

iMAG 4700 Series

FLANGED MAGMETER



RIGHT METER FOR

Water & Wastewater
Treatment

Municipal

Pump skids

Pump stations

Packaged plants

Filtration systems

Reclaimed water

Hydraulic fracturing

Features

- Easy setup
- Minimal straight pipe
- Mounted or remote rate & total
- Tamper-evident seal
- NSF-61 approved
- IP68 rated
- No moving parts

The **iMAG-Series** is the most economical flanged electromagnetic flowmeter on the market. With electrodes designed to discourage fouling, it is available in 3" to 12" pipe in municipal or industrial water, waste and reclaimed water, pump stations, and packaged plant applications. Minimal straight pipe requirements allow iMAG-Series meters to be used in piping configurations where there is little space between the meter and an elbow.

iMAG-Series meters are NSF-61 approved and are rated IP68 for applications where the meter may be operated under water to a depth of at least 10 feet (3 meters) continuously.

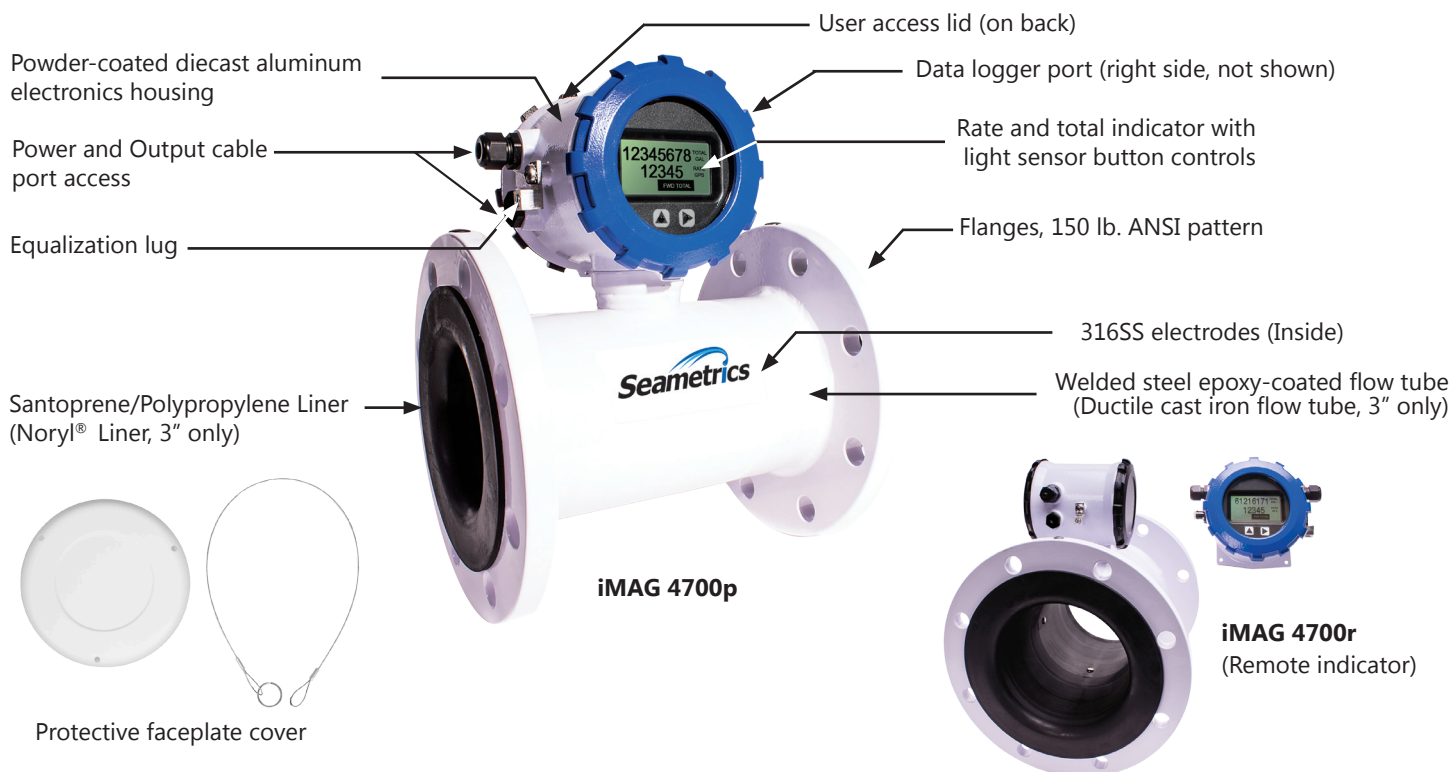
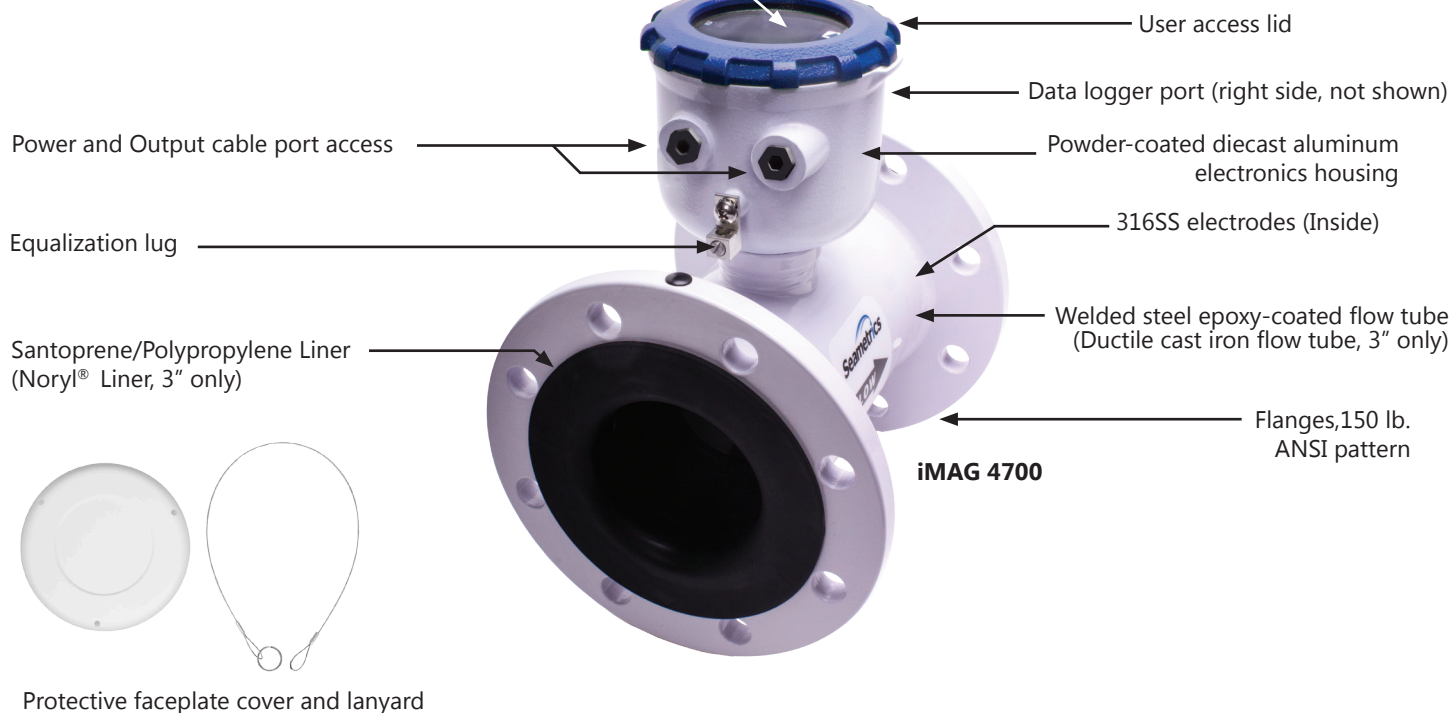
The display can be meter mounted or remote, and both rate and total indication are standard. Rate and total units and pulse scaling can be set via the front panel touch key pad by the user. Bidirectional flow reading is standard with totals available in forward, reverse, net flow, batch forward flow, and batch reverse flow. Batch totals can be reset.

