

Specification Sheet Ultra Mag Flow Meter



Ultra Mag flow meters are manufactured to the highest standard available for mag meters.

The flanged end tube design permits use in a wide range of applications with up to 300 PSI working pressure.

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

Performance Advantages

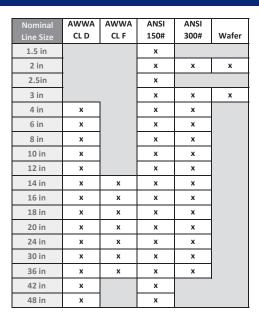
- Flanged models need only 1 pipe diameter upstream of most flow disturbers
- No obstruction to the flow
- No moving parts to wear or break
- Maintenance free
- Choice of Accuracy +/- 0.2% OR +/- 0.5%
- Debris or solids will not clog the meter
- No head loss
- Bi-directional flow
- Empty pipe detection
- Unaffected by changes in density and viscosity
- No risk of liner delamination or separation
- Wide flow range
- · Separated power and signal cables

Installation

Ultra Mag flow meter installation is 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 (2 - 12") or using McCrometer 316 SS



AVAILABLE ULTRA MAG END CONNECTIONS



TYPICAL APPLICATIONS

Industrial

- Raw Water
 - Chilled Water Effluent Wastewater
- Cooling Water
- Cooling water

Clean Water

- Well Water
- Rate-of-Flow Control

Process Control

- Potable Water Raw Water Transmission
- Pump Stations

Wastewater

- Influent
- Lift J
- EffluentReclaimed
- Lift Stations
- Waste Activated Sludge
- Return Activated Sludge

grounding rings. For best performance, grounding rings are recommended for all sizes.

The meter needs to be located a minimum distance before and after flow disturbances, such as elbows, pumps, partially opened valves, and changes in pipe diameter. The uneven flow created by these obstructions can vary with each system.



The minimum distance is measured in pipe diameters (D). To ensure accuracy locate the sensor upstream and downstream of flow disturbances as follows:

1½" to 3" Flanged style meters02" and 3" Wafer style meters34" to 48" Steel flanged meters2

0D upstream / 0D downstream 3D upstream / 1D downstream 2D upstream / 1D downstream

All blending and chemical injection should be done early enough so the flow media is thoroughly mixed prior to entering the measurement area.

ProComm 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 6-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.





Ultra Mag with ProComm GO Converter Part Number Matrix

UM	_	-	_	_	_	_	_	_	_	_	-	 -	_	-	_	-	
Line Size																	
1.5 in	0C																
2 in	02																
2.5 in	0D																
3 in	03																
4 in	04																
6 in	06																
8 in	08																
10 in	10																
12 in	12																
14 in	14																
16 in	16																
18 in	18																
20 in	20																
24 in	24																
30 in	30																
36 in	36																
42 in	42																
48 in	48																
Flange	Conne	ections															
AWWA Class D (150 psi Ratin ANSI Class 150# (2			1 2														
ANSI Class 300# (3			3														
AWWA Class F (3 Wafer Style			4														
Electro			N ptions														
S316 Stainle		el <i>(Star</i>	ndard)	S													
C			stelloy														
Converter Mounting an Meter M					М												
Strain Re					R												
Quick Conr					Q												
Strain Relief [25					P												
Quick Connect [25	rt kem			otted) ower O	C ptions												
				er <i>(Star</i>													
				ttery B		S											
				attery E attery E		E											
		DEFO	arer, be	Acces y E	actup												

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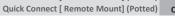
Ultra Mag with ProComm GO Converter Part Number Matrix (cont.)

