

# **Transit Time Ultrasonic Flow Meters**

TFX-5000 Meter

#### DESCRIPTION

The TFX-5000 transit time ultrasonic flow meter measures volumetric flow and heating/cooling energy rates in clean liquids as well as those with small amounts of suspended solids or aeration, such as surface water or raw sewage.

TFX-5000 flow and energy meters clamp onto the outside of pipes and do not contact the internal liquid.

#### **BENEFITS**

By clamping onto the outside of pipes, the meters have inherent advantages over other flow meter technologies, including:

- · Reduced installation time and cost
- · Non-invasive, non-contact measurement
- Continued operation during installation—no need to shut down the process
- No pressure head loss
- · No moving parts to maintain or replace

#### **FEATURES**

- · Large, bi-directional flow measuring range
- Data log up to 8 records
- Modbus® RTU or BACnet® MS/TP over EIA-485; Modbus TCP/IP; BACnet/IP; EtherNet/IP; AquaCUE®/BEACON® connectivity
- Configure and troubleshoot over USB with SoloCUE
- Reynolds, ultrasonic speed and temperature compensation
- · Large, easy-to-read graphical display
- Rugged, aluminum enclosure for a long service life in harsh environments

#### **APPLICATIONS**

The TFX-5000 meter is available in a variety of configurations that permit the user to select a meter with features suitable to meet particular application requirements.

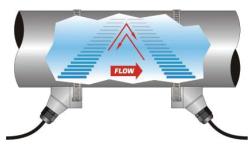
The TFX-5000 meter is available in two versions:

- A flow meter for water delivery, sewage, cooling water, water-glycol mixtures, alcohols and chemicals
- A heating/cooling energy flow meter used in conjunction with dual clamp-on RTDs for temperature measurement—ideal for hydronic process and HVAC applications



#### **OPERATION**

Transit time flow meters measure the time difference between the travel time of an ultrasound wave going *with* the fluid flow and *against* the fluid flow. The time difference is used to calculate the velocity of the fluid traveling in a closed-pipe system. The transducers used in transit time measurements operate alternately as transmitters and receivers. Transit time measurements are bi-directional and are most effective for fluids that have low concentrations of suspended solids and are sonically conductive.



An ultrasonic meter equipped with heat flow capabilities measures the rate and quantity of heat delivered or removed from devices such as heat exchangers. By measuring the volumetric flow rate of the heat exchanger liquid, the temperature at the inlet pipe and the temperature at the outlet pipe, the energy usage can be calculated.



# **Product Data Sheet**

# **SPECIFICATIONS**

# System

Liquid Types	Most clean liquids or liquids	containing small amounts of suspended solids or gas bubbles						
	Medium Pipes (JZ, KZ, NZ, RZ, WZ, HZ)	$\pm$ 0.5% $\pm$ 0.025 ft/s (0.008 m/s) of reading						
Flow Accuracy	Large Pipes (LZ, YZ)	$\pm$ 0.5% $\pm$ 0 0.049 ft/s (0.015 m/s) of reading						
	Small Pipes (CA-CT, UZ)	1 in. (25 mm) and larger = $\pm 1\% \pm 0.03$ ft/s (0.009 m/s) of reading 3/4 in. (20 mm) and smaller = $\pm 1\%$ of full scale						
Repeatability	0.2% above 1.5 ft/s							
	Medium and Large Pipes Up to 40 ft/s, depending on pipe and fluid							
Velocity	Small Pipes	Up to 20 ft/s, depending on pipe and fluid						
Straight Run Requirements	10 diameters upstream, 5 dia	imeters downstream from single elbow						
	General Safety (all models): cCSAus, CE, Pollution Degree 2, CE compliance to Low Voltage Directive, 2014/35/EU							
	<b>Transmitter (certification o</b> cCSAus Ex ec ic nC IIC T4 Gc; AEx tc IIIB T100° C Dc; Class II	JZ and KZ (Easy Rail) transducers, Auxiliary Dry Contact card or units with AquaCUE/BEACON endpoints <b>ption R):</b> Ex tc IIIB T100° C Dc; Class I, Zone 2, AEx ec ic nC IIC T4 Gc; Zone 22, , Division 2, Groups FG; Class III Dry Contact card or units with AquaCUE/BEACON endpoints						
Certification and Compliance	<b>Transducers RZ LZ, NZ, RZ, WZ, YZ (certification option R):</b> cCSAus Ex ec IIC T6 Gc; Ex tc IIIB T60° C Dc; Class I, Zone 2, AEx ec IIC T6 Gc; Zone 22, AEx tc IIIB T60° C Dc; Class II, Division 2, Groups FG; Class III Requires flexible conduit Not available with CA-CT, UZ, HZ or JZ and KZ (Easy Rail) transducers							
	ATEX Hazardous Location: Transmitter (certification option V): II 3 G D Ex ec ic nC IIC T4 Gc, Ex tc IIIB T100° C Dc; Tamb: -2560° C JZ (DTTJ), KZ (DTTK), LZ (DTTL), NZ (DTTN) and RZ (DTTR) Transducers: II 3 G D Ex ec IIC T6 Gc; Ex tc IIIB T60°C Dc; Tamb: -2560° C Not available with UZ, CA to CT, or HZ transducers; flexible conduit, Auxiliary Dry Contact card or AquaCUE/BEACON endpoints							
	JZ, KZ, LZ, NZ and RZ Transdu	ion V): Ex ec nC ic IIC T4 Gc; Ex tc IIIC T100° C Dc; Tamb: -25°C60° C .cers: Ex ec IIC T6 Gc; Ex tc IIIB T60° C Dc; Tamb: -2560° C CT, or HZ transducers; flexible conduit, Auxiliary Dry Contact card or AquaCUE/BEACON endpoints						

#### Transmitter

	24V DC/AC	928V DC @ 8 W max. or 2026 AC 4763 Hz @ 0.5 A max., 2 Amp slow-blow fuse, not field replaceable
Power Options	Maine AC	85264V AC 4763 Hz @ 24VA max. 1 Amp slow-blow fuse, manually field replaceable
	Mains AC	Over-Voltage Rating Category II (CAT II)
	Options	Display with keypad or no display/keypad
Display	Keypad	4-button navigation, keypad with tactile feedback; polyester film
Display	Display	$128 \times 64$ pixel LED backlit graphical display; adjustable brightness and timeout; polycarbonate window
	Flow rate/total	8-digit
Enclosure	NEMA Type 4X, IP67	
Construction	Aluminum construction; pain	ted; wall, panel or pipe mounting; stainless steel fasteners and mounting hardware; EPDM gasket
construction	Conduit Holes	(4) 1/2 in. NPT, M20 $\times$ 1.5 or 1/2 BSPP; cable glands available for NPT and M20
	Pollution Degree	2
F	Altitude Restriction	Up to 2000 m (6561 ft)
Environmental Ratings	Ambient Temperature Range	-4140° F (-2060° C)
Ratings	Storage Temperature Range	-40176° F (-4080° C)
	Humidity	085%, non-condensing
Configuration	Via optional keypad or SoloCl	JE configuration software; SoloCUE available on DVD or download
	Velocity	feet/second, meters/second
	Volumetric total	US Gallons, Million Gallons, Imperial Gallons, Million Imperial Gallons, Acre-Feet, Liters, Hectoliters, Cubic Meters, Cubic Feet, Oil Barrels (42 gallons), Fluid Barrels (31.5 gallons), Imperial Fluid Barrels (36 imperial gallons), Pounds (Kilograms) and custom units
Units (Field- Selectable)	Flow rate	Acre Feet/Day, Liters/Second, Liters/Minute, Liters/Hour, Cubic Meters/Second, Cubic Meters/Minute, Cubic Meters/Hour, Cubic Feet/Minute, Cubic Feet/Minute, Cubic Feet/Hour, Gallons/Second, Gallons/Minute, Gallons/Hour, Million Gallons/Day, Imperial Gallons/Second, Imperial Gallons/Minute, Imperial Gallons/Hour, Million Imperial Gallons/Day, Oil Barrels/Day, Fluid Barrels/Day, Imperial Fluid Barrels/Day and custom units
	Energy total	British Thermal Unit (Btu), Thousand Btu, Millions Btu, Kilocalories, Mega calories, Kilowatt-hour,
	(energy meters)	Megawatt hour, Kilojoules, Mega joules, Ton-hour (Refrigeration)
	Heat/cooling rate (energy meters)	Btu/hour, Thousand Btu/hour, Millions Btu/hour, Ton (Refrigeration), Watts, Kilowatts, Megawatts, Kilojoules/hour, Mega joules/hour, Kilocalories/hour, Mega calories/hour
	Temperature (energy meters)	Farenheit, Celcius, Kelvin

