



Ultra Mag And SIGNAL CONVERTER



DESCRIPTION

MODELS UM06 AND UM08 FLANGED TUBE *ULTRA MAG* meters are manufactured to the highest standard available for magmeters. They incorporate microprocessor technology to offer very low flows and broad range ability. The flanged end tube design permits use in a wide range of applications with up to 300 PSI working pressure. Flanged ends are:

- Steel AWWA Class "D" flat face flanges (150 PSI) for UM06
- Steel AWWA Class "F" raised face flanges (300 PSI) for UM08 (2", 3", and ≥14")
- Steel ANSI 300 lb. Raised Face Flanges for UM08 (4" - 12")

The fabricated tube is stainless steel with steel or stainless steel flanges and is lined with UltraLiner™, an NSF approved, fusion bonded epoxy material.

INSTALLATION is made similar to placing a short length of flanged end pipe in the line. The meter can be installed vertically, horizontally, or inclined on suction or discharge lines. The meter must have a full pipe of liquid for proper operation. Fluid must be grounded to the downstream flange of the sensor either via internal grounding electrodes (4 - 12") or using McCrometer 316 SS Grounding Rings. For best performance, grounding rings are recommended for all sizes. Any 90 or 45 degree elbows, valves, partially opened valves, etc. should not be placed closer than one pipe diameters upstream and zero pipe diameters downstream. All blending and chemical injection should be done early enough so the flow media is thoroughly mixed prior to entering the measurement area.

SIGNAL CONVERTER: The signal converter is the reporting, input and output control device for the sensor. The converter allows the measurements, functional programming, control of the sensor and data recording to be communicated through the display and inputs/outputs. The microprocessor-based signal converter has a curve-fitting algorithm to improve accuracy, dual 4-20mA analog outputs, an optional RS485 communication port, an 8 line graphical backlit LCD display with 3-key touch programming, and a rugged enclosure that meets IP67. In addition to a menu-driven self-diagnostic test mode, the converter continually monitors the microprocessor's functionality. The converter will output rate of flow and total volume. The converter also comes standard with password protection and many more features.

ISOLATED POWER AND SIGNAL: The power and signal between the converter and sensor are isolated and placed in separate cables giving superior resistance to electrical signal noise compared to single cable designs. An added benefit from the dual cable design is a maximum cable length of up to 500ft.

OPTIONAL:

- DC powered converter (10-35 VDC, 21 W)
- Meter mounted converter
- Extended warranty
- Hastelloy® electrodes
- ANSI or DIN flanges
- Quick Connect cable fittings
- Special lay lengths, including ISO standard lay lengths
- Converter sun shield
- Modbus Protocol RS485 converter; HART® Converter; Profibus Converter (No Dual 4-20mA on HART & Profibus); Smart Output™ (Sensus or Itron compatible); Panel mount converter (Not CSA approved); Battery or battery-solar powered converter (Not CSA approved, ±1% accuracy)

MODEL UM06 AND UM08

ULTRA MAG® ELECTROMAGNETIC FLOW METER

150 PSI FLANGED TUBE METER, SIZES 2" thru 48"
300 PSI FLANGED TUBE METER, SIZES 2" thru 48"

SPECIFICATIONS

WARRANTY: 2 Years

ACCURACY TESTS: 5-point wet flow calibration of every complete flow tube with its signal converter. If desired, the tests can be witnessed by the customer. The McCrometer test facilities are traceable to the National Institute of Standards & Technology. Uncertainty relative to flow is ±0.15%

ACCURACY: Plus or minus 0.5% of actual flow (battery powered is ±1% of flow)

IMPORTANT NOTICE ON FLOW METER ACCURACY: The flow meter, the cable and the electronics are factory calibrated for accuracy as a single unit. Changing the cable length with the Splice Kit changes the accuracy of the meter and invalidates the calibration certificate.