A power/output cable allows outputs for use with a variety of Seametrics and other displays and controls for remote reading and telemetry applications. Pulse output is standard on all models and 4-20mA passive current loop is standard on the iMAG 4700p. In addition, 4-20mA loop, HART protocol, high speed digital, and Modbus® protocol outputs are optional on the externally powered units, depending on model.

Contact Your Supplier

Features

Rate and total indicator with light sensor
button controls



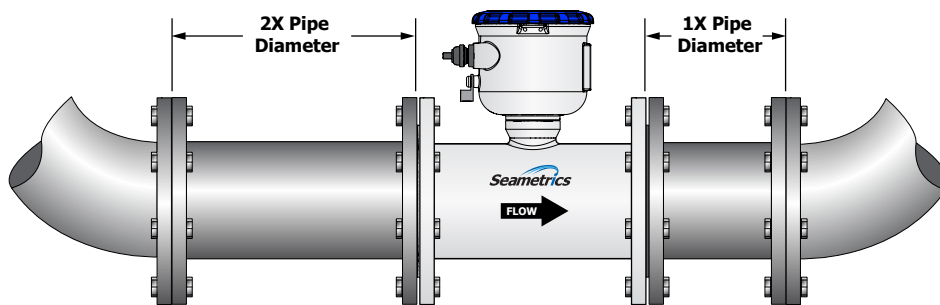
Features



- Built-in Data Logger (*Optional*)
- Bidirectional Flow Reading (*Standard*)
- Pulse Scaled Output (*Standard*)
- 4-20mA Output (*Optional**)
- HART Protocol Output (*Optional**)
- Modbus® Protocol Output (*Optional**)
- High Speed Digital Output (*Optional**)
- Battery Power (*iMAG 4700 battery model only*)
- External DC Power (*Optional**)
- Integrated AC Power Supply (*Optional**)
- Remote Display (*iMAG 4700r*)

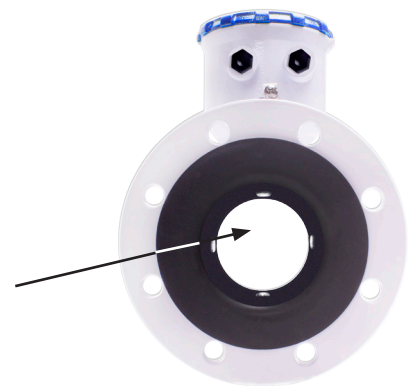
Quickly and easily change Total Volume Units, Flow Rate Units, Pulse Output Scaling, and many other settings using the two light sensor button controls on the display panel.

** Some optional items only available on some configurations. See last page for further details.*



Minimal straight pipe requirements to ease installation in tight quarters.

No moving parts to break or foul!



