ALMAG

Electromagnetic Flowmeter

ALMAGBAT Series

SMC's ALMAGBAT is a battery powered electromagnetic flowmeter mainly used in water applications. The ALMAGBAT's display/converter module is equipped with a replaceable lithium battery that can be used for up to three years of continuous operation. The operation period can be extended by using a high-capacity battery instead of our standard lithium battery. Remote communication can be achieved via a base-station-type radio communication network system. With a centrally located base station, the coverage radius can be up to 1000 meters. Base stations within a close proximity (SRD mode), may operate on 928 MHz frequency. For greater distances, GPRS or CDMA mobile network communications can be used to transmit data to any central office. The ALMAGBAT comes standard with a rugged IP68 die-cast aluminum enclosure, which allows the device to be used in both indoor and outdoor applications.

FEATURES

- Available in 1" - 24" (25-600 mm) sizes
- fluid velocities; 0-50 feet/sec (0-15 m/s)
- GPRS, CDMA and SRD radio communications
- Designed for clean water; fluid conductivity ≥ 20 μS/cm
- IP68 enclosure; suitable for underground applications
- Available FEP liner suitable for vacuum applications
- Excellent accuracy; ±0.5% of reading
- Empty pipe detection
- NIST traceable calibration certificate

SPECIFICATIONS

- Size : 25-600mm
- Measuring Range : 0 - 1.6 fps (0.5 mps) min.
  0 - 27 fps (8 mps); bi-directional
- Temperature : 15~175 °F (-10~80 °C) - Polyurethane
  -4~158 °F (-20~70 °C) - Neoprene
  -40~300 °F (-40~150 °C) - FEP
  -40~300 °F (-40~150 °C) - PTFE
- Materials
  - Measuring Tube : Stainless Steel #304
  - Flange material : Carbon Steel (std.), SS #304 and #316
  - Flange type : ANSI, DIN and JIS flanges
  - Coil Housing : Carbon Steel(standard)
    Stainless Steel #304(Optional)
    Stainless Steel #316(Optional)
- Liners : Polyurethane(40-600 mm)
  Neoprene(25-600 mm)
  PFA(25-600 mm)
  PTFE(25-600 mm)
- Protection : IP 65
- Fluid Conductivity : must be ≥ 20 μS/cm
- Electrode & Grounding : Stainless Steel #316L
  Hastelloy B
  Hastelloy C
  Titanium
  Tantalum
  Platinum -iridium alloy
- Resistance excitation : 250mA exciting current：50 ~ 60Ω
- Ambient Temperature : -13 to 140 °F (-25 to 60 °C)
- Battery life : Up to 66 months - see page two
  - Notes : Battery life depends on flow meter size and/or sampling time (either every 15 or 30 seconds)
- Accuracy : ±0.5% of reading(Velocity>=0.5 m/s)
  ±0.0025 m/s(Velocity < 0.5 m/s)
- Power requirements : LI-SOCL2 battery
- Outputs : Pulse, RS485(opt)

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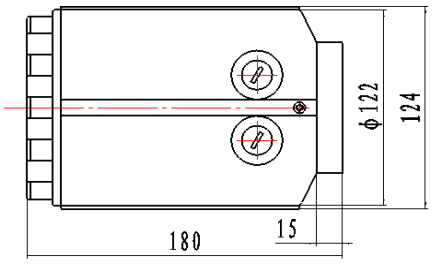
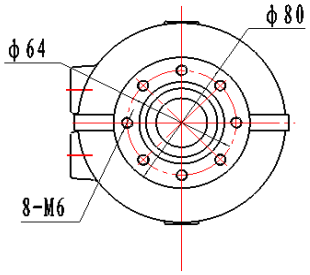
URL : http://www.smartmeasurement.com
TEL：+1-414-299-3896 FAX：+1-414-433-1606
E-mail : sales@smartmeasurement.com

