HACH® ULTRA MAG™

Ultra Mag Flow Meter Specification Sheet

Ultra Mag 3000 utilizes the ProComm Go electronics which allows AC or DC power with battery backup or straight battery operation with pulse and 4-20mA outputs with an accuracy of +/- 1.0% of reading.

Ultra Mag 5000 utilizes the ProComm Max electronics which allows AC or DC power with Modbus, pulse and 4-20mA outputs with an accuracy of +/- 0.5% of reading.

Applications

Ultra Mag flow meters are intended to be used both in clean drinking water and waste water applications. These can include:

- Raw/well source water
- Distribution/ networks
- Water storage
- Revenue/billing
- Pumping stations
- Water treatment
- Final water discharge
- Storm water
- Waste water pumping stations
- Effluent final discharge

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

Standard and Hazardous Location Models

Ultra Mag is designed to work in ordinary circumstances and in hazardous locations. It is available as either the standard model or as a hazard location (HL) model, which is certified by MET (Ultra Mag 3000 only).

Certifications

Ultra Mag series currently has three certifications for quality and safety:

- ISO 9001:2015 certified quality management system
- Certified to NSF / ANSI Standards
- Certified by IAPMO R&T to NSF/ANSI 61 for material safety and NSF/ANSI 372 for low lead content

Additionally, Ultra Mag 3000 is certified for hazardous location:

- Certified by MET to UL 61010-1 / CSA C22.2 No. 61010-1
  - Class I, Division 2, Groups A-D, T4
  - Class I, Zone 2, IIC T4

Available Ultra Mag End Connections

Nominal Line Size	AWWA CL D	AWWA CL F	ANSI 150#	ANSI 300#
1.5 in			x	x
2 in			x	x
2.5 in			x	x
3 in			x	x
4 in	x		x	x
6 in	x		x	x
8 in	x		x	x
10 in	x		x	x
12 in	x		x	x
14in	x	x	x	x
16 in	x	x	x	x
18 in	x	x	x	x
20 in	x	x	x	x
24 in	x	x	x	x
30 in	x	x	x	x
36 in	x	x	x	x
42 in	x		x	
48 in	x		x	

BUREAU VERITAS 182B

MET c US

COMPONENT IAPMO R&T ®
NSF/ANSI/CAN 61
&
NSF/ANSI 372

Hach's Flow Solutions by McCROMETER

Quality Manufacturing

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 500 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.

Signal Transmitters / Transmitters

The signal transmitter is always located at the sensor and changes the raw flow data into usable flow information to allow the measurements, functional programming, and data reporting to be communicated through the transmitters display and outputs. There are two different transmitter models used in various applications. Both transmitters are available as either meter mount or remote mount.

- **ProComm GO Transmitter**

Ultra Mag 3000 flow meter is accompanied by the ProComm GO electronics and is battery powered, ideal for remote installations and locations with unreliable power sources.
- Output options include pulse, 4-20mA, Modbus, and telemetry
- Battery powered with optional solar, AC or DC power with battery backup
- DIY battery replacement and in-field programming available via USB cable and laptop
- 5-year expected battery life
- Rated to 140F
- UL, CSA certifications
- CRN (ANSI), CE, UL certifications

- **ProComm Max Transmitter**

Ultra Mag 5000 is offered with the ProComm Max electronics, offering greater accuracy and more sophisticated output options for users needing superior system integration and data collection.

- Output options include Digital Pulse, 4-20mA, Hart, Modbus, and Ethernet IP
- Datalogger and optional AMI/AMR
- AC/DC powered
- Rated to 140F
- CE, UL, CSA certification
- CRN (ANSI), CE, UL, CSA certifications

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 using McCrometer 316 SS 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 meters	0D upstream / 0D downstream
Ultra Mag 3000, 4"-24" Steel flanged meters	2D upstream / 1D downstream
Ultra Mag 5000, 4" - 48" Steel flanged meters	1D upstream / 0D downstream