UM		_	_	_	-		-	_	-	_	-	
Converter Output Options												
No Outputs (Standard)	-											
No Outputs, DC Cable Only	0											
Two Digital Out	1											
4-20mA Analog only	2											
4-20mA Analog + Two Dig Out	3											
AMI Smart Output only AMI Smart Output + Two Dig Out												
AMI Smart Output + 1wo big Out AMI Smart Output + 4-20mA Analog	5											
AMI Smart Output + 4-20mA Analog + Two Dig Out	6 7											
DC Power/ Analog Out Cable O												
No DC Power or Outputs (Stal												
No Cable - Output Configured (Quick		- 0										
6 ft (Open		1										
25 ft (Open		2										
50 ft (Open		3										
Pulse Cable Le												
No Outpu		·										
No Cable - Output Configured			0									
	(Open		1									
	(Open		2									
	(Open		3									
25 ft (7-Pin Male connector f			4									
50 ft (7-Pin Male connector f			5									
Output Cal												
		Strain		1								
Quick Con	nect Cal	ble Teri	minals									
Smart Output Protocol Optior					uired)							
		_		AMI O		-						
Sensus Protocol (6ft cable	, Nicor	Connec				SEN						
Itron 6 digit Protocol (6ft cable	, Nicor	Connec	tor ha	rdwire	d only)	IT6						
Itron 9 digit [100W] Protocol (6ft cable						IT9						
Neptune Protocol (6ft cable	, Nicor	Connec	tor ha	rdwire	d only)	NEP						
ATT Wireless Telemetry System (I	RTU, So	lar Pan	el, 15 f	ft 7 pin	Cable)	ATT						
Verizon Wireless Telemetry System (I	RTU, So	lar Pan	el, 15 f	ft 7 pin	Cable)	vzw						
			Ν	lon Sta	ndard L	ength O.	ptions					
			Mc	Crome	ter Leng	gth <i>(Star</i>	ndard)	-				
			Com	petito	r Repla	ement	Length	LS				
			Com	petito	r Repla	ement	Length	LP				
	(Custom	Specif	fied Ler	ngth (No	ominal L	ength)	L(XX)				
							C	Color O	ptions			
					M	cCromet	ter Gree	en (Stai	ndard)	-		
								Sk	y Blue	SB		
								Dar	k Blue	DB		
								Lav	ender	LV		
									White	WH		
									rdous A			
							Class 1,	Divisio	on 2, Gr	oups A	-D, T5	HL





Ultra Mag with	Pro	Со	mm	Conv	ert	er F	Par	t Nu	um	be	r Ma	atri	x		
UM	•				_	_	-		-		-		-	 -	
Nominal Line Size															
1.5 in	0C														
2 in	02														
2.5in	0D														
3 in	03														
4 in	04														
6 in	06														
8 in	08														
10 in	10														
12 in	12														
14 in	14														
16 in	16														
18 in	18														
20 in	20														
24 in	24														
30 in	30														
36 in	36														
42 in	42														
48 in	48														
AWWA Class D (150 psi Rating) ANSI Class 150# (285 ANSI Class 300# (300 AWWA Class F (300 Wafer Style (2	psi Ratin psi Ratin psi Ratin & 3" Onl Material	d) 1 g) 2 g) 3 g) 4 y) N Options	-												
Converter Mounting and	H	lastelloy	н												
	Meter M	ount Co	nverter	м											
	n Relief [Connect [R Q											
Strain Relief [Quick Connect [Potted)	P C											





Ultra Mag with ProComm Converter Part Number Matrix (cont.)

UM		_	_	-		-		-		-		-	
Remote Cable Options													
Meter Mount Converter [No remote Cable]	000												
25 feet (Standard)	025												
50 feet	050												
75 feet	075												
100 feet	100												
125 feet	125												
150 feet	150												
175 feet	175												
200 feet	200												
500 feet	500												
Converter Power	Options												
	C Power	А											
	C Power	D											
Converter													
Dual 4-20mA Analog, Dual Dig			1										
Modbus + STD (Two			2										
Hart + STD (Two			3										
Datalogger/BIV + STD (Two			4										
Datalogger/BIV + Modbus + STD (Two	o 4-20, tw	o Dig)	5										
Datalogger/BIV + Hart + STD (Two	o 4-20, tw	o Dig)	6										
AMI Smart Output + STD (Two	o 4-20, tw	o Dig)	7										
Datalogger/BIV + AMI Smart Output + STD (Two	o 4-20, tw	o Dig)	8										
Smart Output Protocol Options (*7	7 or 8 out	put opt	tion red	quired)									
		No	AMI O	utputs	-								
Sensus Protocol (6ft cable, Nice	or Connec	tor ha	rdwire	d only)	SEN								
Itron 6 digit Protocol (6ft cable, Nice	or Connec	tor ha	rdwire	d only)	IT6								
Itron 9 digit [100W] Protocol (6ft cable, Nice	or Connec	tor ha	rdwire	d only)	IT9								
Neptune Protocol (6ft cable, Nice	or Connec	tor ha	rdwire	d only)	NEP								
ATT Wireless Telemetry System (RTU,	Solar Pan	el, 15 f	ft 7 pin	Cable)	ATT								
Verizon Wireless Telemetry System (RTU,	Solar Pan	el, 15 f	ft 7 pin	Cable)	VZW								
		Ν	Non Sta	ndard	Length O	ptions							
		Mc	Crome	ter Len	gth <i>(Star</i>	ndard)							
		Con	npetito	r Repla	cement	Length	LS						
		Con	npetito	r Repla	cement	Length	LP						
	Custom	Specif	fied Ler	ngth (N	ominal L	ength)	L(XX)						
						Ac	curacy	Options					
				Stand	lard Accu	uracy O	.5% Cal	ibration	-				
					High Acc	uracy O	.2% cal	ibration	HA				
									Color O	·			
							McCror	neter Gr			-		
										y Blue	SB		
										'k Blue	DB		
										/ender	LV		
										White	WH		
										rdous A			
								Class	1, Divisio	on 2, Gi	roups A	∖-D, Т 5	HL