		Flow Meter	Energy Meter						
	0/420 mA output	One 16-bit, isolated, max 800 Ohms, internal or external power	Two 16-bit, isolated, max 800 Ohms, internal or external power						
	Digital input	ne 530V DC, isolated, externally or internally sourced, reset totalizer or alarm output							
Inputs and Outputs		Two selectable pulse, alarm, flow direction, sink isolated open collector, 530V DC, max. 50 mA externally or internally sourced, leakage current 1uA max.	Three selectable pulse, frequency, alarm, flow direction, isolated open collector, 530V DC, externally or internally sourced, leakage current 1uA max.						
Outputs	Digital output	Frequency output: 50% duty cycle, 6310k Hz maximum frequency							
		Pulse (totalizer) output: Open collector, pulse width 1500 ms programmable							
		Optional: Two dry contact output for alarm or flow direction 30V DC max., 5A max. (Ethernet not available with this option)							
	RTD (energy only)	None	Two 2-wire, 3-wire or 4-wire Pt100/Pt1000 RTD 12-bit inputs; Range of -40200° C; Clamp-on resistor kits available						
	Programming	USB 2.0 mini B connector for connection to a device with SoloCUE configuration software							
Ports	EIA-485	Modbus RTU command set or BACnet MS/TP; Baud rates 9600, 14400,19200, 38400, 57600, 76800, 115k; terminating resistor selectable							
	Ethernet	Optional 10/100 Base T RJ45, communication via Mo	odbus TCP/IP, BACnet/IP or EtherNet/IP						
	AquaCUE/BEACON	Connectivity to AquaCUE/BEACON endpoint (LTE ce	llular)						
<b>.</b>	Number of points	Up to 8 parameters per record. Selectable 1 second Transfer logs via memory card	to 1 day						
Data Logging	Real Time Clock	Backed up with a super capacitor, minimum of 32 da	ays of data retention without power; Requires no servicing						
	MicroSD card slot	8 GB card, included with transmitter							
Alarms	Records 150 previou	s alarms, warnings or errors							
Languages	English, French, Gerr	nan, Italian, Spanish							
Security	Four levels: Read-on	ly, Operator, Service and Admin; 6-digit passcode nur	mber; selectable auto logout						

#### Transducers

Model	Construction	Cable Length Max.	Pipe/Tubing Sizes <sup>1</sup>	Flow Rate Max. GPM (LPM)	Pipe/ Tubing Materials
CA-CT <sup>5</sup> fixed small pipe	CPVC, Ultem <sup>®</sup> , Nylon cord grip, PVC cable jacket; -40194° F	100 ft	0.52 in.	190	
UZ adjustable small pipe	CPVC, Ultem, and anodized aluminum track system; Nickel-plated brass connector with Teflon insulation; PVC cable jacket, -40194° F (-4090° C)	100 ft (30 m)	0.52 in. (1250 mm)	190 (720)	
NZ (IP67) standard pipe	CPVC, Ultem <sup>®</sup> , Nylon cord grip, PVC cable jacket; -40194° F (-4090° C)	300 ft (90 m)	2.512 in. (DN65DN300)	4000 (15,000)	
RZ (IP54) standard pipe	PBT glass filled, Ultem <sup>®</sup> , Nylon cord grip; PVC cable jacket; , –40250° F (–40121° C)	300 ft (90 m)	2.512 in. (DN65DN300)	4000 (15,000)	
JZ, KZ (IP54) standard pipe, integrated rail	PBT glass filled, Ultem, Nylon cord grip; PVC cable jacket; –40250° F (–40121° C)	300 ft (90 m)	2.56 in. (DN65DN150) 2.512 in. (DN65DN300)	4000 (15,000)	See <sup>2</sup>
WZ (IP68) <sup>7</sup> standard pipe, submersible	CPVC, Ultem, Nylon cord grip; Polyethylene cable jacket; –40194° F (–4090° C)	300 ft (90 m)	2.512 in. (DN65DN300)	4000 (15,000)	
HZ high temperature	PTFE, Vespel, Nickel-plated brass cord grip; FEP cable jacket; -40350° F (-40176° C)	300 ft (90 m)	2.512 in. (DN65DN300)	4000 (15,000)	
LZ (IP67) large pipe	CPVC, Ultem, Nylon cord grip PVC cable jacket; –40194° F (–4090° C)	300 ft (90 m) <sup>6</sup>	848 in. (DN200DN1200) <sup>3,4</sup>	33,000 (125,000)	
YZ (IP68) <sup>7</sup> large pipe, submersible	CPVC, Ultem, Nylon cord grip; Polyethylene cable jacket; –40…194° F (–40…90° C)	300 ft (90 m) <sup>6</sup>	848 in. (DN200DN1200) <sup>3,4</sup>	33,000 (125,000)	

<sup>1</sup> Recommendations based on unlined, new pipes with water. Recommended pipe or tubing sizes vary with pipe conditions and fluid.

<sup>2</sup> PVC, CPVC, HDPE, PTFE, PDVF, stainless steel, ductile iron, aluminum, brass naval, carbon steel copper.

<sup>3</sup> Large pipe transducers are recommended for 8...12 in. pipes if normal velocity is expected to be greater than 12 ft/s (3.6 m/s).

<sup>4</sup> Consult factory for larger pipe sizes.

<sup>5</sup> Not for metric pipes.

<sup>6</sup> Cable lengths up to 600 ft are available. Consult factory for lead times.

<sup>7</sup> IP68 tested at 1 meter for 24 hours.

#### **RTD Kits**

Part Number	Description			Construction	Temperature Range
68996-001	RTD pair; 15 ft (4.5 m) cable	Disc. also as			
68996-002	RTD pair; 50 ft (15 m) cable	Pipe clamp, surface mount, IP54	Pt 1000, Class A ± ( 0.15 + 0.002*  t  ) with t as temperature °C	Aluminum body, silicone cable jacket	-58356° F (-50180° C)
68996-003	RTD pair; 100 ft (30 m) cable	surface mount, if 54	with t as temperature. C	Shicone caple jacket	(-30180 C)

#### **SoloCUE Flow Device Manager Software**

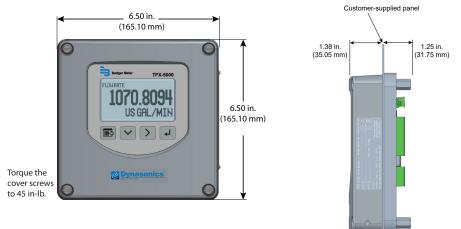
The flow meter *may* be programmed through the keypad or with SoloCUE software. If the meter is ordered without a display/keypad, the flow meter *must* be programmed with SoloCUE software. The software is used to configure, calibrate and communicate with TFX-5000 meters with English, French, German, Italian and Spanish menus. Additionally, it has numerous troubleshooting tools to make diagnosing and correcting installation problems easier.

SoloCUE	Used to co	nfigure, calibrate and troubleshoot flow meters and control valves; Software is compatible with Windows 7, 8, 10
USB Cable	RC820648	USB 2.0 mini B connector to A connector, shielded

#### DIMENSIONS Remote System Enclosure



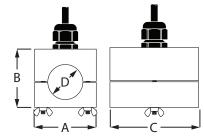
#### **Panel Mount Enclosure**

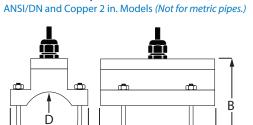


Consult factory for part number selection.