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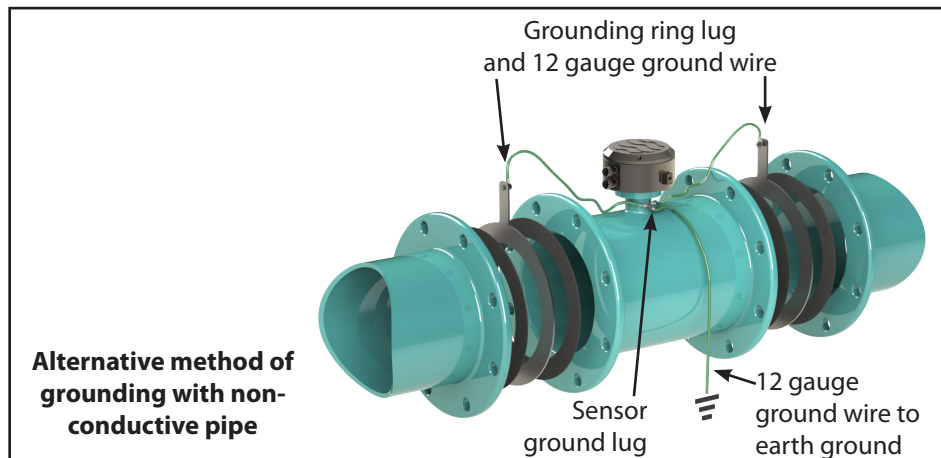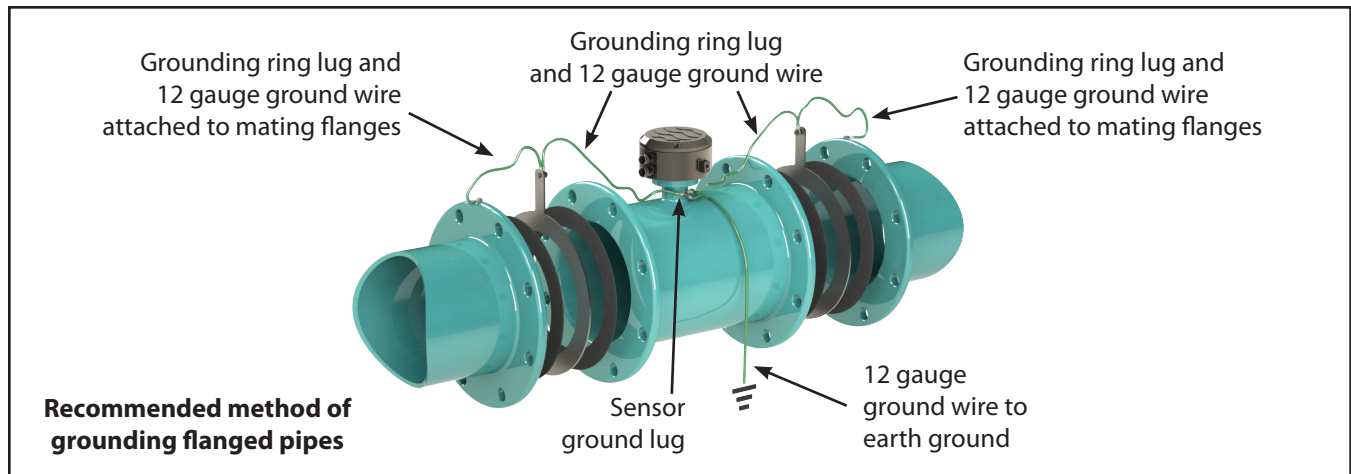
Meter Grounding Recommendations

Grounding the meter body for safety according to national (NEC) or local electrical codes is recommended on ALL meter installations.

All Field Mag flow meter installations require minimum grounding with a 12-gauge ground wire to an earth ground.

Flanged end meters

When installing into a PVC or plastic pipe system, grounding rings for flanged meters are recommended for all sizes. Flanges on the Field Mag sensor have a non-conductive coating and may not require grounding rings. For best performance, McCrometer provides grounding rings for all sizes.

For best performance, grounding the fluid column is recommended when the meter is installed in an electrically noisy environment, such as with VFD pumps or nearby electrical systems with insufficient grounding.

Grounding ring lug and 12 gauge ground wire attached to mating flanges — Grounding ring lug and 12 gauge ground wire — Grounding ring lug and 12 gauge ground wire attached to mating flanges — Sensor ground lug — 12 gauge ground wire to earth ground

Recommended method of grounding flanged pipes

Grounding ring lug and 12 gauge ground wire — Sensor ground lug — 12 gauge ground wire to earth ground

Alternative method of grounding with non-conductive pipe

Ultra Mag Flow Meter Specifications

All specifications apply to both Ultra Mag 3000 and Ultra Mag 5000 models except where noted.

Physical Specifications

Measurement Method	Electromagnetic flow based on Faraday's Law
Directionality	Forward and reverse flow indication and forward, reverse, net totalization are standard with all meters
Pipe Sizes	Ultra Mag 3000: 1½, 2″, 2½, 3″, 4″, 6″, 8″, 10″, 12″, 14″, 16″, 18″, 20″, 24″ Ultra Mag 5000: 1½, 2″, 2½, 3″, 4″ 6″, 8″, 10″, 12″, 14″, 16″, 18″, 20″, 24″, 30″, 36″, 42″, 48″
Body Style	Flanged tube
Liner	206N
Electrodes	Type 316 stainless steel, Hastelloy optional
Electrode Shape	Standard shape
Electrical Connections	• Compression gland seals • Quick-Connect
Signal Transmitter	• Ultra Mag 3000: ProComm GO transmitter • Ultra Mag 5000: ProComm Max transmitter
Transmitter Mount	Either meter mount or remote mount
Sensor Cable Lengths	• **Standard**: 25′/7.6 m McCrometer supplied submersible cable with each remote mount unit. • **Optional:** Up to 500′/152.4 m, or 25′/7.6 m max for ProComm GO • **Custom Quick Connect:** Available in standard cable lengths: Feet: 25, 50, 75, 100, 125, 150, 175, 200, 500 Meters: 7.6, 15.25. 22.5, 30.5, 38.1, 45.75, 53.3, 61, 152.4 Custom quick connect cables at additional cost.

Performance and Operational Specifications

Operating Temperature	-10 to 60 °C (14 to 140 °F)
Storage Temperature	-15 to 60 °C (5 to 140 ° F)
IP Rating	• Quick Connect (NEMA 6P/IP68 with remote transmitter) • Compression gland seals (NEMA 6P/IP68 with remote transmitter)
Sensor Submersibility Depth	**With standard strain relief cable:** 1.8 m (6 ft.) **With optional quick connect cable:** 9 m (30 ft.)
Pressure Rating	• AWWA CL D, 150 PSI maximum working pressure • ANSI #150, 285 PSI maximum • ANSI #300, 500 PSI maximum
Velocity Range	0.2 to 32 FPS

Ultra Mag Flow Meter Specifications (cont.)

Performance and Operational Specifications (cont.)

