



ALMAG

Electromagnetic Flowmeter

ALMAG Series

GENERAL

Smartmeasurement ALMAGWP-C is ceramic-lined version of our standard electromagnetic flowmeter. The ALMAGWP-C can be used in situations where there are aggressive acids or highly abrasive slurries, as long as the fluid's conductivity is greater than 5 $\mu\text{S}/\text{cm}$. This meter is compact and lightweight, featuring wafer-type connections, ceramic liner and ceramic electrodes. These features allow for higher flow velocities and wider turn-downs which make it ideal for many types of processes including those involving high pressure, high temperature, or vacuum service. Nominal flow body sizes range from ½" top 8" (15-200mm) and are wet calibrated to verify their specified accuracy with traceability to the U.S. National Institute of Science and Technology (NIST). The electronics can be mounted in a standard IP65 enclosure or an Exd IP67 enclosure with ATEX, CSA and FM approvals. A remote mounted version is also available. Optional communication outputs include RS485 /Modbus, HART, and Profibus. Relay outputs are also available in place of the standard open collector transistor switches. This broad array of options make the ALMAGWP-C an ideal choice in the harsh chemical industries as well as other applications with highly corrosive fluids.

FEATURES

- Variety of liners (see ordering sheet on page 4)
- Wide fluid velocity range of 0.6-40 feet/sec (0.2-12 m/s)
- Modbus, Hart, Profibus-DP communication
- Designed for clean fluids > 5 $\mu\text{S}/\text{cm}$
- IP68 enclosure that can be used for underground applications
- Ceramic Liner suitable for vacuum pressure applications
- High accuracy; $\pm 0.5\%$ of reading
- Display of empty pipe, current excitation, alarms, etc.
- NIST traceable calibration certificate



Standard type



Remote converter



Ceramic liner



Exd (ATEX, CSA & FM) converter

SPECIFICATION

- | | | | |
|-------------------|--|-----------------------|--|
| ● Size | : ½"-8" (15-200mm) | ● Display | : Flow rate, flow velocity, percent full-scale total accumulated flow |
| ● Connection | : Wafer | ● Protection | : IP 65 - Std. IP68 flow body - Remote electronics IP67 Exd ATEX, CSA & FM |
| ● Measuring Range | : 0.6-40 ft/sec (0.2-12 m/s) bi-directional | ● Conductivity | : to be more than 5 $\mu\text{S}/\text{cm}$ |
| ● Temperature | -4~140 °F (-20~60 °C) - Integral -40~482 °F (-40~250 °C) - Remote | ● Ambient Temperature | : -13~140 °F (-25~60 °C) |
| ● Pressure | : up to 580 psig (4.0Mpa) | ● Accuracy | : $\pm 0.5\%$ of reading - standard $\pm 0.2\%$ of full scale - Option |
| ● Electrode | : Ceramic | ● Power requirements | : 19-36 V_{DC} , 12-15W 85-265 V_{AC} , 45-63 Hz, $\leq 20\text{W}$ |
| ● Liner | : Ceramic | ● Outputs | : 4-20mA, Pulse, |
| ● Measuring Tube | : Ceramic | ● Communication | : RS232/485/HART, Modbus |
| ● Coil Housing | : Stainless Steel #304 - Opt Stainless Steel #316 - Opt | | |
| ● Earth ring | : Stainless Steel #304 - Opt Stainless Steel #316 - Opt | | |