#### **Transducers**

**Fixed Small Pipe** Pipes and Tubing 1/2...2 in. (Not for metric pipes.)



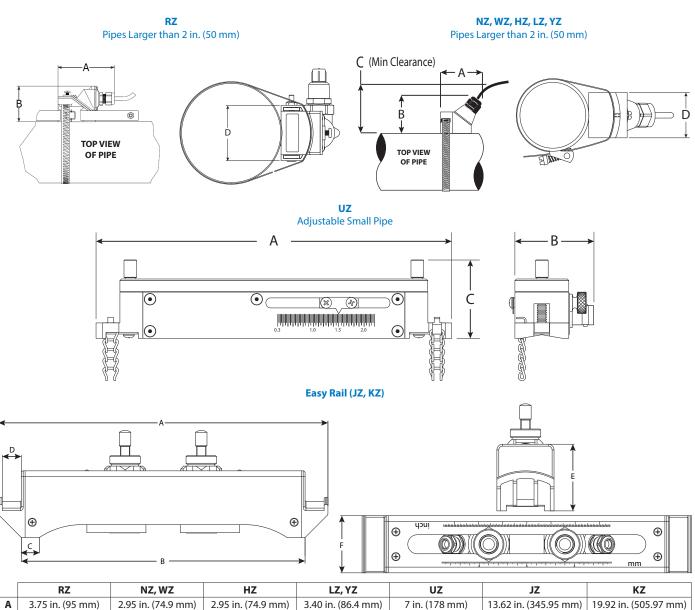


Fixed Small Pipe U-Bolt Connections CF, CL

Pipe Size	Pipe Material	A	В	c	D
	ANSI/DN	2.46 in. (62.48 mm)	2.36 in. (59.94 mm)	2.66 in. (67.56 mm)	0.84 in. (21.34 mm)
1/2 in.	Copper	2.46 in. (62.48 mm)	2.36 in. (59.94 mm)	3.33 in. (84.58 mm)	0.63 in. (16.00 mm)
	Tubing	2.46 in. (62.48 mm)	2.28 in. (57.91 mm)	3.72 in. (94.49 mm)	0.50 in. (12.70 mm)
	ANSI/DN	2.46 in. (62.48 mm)	2.57 in. (65.28 mm)	2.66 in. (67.56 mm)	1.05 in. (26.67 mm)
3/4 in.	Copper	2.46 in. (62.48 mm)	2.50 in. (63.50 mm)	3.56 in. (90.42 mm)	0.88 in. (22.35 mm)
	Tubing	2.46 in. (62.48 mm)	2.50 in. (63.50 mm)	3.56 in. (90.42 mm)	0.75 in. (19.05 mm)
	ANSI/DN	2.46 in. (62.48 mm)	2.92 in. (74.17 mm)	2.86 in. (72.64 mm)	1.32 in. (33.53 mm)
1 in.	Copper	2.46 in. (62.48 mm)	2.87 in. (72.90 mm)	3.80 in. (96.52 mm)	1.13 in. (28.70 mm)
	Tubing	2.46 in. (62.48 mm)	2.75 in. (69.85 mm)	3.80 in. (96.52 mm)	1.00 in. (25.40 mm)
	ANSI/DN	2.80 in. (71.12 mm)	3.18 in. (80.77 mm)	3.14 in. (79.76 mm)	1.66 in. (42.16 mm)
1-1/4 in.	Copper	2.46 in. (62.48 mm)	3.00 in. (76.20 mm)	4.04 in. (102.62 mm)	1.38 in. (35.05 mm)
	Tubing	2.46 in. (62.48 mm)	3.00 in. (76.20 mm)	4.04 in. (102.62 mm)	1.25 in. (31.75 mm)
	ANSI/DN	3.02 in. (76.71 mm)	3.40 in. (86.36 mm)	3.33 in. (84.58 mm)	1.90 in. (48.26 mm)
1-1/2 in.	Copper	2.71 in. (68.83 mm)	2.86 in. (72.64 mm)	4.28 in. (108.71 mm)	1.63 in. (41.40 mm)
	Tubing	2.71 in. (68.83 mm)	3.31 in. (84.07 mm)	4.28 in. (108.71 mm)	1.50 in. (38.10 mm)
	ANSI/DN	3.70 in. (93.98 mm)	3.42 in. (86.87 mm)*	5.50 in. (139.70 mm)	2.38 in. (60.45 mm)*
2 in.	Copper	3.70 in. (93.98 mm)	3.38 in. (85.85 mm)*	5.50 in. (139.70 mm)	2.13 in. (54.10 mm)*
	Tubing	3.21 in. (81.53 mm)	3.85 in. (97.79 mm)	4.75 in. (120.65 mm)	2.00 in. (50.80 mm)

\* Varies due to U-bolt configuration

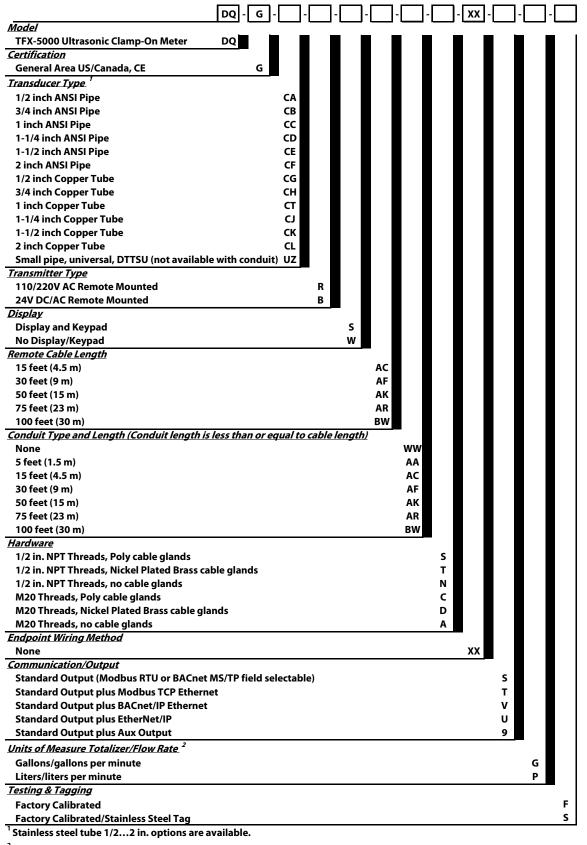
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	RZ	NZ, WZ	HZ	LZ, YZ	UZ	JZ	KZ
Α	3.75 in. (95 mm)	2.95 in. (74.9 mm)	2.95 in. (74.9 mm)	3.40 in. (86.4 mm)	7 in. (178 mm)	13.62 in. (345.95 mm)	19.92 in. (505.97 mm)
В	2.35 in. (60 mm)	2.75 in. (69.8 mm)	2.75 in. (69.8 mm)	2.94 in. (74.7 mm)	1.6 in. (42 mm)	11.73 in. (297.94 mm)	18.03 in. (457.96 mm)
С	—	3.00 in. (76.2 mm)	3.00 in. (76.2 mm)	3.20 in. (81.3 mm)	1.5 in. (39 mm)	0.75 in. (19.05 mm)	0.75 in. (19.05 mm)
D	2.19 in. (56 mm)	1.70 in. (43.2 mm)	1.71 in. (43.4 mm)	2.50 in. (63.5 mm)	—	0.79 in. (20.06 mm)	0.79 in. (20.06 mm)
Ε	—	—	—	—	—	2.76 in. (70.10 mm)	2.76 in. (70.10 mm)
F	_	_	_	_	_	2.36 in. (59.94 mm)	2.36 in. (59.94 mm)

#### PART NUMBER CONSTRUCTION

Part Number Construction for TFX-5000 Flow Meters for Pipes 2 in. and Smaller



DQ - B -					XX -			-
Model								
TFX-5000 Ultrasonic Clamp-On Meter DQ								
Certification								
Hazardous Location, Class I, Division 2 B								
Transducer Type <sup>1</sup>								
1/2 inch ANSI Pipe	Δ							
3/4 inch ANSI Pipe								
1 inch ANSI Pipe								
1-1/4 inch ANSI Pipe								
1-1/2 inch ANSI Pipe								
2 inch ANSI Pipe								
1/2 inch Copper Tube								
3/4 inch Copper Tube								
1 inch Copper Tube								
1-1/4 inch Copper Tube								
1-1/2 inch Copper Tube								
2 inch Copper Tube								
Transmitter Type								
110/220V AC Remote Mounted	R							
24V DC/AC Remote Mounted	В							
Display	_							
Display and Keypad	:	s						
No Display/Keypad		N						
Remote Cable/Conduit Length <sup>2</sup>								
15 feet (4.5 m)		AC	AC					
30 feet (9 m)		AF	AF					
50 feet (15 m)		AK	AK					
75 feet (23 m)		AR	AR					
100 feet (30 m)		BW	BW					
Hardware		511						
1/2 in. NPT Threads, Poly cable glands				s				
1/2 in. NPT Threads, Nickel Plated Brass cable glands				т				
1/2 in. NPT Threads, no cable glands				N				
M20 Threads, Poly cable glands				С				
M20 Threads, Nickel Plated Brass cable glands				D				
M20 Threads, no cable glands				A				
Endpoint Wiring Method								
None					xx			
Communication/Output						-		
Standard Output (Modbus RTU or BACnet MS/TP field selectable)						s		
Standard Output plus Modbus TCP Ethernet						т		
Standard Output plus BACnet/IP Ethernet						v		
Standard Output plus EtherNet/IP						υ		
Units of Measure Totalizer/Flow Rate <sup>3</sup>							•	
Gallons/gallons per minute							G	
Liters/liters per minute							P	
Testing & Tagging							-	
Factory Calibrated								F
-								s
Factory Calibrated/Stainless Steel Tag								

# Part Number Construction for TFX-5000 Flow Meters for Pipes 2 in. and Smaller for Hazardous Locations

<sup>2</sup> For hazardous location units, Remote Cable and Conduit Length codes must match.