Accuracy	• Ultra Mag 3000: Battery powered: 1% of measured value ±0.006 ft/s (±0.0018 m/s) • Ultra Mag 5000: Standard: +/- 0.5% of measured value ±0.006 ft/s (±0.0018 m/s) Optional: +/- 0.2% of measured value ±0.006 ft/s (±0.0018 m/s) **IMPORTANT NOTICE ON FLOW METER ACCURACY:** The Ultra Mag 3000 flow meter with remote display's cable and electronics are factory calibrated for accuracy as a single unit. Changing the cable length, even with the splice kit, changes the accuracy of the meter and invalidates the calibration certificate. The Ultra Mag 5000 flow meter does not have this restriction. Multiple point wet flow calibrations are conducted on every complete flow tube with its signal transmitter. 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%.
Repeatability	±0.05% or ±.0008ft/s (±0.25mm/s), whichever is greater
Head Loss	None. No obstruction in line and no moving parts
Conductivity	5 µs/cm
Pipe Run Requirements	**3000:** 1½" to 3" Flanged style meters 0D upstream / 0D downstream 4" - 24" Steel flanged meters 2D upstream / 1D downstream **5000:** 1½" to 3" Flanged style meters 0D upstream / 0D downstream 4" - 48" Steel flanged meters 1D upstream / 0D downstream

Other Specifications

|	

Certifications and Approvals	**Ultra Mag 3000**
	
	Standard model:
	• ISO 9001:2015 certified quality management system
	• Certified by MET to UL 61010-1
	• Certified to NSF / ANSI Standards*
	
	HL Model:
	• ISO 9001:2015 certified quality management system
	• Certified by MET to UL 61010-1 and MET C22.2 No. 61010-1-04
	  • Class I, Division 2, Groups A B C D, T4
	  • Class I, Zone 2, IIC T4
	• Certified to NSF / ANSI Standards*
	
	Ultra Mag 5000
	• ISO 9001:2015 certified quality management system
	• Certified to NSF / ANSI Standards*

System Options	Stainless steel ID tag
Meter Options and Accessories	• Extended warranty • Hastelloy® electrodes • ANSI flanges • Special lay lengths, including ISO standard lay lengths • Additional sensor cable up to 475' • Quick connect cable fittings • Transmitter sun shield • Smart Output™ (Sensus or Itron compatible) • Battery or battery-solar powered transmitter (ProComm GO only)
Warranty	**Meter:** 2 year warranty **Liner:** Lifetime guarantee

* Certified by IAPMO R&T to NSF/ANSI 61 for material safety and NSF/ANSI 372 for low lead content.

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Flow Meter Dimensions and Weights

1½" to 3" Models

Pipe Size (Nominal)	Flow Ranges (0.2 to 32 FPS) Min-Max GPM	DIMENSIONS (Lay Lengths)								Est. Shipping Weight (lbs.)*	
		A		B	C		D				
		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 ½"	1.29-200	11	14	4.5	5.0	6.1	6.5	7.25		93	not offered
2"	1.29-200	11	14	4.5	6.0	6.5	6.5	7.25		93	70
2 ½"	3.25-510	13.4	15.5	4.5	7.0	7.5	7.0	7.75		94	not offered
3"	3.25-510	13.4	15.5	4.5	7.5	8.25	7.0	7.75		94	80

* For remote mount meters, add 4 lbs for ProComm Max transmitter.
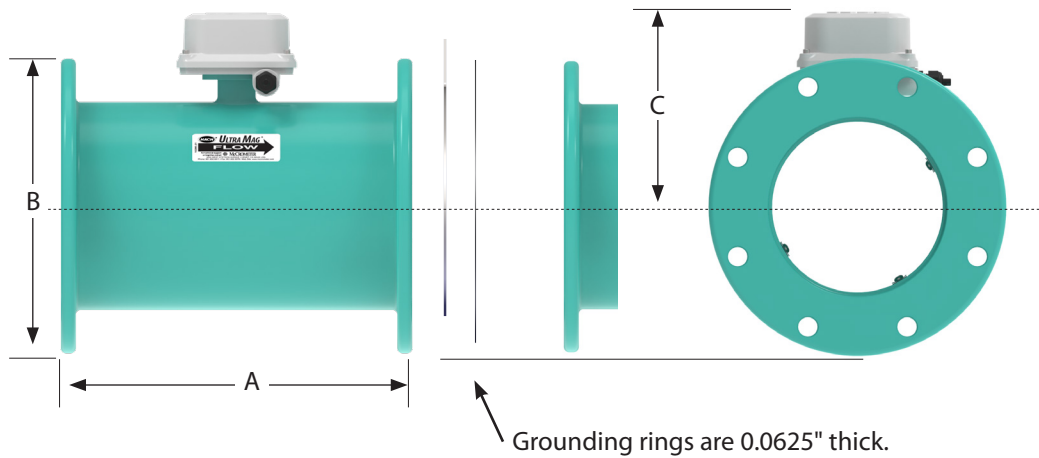
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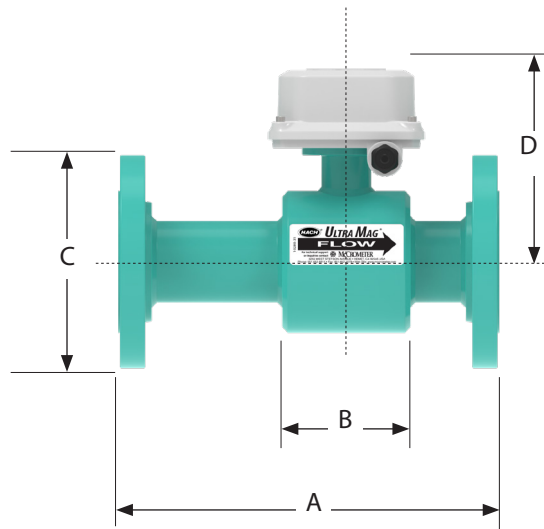
Dimensions and Weights (cont.)