SmartMeasurement

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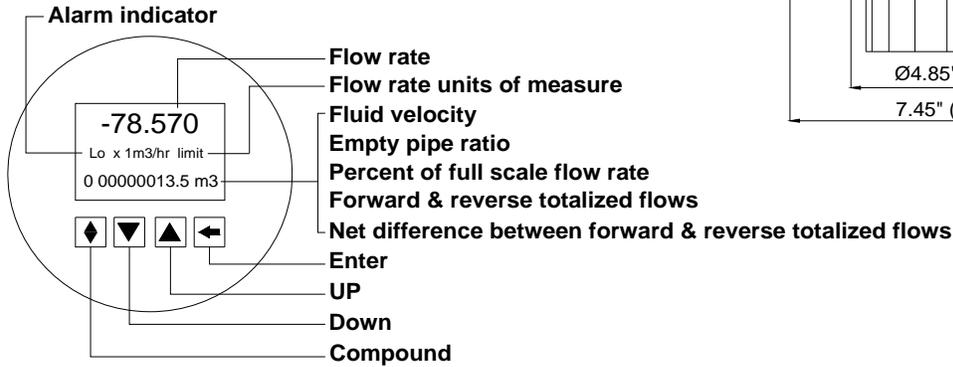
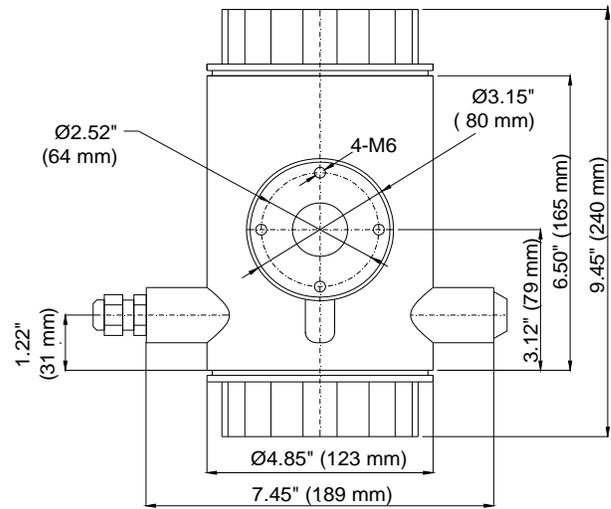
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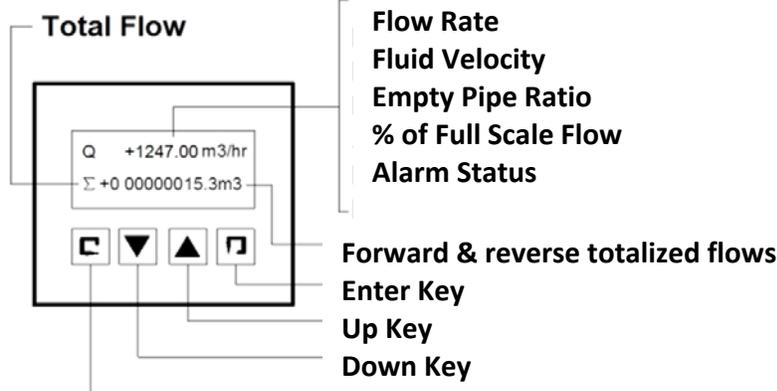
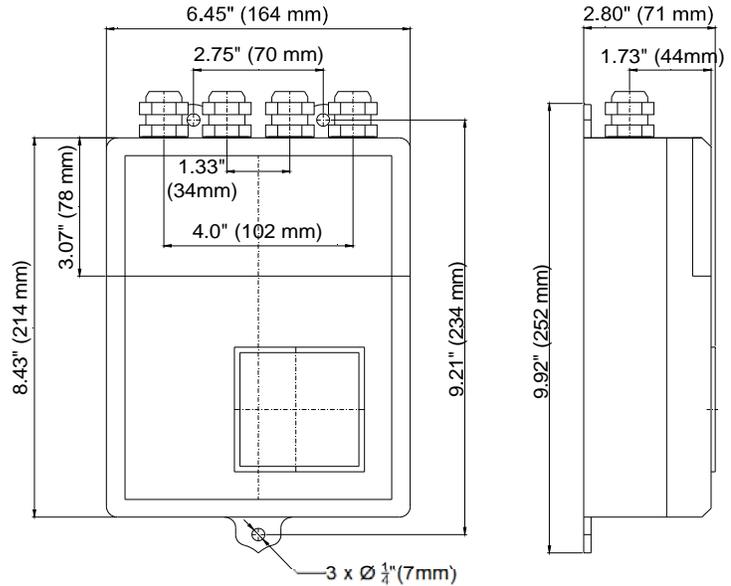
Electromagnetic Flowmeter ALMAGWP