# Part Number Construction for TFX-5000 Flow Meters for Pipes Larger than 2 in.

			. 🗌 .	. 🗖 .		xx	-	-	-	
Model									L	
TFX-5000 Ultrasonic Clamp-On Meter DQ										
Certification										
General Area US/Canada, CE G										
Transducer Type										
Medium pipe, DTTR, 2.5 in. (65 mm) or larger RZ										
Medium pipe, submersible DTTN, 2.5 in. (65 mm) or larger 'WZ										
2.56 inches (65150 mm) Easy Rail (not available with condui JZ										
2.512 inches (65300 mm) Easy Rail (not available with cond KZ										
Medium pipe, high temperature (not available with conduit) HZ										
Large pipe, DTTL, 8 in. (200 mm) or larger LZ										
Large pipe, submersible DTTL, 8 in. (200 mm) or larger YZ										
<u>Transmitter Type</u>										
110/220V AC Remote Mounted	R B									
24V DC/AC Remote Mounted	в									
<u>Display</u> Display and Keypad		s								
No Display/Keypad		w								
Remote Cable Length		vv								
15 feet (4.5 m)			AC							
30 feet (9 m)			AC							
50 feet (15 m)			AK							
75 feet (23 m)			AR							
100 feet (30 m)			BW							
150 feet (46 m)			BK							
200 feet (61 m)			DW							
250 feet (76 m)			DK							
300 feet (90 m)			EW							
350 feet (107 m) (DTTL "LZ" and "YZ" only)			EK							
400 feet (122 m) (DTTL "LZ" and "YZ" only)			FW							
450 feet (137) (DTTL "LZ" and "YZ" only)			FK							
500 feet (152 m) (DTTL "LZ" and "YZ" only)			GW							
550 feet (168) (DTTL "LZ" and "YZ" only)			GK							
600 feat (192 m) (DTTL    7" and    V7" are )										
600 feet (183 m) (DTTL "LZ" and "YZ" only)			HW							
600 feet (183 m) (DTTL "L2" and "Y2" only) <u>Conduit Type and Length (Conduit length is less than or equal to cable lo</u>	ength)		HW							
	ength)		HW	ww						
Conduit Type and Length (Conduit length is less than or equal to cable l	l <u>ength)</u>		HW	ww AA						
Conduit Type and Length (Conduit length is less than or equal to cable le None 5 feet (1.5 m) 15 feet (4.5 m)	ength)		HW	AA AC						
Conduit Type and Length (Conduit length is less than or equal to cable le None 5 feet (1.5 m) 15 feet (4.5 m) 30 feet (9 m)	ength)		HW	AA AC AF						
Conduit Type and Length (Conduit length is less than or equal to cable le None 5 feet (1.5 m) 15 feet (4.5 m) 30 feet (9 m) 50 feet (15 m)	ength)		HW	AA AC AF AK						
Conduit Type and Length (Conduit length is less than or equal to cable le None 5 feet (1.5 m) 15 feet (4.5 m) 30 feet (9 m) 50 feet (15 m) 75 feet (23 m)	ength)		HW	AA AC AF AK AR						
Conduit Type and Length (Conduit length is less than or equal to cable le None 5 feet (1.5 m) 15 feet (4.5 m) 30 feet (9 m) 50 feet (15 m) 75 feet (23 m) 100 feet (30 m)	l <u>ength)</u>		HW	AA AC AF AK AR BW						
Conduit Type and Length (Conduit length is less than or equal to cable level           None           5 feet (1.5 m)           15 feet (4.5 m)           30 feet (9 m)           50 feet (15 m)           75 feet (23 m)           100 feet (30 m)           150 feet (46 m)	l <u>ength)</u>		HW	AA AC AF AK AR BW BK						
Conduit Type and Length (Conduit length is less than or equal to cable length)           None           5 feet (1.5 m)           15 feet (4.5 m)           30 feet (9 m)           50 feet (15 m)           75 feet (23 m)           100 feet (30 m)           150 feet (46 m)           200 feet (61 m)	<u>'ength</u>		HW	AA AC AF AK AR BW BK DW						
Conduit Type and Length (Conduit length is less than or equal to cable length)           None           5 feet (1.5 m)           15 feet (4.5 m)           30 feet (9 m)           50 feet (15 m)           75 feet (23 m)           100 feet (30 m)           150 feet (46 m)           200 feet (61 m)           250 feet (76 m)	length)		HW	AA AC AF AK BW BK DW DK						
Conduit Type and Length (Conduit length is less than or equal to cable level           None           5 feet (1.5 m)           15 feet (4.5 m)           30 feet (9 m)           50 feet (15 m)           75 feet (23 m)           100 feet (30 m)           150 feet (46 m)           200 feet (61 m)           250 feet (76 m)           300 feet (90 m)	length)		HW	AA AC AF AK AR BW BK DW						
Conduit Type and Length (Conduit length is less than or equal to cable level           None           5 feet (1.5 m)           15 feet (4.5 m)           30 feet (9 m)           50 feet (15 m)           75 feet (23 m)           100 feet (30 m)           150 feet (61 m)           200 feet (61 m)           250 feet (76 m)           300 feet (90 m)	length)		HW	AA AC AF AK BW BK DW DK						
Conduit Type and Length (Conduit length is less than or equal to cable level           None           5 feet (1.5 m)           15 feet (4.5 m)           30 feet (9 m)           50 feet (15 m)           75 feet (23 m)           100 feet (30 m)           150 feet (46 m)           200 feet (76 m)           300 feet (90 m)           Hardware           1/2 in. NPT Threads, Poly cable glands	'ength)		HW	AA AC AF AK BW BK DW DK	ST					
Conduit Type and Length (Conduit length is less than or equal to cable le None 5 feet (1.5 m) 15 feet (4.5 m) 30 feet (9 m) 50 feet (15 m) 75 feet (23 m) 100 feet (20 m) 150 feet (30 m) 150 feet (46 m) 200 feet (61 m) 250 feet (61 m) 300 feet (90 m) Hardware 1/2 in. NPT Threads, Poly cable glands 1/2 in. NPT Threads, Nickel Plated Brass cable glands	'ength)		HW	AA AC AF AK BW BK DW DK	т					
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands	'ength)		HW	AA AC AF AK BW BK DW DK	T N					
Conduit Type and Length (Conduit length is less than or equal to cable left         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Poly cable glands	ength)		HW	AA AC AF AK BW BK DW DK	T N C					
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Poly cable glands         M20 Threads, Nickel Plated Brass cable glands	ength)		HW	AA AC AF AK BW BK DW DK	T N C D					
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         M20 Threads, no cable glands         M20 Threads, no cable glands	ength)		HW	AA AC AF AK BW BK DW DK	T N C					
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, Nickel Plated Brass cable glands	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx				
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, Nickel Plated Brass cable glands         1/2 in. NPT Threads, No cable glands         M20 Threads, Poly cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx				
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, Nickel Plated Brass cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, No cable glands         M20 Threads, No cable glands         M20 Threads, No cable glands	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	XX	S			
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, Nickel Plated Brass cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, no cable glands         Communication/Output	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	ST			
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (61 m)         200 feet (61 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, Nickel Plated Brass cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         M20 Threads, no cable glands         Communication/Output         Standard Output (Modbus RTU or BACnet MS/TP field selectable)	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx				
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, Nickel Plated Brass cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         Communication/Output         Standard Output (Modbus RTU or BACnet MS/TP field selectable)         Standard Output plus Modbus TCP Ethernet	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	т			
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, Nickel Plated Brass cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, No cable glands         Communication/Output         Standard Output (Modbus RTU or BACnet MS/TP field selectable)         Standard Output plus Modbus TCP Ethernet         Standard Output plus BACnet/IP Ethernet	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	T V			
Conduit Type and Length (Conduit length is less than or equal to cable level         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         Communication/Output         Standard Output (Modbus RTU or BACnet MS/TP field selectable)         Standard Output plus Modbus TCP Ethernet         Standard Output plus BACnet/IP Ethernet         Standard Output plus BACnet/IP Ethernet         Standard Output plus EtherNet/IP	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	T V U			
Conduit Type and Length (Conduit length is less than or equal to cable letter the set of t	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	T V U		G	
Conduit Type and Length (Conduit length is less than or equal to cable letter the set of t	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	T V U		GP	
Conduit Type and Length (Conduit length is less than or equal to cable letter is feet (1.5 m)         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Poly cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         Endpoint Wiring Method         None         Communication/Output         Standard Output plus Modbus RTU or BACnet MS/TP field selectable)         Standard Output plus BACnet/IP Ethernet         Standard Output plus BACnet/IP Ethernet         Standard Output plus Aux Output         Units of Measure Totalizer/Flow Rate <sup>2</sup> Gallons/gallons per minute         Liters/liters per minute         Liters/liters per minute <td>ength)</td> <td></td> <td>HW</td> <td>AA AC AF AK BW BK DW DK</td> <td>T N C D</td> <td>xx</td> <td>T V U</td> <td></td> <td></td> <td></td>	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	T V U			
Conduit Type and Length (Conduit length is less than or equal to cable letter is feet (1.5 m)         None         5 feet (1.5 m)         15 feet (4.5 m)         30 feet (9 m)         50 feet (15 m)         75 feet (23 m)         100 feet (30 m)         150 feet (46 m)         200 feet (61 m)         250 feet (76 m)         300 feet (90 m)         Hardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         1/2 in. NPT Threads, no cable glands         M20 Threads, Poly cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, no cable glands         Endpoint Wiring Method         None         Communication/Output         Standard Output (Modbus RTU or BACnet MS/TP field selectable)         Standard Output plus BACnet/IP Ethernet         Standard Output plus Aux Output         Units of Measure Totalizer/Flow Rate <sup>2</sup> Gallons/gallons per minute         Liters/liters per minute         Testing & Tagging         Factory Calibrated	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	XX	T V U			F
Conduit Type and Length (Conduit length is less than or equal to cable letter t	ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	T V U			FS
Conduit Type and Length (Conduit length is less than or equal to cable letter the set of t	'ength)		HW	AA AC AF AK BW BK DW DK	T N C D	xx	T V U			