REPEATABILITY: ±0.05% or ±0.0008ft/s (±0.25mm/s), whichever is greater

HEAD LOSS: None. No obstruction in line and no moving parts

PRESSURE RANGE: 150 PSI maximum working pressure (UM06); 300 PSI maximum working pressure (UM08)

TEMPERATURE RANGE:

Sensor Operating: -10 to 60°C (14 to 140°F)

Sensor Storage: -15 to 60°C (5 to 140°F)

Electronics: Operating and storage temperature: -20° to 60° C (-4° to 140° F)

VELOCITY RANGE: .2 to 32 FPS

BI-DIRECTIONAL FLOW: Forward and reverse flow indication and forward, reverse, net totalization are standard with all meters

CONDUCTIVITY: 5 µs/cm

LINER: UltraLiner NSF approved, fusion bonded epoxy

ELECTRODES: Type 316 stainless steel, others optional

POWER SUPPLY: AC: 100-240VAC/45-66 Hz (20W/25VA), DC: 10-35VDC (21W), battery (four lithium D cell batteries), five-year estimated life, solar (5W panel). AC, DC, battery, or battery & solar must be specified at time of ordering.

OUTPUTS: Dual 4-20mA Outputs (Not available for Profibus, HART, or battery converters); Galvanically isolated and fully programmable for zero and full scale (0-22mA).

Four separate digital programmable outputs: open collector transistor usable for pulse, frequency, or alarm settings.

- Volumetric Pulse
- Flow Rate (Frequency)
- Directional Indication
- High/Low Flow Alarms
- Hardware Alarm
- Empty Pipe
- Range Indication

SENSOR CABLE LENGTHS:

Standard: 25' McCrometer supplied submersible cable with each remote mount unit.

Optional: Up to 500 feet, or 50 feet max for battery powered.

Quick connect: Available in standard cable lengths: 25'; 50'; 75'; 100'; 125'; 150'; 175'; 200'; and 500'. Custom cable lengths at additional cost.

CONVERTER/SENSOR SEPARATION: ≤ 500 feet; for longer lengths consult factory

EMPTY PIPE SENSING: Zero return when electrodes are uncovered

ALARMS: Programmable alarm outputs

DIGITAL TOTALIZER: Cubic Meter; Cubic Centimeter; Milliliter; Liter; Cubic Decimeter; Decaliter; Hectoliter; Cubic Inches; US Gallons; Imperial Gallons; Cubic Feet; Kilo Cubic Feet; Standard Barrel; Oil Barrel; US Kilogallon; Ten Thousands of Gallons; Imperial Kilogallon; Acre Feet; Megagallon; Imperial Megagallon; Hundred Cubic Feet, Megaliters

IP RATINGS:

Metering Tube: NEMA 6P/IP68 with remote converter

Die cast aluminum converter: IP67

Panel mount converter: IP65

SENSOR SUBMERSIBILITY DEPTH:

With standard strain relief cable: 9 m (30 ft.)

With optional quick connect: 1.8 m (6 ft.)

CERTIFICATIONS:

- CE Certified (Converter only)
- Listed by CSA to 61010-1: Certified by CSA to UL 61010-1 and CSA C22.2 No.61010-1-04
- ISO 9001:2015 certified quality management system