Mounting drawing

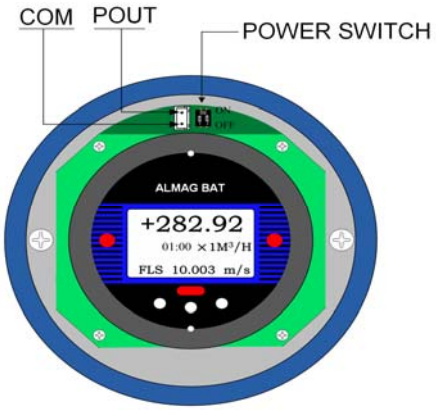
- **Standard Integral type**

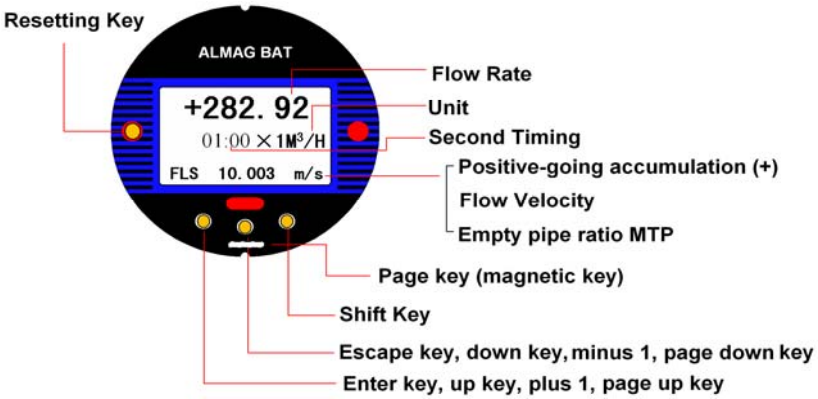




- **GPRS function type**

- **Battery Powered Transmitter Display**





Battery

- LI-SOCL2 battery (part number: ER34615)
- Rating: 3.6V_{DC}, 19000 mAh
- Max continuous working current: 200 mA
- Max pulse current: 400 mA
- Working temperature: -65~185 °F (-55~85 °C)
- Dimensions: Φ1⅜" x 2⁷⁄₁₆" (Φ34.2 mm × 61.5 mm)
- Weight: 106 g
- Battery life:

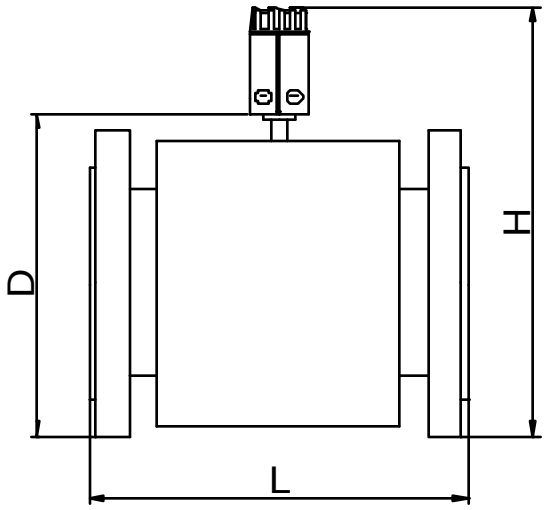
Line size	⅛~6" (3-150 mm)	8~14" (200-350 mm)	mm)
⅟₁₅ Hz	40 months	32 months	30 months
⅟₃₀ Hz	66 months	60 months	50 months