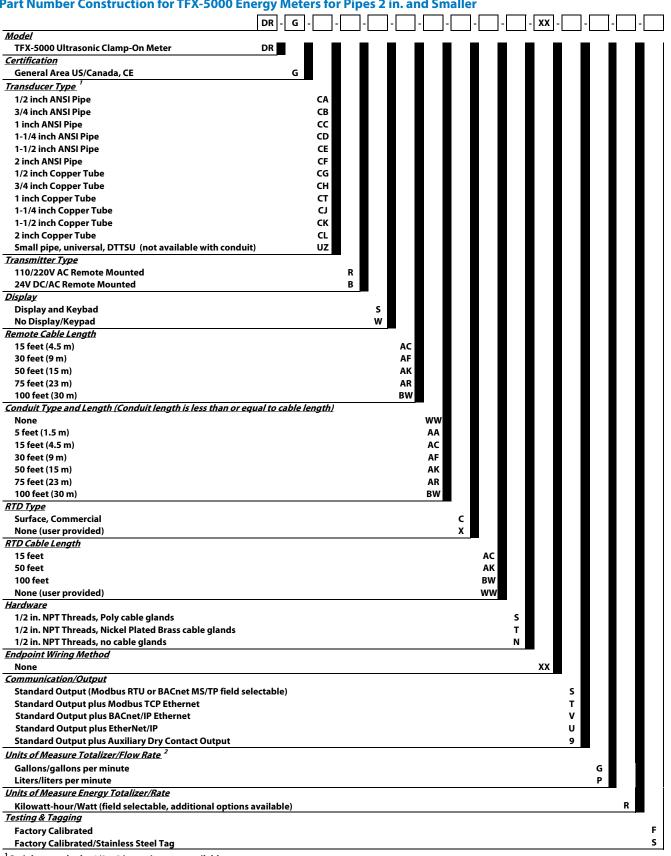
DQ							- XX -		-	
	-					JJ	7.77			L
TFX-5000 Ultrasonic Clamp-On Meter DQ										
Certification										
Hazardous Location, Class I, Division 2 B										
Hazardous Location Class I, Div 2, Zone 2/22; Class R										
Transducer Type										
Medium pipe, DTTR, 2.5 in. (65 mm) or larger RZ										
Medium pipe, submersible DTTN, 2.5 in. (65 mm) or larger <sup>1</sup> WZ										
Large pipe, DTTL, 8 in. (200 mm) or larger LZ										
Large pipe, submersible DTTL, 8 in. (200 mm) or larger <sup>1</sup> YZ										
Transmitter Type										
110/220V AC Remote Mounted	R									
24V DC/AC Remote Mounted	В									
<u>Display</u>										
Standard		S								
No Display/Keypad		W	/							
Remote Cable/Conduit Length										
15 feet (4.5 m)			Α	c	AC					
30 feet (9 m)				F	AF					
50 feet (15 m)				к	AK					
75 feet (23 m)				R	AR					
100 feet (30 m)				w	BW					
150 feet (46 m)				ĸ	BK					
200 feet (61 m)				w	DW					
250 feet (76 m)				ĸ	DK					
300 feet (90 m)				w	EW					
Hardware						-				
1/2 in. NPT Threads, Poly cable glands						s				
1/2 in. NPT Threads, Nickel Plated Brass cable glands						т				
1/2 in. NPT Threads, no cable glands						Ν				
M20 Threads, Poly cable glands						с				
M20 Threads, Nickel Plated Brass cable glands						D				
M20 Threads, no cable glands						Α				
Endpoint Wiring Method							_			
None							xx			
Communication/Output								-		
Standard Output (Modbus RTU or BACnet MS/TP field selectable)								S		
Standard Output plus Modbus TCP Ethernet								т		
Standard Output plus BACnet/IP Ethernet								v		
Standard Output plus EtherNet/IP								U		
Units of Measure Totalizer/Flow Rate <sup>2</sup>									-	
Gallons/gallons per minute									G	
Liters/liters per minute									Р	
Testing & Tagging										
Factory Calibrated										F
Factory Calibrated/Stainless Steel Tag										S
Submersible transducer cables use two conduit openings.										

Part Number Construction for TFX-5000 Flow Meters for Pipes Larger than 2 in. for U.S./Canada Hazardous Locations