Specifications

Pipe Sizes		3", 4", 6", 8", 10", 12"			
Flanges		150 lb. ANSI Pattern			
Pressure		150 psi (10.3 bar) line pressure			
Temperature	Operating	10° to 140° F (-12° to 60° C)			
	Storage	-40° to 158° F (-40° to 70° C)			
Accuracy		±0.75% of reading on iMAG 4700p and 4700r (±1.0% iMAG 4700), ±0.025% of full-scale flow from low flow cutoff to maxi. flow rate of 10 m/sec			
Low Flow Cutoff		0.5% of maximum flow rate			
Material	Body (3" only)	Ductile cast iron, powder coated			
	Body (4"-12")	Welded steel, epoxy-coated			
	Liner (3" only)	Noryl®			
	Liner (4"-12")	Santoprene flange/Polypropylene liner body			
	Electronics Housing	Powder-coated diecast aluminum			
	Electrodes	316 stainless steel			
	O-ring (3" only)	EPDM			
Display	Type	128x64 dot-matrix LCD			
	Digits	5 Digit Rate		8 Digit Total	
	Units	Rate Volume Units		Rate Time Units	
	<i>Please Note: All iMAG meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be set in the field.</i>	Gallons	Million Gallons ²	Second	Gallons
		Liters	Mega Liters ²	Minute	Gallons x 10
		Barrels(42 gal)	Imperial Gallons	Hour	Gallons x 100
		Cubic Feet	Million Imperial Gallons ²	Day	Gallons x 1000
		Cubic Meters			Million Gallons
	Bidirectional¹	Forward Total, Reverse Total, Net Total, Batch Forward Total, Batch Reverse Total (Batch totals can be reset)			
Power	DC Power	9-36 Vdc @ 250 mA max, 30 mA average			
	Battery Backup	DC powered units: Two lithium 3.6V 'D' batteries, replaceable. AC powered units: One 9V alkaline battery, replaceable.			
	AC Power (iMAG 4700r and 4700p only)	85-264Vac, 50/60Hz, 0.12A			
	Battery (iMAG 4700 only)	Two lithium 3.6V 'D' batteries, replaceable.			
Scaled Pulse Output	Signal	Current sinking pulse, isolated, 36 Vdc at 10 mA max			
	Pulse Rates	User-scalable from 0.1 to 99,999.9 volume units/pulse. Pulse width is one-half of pulse period with minimum pulse width of 2.5 ms, 200 pulses/sec max, 150 pulses/sec max with battery option			
Options	4-20mA Current Loop	Isolated, passive, 24Vdc, 650 Ω maximum current loop			
	HART/4-20mA	HART protocol over 4-20mA line			
	High Speed Digital Output (iMAG 4700 & 4700p only)	Isolated, open collector, 24 Vdc			
	Serial Communications	Isolated, asynchronous serial RS485 (Reconfigurable for RS232 or 3.3V CMOS), Modbus® RTU protocol (factory selectable)			
Cable	Power/Output Cable	20ft (6m) standard length polyurethane jacketed cable—for power and outputs (lengths up to 200' available).			
	Remote Display Cable (iMAG 4700r)	20ft (6m) standard length polyurethane jacketed cable—for connection between meter and remote display (lengths up to 200' available).			
Conductivity		> 20 microSiemens/cm			
Empty Pipe Detection		Hardware/software, conductivity-based			
Regulatory		C € (EN 61326), 4" -12" NSF-61 60°C (140°F); 3" NSF-61 Cold Water 23°C (73.4°F)			
Environmental		NEMA 6P, IP68 (10ft (3m) depth, continuously)			