ULTRA MAG FLOW METER SPECIFICATIONS

Physical Specifications

Physical Specificatio	ons	
Directionality	Single direction	
Pipe Sizes	1.5" 2", 2.5" 3", 4", 6",	8", 10", 12", 14", 16", 18", 20", 24", 30", 36", 42", 48"
Body Style	Unflanged and flan	ged tube.
Electrical Connections	Compression gla	nd seals
Electrical Connections	Quick-Connect	
Electrodes	Type 316 stainless	steel, others optional
Liner	UltraLiner NSF app	roved, fusion bonded epoxy
		5′/7.6 m McCrometer supplied submersible cable with each remote mount unit.
		p to 500'/152.4 m, or 25'/7.6 m max for battery powered.
Sensor Cable Lengths		vailable in standard cable lengths:
Sensor cubic Lengths		eet: 25, 50, 75, 100, 125, 150, 175, 200, 500
		leters: 7.6, 15.25. 22.5, 30.5, 38.1, 45.75, 53.3, 61, 152.4
		ustom cable lengths at additional cost.
Head Loss	None. No obstructi	on in line and no moving parts
Performance and O	perational Speci	fications
Operating Temperature	-10 to 60°C (14 to 1	40°F)
Storage Temperature	-15 to 60°C (5 to 14	0° F)
	AWWA Class D (150) psi Rating) (Standard)
Pressure Range	AWWA Class F (300	psi Rating)
riessure nalige	ANSI Class 150# (28	35 psi Rating)
	ANSI Class 300# (30)0 psi Rating)
	• Standard: +/- 0.5	% of measured value ±0.006 ft/s (±0.0018 m/s)
		% of measured value ± 0.006 ft/s (± 0.0018 m/s)
		: 1% of measured value ±0.006 ft/s (±0.0018 m/s)
Accuracy	IMPORTANT NOTI	CE ON FLOW METER ACCURACY: The flow meter, the cable and the
		ory calibrated for accuracy as a single unit. Changing the cable length
		changes the accuracy of the meter and invalidates the calibration
	certificate.	
	Multiple point wet	flow calibration of every complete flow tube with its signal converter.
Accuracy Tests	If desired, the tests	can be witnessed by the customer. The McCrometer test facilities are
Accuracy lests	traceable to the Na	tional Institute of Standards & Technology. Uncertainty relative to flow is
	±0.15%.	
	1½" to 3" Flanged	style meters: 0D upstream / 0D downstream
Pipe Run Requirements		yle meters: 3D upstream / 1D downstream
	4" to 48" Steel flar	
Reliability	±0.05% or ±.0008ft	/s (±0.25mm/s), whichever is greater
Conductivity	5 μs/cm	
Velocity Range	.2 to 32 FPS	
	Standard Model:	Quick Connect (NEMA 6P/IP68 with remote converter)
		Compression gland seals (NEMA 6P/IP68 with remote converter)
IP Rating	HL Model:	Quick Connect (IP67)
		Compression gland seals (IP67)
Sensor Submersibility	With standard str	ain relief cable: 9 m (30 ft.)
Depth		ck connect cable: 1.8 m (6 ft.)
	op nonen den	





ULTRA MAG FLOW METER SPECIFICATIONS (CONT.)

Certifications and A	pprovals	
Standard Model	 ISO 9001:2015 certified quality management system Certified by MET to UL 61010-1 / CSA C22.2 No. 61010-1 Certified to NSF / ANSI Standards* 	
HL Model	 ISO 9001:2015 certified quality management system Certified by MET: Safety: UL61010-1 / CSA C22.2 No. 61010-1, Third Edition: Safety of Electrical Equipment For Measurement, Control, and Laboratory Use Certified by MET: Standards: ANSI / ISA12.12.01 / CSA C22.2 No. 213, Nonincendive Electrical Equipment Class I and II, Division 2 Class III, Divisions 1 and 2 Hazardous (Classified) Locations Certified to NSF / ANSI Standards* * Ultra Mag is certified by IAPMO R&T to NSF/ANSI 61 for material safety 	Control of the second s
Other Specifications	<u> </u>	
Options and Accessories	 Hastelloy[®] electrodes Additional sensor cable up to 475' Annual verification / calibration Stainless steel ID tag Battery or battery-solar powered converter DC powered converter (10-35 VDC, 21 W) Meter mounted converter Extended warranty ANSI or DIN flanges Special lay lengths, including ISO standard lay lengths Quick Connect cable fittings HART[®] Converter Smart Output[™] (Sensus or Itron compatible) 	
Warranty	Meter: 2 year warranty Liner: Lifetime guarantee	





METER GROUNDING RECOMMENDATIONS

Ultra Mag meters come standard with a set of grounding rings for use with the preferred method of grounding Ultra Mag meters.