# Part Number Construction for TFX-5000 Flow Meters for Pipes Larger than 2 in. for ATEX/IECEx Hazardous Locations

TFX-5000 Ultrasonic Clamp-On Meter       DQ         Cartification       Itarardous location, ATEX Zone 2/22, IECEX Zone 2       V         Itarardous location, ATEX Zone 2/22, IECEX Zone 2       V         Medium pipe, DTR, 2.5 in. (65 mm) or larger       RZ         Medium pipe, DTR, 2.5 in. (65 mm) or larger       RZ         S 6 inches (65150 mm) Easy Rail (not available with condui IZ       2.5 6 inches (65150 mm) are arger 1       VZ         Large pipe, DTR, 8. in (200 mm) or larger 1       VZ       ZZ       Large pipe, DTR, 8. in (200 mm) or larger 1       VZ         Large pipe, DTR, 8. in (200 mm) or larger 1       VZ       ZZ       Large pipe, DTR, 8. in (200 mm) or larger 1       VZ         100220V AC Remote Mounted       R       B       S       S         Display Keypad       S       S       S         Display Keypad       WW       AC       AC         30 feet (15 m)       AK       AK       AK         200 feet (15 m)       BW       BW       S         200 feet (16 m)       BW       BW       S         200 feet (16 m)       BK       C       C         None       WW       S       S       S         1/2 in. NPT Threads, Nickel Plated Brass cable glands       T       T	Γ						xx _	٦_٢	٦.	
TFX-5000 Ultrasonic Clamp-On Meter       DQ         Cartification       Itarardous location, ATEX Zone 2/22, IECEX Zone 2       V         Itarardous location, ATEX Zone 2/22, IECEX Zone 2       V         Medium pipe, DTR, 2.5 in. (65 mm) or larger       RZ         Medium pipe, DTR, 2.5 in. (65 mm) or larger       RZ         S 6 inches (65150 mm) Easy Rail (not available with condui IZ       2.5 6 inches (65150 mm) are arger 1       VZ         Large pipe, DTR, 8. in (200 mm) or larger 1       VZ       ZZ       Large pipe, DTR, 8. in (200 mm) or larger 1       VZ         Large pipe, DTR, 8. in (200 mm) or larger 1       VZ       ZZ       Large pipe, DTR, 8. in (200 mm) or larger 1       VZ         100220V AC Remote Mounted       R       B       S       S         Display Keypad       S       S       S         Display Keypad       WW       AC       AC         30 feet (15 m)       AK       AK       AK         200 feet (15 m)       BW       BW       S         200 feet (16 m)       BW       BW       S         200 feet (16 m)       BK       C       C         None       WW       S       S       S         1/2 in. NPT Threads, Nickel Plated Brass cable glands       T       T	Model									
Certification       Hazardous Location, ATEX Zone 2/22, IECEX Zone 2       V         Transducer Type       Medium pipe, DTTR, 2.5 in. (65 mm) or larger       RZ         Medium pipe, DTTR, 2.5 in. (65 mm) or larger       RZ         2.5 6 inches (65130 mm) Easy Rail (not available with conduit 12       2.52         2.512 inches (65300 mm) asay Rail (not available with conduit 12       2.212         Large pipe, DTTL, 8 in. (200 mm) or larger       LZ         Large pipe, Submersible DTTL, 8 in. (200 mm) or larger       VZ         T10/220V AC Remote Mounted       R         B       Display         Display and Keypad       S         No Display/Keypad       W         Remote Cable Length       AC         15 feet (4.5 m)       AC         30 feet (9 m)       AF         So feet (15 m)       AK         75 feet (23 m)       AR         100 feet (30 m)       BK         220 feet (76 m)       K         Yole, Need Poly cable glands       T         1/2 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, Nickel Plated Brass cable glands       C         Moot       XX       Communication/Output         Standard Output plus Modouts TU or BACnet MS/TP field selectable)<		DQ								
Transducer Type         Medium pipe, Submersible DTTN, 2.5 in. (65 mm) or larger       RZ         Medium pipe, Submersible DTTN, 2.5 in. (65 mm) or larger 1       WZ         2.5 (5 inches (65300 mm) Easy Rail (not available with conduit IZ       IZ         2.5 (2 inches (65300 mm) Easy Rail (not available with conduit IZ       IZ         2.5 (2 inches (65300 mm) or larger       LZ         Large pipe, Submersible DTTL, 8 in. (200 mm) or larger '       YZ         Transmitter Type       R         110/220V AC Remote Mounted       R         ZAV DC/AC Remote Mounted       B         Display and Keypad       W         Remote Cable Length       AC         30 feet (3 m)       AK         150 feet (46 m)       BK         200 feet (61 m)       DW         200 feet (61 m)       DW         200 feet (61 m)       DW         12 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, Nickel Plated Brass cable glands       C         Moz       AD       A         AD2 Threads, Nickel Plated Brass cable glands       A         Mone       XX       XX         Communication/Output       S A         Standard Output plus BACnet MS/TP field selectable) <t< td=""><td>Certification</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Certification									
Transducer Type         Medium pipe, Submersible DTTN, 2.5 in. (65 mm) or larger       RZ         Medium pipe, Submersible DTTN, 2.5 in. (65 mm) or larger 1       WZ         2.5 (5 inches (65300 mm) Easy Rail (not available with conduit IZ       IZ         2.5 (2 inches (65300 mm) Easy Rail (not available with conduit IZ       IZ         2.5 (2 inches (65300 mm) or larger       LZ         Large pipe, Submersible DTTL, 8 in. (200 mm) or larger '       YZ         Transmitter Type       R         110/220V AC Remote Mounted       R         ZAV DC/AC Remote Mounted       B         Display and Keypad       W         Remote Cable Length       AC         30 feet (3 m)       AK         150 feet (46 m)       BK         200 feet (61 m)       DW         200 feet (61 m)       DW         200 feet (61 m)       DW         12 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, Nickel Plated Brass cable glands       C         Moz       AD       A         AD2 Threads, Nickel Plated Brass cable glands       A         Mone       XX       XX         Communication/Output       S A         Standard Output plus BACnet MS/TP field selectable) <t< td=""><td>Hazardous Location, ATEX Zone 2/22, IECEx Zone 2</td><td>v</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Hazardous Location, ATEX Zone 2/22, IECEx Zone 2	v								
Medium pipe, DTTR, 2.5 in. (65 mm) or larger RZ Medium pipe, submersible DTTN, 2.5 in. (65 mm) or larger WZ 2.5 (in check (65 150 mm) Easy Rail (not available with condul: ZZ 2.5 (12 Inches (65 130 mm) Easy Rail (not available with condul: ZZ 2.5 (12 Inches (65 150 mm) or larger LZ Large pipe, Submersible DTTL, 8 in. (200 mm) or larger 'YZ Transmitter Type Transmitter Type Tol220V AC Remote Mounted R 24V DC/AC Remote Mounted SW Bolsplay(Keypad SW Bolsplay(Keypad SW Remote Cable Length 15 feet (15 m) AC 30 feet (9 m) AF 50 feet (15 m) AK 100 feet (46 m) BW 130 feet (46 m) BW 130 feet (46 m) BW 230 feet (16 m) AF 100 feet (30 m) BW 130 feet (46 m) BW 130 feet (6 m) Conduit Length is less than or equal to cable length! Nome WW 4ardware 17 L/2 in. NPT Threads, no labe glands T 17 Lin. NPT Threads, Nickel Plated Brass cable glands T 17 Lin. NPT Threads, Nickel Plated Brass cable glands A 102 Threads, Nickel Plated Brass cable glands C 17 Lin. NPT Threads, no cable glands C M20 Threads, no cable glands C M20 Threads, Nickel Plated Brass cable glands C M20	Transducer Type									
Medium pipe, submersible DTTN, 2.5 in. (65 mm) or larger <sup>1</sup> WZ 2.5 6 in check (65150 mm) Easy Rail (not available with conduir <i>IZ</i> 2.5 12 inches (65150 mm) Easy Rail (not available with conduir <i>IZ</i> Large pipe, DTTL, 8 in. (200 mm) or larger 12 <i>Iz</i> <i>Transmitter Type</i> 110/220V AC Remote Mounted R 24V DC/AC Remote Mounted S <i>Bisplay</i> and Keypad S <i>Sigplay</i> 15 foet (4.5 m) AC 30 feet (9 m) AF 15 feet (4.5 m) AC 30 feet (15 m) AF 15 feet (4.5 m) AC 30 feet (30 m) BWW 250 feet (15 m) AF 15 feet (46 m) BK 200 feet (61 m) BK 200 feet (61 m) BK 200 feet (61 m) BK 200 feet (61 m) Conduit length is less than or equal to cable length) None XXX 200 feet (51 m) XK 12 in. NPT Threads, Poly cable glands T 12 in. NPT Threads, Nickel Plated Brass cable glands T 12 in. NPT Threads, Nickel Plated Brass cable glands C <i>Camuunication/Output</i> Standard Output plus BACnet/IP Ethernet XX <i>Camuunication/Output</i> BACnet MS/TP field selectable) Standard Output plus BACnet/IP Ethernet V Standard Output plus BACnet/IP Ethernet C <i>Camuunication/Output</i> BACnet/IP Ethernet C <i>Camuunication/Salpay Calbing and C</i> <i>Camuunication/Control Calbing and Calbing and Calbing and Calbing and Calbing and Calbing an</i>		RZ								
2.5 6 inches (65 300 mm) Easy Bail (not available with condul 12 2.5 12 inches (65 300 mm) Easy Bail (not available with condu KZ Large pipe, DTTL, 8 in. (200 mm) or larger 1 VZ Transmitter Type 110/220V AC Remote Mounted R 24V DC/AC Remote Mounted B 24y DC/AC Remote Mounted S 24V DC/AC Remote Mounted S 24V DC/AC Remote Mounted C 15 feet (4.5 m) A 5 feet (15 m) A 5 feet (15 m) A 5 of feet (15 m) A 5 of feet (15 m) A 5 of feet (15 m) A 100 feet (30 m) B 100 feet (30 m) B 100 feet (30 m) B 250 feet (16 m) D 250 feet (16 m) D 250 feet (16 m) D 12 in. NPT Threads, Poly cable glands T 1/2 in. NPT Threads, Poly cable glands T 1/2 in. NPT Threads, Poly cable glands C 1/2 in. NPT Threads, Nickel Plated Brass cable glands C 1/2 in. NPT Threads, Nickel Plated Brass cable glands C M20 Threads, Poly cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, Poly cable glands C M20 Thr		arger <sup>1</sup> WZ								
2.512 inches (65300 mm) Easy Rail (not available with condu KZ Large pipe, DTTL, 8 in. (200 mm) or larger 1 VZ Transmitter Type Transmitter Type Type Tra										
Large pipe, DTTL, 8 in. (200 mm) or larger LZ Large pipe, submersible DTTL, 8 in. (200 mm) or larger <sup>1</sup> YZ Teasmitter Type 110/220V AC Remote Mounted R B Display and Keypad S Display and Keypad S No Display(Keypad W Remote Cable Length A 15 feet (4.5 m) AC 30 feet (9 m) AF 50 feet (15 m) AK 50 feet (15 m) AK 75 feet (23 m) BW 150 feet (16 m) BW 250 feet (16 m) BW 250 feet (76 m) DW 250 feet (76 m) DW 250 feet (76 m) Conduit length is less than or equal to cable length) None W Hardware Total Length (Conduit length is less than or equal to cable length) None S 1/2 in. NPT Threads, Nickel Plated Brass cable glands S 1/2 in. NPT Threads, no cable glands S 1/2 in. NPT Threads, Nickel Plated Brass cable glands C M20 Threads, Notkel Plated Brass Cable glands C M20 Threads, Nother Plated Brass C M20 Threads, Nother Plated B	•									
Transmitter Type 110/220V AC Remote Mounted R 110/220V AC Remote Mounted B Display Display Meypad S No Display/Keypad W Remote Cable Length 15 feet (4.5 m) AC 30 feet (9 m) AF 50 feet (15 m) AK 75 feet (23 m) AR 100 feet (30 m) BW 250 feet (61 m) DW 250 feet (76 m) Conduit Type and Length (Conduit length is less than or equal to cable length) None VW 4ardware 1/2 in. NPT Threads, Poly cable glands T 1/2 in. NPT Threads, Nickel Plated Brass cable glands T 1/2 in. NPT Threads, Nickel Plated Brass cable glands AC Communication/Output Standard Output (Modbus RTU or BACnet MS/TP field selectable) Standard Output plus EtherNet/IP U U U U U U U U U U U U U U U U U U U	Large pipe, DTTL, 8 in. (200 mm) or larger	LZ								
110/220V ÅC Remote Mounted R 24V DC/AC Remote Mounted B 24V DC/AC Remote Mounted S Display and Keypad S No Display/Keypad S No Display/Keypad A W 30 feet (9 m) A 50 feet (15 m) A 75 feet (15 m) A 15 feet (46 m) B 200 feet (30 m) B 15 of feet (64 m) B 200 feet (61 m) B 200 feet (61 m) B 200 feet (76 m) C Conduit Type and Length (Conduit length is less than or equal to cable length) None W 4rdWare 1/2 in. NPT Threads, Poly cable glands S 1/2 in. NPT Threads, Nickel Plated Brass cable glands T 1/2 in. NPT Threads, Nickel Plated Brass cable glands C M20 Threads, No cable glands C M20 Threads, no cable glands A Endpoint Wiring Method X None XX Standard Output (Modbus RTU or BACnet MS/TP field selectable) S Standard Output plus BACnet/IP Ethernet T Standard Output plus BACnet/IP Ethernet C V Standard Output plus BACnet/IP Ethernet C F Factory Calibrated Stanless Steel Tag S	Large pipe, submersible DTTL, 8 in. (200 mm) or large	er <sup>1</sup> YZ								
24V DC/AC Remote Mounted       B         Display       Display and Keypad         Display and Keypad       W         Remote Cable Length       AC         15 feet (4.5 m)       AC         30 feet (9 m)       AF         50 feet (15 m)       AK         75 feet (22 m)       AR         100 feet (30 m)       BW         150 feet (46 m)       BK         200 feet (61 m)       DW         250 feet (76 m)       DK         Conduit Type and Length (Conduit length is less than or equal to cable length)       WW         None       WW         Vardware       T         1/2 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, no cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       S         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       C         None       XX         Communication/Output       S         Standard Output UBAChretMS/TP	Transmitter Type									
Display in Version of	110/220V AC Remote Mounted		R							
Display and Keypad S No Display/Keypad W W Remote Cable Length 15 feet (4.5 m) AC 30 feet (9 m) AF 50 feet (15 m) AK 75 feet (23 m) AR 100 feet (30 m) BW 150 feet (46 m) BW 250 feet (76 m) DW 250 feet (76 m) DW 250 feet (76 m) DW 250 feet (76 m) S Conduit Type and Length (Conduit length is less than or equal to cable length) None WW Hardware 1/2 in. NPT Threads, Poly cable glands S 1/2 in. NPT Threads, Nickel Plated Brass cable glands T 1/2 in. NPT Threads, Nickel Plated Brass cable glands C M20 Threads, Nickel Plated Brass cable glands C Gumunication/Output plus Modbus TCP Ethernet T Standard Output plus BACnet/IP Ethernet V Standard Output plus BACnet/IP Ethernet V Standard Output plus BACnet/IP Ethernet V Standard Output plus BACnet/IP Ethernet C T Standard Output plus BACnet/IP Ethernet C S Standard Output plus BACnet/IP Ethernet S S Standard Output plus BACnet/IP Ethernet S S Standard Output plus BACnet/IP Ethernet S S S Standard Output plus BACnet/IP Ethernet S S S S S S S S S S S S S S S S S S S	24V DC/AC Remote Mounted		В							
No Display/Keypad       W         Remote Cable Length       AC         15 feet (4.5 m)       AC         30 feet (9 m)       AF         50 feet (15 m)       AK         75 feet (23 m)       AR         100 feet (30 m)       BW         125 0f eet (46 m)       BK         200 feet (61 m)       DW         250 feet (76 m)       DK         Conduit Type and Length (Conduit length is less than or equal to cable length)       WW         Mone       WW         Hardware       S         1/2 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       XX         Communication/Output       S         Standard Output plus Modobus TCP Ethernet       XX         Communication/Output plus BACnet/IP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Vits of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       P         Peresting & Tagging       F	<u>Display</u>									
Remote Cable Length         15 feet (4.5 m)         30 feet (9 m)         30 feet (9 m)         Soffeet (15 m)         AR         100 feet (30 m)         15 feet (46 m)         200 feet (61 m)         200 feet (61 m)         200 feet (61 m)         DW         250 feet (76 m)         Conduit Type and Length iConduit length is less than or equal to cable length!         None         WW         Vardware         1/2 in. NPT Threads, Poly cable glands         1/2 in. NPT Threads, no cable glands         T         1/2 in. NPT Threads, Nickel Plated Brass cable glands         T         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, Nickel Plated Brass cable glands         M20 Threads, No cable glands         Communication/Output         Standard Output plus Modbus TCP Ethernet         Standard Output plus Modbus TCP Ethernet         Vits of Measure Totalizer/Flow Rate <sup>2</sup> Gallons/gallons per minute       G         Liters/liters per minute       P         Testing & Tagging       F         Factory Calibrated/Stainless Steel Tag <t< td=""><td>Display and Keypad</td><td></td><td></td><td>S</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Display and Keypad			S						