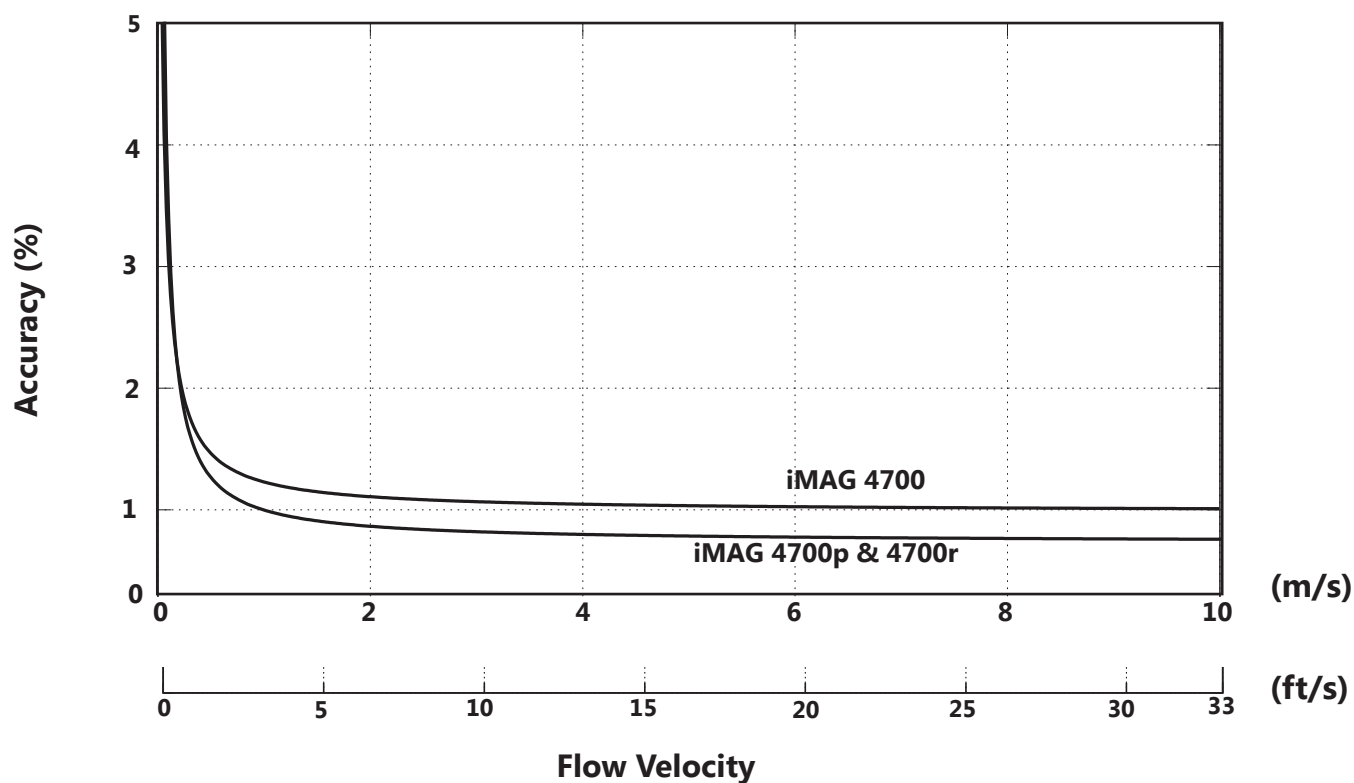
Modbus is a registered trademark of Schneider Electric.

* Specifications subject to change. Please consult our website for the most current data (www.seametrics.com).

¹ If forward and reverse flow data needs to be sent to another device, either the Digital or Modbus output is required.

² Rate Time Unit is available in Day only.