4" to 12" Flanged End Body Style

Pipe Size (Nominal)	Flow Ranges (0.2 to 32 FPS) Min-Max GPM	DIMENSIONS (Lay Lengths)											Est. Shipping Weight (lbs.)*		
		A					B			C					
		AWWA	ANSI		ISO ANSI		AWWA	ANSI		AWWA	ANSI		AWWA	ANSI	
		150# Class D	150# CL150	300# CL300	150# CL150	300# CL300	150# Class D	150# CL150	300# CL300	150# Class D	150# CL150	300# CL300	150# Class D	150# CL150	300# CL300
4"	6.97-1110	13.4	13.4	13.4	9.00	10.00	9.0	9.0	10.0	9.25	9.25	9.25	86	167	167
6"	16.1-2560	14.6	14.6	14.6	11.00	12.50	11.0	11.0	12.5	10.25	10.25	10.25	98	186	186
8"	29.2-4670	16.1	17.25	17.25	13.50	15.00	13.5	13.5	15.0	11.25	11.25	11.25	118	250	250
10"	46.3-7400	18.5	18.5	18.5	16.00	17.50	16.0	16.0	17.5	12.5	12.5	12.5	168	290	290
12"	67.3-10760	19.7	19.7	19.7	19.00	20.50	19.0	19.0	20.5	13.5	13.5	13.5	210	350	350

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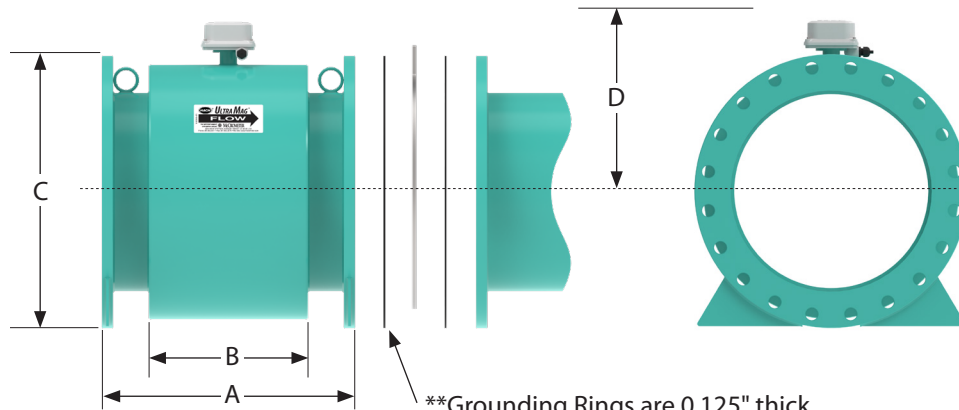

Grounding rings are 0.0625" thick.

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Dimensions and Weights (cont.)

14+" Flanged End Body Style

Pipe Size (nom.	Flow Ranges (0.2 to 32 FPS) Min-Max GPM	DIMENSIONS													Est. Shipping Weight (lbs.)*			
		A						B	C				D**		AWWA		ANSI	
		AWWA		ANSI		ISO ANSI			AWWA		ANSI							
		150# Class D	300# Class F	150# CL150	300# CL300	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	21.00	23.00	10.38	21.00	23.00	21.00	23.00	13.56		290	370	370	550
16"	117-18670	23.60	25.25	25.25	25.25	23.50	25.50	12.38	23.50	25.50	23.50	25.50	14.31		352	443	443	639
18"	149-23820	23.60	25.25	25.25	25.25	25.00	28.00	12.38	25.00	28.00	25.00	28.00	15.31		400	492	492	801
20"	186-29600	25.60	28.25	28.25	28.25	27.50	30.50	14.38	27.50	30.50	27.50	30.50	16.25		465	603	603	973
24"	269-43040	30.70	35.75	35.75	35.75	32.00	36.00	18.88	32.00	36.00	32.00	36.00	18.25		658	864	864	1373
30"	418-66740	35.80	41.75	41.75	41.75	not offered		22.38	38.75	43.00	38.75	43.00	21.87		1067	1463	1463	2150
36"	607-97000	46.10	46.10	46.10	46.10			21.38	46.00	50.00	46.00	50.00	24.87		1529	2083	2083	3125
42"	831-132900	48.05	not offered	48.05	not offered			21.38	52.75	not offered	52.75	not offered	27.56		2113	2852	contact factory	
48"	1091-174440	50.00		50.00				21.38	59.50		59.50		30.56		2445	3139		

*Shipping weights are estimated and may change due to specific order packaging
** DIM D represents the remote transmitter height in relation to the meter centerline.