Grounding the meter body for safety according to national (NEC) or local electrical codes is recommended on ALL meter installations. Ultra Mag meters come standard with a set of grounding rings for use with the preferred method of grounding Ultra Mag meters.

See the Ultra Mag IOM Manual, Lit. # 30119-03, for more information on grounding configurations using grounding rods and grounding rings.



Preferred method of grounding



Sensor grounding for meters in an electrically noisy environment



Sensor grounding for meters with minimal ground noise

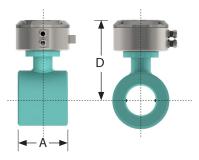


DIMENSIONS AND WEIGHTS

Wafer Mag Models

Pipe Size (Nominal)	Flow Ranges (0.2 to 32 FPS)		ISIONS engths)	Est. Shipping Weight (lbs.)*
(Nominal)	Min-Max GPM	Α	В	
2"	1.29-200	4.5	6.5	9.6
3"	3.25-510	4.5	7.0	11.3

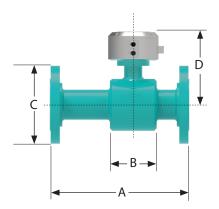
* For remote mount meters, add 4 lbs for ProComm converter.



11/2" to 3" Models

	Flow Ranges					ipping t (lbs.)*				
Pipe Size	(0.2 to 32 FPS)	ļ	A	В	(C	L.)		
(Nominal)	Min-Max GPM	CL150 ANSI 150#	CL300 ANSI 300#		CL150 ANSI 150#	CL300 ANSI 300#	CL150 ANSI 150#	CL300 ANSI 300#	CL150 ANSI 150#	CL300 ANSI 300#
1 1⁄2″	1.29-200	11	not offered	4.5	5.0	not offered	6.5	not offered	45	not offered
2"	1.29-200	11	14	4.5	6.0	6.5	6.5	7.25	45	70
2 ½″	3.25-510	13.4	not offered	4.5	7.0	not offered	7.0	not offered	50	not offered
3"	3.25-510	13.4	15.5	4.5	7.5	8.25	7.0	7.75	55	80

* For remote mount meters, add 4 lbs for ProComm converter.





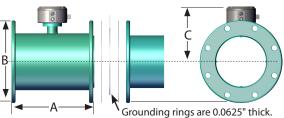
DIMENSIONS AND WEIGHTS (CONT.)

4" to 12" Models Body Style

14+" Models Body Style

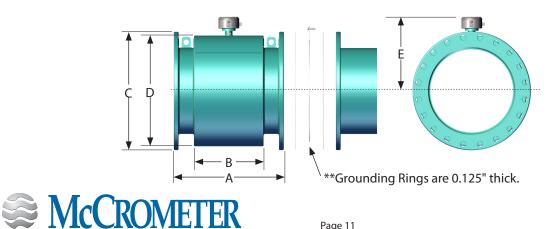
	Flow Dension					Est. Shipping Weigh (lbs.)*							
Pipe Size	Flow Ranges (0.2 to 32 FPS)		Α			В			С				
(Nominal)	Min-Max GPM	AWWA	AN	ISI	AWWA	AN	ISI	AWWA	AN	ISI	AWWA	AN	ISI
		150#	150#	300#	150#	150#	300#	150#	150#	300#	150#	150#	300#
		Class D	CL150	CL300	Class D	CL150	CL300	Class D	CL150	CL300	Class D	CL150	CL300
4"	6.97-1110	13.4	13.4	13.4	9.0	9.0	10.0	9.25	9.25	9.25	70	108	108
6"	16.1-2560	14.6	14.6	14.6	11.0	11.0	12.5	10.25	10.25	10.25	80	138	138
8″	29.2-4670	16.1	17.25	17.25	13.5	13.5	15.0	11.25	11.25	11.25	115	195	195
10″	46.3-7400	18.5	18.5	18.5	16.0	16.0	17.5	12.5	12.5	12.5	140	247	247
12″	67.3-10760	19.7	19.7	19.7	19.0	19.0	20.5	13.5	13.5	13.5	190	342	342