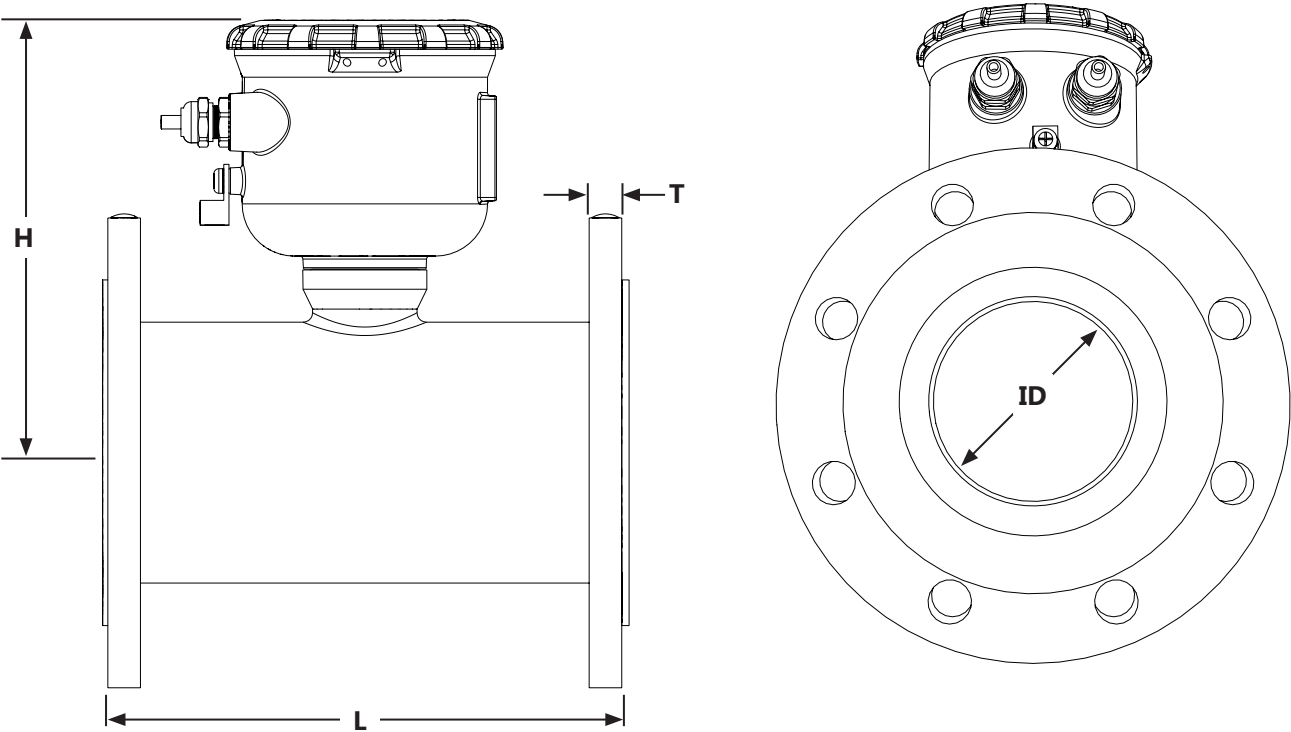
iMAG Accuracy



Flow Rate (3" - 12")

Pipe Size (Inches in diameter)	3"	4"	6"	8"	10"	12"
Max Flow Rate (Gallons/Minute)	723	1285	2891	5140	8031	11565
Cut-off (min) Flow Rate (Gallons/Minute)	3.62	6.43	14.46	25.70	40.15	57.82
Max Flow Rate (Liters/Second)	46	81	182	324	507	730
Cut-off (min) Flow Rate (Liters/Second)	0.23	0.41	0.91	1.62	2.54	3.65
Max Flow Velocity (Meters/Second)	10	10	10	10	10	10