**Grounding Rings are 0.125" thick.

Ultra Mag 3000 Part Number Matrix

UM3 - - - - - - - -

Nominal Line Size

Size	Code
1.5"	0C
2"	02
2.5"	0D
3"	03
4"	04
6"	06
8"	08
10"	10
12"	12
14"	14
16"	16
18"	18
20"	20
24"	24

Flange Connections

Option	Code
AWWA Class D (150 psi Rating) *(Standard)*	1
ANSI Class 150# (285 psi Rating)	2
ANSI Class 300# (300 psi Rating)	3
AWWA Class F (300 psi Rating)	4
Wafer Style (2 & 3" Only)	N

Electrode Material Options

Option	Code
S316 Stainless Steel *(Standard)*	S
Hastelloy	H

Converter Mounting and Cable Connector Options

Option	Code
Meter Mount Converter	M
IP68 Strain Relief [Remote Mount] (Standard)	R
IP68 Quick Connect Potted Connector [Remote Mount]	Q

Converter Power Options

Option	Code
Battery Power *(Standard)*	B
Solar Power, Battery Backup	S
A/C Power, Battery Backup	E
DC Power, Battery Backup	F

Converter Output Options

Option	Code
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

DC Power/ Analog Out Cable Options

Option	Code
No DC Power or Outputs *(Standard)*	
No Cable - Output Configured (Quick Conn)	0
6 ft (Open Leads)	1
25 ft (Open Leads)	2
50 ft (Open Leads)	3

Ultra Mag 3000 Part Number Matrix (cont.)

| UM3 | - | | | - | - | - | - | - | - | - |

Pulse Cable Length Options

Option	Code
No Outputs *(Standard)*	
No Cable - Output Configured (Quick Conn)	0
6 ft (Open Leads)	1
25 ft (Open Leads)	2
50 ft (Open Leads)	3

Output Cable Terminal Options

Option	Code
Strain Relief	1
Quick Connect Cable Terminals	2

Smart Output Protocol / SmartTrax Options

Option	Code
No AMI Outputs/SmartTrax Options	
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
2 ft SmartTrax Standalone Unit ExactRead Cable (Strain Relief Only)	S02
6 ft SmartTrax Standalone Unit ExactRead Cable (Strain Relief Only)	S06
25 ft SmartTrax Standalone Unit ExactRead Cable (Strain Relief Only)	S25
50 ft SmartTrax Standalone Unit ExactRead Cable (Strain Relief Only)	S50

Non Standard Length Options

Option	Code	
McCrometer Length *(Standard)*		
ISO Length (Only Available in ANSI)	ISO	
Competitor Replacement Length	LS	Select
Competitor Replacement Length	LP	Length
Custom Specified Length (Nominal Length)	L(XX)	

Color Options

Option	Code
McCrometer Green (Standard)	
Sky Blue	SB
Dark Blue	DB
Lavender	LV
White	WH

No Batteries, Battery Tray Options

Option	Code
Includes Batteries (Standard)	
No Batteries (Alkaline Tray)	NBA
No Batteries (Lithium Tray)	NBL

Canadian Registration Certified

Option	Code
No CRN Needed	
CRN Certified (Sizes 4-12" ANSI Flanges Only)	CRN

Hazardous Area Location

Option	Code
No Hazardous Location Needed	
Class 1, Division 2, Groups A-D, T5	HL

Ultra Mag 5000 Part Number Matrix

UM5	-						-	-	-	-	-	-	-

Nominal Line Size

Size	Code
1.5"	0C
2"	02
2.5"	0D
3"	03
4"	04
6"	06
8"	08
10"	10
12"	12
14"	14
16"	16
18"	18
20"	20
24"	24
30"	30
36"	36
42"	42
48"	48

End Connection Options

Option	Code
AWWA Class D (150 psi Rating) *(Standard)*	1
ANSI Class 150# (285 psi Rating)	2
ANSI Class 300# (300 psi Rating)	3
AWWA Class F (300 psi Rating)	4
Wafer Style (2 & 3" Only)	N

Electrode Material Options

Option	Code
S316 Stainless Steel *(Standard)*	S
Hastelloy	H

Transmitter Mounting and Cable Connector Options

Option	Code
Meter Mount Converter	M
IP68 Strain Relief [Remote Mount] (Standard)	R
IP68 Quick Connect Potted Connector [Remote Mount]	Q

Remote Cable Length Options

Option	Code
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

Ultra Mag 5000 Part Number Matrix (cont.)

UM5 - ▢ - - - - - - - -

Transmitter Power Options
Option	Code
A/C Power	A
DC Power	D

Transmitter Analog/Hart Output Options
Option	Code
Single 4-20mA Analog, Dual Digital (Standard)	1
Dual 4-20mA Analog, Dual Digital	2
1 Hart 4-20mA Analog, 1 Standard 4-20mA Analog, Dual Digital	3

Transmitter Digital Output Options
Option	Code
No Digital Protocol Outputs	
Modbus Protocol	MOD
Ethernet IP Protocol *Future Option	EIP

Output Protocol Types
Option	Code
No Digital outputs	
RTU (RS485) Output (Modbus)	R
TCP/IP Output (Modbus, Ethernet IP)	E

Smart Output Protocol / SmartTrax Options
Option	Code
No AMI Outputs/ SmartTrax	
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
2 ft SmartTrax Standalone Unit ExactRead Cable (Strain Relief Only)	S02
6 ft SmartTrax Standalone Unit ExactRead Cable (Strain Relief Only)	S06
25 ft SmartTrax Standalone Unit ExactRead Cable (Strain Relief Only)	S25
50 ft SmartTrax Standalone Unit ExactRead Cable (Strain Relief Only)	S50

Non Standard Length Options
Option	Code
McCrometer Length (Standard)	
ISO Length (Only Available in ANSI)	ISO
Competitor Replacement Length	LS	Select
Competitor Replacement Length	LP	Length
Custom Specified Length (Nominal Length)	L(XX)

Accuracy Options
Option	Code
Please select Value	
Standard Accuracy 0.5% Calibration	
High Accuracy 0.2% Calibration	HA

Color Options
Option	Code
McCrometer Green (Standard)	
Sky Blue	SB
Dark Blue	DB
Lavender	LV
White	WH

