAWING

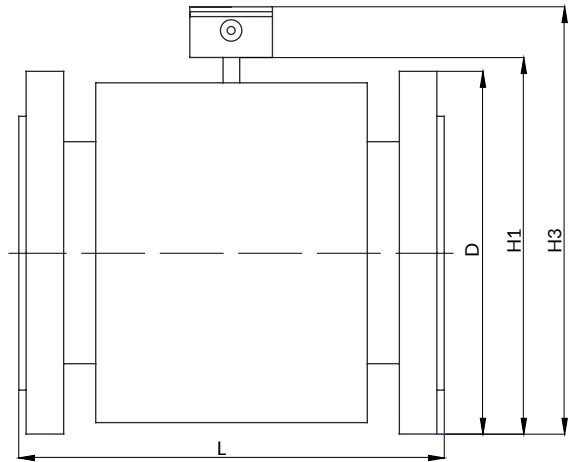
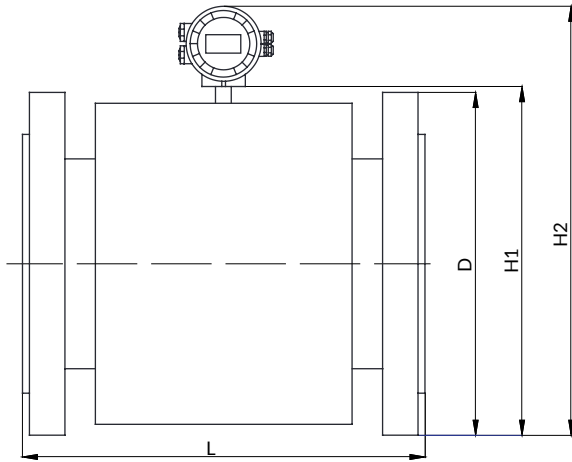
STANDARD INTEGRAL TYPE



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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| | |
|-----------------------------------|---|
| 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 and process connection type (flange, threaded, etc.) |
| PRESSURE & TEMPERATURE | 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

| ALMAGWP- | *_ | * | *_ | * | *_ | * | *_ | * | *_ | * | *_ | **_ | ** | DESCRIPTION |
|---|----|----|----|---|----|---|----|----|-----|----|----|-----|-----|-----------------|
| ANSI 150# Flange | F | | | | | | | | | | | | | Connection |
| Ceramic - 4Mpa (DN15~DN200) ½"~8" | C | | | | | | | | | | | | | |
| DIN Standard Flange | D | | | | | | | | | | | | | |
| 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 (Ebonite) | | | | 8 | | | | | | | | | | |
| Other | | | | 9 | | | | | | | | | | |
| Ceramic | | | | C | | | | | | | | | | |
| Integral type | | | | | | | | IN | | | | | | Transmitter |
| Remote type - with 5m cable | | | | | | | | RE | | | | | | |
| Max Pressure (362 psi) 2.5Mpa with flanges up to DN80 | | | | | | | | | 2.5 | | | | | Pressure |
| Max Pressure (232 psi) 1.6Mpa with flanges up to DN150 | | | | | | | | | 1.6 | | | | | |
| Max Pressure (145 psi) 1.0 Mpa with flanges up to DN2000 | | | | | | | | | 1.0 | | | | | |
| Max Pressure (87 psi) 0.6Mpa with flanges up to DN2000 | | | | | | | | | 0.6 | | | | | |
| 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 _{DC} | | | | | | | | | | | | DC | | Power supply |
| 85~265 V _{AC} @ 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 | | | | | | | | | | | | | EXD | |
| Explosion Proof - for remote type | | | | | | | | | | | | | EXR | |
| None | | | | | | | | | | | | | NN | Options |
| With CS install flange | | | | | | | | | | | | | IF | |