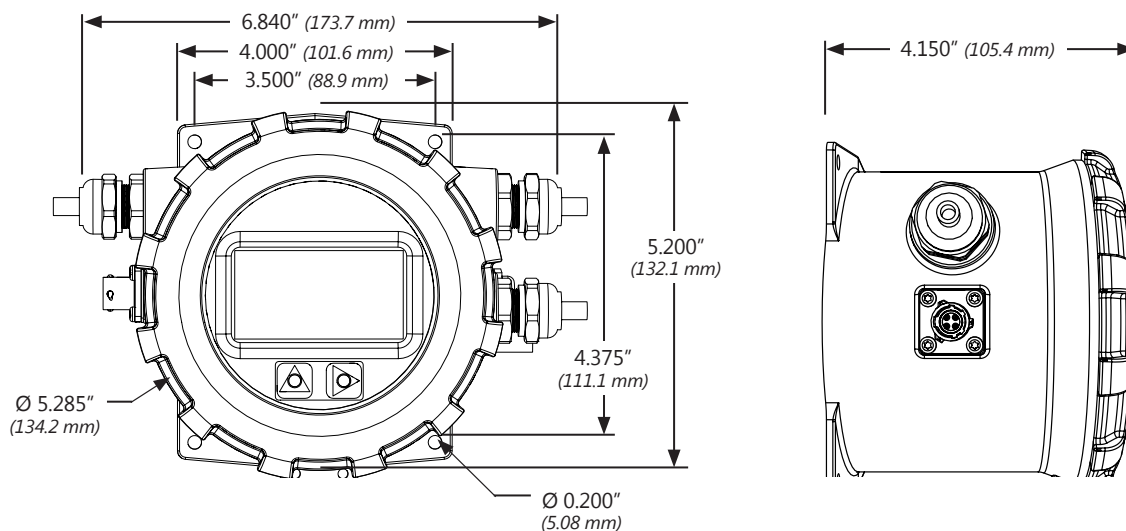
Dimensions - iMAG 4700



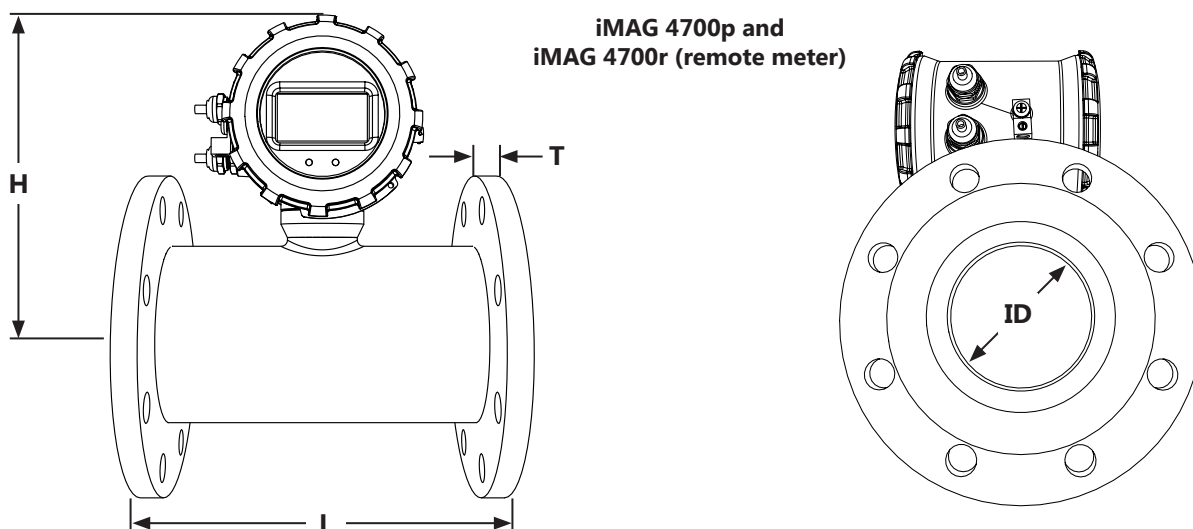
iMAG 4700 Meter Size	L		H		T		ID		Shipping Weight	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg
3"	12.25	311.15	7.08	179.8	.68	17.25	2.6	66.04	31	14
4"	10.24	260	8.3	211	.62	15.7	3.12	79	27	12
6"	12.27	312	9.1	231	.69	17.5	5.05	128	42	19
8"	14.24	362	10.1	257	.69	17.5	6.44	164	64	29
10"	18.18	462	11.2	284	.69	17.5	8.61	219	123	56
12"	19.68	500	12.2	310	.81	20.6	10.55	268	165	75
Flanges Standard ANSI 150 lb. drilling									Cable 1 lb.	

Dimensions - iMAG 4700r and iMAG 4700p

iMAG 4700r (remote display)



**iMAG 4700p and
iMAG 4700r (remote meter)**



iMAG 4700 Meter Size	L		H		T		ID		Shipping Weight			
									iMAG 4700p		iMAG 4700r	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg	lbs	Kg
3"	12.25	311.15	7.95	201.9	.68	17.25	2.6	66.04	31	14	34	15.4
4"	10.24	260	8.6	218	.62	15.7	3.12	79	28	13	31	14
6"	12.27	312	9.4	239	.69	17.5	5.05	128	43	19.5	46	21
8"	14.24	362	10.4	264	.69	17.5	6.44	164	65	29.5	68	31
10"	18.18	462	11.5	292	.69	17.5	8.61	219	124	56.5	127	58
12"	19.68	500	12.5	317	.81	20.6	10.55	268	166	75.5	169	77
Flanges	Standard ANSI 150 lb. drilling								Cable 1 lb.			