*Shipping weights are estimated and may change due to specific order packaging



	Flow					DI	MENSI	ONS					Est. Sh	ipping	Weight	(lbs.)*
Pipe	Ranges		ļ	۱		В		(:		D	E				
Size	(0.2 to 32 FPS) Min-	AW	WA	AN	ISI		AW	WA	AN	ISI			AW	WA	AN	ISI
(nom.	Max GPM	150# Class D	300# Class F	150# CL150	300# CL300		150# Class D	300# Class F	150# CL150	300# CL300			150# Class D	300# Class F	150# CL150	300# CL300
14"	90.1-14410	21.70	22.75	22.75	22.75	11.875	21.00	23.00	21.00	23.00	20.135	14.56				
16"	117-18670	23.60	25.25	25.25	25.25	14.25	23.50	25.50	23.50	25.50	21.635	15.32				
18"	149-23820	23.60	25.25	25.25	25.25	14.25	25.00	28.00	25.00	28.00	23.635	16.32]			
20"	186-29600	25.60	28.25	28.25	28.25	16.06	27.50	30.50	27.50	30.50	25.6975	17.35		Contact	factory	
24"	269-43040	30.70	35.75	35.75	35.75	21.75	32.00	36.00	32.00	36.00	29.51	19.25				
30"	418-66740	35.80	41.75	41.75	41.75	25.25	38.75	43.00	38.75	43.00	35.6975	22.35]			
36"	607-97000	46.10	46.10	46.10	46.10	28.63	46.00	50.00	46.00	50.00	42.76	25.88	-			
42"	831- 132900	48.05	not	48.05	not	36.25	52.75	not	52.75	not	48.135	28.57	7 not			
48"	1091- 174440	50.00	offered	50.00	offered	36.25	59.50	offered	59.50	offered	54.135	31.57	offered			

*Shipping weights are estimated and may change due to specific order packaging







PROCOMM GO CONVERTER PART NUMBER MATRIX

PG	_	_	_	_	_	-		-	
Converter Mounting Options									
Meter Mount Converter (Standard) M									
Remote Mount R									
Converter Power Options	•								
Battery Power (Standard)	В								
Solar Power, Battery Backup	S								
A/C Power, Battery Backup	E								
DC Power, Battery Backup	F								
Converter Output C	ptions								
No Outputs (Star	ndard)	-							
No Outputs, DC Cabl		0							
Two Digi		1							
4-20mA Analo		2							
4-20mA Analog + Two D	· ·	3							
AMI Smart Outpu	t Only	4							
AMI Smart Output + Two E	ig Out	5							
AMI Smart Output + 4-20mA	Analog	6							
AMI Smart Output + 4-20mA Analog + Two D	ig Out	7							
DC Power/ Analog Out (Cable O	ptions							
No DC Power or Outpu		-	-						
No Cable - Output Configured	(Quick	Conn)	0						
6 ft (Open Leads -	Strain	Relief)	1						
25 ft	(Open	Leads)	2						
50 ft	(Open	Leads)	3						
Pulse C	able Le	ngth O	ptions						
No	Outpu	ts (Sta	ndard)	-					
No Cable - Output Configured (Strain F	Relief o	r Quick	Conn)	0					
	6 ft	(Open	Leads)	1					
	25 ft	(Open	Leads)	2					
	50 ft	(Open	Leads)	3					
25 ft (7-Pin Male conn	ector fo	or Tele	metry)	4					
50 ft (7-Pin Male conn	ector fo	or Tele	metry)	5					
Out	put Cab	le Terr	ninal O	ptions					
			ef (Stan		1				
Quick Connect (2					2				
Smart Output Protoco	ol Optic	ons (*4	- 7 outj						
					AMI O	•	-		
Sensus Protocol (6							SEN		
Itron 6 digit Protocol (6							IT6		
Itron 9 digit [100W] Protocol (6							IT9		
Neptune Protocol (6							NEP		
ATT Wireless Telemetry Sy							ATT		
Verizon Wireless Telemetry Sy	stem (F	RTU, So	lar Pan	el, 15 f			VZW		
					Hazard	lous Ar	ea Locat	tion	