Notes: Excitation frequency

⅟₁₅ Hz - means flow is monitored every 15 seconds

⅟₃₀ Hz - means flow is monitored every 30 seconds

DIMENSIONS



Nominal Diameter	Normal pressure psig (MPa)	Dimensions - inches (mm)			Weight lbs. (Kg)
		L	D	H	
1" (25 mm)	362 (2.5)	7⅞ (200)	6½ 165	15 15/16 (405)	11 (5)
1¼" (32 mm)		7⅞ (200)	7 3/32 (180)	16 17/32 (420)	14.3 (6.5)
1½" (40 mm)		7⅞ (200)	7½ (190)	16 15/16 (430)	15.4 (7)
2" (50 mm)		7⅞ (200)	7⅞ (200)	17 5/16 (440)	19.8 (9)
2 ½" (65 mm)		9 27/32 (250)	8 21/32 (220)	18⅛ (460)	24.3 (11)
3" (80 mm)		9 27/32 (250)	9 7/16 (240)	18 29/32 (480)	29 (13)
4" (100 mm)	232 (1.6)	9 27/32 (250)	9 27/32 (250)	19 9/32 (490)	33 (15)
5" (125 mm)		9 27/32 (250)	11 1/32 (280)	20 15/32 (520)	42 (19)
6" (150 mm)		11 13/16 (300)	12 19/32 (320)	22 1/32 (560)	53 (24)
8" (200 mm)	145 (1.0)	13 ¾ (350)	14 31/32 (380)	24 13/32 (620)	71 (32)
10" (250 mm)		17 23/32 (450)	16 15/16 (430)	26⅜ (670)	104 (47)
12" (300 mm)		19 11/16 (500)	19 9/32 (490)	28¾ (730)	148 (67)
14" (350 mm)		19 11/16 (500)	21 21/32 (550)	31 3/32 (790)	172 (78)
16" (400 mm)		19 11/16 (500)	23⅝ (600)	33 1/16 (840)	210 (95)
18" (450 mm)		21 21/32 (550)	25 7/32 (640)	34 21/32 (880)	243 (110)
20" (500 mm)		21 21/32 (550)	27 17/32 (700)	37 (940)	287 (130)
24" (600 mm)		23⅝ (600)	31½ (800)	40 31/32 (1040)	353 (160)

**** 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 and conductivity.
Full Scale Flow	Please specify maximum and minimum flow rates in units must be m^3/hr., LPM, or GPM
Line Size	Please indicate a nominal pipe diameter as well connection type (flange, threaded, etc..)
Pressure & Temperature	We will calibrate your flowmeter as close to your operating conditions as possible

Model Selection Guide

ALMAG BAT Series

Example: ALMAGBAT-F-100-0-3-IN-1.6-E-0-15-0-NX-NN-NN

ALMAGBAT	**-	*	*	*-	**	**-	*	*	*-	*	*	*-	*	*	Description
ANSI 150# Flange	F														Connection
Ceramic type	C														
Sanitary	S														
Wafer type	W														
15 ~ 600 mm		**													Line size in units of mm
316 stainless steel			0												Electrode
Hast B			1												
Hast C			2												
Ta			3												
Ti			4												
Ceramic			C												
Chloroprene Rubber(Neoprene)				3											Liner Material
PO				4											
PTFE				5											
PFA				6											
F46				7											
Ceramic				C											
Integral type					IN										Transmitter
Remote type - with 5m cable					RE										
Max Pressure 2.5Mpa - up to DN80						2.5									Pressure
Max Pressure 1.6Mpa - up to DN150						1.6									
Max Pressure 1.0Mpa - up to DN600						1.0									
up to 80 deg C							E								Temperature
up to 150 deg C							H								
Not Needed								0							Grounding electrode/ring
Grounding electrode								1							
304SS grounding ring								2							
Every 15 seconds									15						Excitation frequency
Every 30 seconds									30						
None										0					Communication
RS485										1					
GPRS										2					
CDMA										3					
None											NX				Explosion proof
Aluminum enclosure, 304SS pipe, CS coil housing and flange												NN			Materials
Aluminum enclosure. 304SS pipe, CS coil housing and 304SS flange												C304			
Aluminum enclosure. 304SS pipe, coil housing and flange												304			
None													NN		Option
With CS install flange													IF		