Mounting

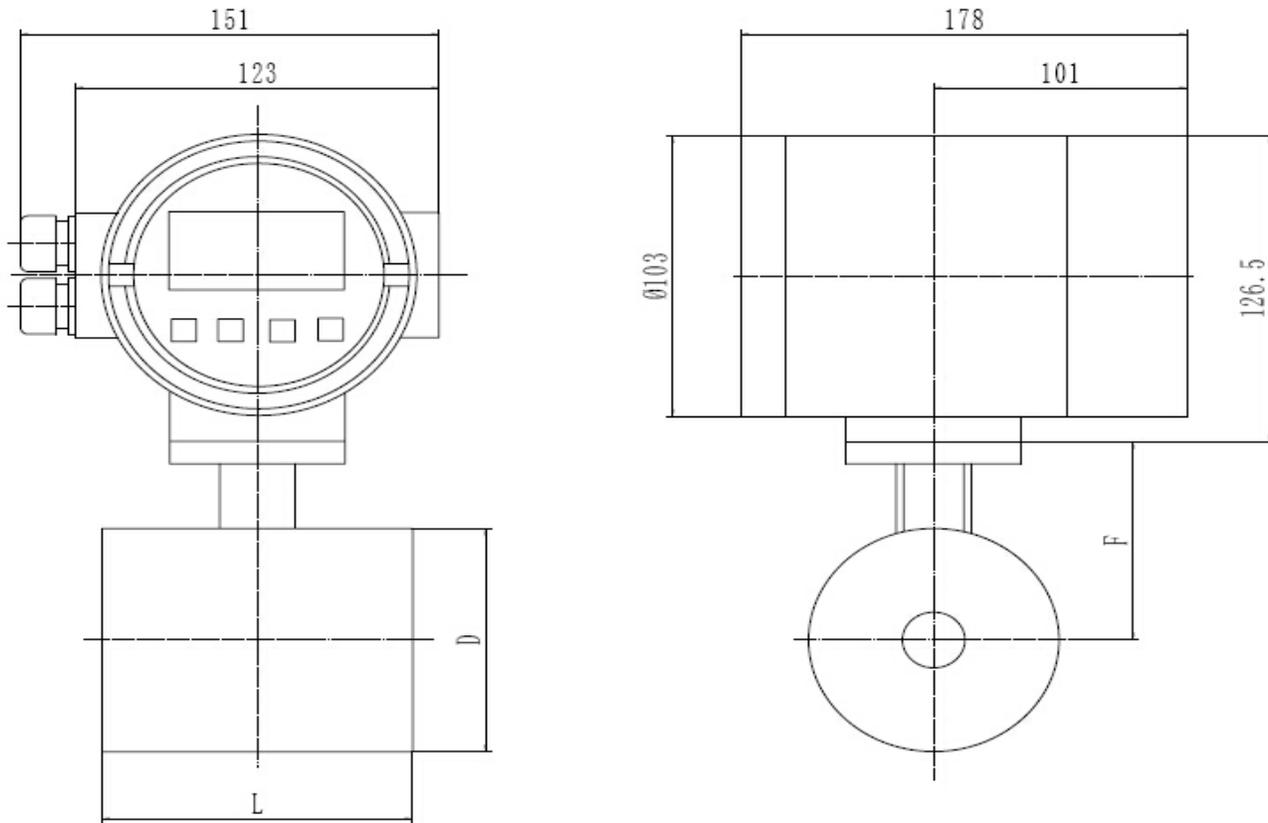
• **Standard Integral type**



• **Standard Remote type**



7 DIMENSIONS



| Nominal Diameter Inches (mm) | Max pressure psi (MPa) | Dimension - inches (mm) | | | Weight - lbs (kg) | |
|---------------------------------|---------------------------|-------------------------|-------------|------------|-------------------|------------|
| | | L | D | F | Integral | Remote |
| ½" (DN15) | 580 psi (4.0 MPa) | 3.54 (90) | 2.36 (60) | 3.35 (85) | 12.1 (5.5) | 7.7 (3.5) |
| ¾" (DN 20) | | 3.54 (90) | 2.36 (60) | 3.35 (85) | 14.3 (6.5) | 9.9 (4.5) |
| 1" (DN 25) | | 2.52 (64) | 2.48 (63) | 3.43 (87) | 15.4 (7) | 11 (5) |
| 1¼" (DN 32) | | 3.23 (82) | 3.00 (76) | 3.66 (93) | 18.7 (8.5) | 14.3 (6.5) |
| 1½" (DN 40) | | 3.54 (90) | 3.50 (89) | 3.94 (100) | 19.8 (9) | 15.4 (7) |
| 2" (DN 50) | | 4.33 (110) | 3.98 (101) | 4.17 (106) | 24.2 (11) | 19.8 (9) |
| 2½" (DN 65) | | 5.12 (130) | 4.50 (114) | 4.41 (112) | 28.7 (13) | 24.2 (11) |
| 3" (DN80) | | 6.69 (170) | 5.00 (127) | 4.69 (119) | 33.1 (15) | 28.7 (13) |
| 4" (DN100) | | 7.09 (180) | 6.25 (159) | 5.31 (135) | 37.5 (17) | 33.1 (15) |
| 5" (DN125) | | 8.66 (220) | 6.25 (159) | 5.31 (135) | 46.3 (21) | 41.9 (19) |
| 6" (DN150) | | 10.55 (268) | 8.62 (219) | 6.50 (165) | 57.3 (26) | 52.9 (24) |
| 8" (DN200) | | 11.80 (300) | 10.75 (273) | 7.56 (192) | 74.9 (34) | 70.5 (32) |

ALMAG

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

You also need to provide the following information:

| | |
|-----------------------------------|--|
| Type of Fluid | Please specify the name of your fluid media, the operating PH, and conductivity. |
| Full Scale Flow | Maximum and minimum flow rates should be specified in units of MPH, GPM, LPM, etc. |
| Line Size | Please state nominal pipe size as well process connection type (flange, threaded, etc..) |
| Pressure & Temperature | We will calibrate your flowmeter as close to your operating conditions as possible |