Canadian Registration Certified
Option	Code
No CRN Needed	
CRN Certified (Sizes 4-12" ANSI Flanges Only)	CRN

Hazardous Area Location
Option	Code
No Hazardous Location Needed	
Class 1, Division 2, Groups A-D, T5	HL

HACH ® **ULTRA MAG**

ProComm GO Specifications

Physical Specifications

Electronic Housing	Diecast aluminum, powder coated enclosure w/ tamper resistant seal, 6½" x 6½" 43/8" tall
Transmitter Dimensions	See "Dimensions" section for meter mount and remote mount transmitter dimensions.
Power	**Battery:** Standard: three 3.6V lithium-thionyl chloride (Li-SOCI2) D size batteries with two AA backup batteries **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 Operational Specifications

Battery Life	Five-year expected battery life, five-year 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 transmitter

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 transmitter)

Display and Measurement

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	IGM	Imperial gal per minute	CFM	Cubic feet per minute
MGD	Mega gal per day	MI9	Miners inch (9G)	B5M	Barrels per minute (55G)
CFS	Cubic feet per second	MI1	Miners inch (11.22G)	B5H	Barrels per hour (55G)
MLD	Megaliters per day	APD	Acre feet per day	B5D	Barrels per day (55G)
LPS	Liters per second	KLH	Kiloliters per hour	B4M	Barrels per minute (42G)
CMH	Cubic meters per hour	LPH	Liters per hour	B4H	Barrels per hour (42G)
LPM	Liters per minute	CMM	Cubic meters per minute	B4D	Barrels per day (42G)
GPH	Gallons per hour	CFM	Cubic feet per minute		

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ProComm GO Specifications (cont.)

Display and Measurement (cont.)

Totalizer Units					
GAL	Gallons	B42	Barrel (42G)	MH1	Miners Inch Hour (11.22G)
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	Standard with all models, minimum of five years of data stored

Other Specifications

Options and Accessories	• Data Logger - included as standard with five years of data storage at default (12hr) interval. (Cable sold separately) • AC, DC, and battery powered with battery backup powered available
Safety	• IEC 61010-1, Pollution Degree II • Overvoltage protection Category III

Certifications

Standard Model	• ISO 9001:2015 certified quality management system • CE • Certified by MET to UL 61010-1	

HL Model	• ISO 9001:2015 certified quality management system
	• CE
	• Certified by MET to UL 61010-1 and MET C22.2 No. 61010-1-04
	  • Class I, Division 2, Groups A B C D, T4
	  • Class I, Zone 2, IIC T4
	
	Note: ProComm GO with SmartTrax On Board is not available for hazardous locations.	

ProComm Max Specifications

Physical Specifications

Electronic Housing	Diecast aluminum, powder coated enclosure w/ tamper resistant seal
Transmitter Dimensions	Remote Mount: Height: 7.3" (18.5 cm) Width: 8.5" (21.6 cm) Depth: 4.3" (10.9 cm) Meter Mount: Height: 6.9" (17.5 cm) Width: 7.2" (18.25 cm) Depth: 6.2" (15.7 cm)
Power	AC Power: 100-240 VAC / 47-66 Hz (10 W) DC Power: 10-35 VDC (10 W) Note: AC or DC must be specified at time of ordering.
Connection Options	Conduit option: 1/2" NPT threaded connections
Galvanic Isolation	All outputs are galvanically isolated from power supply up to 500 V
Conductivity	Minimum conductivity of 5µS/cm

Performance and Operational Specifications

Location	Indoor or outdoor use
Operating and Storage Temperature	-4° to 140° F (-20° to 60° C)
IP Rating	IP67 Die cast aluminum transmitter
Standard Outputs	Single 4-20mA (standard). Galvanically isolated and fully programmable for zero and full scale. A second 4-20mA is available. Two separate digital programmable outputs: open collector transistor usable for pulse, frequency, or alarm settings. • Volumetric Pulse • Range Indication • Maximum switching voltage: 35 VDC • Maximum switching current: 100mA • Insulation from other secondary circuits: 500V
Optional Outputs	• Modbus • HART • Ethernet IP • Datalogger • Smart Output™ (Sensus, Itron 6, Itron 9)

Display and Measurement

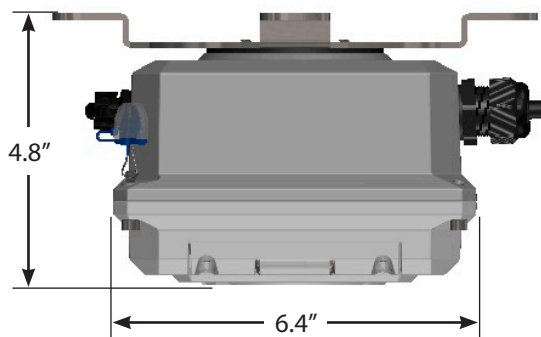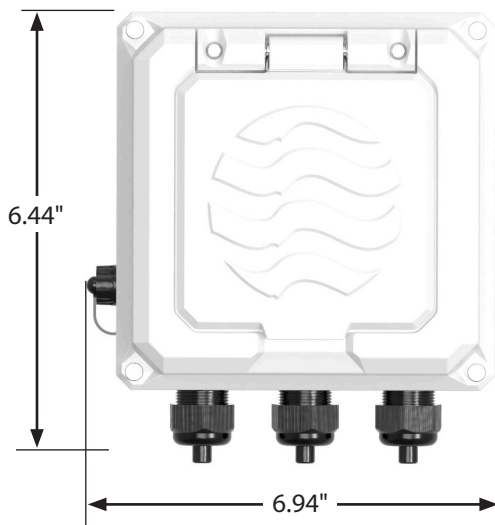|	
Keyboard and Display	Can be used to access and change set-up parameters using six membrane keys and an LCD display
Units	GAL Gallons, CUF Cubic Feet, AFT Acre Feet, CUM Cubic Meters, LIT Liters, MML Megaliter, MTT Metric Ton (KL), B31 Barrel (31G), B42 Barrel (42G), B46 Barrel (46G), B55 Barrel (55G), IMG Imperial Gallon, AIN Acre Inch, TON Ton (Short), MM1 Miners Inch Minute (11.22G), MM9 Miners Inch Minute (9G), MH1 Miners Inch Hour (11.22G), MD1 Miners Inch Day (11.22G), MH9 Miners Inch Hour (9G), MD9 Miners Inch Day (9G), KGL Kilo Gallons, MGL Mega Gallons, IN3 Cubic Inch