15 feet (4.5 m) AC AC 30 feet (9 m) AF 30 feet (9 m) AF 50 feet (15 m) AK AK 50 feet (15 m) AK 50 feet (30 m) BW 150 feet (30 m) BW 150 feet (46 m) BW 250 feet (61 m) DW 250 feet (76 m) DK Conduit Ingeth is less than or equal to cable length/ None WW 250 feet (76 m) DK 71 Interads, Poly cable glands T 1/2 in. NPT Threads, Nickel Plated Brass cable glands T 1/2 in. NPT Threads, Nickel Plated Brass cable glands C M 20 Threads, Nickel Plated Brass cable glands A Endpoint Wiring Method A Endpoint Wiring Method A Endpoint Wiring Method Standard Output flow BACnet INS/TP field selectable) S Standard Output plus BACnet IP Ethernet T Standard Output plus BACnet IP Ethernet V U Standard Output plus BACnet IP Ethernet Q U Enternet C T Standard Output plus BACnet IP Ethernet G Intervent C C G Litters/Ilters per minute G P Testing & Tagging Factory Calibrated Stanless Steel Tag S S	No Display/Keypad			w						
30 feet (9 m) AF 50 feet (15 m) AK 50 feet (15 m) AK 75 feet (23 m) AK 75 feet (23 m) AR 100 feet (30 m) BW 150 feet (46 m) BK 200 feet (61 m) DW 250 feet (76 m) DK Conduit Type and Length (Conduit length is less than or equal to cable length) None WW 4ardware 1/2 in. NPT Threads, Poly cable glands S 1/2 in. NPT Threads, Nickel Plated Brass cable glands T 1/2 in. NPT Threads, Nickel Plated Brass cable glands C M20 Threads, No cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, Nickel Plated Brase cable glands C M20 Threads, No cable glands C M20 Threads, No cable glands C M20 Threads, Nickel Plated Brase C M20 Threads, Nickel P	Remote Cable Length									
50 feet (15 m)       AK         75 feet (23 m)       AR         100 feet (30 m)       BW         150 feet (46 m)       BK         200 feet (61 m)       DW         250 feet (76 m)       DK         Conduit Type and Length (Conduit length is less than or equal to cable length)       NW         Hardware       WW         Hardware       WW         Hardware       S         1/2 in. NPT Threads, Poly cable glands       T         1/2 in. NPT Threads, no cable glands       C         M20 Threads, no cable glands       D         M20 Threads, no cable glands       D         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, No cable glands       C         M20 Threads, No cable glands       D         M20 Threads, No cable glands       D         Standard Output flus BACnet MS/TP field selectable)       S         Standard Output glus Modbus TCP Ethernet       T         Standard Output glus BACnet/IP Ethernet       V         Standard Output glus BACnet/IP Ethernet       V         Standard Output glus BACnet/IP Ethernet       V         Standard Output glus BACnet/IP Ethernet       P         Units of Measure Totalizer/Flow Rate 2       G	15 feet (4.5 m)				AC					
75 feet (23 m) AR 100 feet (30 m) BW 150 feet (46 m) BK 200 feet (61 m) DW 250 feet (76 m) DK Conduit Type and Length (Conduit length is less than or equal to cable length) None WW 4ardware 1/2 in. NPT Threads, Poly cable glands S 1/2 in. NPT Threads, Nickel Plated Brass cable glands T 1/2 in. NPT Threads, Nickel Plated Brass cable glands C M20 Threads, No cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, No cable glands C S Standard Output [Wodbus RTU or BACnet MS/TP field selectable] S S tandard Output plus BACnet/IP Ethernet T Standard Output plus BACnet/IP Ethernet V Standard Output plus EtherNet/IP U U Units of Measure Totalizer/Flow Rate <sup>2</sup> Gallons/gallons per minute G Liters/liters per minute G Liters/liters per minute F Factory Calibrated/Stainless Steel Tag S	30 feet (9 m)				AF					
100 feet (30 m)       BW         150 feet (46 m)       BK         200 feet (61 m)       DW         250 feet (76 m)       DK         Conduit Type and Length (Conduit length is less than or equal to cable length)       MW         None       WW         Hardware       WW         1/2 in. NPT Threads, Poly cable glands       T         1/2 in. NPT Threads, no cable glands       T         M20 Threads, Nickel Plated Brass cable glands       N         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, No cable glands       A         M20 Threads, No cable glands       A         M20 Threads, No cable glands       XX         Communication/Output       S         Standard Output flus Modbus TCP Ethernet       T         Standard Output plus BdCnet/IP Ethernet       Y         Standard Output plus BdCnet/IP Ethernet       Y         Vista of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G         Utits of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       P         Tes	50 feet (15 m)				AK					
150 feet (46 m) BK 200 feet (61 m) DW 250 feet (76 m) DK Conduit Type and Length (Conduit length is less than or equal to cable length) None WW Hardware 1/2 in. NPT Threads, Poly cable glands S 1/2 in. NPT Threads, no cable glands T 1/2 in. NPT Threads, no cable glands C M20 Threads, no cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, No cable glands C M20 Threads, No cable glands C M20 Threads, no cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, no cable glands C M20 Threads, Nickel Plated Brass cable glands C M20 Threads, No cable glands C M20 Threads, N C M20 Threads,	75 feet (23 m)				AR					
200 feet (61 m)       DW         250 feet (76 m)       DK         Conduit Type and Length (Conduit length is less than or equal to cable length)       None         None       WW         Hardware       WW         1/2 in. NPT Threads, Poly cable glands       S         1/2 in. NPT Threads, no cable glands       T         1/2 in. NPT Threads, no cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       S         Standard Output U BACnet MS/TP field selectable)       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Vistandard Output plus EtherNet/IP       U         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       P         Testing & Tagging       F <td>100 feet (30 m)</td> <td></td> <td></td> <td>I</td> <td>BW</td> <td></td> <td></td> <td></td> <td></td> <td></td>	100 feet (30 m)			I	BW					
250 feet (76 m)       DK         Conduit Type and Length (Conduit length is less than or equal to cable length)       WW         None       WW         Hardware       WW         1/2 in. NPT Threads, Poly cable glands       S         1/2 in. NPT Threads, no cable glands       T         1/2 in. NPT Threads, no cable glands       N         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       A         M20 Threads, Nickel Plated Brass cable glands       A         M20 Threads, Nickel Plated Brass cable glands       A         M20 Threads, No cable glands       A         Standard Output (Modbus RTU or BACnet MS/TP field selectable)       S         Standard Output flus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       P         Testing & Tagging       F         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S	150 feet (46 m)				BK					
Conduit Type and Length (Conduit length is less than or equal to cable length)         None       WW         Hardware       1/2 in. NPT Threads, Poly cable glands       S         1/2 in. NPT Threads, no cable glands       T         1/2 in. NPT Threads, no cable glands       C         M20 Threads, Poly cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       C         M20 Threads, no cable glands       D         M20 Threads, no cable glands       A         Endpoint Wiring Method       XX         None       XX         Communication/Output       S         Standard Output IN BACnet MS/TP field selectable)       S         Standard Output plus BACnet/IP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Vista of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       P         Vesting & Tagging       F         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S	200 feet (61 m)			1	DW					
None       WW         Hardware       1/2 in. NPT Threads, Poly cable glands       S         1/2 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, no cable glands       T         M20 Threads, Poly cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, No cable glands       C         M20 Threads, no cable glands       D         M20 Threads, no cable glands       A         Endpoint Wiring Method       A         None       XX         Communication/Output       S         Standard Output (Modbus RTU or BACnet MS/TP field selectable)       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus BACnet/IP Ethernet       V         Vista of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       P         Testing & Tagging       F         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S	250 feet (76 m)				DK					
Hardware         1/2 in. NPT Threads, Poly cable glands       S         1/2 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, no cable glands       N         M20 Threads, Poly cable glands       C         M20 Threads, Nickel Plated Brass cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       A         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       A         Standard Output fus Modus STU or BACnet MS/TP field selectable)       S         Standard Output plus BACnet/IP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G         Liters/liters per minute       P         Testing & Tagging       F         Factory Calibrated       S         Factory Calibrated/Stainless Steel Tag       S <td>Conduit Type and Length (Conduit length is less than</td> <td>or equal to cable le</td> <td>ength)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Conduit Type and Length (Conduit length is less than	or equal to cable le	ength)							
1/2 in. NPT Threads, Poly cable glands       S         1/2 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, no cable glands       N         M20 Threads, Poly cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       D         Standard Output Wiring Method       XX         Communication/Output       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Vists of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G	None				WW					
1/2 in. NPT Threads, Nickel Plated Brass cable glands       T         1/2 in. NPT Threads, no cable glands       N         M20 Threads, Poly cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       D         Standard Output Wiring Method       XX         Standard Output plus BACnet/IP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus EtherNet/IP       U         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G         Testing & Tagging       F	<u>Hardware</u>									
1/2 in. NPT Threads, no cable glands       N         M20 Threads, Poly cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       D         M20 Threads, no cable glands       D         M20 Threads, no cable glands       A         Endpoint Wiring Method       A         None       XX         Communication/Output       S         Standard Output (Modbus RTU or BACnet MS/TP field selectable)       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus BACnet/IP Ethernet       G         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G         Iters/liters per minute       G         Iters/liters per minute       F         Testing & Tagging       F         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S						S				
M20 Threads, Poly cable glands       C         M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       A         Endpoint Wiring Method       A         None       XX         Communication/Output       XX         Standard Output (Modbus RTU or BACnet MS/TP field selectable)       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus BACnet/IP Ethernet       G         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G         Testing & Tagging       F         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S	-	5				т				
M20 Threads, Nickel Plated Brass cable glands       D         M20 Threads, no cable glands       A         M20 Threads, no cable glands       A         Endpoint Wiring Method       A         None       XX         Communication/Output       Standard Output (Modbus RTU or BACnet MS/TP field selectable)       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus EtherNet/IP       U         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G         Testing & Tagging       Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S						Ν				
M20 Threads, no cable glands       A         Endpoint Wiring Method       XX         None       XX         Communication/Output       S         Standard Output (Modbus RTU or BACnet MS/TP field selectable)       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus EtherNet/IP       U         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G         Testing & Tagging       F         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S						С				
Endpoint Wiring Method       XX         None       XX         Communication/Output       S         Standard Output (Modbus RTU or BACnet MS/TP field selectable)       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus EtherNet/IP       U         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       P         Liters/liters per minute       P         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S	-					D				
NoneXXCommunication/OutputStandard Output (Modbus RTU or BACnet MS/TP field selectable)SStandard Output plus Modbus TCP EthernetTStandard Output plus BACnet/IP EthernetVStandard Output plus EtherNet/IPUUnits of Measure Totalizer/Flow Rate 2GGallons/gallons per minutePTesting & TaggingFFactory CalibratedFFactory Calibrated/Stainless Steel TagS						Α				
Communication/Output       S         Standard Output (Modbus RTU or BACnet MS/TP field selectable)       S         Standard Output plus Modbus TCP Ethernet       T         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus BACnet/IP Ethernet       V         Standard Output plus EtherNet/IP       U         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       P         Liters/liters per minute       P         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S	<u>Endpoint Wiring Method</u>									
Standard Output (Modbus RTU or BACnet MS/TP field selectable)SStandard Output plus Modbus TCP EthernetTStandard Output plus BACnet/IP EthernetVStandard Output plus BACnet/IP EthernetVStandard Output plus EtherNet/IPUUnits of Measure Totalizer/Flow Rate2Gallons/gallons per minuteGLiters/liters per minutePTesting & TaggingFFactory Calibrated /Stainless Steel TagS							XX			
Standard Output plus Modbus TCP EthernetTStandard Output plus BACnet/IP EthernetVStandard Output plus EtherNet/IPUUnits of Measure Totalizer/Flow Rate2Gallons/gallons per minuteGLiters/liters per minutePTesting & TaggingFactory CalibratedFactory Calibrated/Stainless Steel TagS										
Standard Output plus BACnet/IP Ethernet       V         Standard Output plus EtherNet/IP       U         Units of Measure Totalizer/Flow Rate       2         Gallons/gallons per minute       G         Liters/liters per minute       P         Testing & Tagging       F         Factory Calibrated /Stainless Steel Tag       S		d selectable)					S			
Standard Output plus EtherNet/IP       U         Units of Measure Totalizer/Flow Rate <sup>2</sup> G         Gallons/gallons per minute       G         Liters/liters per minute       P         Testing & Tagging       F         Factory Calibrated       F         Factory Calibrated/Stainless Steel Tag       S										
Units of Measure Totalizer/Flow Rate <sup>2</sup> Gallons/gallons per minute G Liters/liters per minute P Testing & Tagging Factory Calibrated F Factory Calibrated Stainless Steel Tag S							-			
Gallons/gallons per minuteGLiters/liters per minutePTesting & TaggingFFactory CalibratedFFactory Calibrated/Stainless Steel TagS	Standard Output plus EtherNet/IP						U			
Liters/liters per minute     P       Testing & Tagging     F       Factory Calibrated     F       Factory Calibrated/Stainless Steel Tag     S	Units of Measure Totalizer/Flow Rate <sup>2</sup>									
Testing & Tagging         Factory Calibrated         Factory Calibrated/Stainless Steel Tag         S	Gallons/gallons per minute								G	
Testing & Tagging         Factory Calibrated         Factory Calibrated/Stainless Steel Tag         S	Liters/liters per minute								Р	
Factory CalibratedFFactory Calibrated/Stainless Steel TagS	Testing & Tagging									•
Factory Calibrated/Stainless Steel Tag S										F
	-									S
JUMILEI JIME KIMIJAULEI LOMEJ HJE LWU LUHUHI UMEHIHIMJ.	<sup>1</sup> Submersible transducer cables use two conduit ope	eninas.								