Model Selection Guide

| ALMAG Series | | | | | | | | | | | | | | |
|---|----------------|----|----------------|---|----------------|----|----------------|----|----------------|----|----------------|-----------------|-----|-----------------|
| Example: ALMAGWP-C-50-0-3-IN-2.5-65-0-DC-0-EXI-NN-NN | | | | | | | | | | | | | | |
| ALMAGWP- | * ₋ | * | * ₋ | * | * ₋ | * | * ₋ | * | * ₋ | * | * ₋ | ** ₋ | ** | Description |
| Ceramic - 4Mpa | C | | | | | | | | | | | | | |
| ½"-8" (DN15-DN200) | | ** | | | | | | | | | | | | Size |
| Ceramic | | | C | | | | | | | | | | | Liner |
| Ceramic | | | | C | | | | | | | | | | Electrode |
| Integral type | | | | | | IN | | | | | | | | Transmitter |
| Remote type - with 5m cable | | | | | | RE | | | | | | | | |
| Max Pressure 580 psi (4.0Mpa) | | | | | | | 4.0 | | | | | | | Pressure |
| IP65 | | | | | | | | 65 | | | | | | Protection |
| IP68 flow body and IP65 transmitter, only for remote type | | | | | | | | 68 | | | | | | |
| Not Needed | | | | | | | | | 0 | | | | | Grounding rings |
| 304SS grounding ring | | | | | | | | | 2 | | | | | |
| 316SS grounding ring | | | | | | | | | 3 | | | | | |
| 11-40 V _{DC} | | | | | | | | | | DC | | | | Power supply |
| 85-265 V _{AC} , 50/60 Hz | | | | | | | | | | AC | | | | |
| No communication | | | | | | | | | | | 0 | | | Communication |
| HART | | | | | | | | | | | 1 | | | |
| RS485 - Modbus | | | | | | | | | | | 2 | | | |
| RS485 - Profibus DP | | | | | | | | | | | 3 | | | |
| None | | | | | | | | | | | | NX | | Explosion proof |
| Explosion Proof ATEX, CSA and FM - for integral type | | | | | | | | | | | | EXD | | |
| Explosion Proof ATEX, CSA and FM - for remote type | | | | | | | | | | | | EXR | | |
| Aluminum Enclosure, 304 coil housing | | | | | | | | | | | | | NN | Materials |
| Aluminum Enclosure, 316 coil housing | | | | | | | | | | | | | 316 | |
| None | | | | | | | | | | | | | NN | Options |