Other Specifications

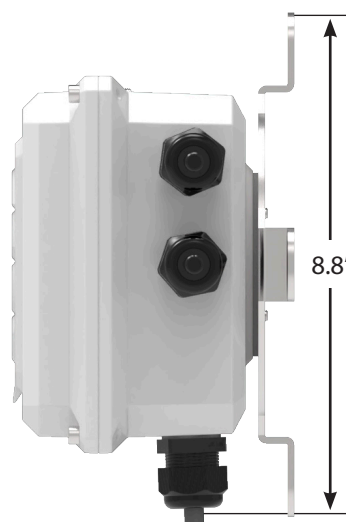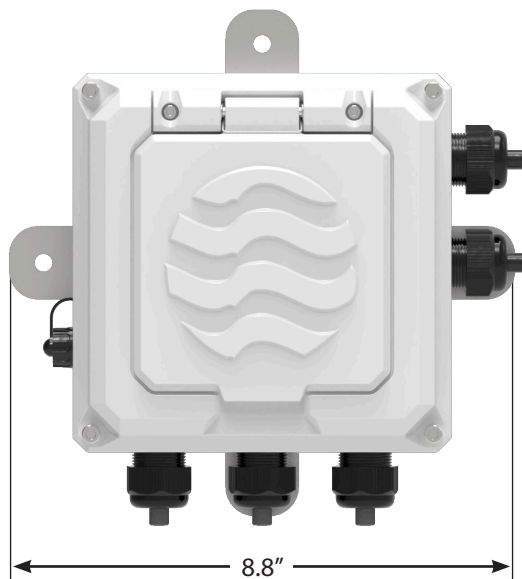| |
|---|
| • ISO 9001:2015 certified quality management system • CE |

ProComm GO Transmitter Dimensions

Meter mount converter

6.44"

6.94"

4.34"

6.94"

Remote mount converter

4.8"

6.4"

8.8"

8.8"