Class 1, Division 2, Groups A-D, T5 HL





PROCOMM CONVERTER PART NUMBER MATRIX

PC		-	
Converter Mounting Options	_		_
Remote Mount R			
Meter Mount M			
Converter Power Options			
A/C Power A			
DC Power D			
Converter Output Options			
Dual 4-20mA Analog, Dual Digital (Standard) 1			
Modbus + STD (Two 4-20, two Dig) 2			
Hart + STD (Two 4-20, two Dig) 3			
Datalogger/BIV + STD (Two 4-20, two Dig) 4			
Datalogger/BIV + Modbus + STD (Two 4-20, two Dig) 5			
Datalogger/BIV + Hart + STD (Two 4-20, two Dig) 6			
AMI Smart Output + STD (Two 4-20, two Dig) 7*			
Datalogger/BIV + AMI Smart Output + STD (Two 4-20, two Dig) 8*			
Smart Output Protocol Options (*7 or 8 output option required)			
No AMI Outputs	-		
Sensus Protocol (6ft cable, Nicor Connector hardwired only)	SEN		
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)	IT6		
Itron 9 digit [100W] Protocol (6ft cable, Nicor Connector hardwired only)	IT9		
Neptune Protocol (6ft cable, Nicor Connector hardwired only)	NEP		
ATT Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)			
Verizon Wireless Telemetry System (RTU, Solar Panel, 15 ft 7 pin Cable)			
Hazardous A			
Class 1, Division 2, G	roups A	A-D, T5	HL





PROCOMM CONVERTER SPECIFICATIONS

Physical Specification	ons					
Electronic Housing	Diecast aluminum, powder coated enclosure w/ tamper resistant seal					
	Remote Mount: Height: 7.3" (18.5 cm)					
		Width: 8.5" (
Converter	Depth: 4.3" (10.9 cm)					
Dimensions		Height: 6.9"				
	Width: 7.2" (18.25 cm) Depth: 6.2" (15.7 cm)					
	AC Power:	100-240 VAC / 45-66 Hz (10 W)			Note: AC or DC must	
Power	DC Power: 12-48 VDC (10 W) be specifie of ordering					
Connection Options	 Compression gland seals for 0.24" to 0.47" diameter round cable Conduit option: 1/2" NPT threaded connections 					
Galvanic Isolation	All inputs / outpu	ıts are galvar	nically isolated from power sup	ply up to 5	600 V	
Conductivity	Minimum condu	ctivity of 5µS	5/cm			
Performance and Operational Specifications						
Accuracy	 ±0.5% from 1 f/s to max velocity, up to ±1% for 0.3 to 1 f/s ±1% for reverse flow 					
Location	Indoor or outdoor use					
Operating and Storage Temperature	-4° to 140° F (-20° to 60° C)					
IP Rating	IP67 Die cast aluminum converter (only when connected using compression gland seals)					
Standard Outputs	Dual 4-20mA Outputs: Galvanically isolated and fully programmable for zero and full scale (0-21mA rangeability)					
	Two separate digital programmable outputs: open collector transistor usable for pulse, frequency, or alarm settings.					
	Volumetric Pul		 Range Indication 		ium switching	
	Flow Rate (Free		Maximum switching		ncy: 1250 Hz	
	Hardware Alarr High / ow Elow		voltage: 40 VDCMaximum switching		ion from other dary circuits: 500V	
	High/Low FlowEmpty Pipe	AldIIIIS	 Maximum switching current: 100mA 	second	adry circuits: 500v	
	 Directional Ind 	ication				
Optional Outputs	Modbus		 Smart Output[™] (Sensus, 	• Datalo	gger	
optional outputs	• HART		ltron 6, ltron 9)	• Built-ir	n verification	
Display and Measur						
Keyboard and Display	display	ccess and ch	ange set-up parameters using			
Engineering Units	 Cubic Meter Cubic Centime Milliliter Liter Cubic Decimet Decaliter Hectoliter 		 US Gallons Imperial Gallons Cubic Feet Kilo Cubic Feet Standard Barrel Oil Barrel US Kilogallon 	 Acre Fe Megag Imperi 	gallon al Megagallon ed Cubic Feet	
	Cubic Inches		Ten Thousands of Gallons			





PROCOMM CONVERTER SPECIFICATIONS (CONT.)

Other Specifications

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Standard Model	 ISO 9001:2015 certified quality management system Certified by MET to UL 61010-1 / CSA C22.2 No. 61010-1 Certified to NSF / ANSI Standards* 				
HL Model	 ISO 9001:2015 certified quality management system Certified by MET: Safety: UL61010-1 / CSA C22.2 No. 61010-1, Third Edition: Safety of Electrical Equipment For Measurement, Control, and Laboratory Use Certified by MET: Standards: ANSI / ISA12.12.01 / CSA C22.2 No. 213, Nonincendive Electrical Equipment Class I and II, Division 2 Class III, Divisions 1 and 2 Hazardous (Classified) Locations 	CE MET.			
	IMPORTANT Electrical safety certifications above do not apply to model 282L Single Point Insertion (SPI Mag) Electromagnetic Flow Meter.				
	IMPORTANTRefer to certification requirements. Do not substitute components.				
	IMPORTANT The ProComm converter, models PC-RA1-HL series and PC-MA no user serviceable parts.	1-HL series have			