How to Order Worksheet

iMAG 4700 iMAG 4700p iMAG 4700r	①	②	③	④	⑤	⑥	⑦

② **Style:** F1 = 150 lb ANSI Pattern ③ **Power:** D1 = DC 60Hz, D2 = DC 50Hz
A1 = AC 60Hz, A2 = AC 50Hz
BX = Battery ④ **Outputs:** X = No optional output
L = 4-20mA S = Modbus®
H = HART/4-20mA G = Digital

iMAG 4700 (Integrated Display)	① Size	② Style	③ Power	④ Optional Output (The 4700 comes standard with one pulse output)	⑤ Options	⑥ DC Power/Output Cable - 6 conductor (Must select one)
	-0300 3"	-F1	-D1	-X (requires single cable for DC power & output)	-XX None	-0000 No Cable (customer will supply)
	-0400 4"		-D2	-L (requires single cable for DC power & output)	-01 Data Logger	Single Dual
	-0600 6"			-H (requires single cable for DC power & output)		-006S -006D 6 meter (20 ft)
	-0800 8"			-S (requires dual cable for DC power & output)		-015S -015D 15 meter (50 ft)
	-1000 10"			-G (requires dual cable for DC power & output)		-030S -030D 30 meter (100 ft)
	-1200 12"		-BX	-X (requires single cable for pulse output)		-045S -045D 45 meter (150 ft)
						-060S -060D 60 meter (200 ft)

iMAG 4700p (Integrated Display)	① Size	② Style	③ Power ¹	④ Optional Output (The 4700p comes standard with 4-20mA and one pulse output)	⑤ Options	⑥ DC Power/Output Cable - 8 conductor (Must select one)
	-0300 3"	-F1	-D1	-X (requires single cable for DC power & output)	-XX None	-0000 No Cable (customer will supply)
	-0400 4"		-D2	-H (requires single cable for DC power & output)	-01 Data Logger	Single Dual
	-0600 6"			-S (requires dual cable for DC power & output)		-006S -006D 6 meter (20 ft)
	-0800 8"			-G (requires dual cable for DC power & output)		-015S -015D 15 meter (50 ft)
	-1000 10"					-030S -030D 30 meter (100 ft)
	-1200 12"		-A1	-X (requires single cable for output)		-045S -045D 45 meter (150 ft)
			-A2	-H (requires single cable for output)		-060S -060D 60 meter (200 ft)
				-S (requires single cable for output)		
				-G (requires single cable for output)		

iMAG 4700r (Remote Display)	① Size	② Style	③ Power ¹	④ Optional Output (The 4700r comes standard with one pulse output)	⑤ Options	⑥ DC Power/Output Cable - 6 conductor (Must select one)	⑦ Remote Display Cable - 6 conductor (Must select one)
	-0300 3"	-F1	-D1	-X (requires single cable for DC power and output)	-XX None	-0000 No Cable (customer will supply)	-006 6 meter (20 ft)
	-0400 4"		-D2	-L (requires single cable for DC power and output)	-01 Data Logger	Single Dual	-015 15 meter (50 ft)
	-0600 6"			-H (requires single cable for DC power and output)		-006S -006D 6 meter (20 ft)	-030 30 meter (100 ft)
	-0800 8"			-S (requires dual cable for DC power and output)		-015S -015D 15 meter (50 ft)	-045 45 meter (150 ft)
	-1000 10"					-030S -030D 30 meter (100 ft)	-060 60 meter (200 ft)
	-1200 12"		-A1	-X (requires single cable for output)		-045S -045D 45 meter (150 ft)	
			-A2	-L (requires single cable for output)		-060S -060D 60 meter (200 ft)	
				-H (requires single cable for output)			
				-S (requires single cable for output)			

Modbus is a registered trademark of Schneider Electric. Viton is a registered trademark of DuPont Corporation.

Note: All iMAG meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be programmed in the field.

¹ AC meters come with a 1.8 meter (6 ft) AC power cable.