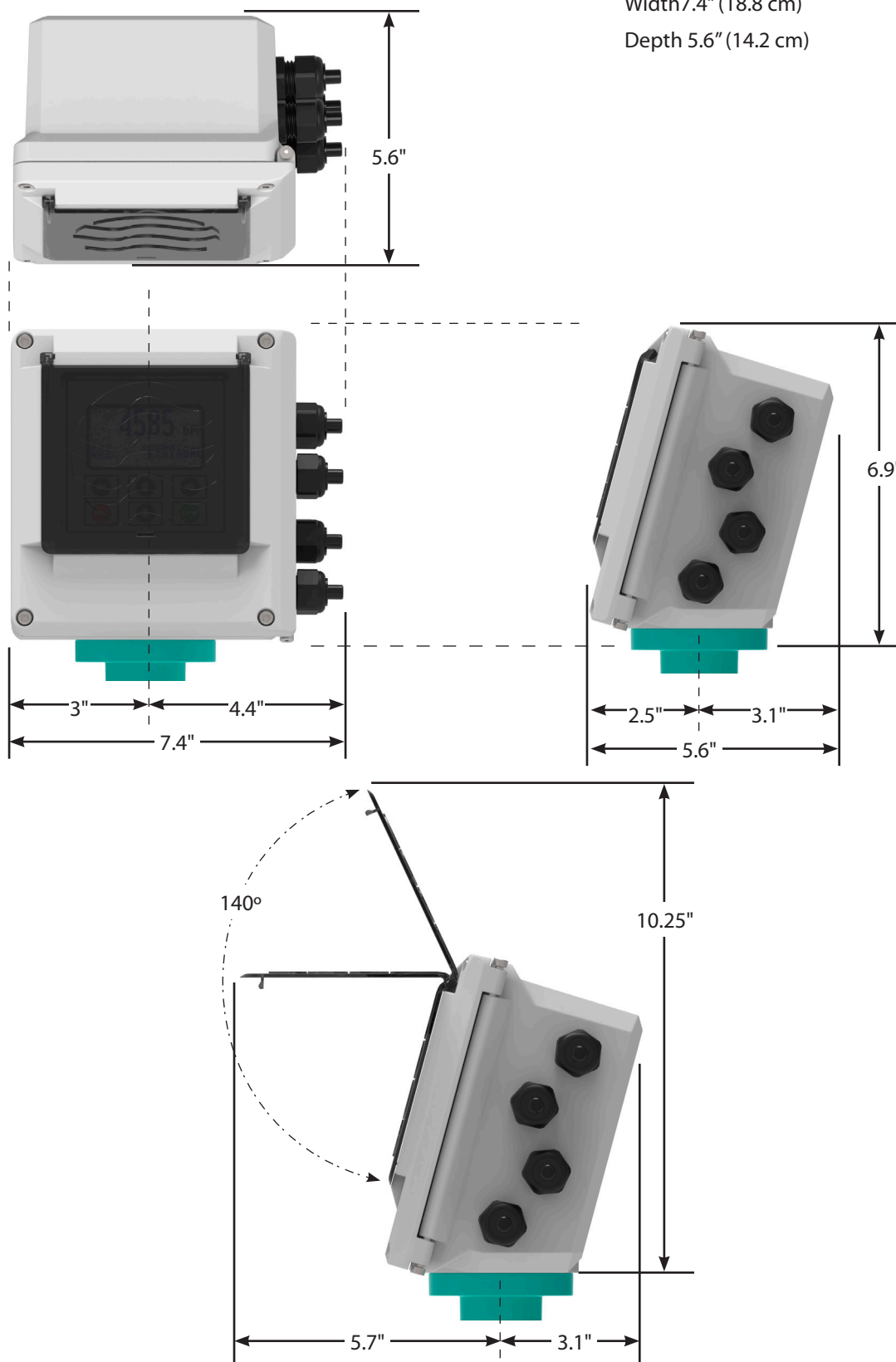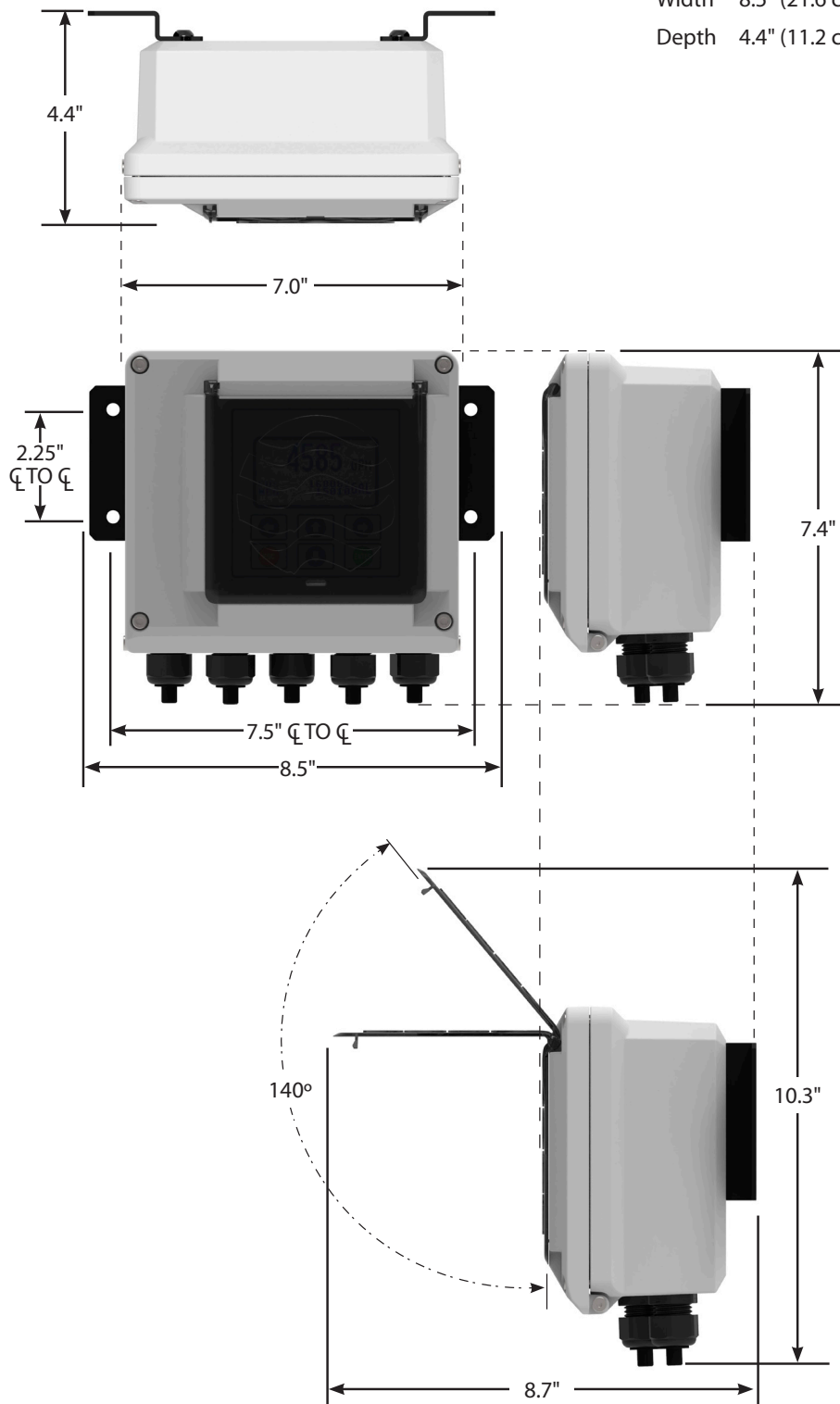## ProComm Max Transmitter Dimensions

Height 6.9" (17.6 cm)

Width 7.4" (18.8 cm)

Depth 5.6" (14.2 cm)

ProComm Max Transmitter Dimensions (cont.)

Height   7.4" (18.9 cm)

Width   8.5" (21.6 cm)

Depth   4.4" (11.2 cm)

4.4"

7.0"

2.25"
C TO C

4565

7.5" C TO C

8.5"

7.4"

140°

10.3"

8.7"

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