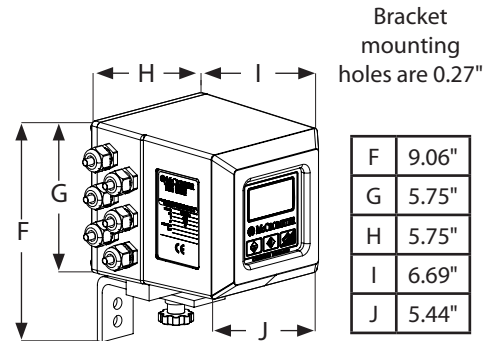
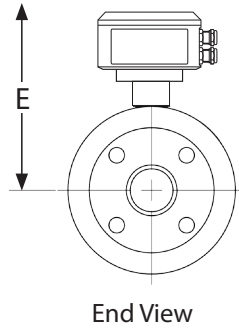
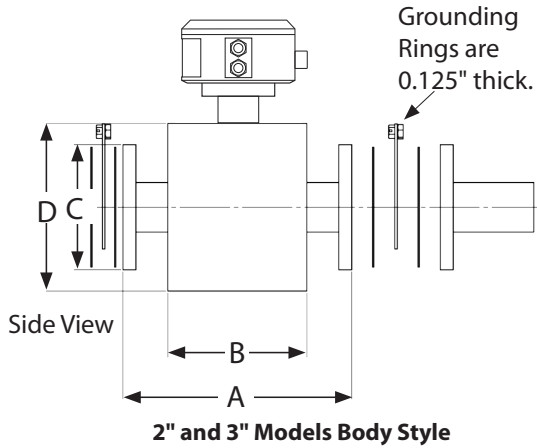
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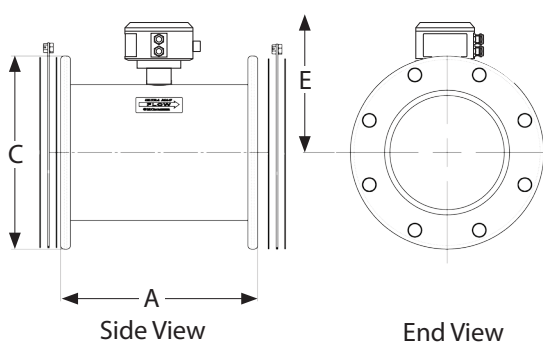
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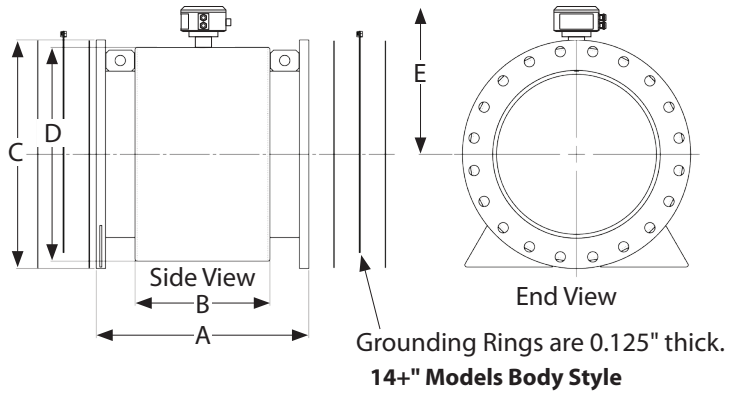
MODEL UM06 AND UM08
ELECTROMAGNETIC FLOW METER



Converter Dimensions



4" to 12" Models Body Style



Pipe Size (Nominal)	Meter Pipe ID	Flow Ranges GPM Standard .2 to 32 FPS Min - Max	DIMENSIONS (Lay Lengths)							Estimated Shipping Weight (lbs.)	
			A*		B	C		D	E	UM06	UM08
			UM06	UM08		UM06	UM08				
2"	2.117	2 - 340	11.00	11.00	6.70	6.00	6.50	7.90	9.26	93	107
3"	3.220	5 - 730	13.40	13.40	6.70	7.50	8.25	9.40	10.01	97	111
4"	3.720	8 - 1,140	13.40	13.40	n/a	9.00	10.00	n/a	8.06	78	108
6"	5.692	19 - 2,660	14.60	14.60	n/a	11.00	12.50	n/a	9.06	82	138
8"	7.692	33 - 4,870	16.10	17.25	n/a	13.50	15.00	n/a	10.06	115	195
10"	9.682	52 - 7,670	18.50	18.50	n/a	16.00	17.50	n/a	10.46	144	247
12"	11.682	74 - 11,180	19.70	19.70	n/a	19.00	20.50	n/a	12.31	193	342
14"	13.440	90 - 16,070	21.70	22.75	12.00	21.00	23.00	20.30	15.46	321	476
16"	15.440	118 - 20,900	23.60	25.25	14.20	23.50	25.50	21.10	16.21	390	645
18"	17.440	150 - 26,480	23.60	25.25	14.20	25.00	28.00	21.10	17.21	446	750
20"	19.440	185 - 32,720	25.60	28.25	16.20	27.50	30.50	24.80	18.26	588	874
24"	23.440	270 - 47,180	30.70	35.75	21.70	32.00	36.00	29.60	20.11	769	1,568
30"	29.190	420 - 73,620	35.80	41.75	26.50	38.75	43.00	35.90	23.26	1,261	2,317
36"	35.190	610 - 105,930	46.10	46.10	28.20	46.00	50.00	42.70	26.66	1,696	2,915
42"	41.190	830 - 144,370	48.05	**	32.10	52.75	**	48.35	29.99	**	**
48"	47.190	1,080 - 188,430	50.00	**	36.00	59.50	**	54.00	33.31	**	**

* Laying lengths for meters with ANSI Class 150 Flanges are equal to UM08 laying lengths

** Consult factory



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Lit. # 30107-09 Rev. 4.8 / 10-23-18

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