PROCOMM GO CONVERTER SPECIFICATIONS

Physical Specification	ons					
Electronic Housing	Diecast aluminum, powder coated enclosure w/ tamper resistant seal, 61/2" x 61/2" x 43/8" tall					
Converter Dimensions	See "Dimensions" section for meter mount and remote mount converter dimensions.					
Dower	Battery: Standard: three 3.6V lithium-thionyl chloride (Li-SOCI2) D size batteries with two AA backup batteries				de (Li-SOCI2) D size	
Power	AC Power: 100-240VAC/45-66Hz (4W) DC Power: Linear power supply 10-35VDC (4 W)					
Electrical Connections	 Optional shielded cable for 10-32VDC/4-20 mA output Optional shielded cable for pulse out 					
Performance and O	perational Specificati	ons				
Battery Life	Five-year expected batte	y life, five-yea	r battery warranty			
Location	Indoor or outdoor use					
Altitude	Operating: 2000 meters Storage: 12,000 meters					
Operating Temperature	-4° to 140° F (-20° to 60° C)					
Storage Temperature	-4° to 140° F (-20° to 60° C)					
Relative Humidity	0% to 100%					
IP Rating	IP67 Die cast aluminum converter					
Outputs	Digital output: Digital pulse (open collector) output for volumetric - Two isolated digital pulse (open collector) outputs for volumetric - AMI output					
	Analog output:4-20mA: Galvanically Isolated, 16 Bit resolution. All power configurations (including battery).					
Note: 9-30 VDC loop power required (not supplied via converter)						
Display and Measur			1			
Display	 2-Line LCD display (no backlight) Non-volatile memory Anti-reverse totalizer (standard) Total (to 9 digits of precision) Flow rate and velocity (to 5 digits of precision) Two alarms: low battery and empty pipe (optional) Opening lid activates display 					
Digits	5 Rate, 9 Total		• • •			
Units	GPM Gallons per minute MGD Mega gal per day CFS Cubic feet per secon MLD Megaliters per day LPS Liters per second CMH Cubic meters per ho LPM Liters per minute	MI9 Mine MI1 Mine APD Acre KLH Kilol Ir LPH Liter	erial gal per minute ers inch (9G) ers inch (11.22G) feet per day iters per hour s per hour c meters per minute	CFM B5M B5H B5D B4M B4H B4D	Cubic feet per minute Barrels per minute (55G) Barrels per hour (55G) Barrels per day (55G) Barrels per minute (42G) Barrels per hour (42G) Barrels per day (42G)	
	GPH Gallons per hour		c feet per minute			





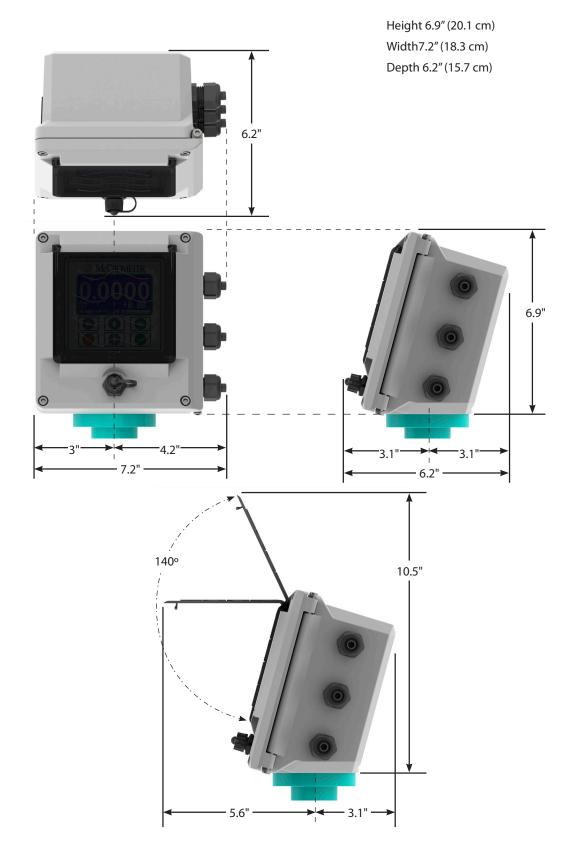
Specification Sheet Ultra Mag Flow Meter