Submersible transducer cables use two conduit openings.



#### Part Number Construction for TFX-5000 Energy Meters for Pipes 2 in. and Smaller

<sup>1</sup> Stainless steel tube 1/2...2 in. options are available.

# Part Number Construction for TFX-5000 Energy Meters for Pipes Larger than 2 in.

Part Number Construction for TFX-5000 End			П				_ xx			
Model										J-[]
	DR									
Certification										
General Area US/Canada, CE	G									
Transducer Type										
Medium pipe, DTTR, 2.5 in. (65 mm) or larger	RZ									
Medium pipe, submersible DTTN, 2.5 in. (65 mm) or larger <sup>1</sup>	WZ									
2.56 inches (65150 mm) Easy Rail (not available with condu	t) JZ									
2.512 inches (65300 mm) Easy Rail (not available with cond	uit) KZ									
Medium pipe, high temperature (not available with conduit)	HZ									
Large pipe, DTTL, 8 in. (200 mm) or larger	LZ									
Large pipe, submersible DTTL, 8 in. (200 mm) or larger <sup>1</sup>	YZ									
<u>Transmitter Type</u>		_								
110/220V AC Remote Mounted		R								
24V DC/AC Remote Mounted		В								
<u>Display</u>			~							
Standard			s W							
No Display/Keypad			vv							
Remote Cable Length <sup>2</sup>										
15 feet (4.5 m)				AC						
30 feet (9 m)				AF						
50 feet (15 m) 75 feet (23 m)				AK						
75 feet (23 m) 100 feet (30 m)				AR BW						
100 feet (30 m) 150 feet (46 m)				BK						
200 feet (61 m)				DW						
250 feet (76 m)				DK						
300 feet (90 m)				EW						
<u>Conduit Type and Length (Conduit length is less than or equal to e</u>	able length)									
None	<u> </u>			ww						
5 feet (1.5 m)				AA						
15 feet (4.5 m)				AC						
30 feet (9 m)				AF						
50 feet (15 m)				AK						
75 feet (23 m)				AR						
100 feet (30 m)				BW						
150 feet (46 m)				ВК						
200 feet (61 m)				DW						
250 feet (76 m)				DK						
300 feet (90 m)				EW						
<u>RTD Type</u>										
Surface, Commercial					c					
None (user provided)					X					
<u>RTD Length</u>										
15 feet (4.5 m)						AC				
50 feet (15 m)						AK BW				
100 feet (30 m) None (user provided)						NM				
None (user provided) Hardware						~~~				
1/2 in. NPT Threads, Poly cable glands							s			
1/2 in. NPT Threads, Nickel Plated Brass cable glands							г			
1/2 in. NPT Threads, no cable glands							N			
M20 Threads, Poly cable glands							c			
M20 Threads, Nickel Plated Brass cable glands										
M20 Threads, no cable glands							A			
Endpoint Wiring Method										
None							XX			
Communication/Output								-		
Standard Output (Modbus RTU or BACnet MS/TP field selectable	)							s		
Standard Output plus Modbus TCP Ethernet								т		
Standard Output plus BACnet/IP Ethernet								v		
Standard Output plus EtherNet/IP								U		
Standard Output plus Aux Output								9		
Units of Measure Totalizer/Flow Rate <sup>3</sup>										
Gallons/gallons per minute								(	3	
Liters/liters per minute									>	
Units of Measure Energy Totalizer/Rate										
Kilowatt-hour/Kilowatt (field selectable, additional options avai	lable)								R	
Testing & Tagging										-
Factory Calibrated										F
Factory Calibrated/Stainless Steel Tag										S
<sup>1</sup> Contact factory for DTTL cable lengths longer than 300 ft.										
Contact factory for DTTL cable lengths longer than 500 ft.										

<sup>2</sup> Submersible transducer cables use two conduit openings.
 <sup>3</sup> Field selectable, additional options available.

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