	GAL	Gallons	B42	Barrel (42G)	MH1	Miners Inch Hour (11.22G)	
Totalizer Units	CUF	Cubic Feet	B46	Barrel (46G)	MD1	Miners Inch Day (11.22G)	
	AFT	Acre Feet	B55	Barrel (55G)	MH9	Miners Inch Hour (9G)	
	CUM	Cubic Meters	IMG	Imperial Gallon	MD9	Miners Inch Day (9G)	
	LIT	Liters	AIN	Acre Inch	KGL	Kilo Gallons	
	MML	Megaliter	TON	Ton (Short)	MGL	Mega Gallons	
	MTT	Metric Ton (KL)	MM1	Miners Inch Minute (11.22G)	IN3	Cubic Inch	
	B31	Barrel (31G)	MM9	Miners Inch Minute (9G)			
Data Logger	Stand	Standard with all models, minimum of five years of data stored					
Other Specifications							
Outlong and	Data Logger - included as standard with five years of data storage at default (12hr)						
Options and	interval. (Cable sold separately)						
Accessories	AC, DC, and battery powered with battery backup powered available						
	IEC 61010-1, Pollution Degree II						
Safety	Overvoltage protection Category III						
Certifications							
Standard Model	• ISO	9001:2015 certified of	quality r	nanagement system			
Standard model	Certified by MET to UL 61010-1 / CSA C22.2 No. 61010-1						
	• ISO	9001:2015 certified of	quality r	nanagement system		COMPONENT	
HL Model	Certified by MET: Safety: UL61010-1 / CSA C22.2 No. 61010-1 Third Edition: Safety of Electrical Equipment For						
	Measurement, Control, and Laboratory Use						
	Certified by MET: Standards: ANSI / ISA12.12.01 / CSA C22.2 No. 213, Nonincendive Electrical Equipment						
	 Class I and II, Division 2 						
	 Class I and I, Division 2 Class III, Divisions 1 and 2 Hazardous (Classified) Locations 						





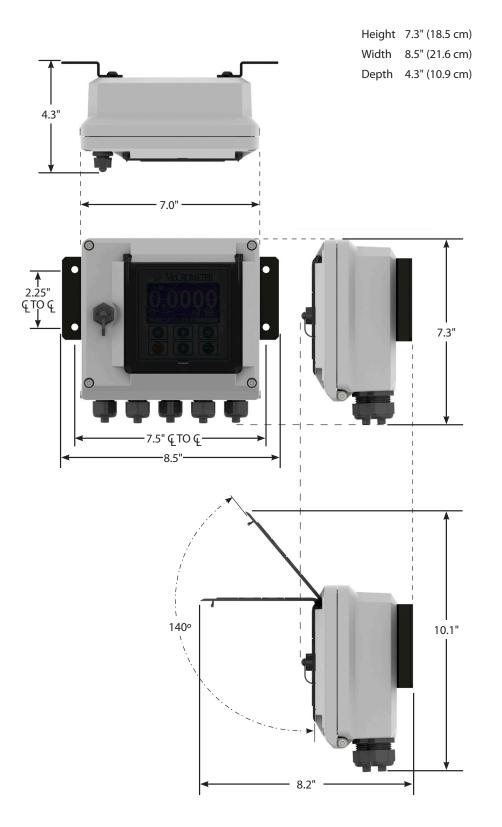
PROCOMM CONVERTER METER MOUNT DIMENSIONS







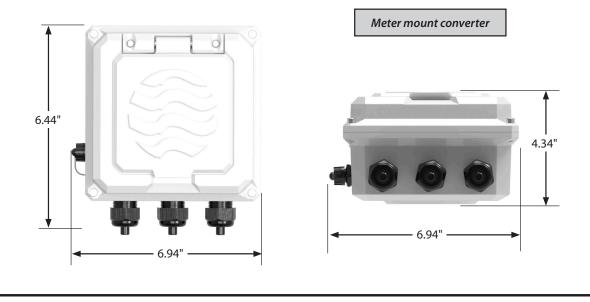
PROCOMM CONVERTER REMOTE MOUNT DIMENSIONS

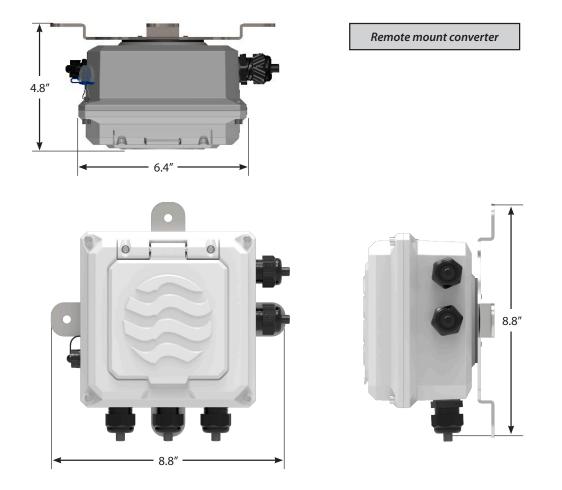






PROCOMM GO CONVERTER DIMENSIONS





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