HALOX Distributed Products Fact Sheet

SeaMetrics Flow Meters and Flow Computers

WTP-PVC body turbine flow meter

WT-S Stainless steel body turbine flow meter

TX115/215 Hot-tap insertion turbine flow meter

FT420 Loop-powered flow computer

Halox offers SeaMetrics flow meters and flow computers sized to Halox chlorine dioxide generators to aid in water measurement.

SeaMetrics WT-Series flow meters are available in PVC or stainless steel. Both models are available in 2 to 6 inch sizes and use one moving part, a precision-molded helical rotor. Turbine rotors are Kynar (PVDF). Rotation of the rotor is electronically detected and processed. High quality jewel bearings and polished zirconia ceramic shafts minimize friction while providing long wear life. The entire rotor assembly is easily removed from the meter for field service without removing the meter from the pipe.

WT-P bodies (PVC model) are fabricated from Schedule 80 PVC fittings. The turbine inset is also machined from one solid piece of PVC and is held in place by stainless steel screws. WT-S bodies (stainless steel model) are fabricated from stainless steel tubing. The turbine inset is machined from a stainless steel casting.

Halox also offers the SeaMetrics TX115/215 Hot-tap Insertion Turbine Flow Meter; designed to be installed or be serviced without depressurizing the pipe. They have a turbine rotor and jewel bearings for superior low-flow performance. Rotation of the rotor is deflected by a non-drag Hall-effect sensor that interfaces easily with many types of electronic controls. A display, divider or analog transmitter can be installed on the end of the sensor or the signal can be sent without amplification for hundreds of feet to remote electronics.

Insertion and removal under pressure is possible due to the 2 inch full-port isolation valve, which comes with a nipple for installation on the pipe fitting. If it is necessary to do the initial installation under pressure, any standard hot tap drill machine with a 2-inch NPT adapter such as a Transmate or a Mueller, can be used. Ordinarily it is not necessary to use an installation tool, since the small diameter tube can be controlled by hand at all but the highest pressures.

The SeaMetrics FT420 flow computer is a loop-powered microcontroller-based transmitter/indictor. It displays rate and total (resettable or non-resettable) flow, and provides a 4-20 mA analog signal proportional to flow. A programmable pulse output is also standard for metering pump control or data logging**.** The flow computer is available in either wall-mounted or meter mounted versions.

The rugged cast-aluminum housing is gasketed for maximum environmental protection and the electronics are potted into a solid block of urethane. A membrane keypad allows setting to be changed without removing the cover. The universal mount version comes with brackets for wall mounting and also with an adapter for field installation on 80 series flow sensors.

WTP-PVC body turbine flow meter

- **In-line, individually-calibrated turbine meter maximizes accuracy**
- **Turbine rotor is the only moving part, optimizing low-flow performance**
- **Solid-state pickup**
- **Electronic register can be meter-mounted or remote**
- **Available with blind pulse or 4-20 mA output**
- **Can be ordered with stub ends (standard) or flanges (optional)**

Materials:	Meter Body	PVC Schedule 80 fittings
	Turbine Inset	PVC (Polypro in 2 inch size)
	Turbine Rotor	Kynar (PVDF)
	Shafts	Zirconia ceramic
	Bearings	Sapphire journal, ruby ball
Maximum Pressure:		150 PSI @ 75° F (10 bar @ 24° C)
Maximum Temperature		120° F (50° C)

Flow Range (Gallons Per Minute)

	2 Inch	3 Inch	4 Inch	6 Inch
Min	2	3	6	12
Max	150	400	600	1200

Flow Range (Liters Per Minute)

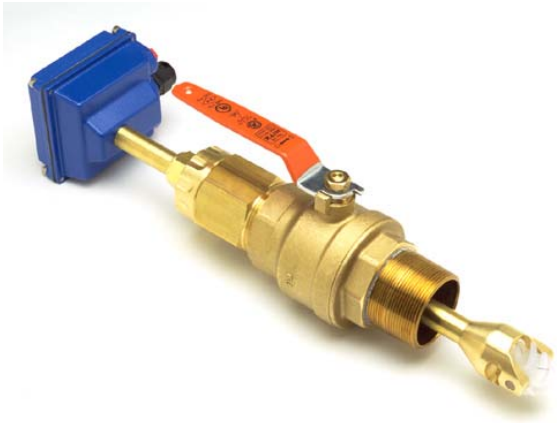
	2 Inch	3 Inch	4 Inch	6 Inch
Min	8	11	23	46
Max	568	1514	2271	4542

WT-S Stainless steel body turbine flow meter

- **In-line, individually-calibrated turbine meter maximizes accuracy**
- **Turbine rotor is the only moving part, optimizing low-flow performance**
- **Solid-state pickup**
- **Electronic register can be meter-mounted or remote**
- **Available with blind pulse or 4-20 mA output**
- **Lightweight, corrosion-resistant T304 (or optional T316) body**
- **Flanges standard 3 inch and above (2 inch has female NPT threads)**

Materials:	Meter Body	T-304 Stainless, T-316 optional
	Turbine Inset	CF8M Cast Stainless
	Turbine Rotor	Kynar (PVDF)
	Shafts	Zirconia ceramic
	Bearings	Sapphire journal, ruby ball
Maximum Pressure:		200 PSI (14bar)
Maximum Temperature		200° F (93° C)
Accuracy:		± 1% FS
Power:	WTS101	Input: 115 VAC, 50/60 Hz, 19 W Output: 24 VDC, 500 mA

TX115/215 Hot-tap insertion turbine flow meter



- **Adjustable hot-tap turbine sensor for pipe sizes 2 to 48 inch diameter**
- **Isolation valve allows insertion and removal with the pipe under pressure**
- **Two sizes fit entire pipe range: IP115 to 10 inch, IP215 to 48 inch**
- **Turbine sensor allows lowest minimum flow rate**
- **High-quality ruby bearings for excellent low-flow performance and long life**
- **One easily-replaced moving part**
- **Uses standard NPT threaded pipe fittings or saddles**
- **Square-wave frequency output can connect directly to PLC's or counter controls**
- **Controls can be remote or meter mounted**

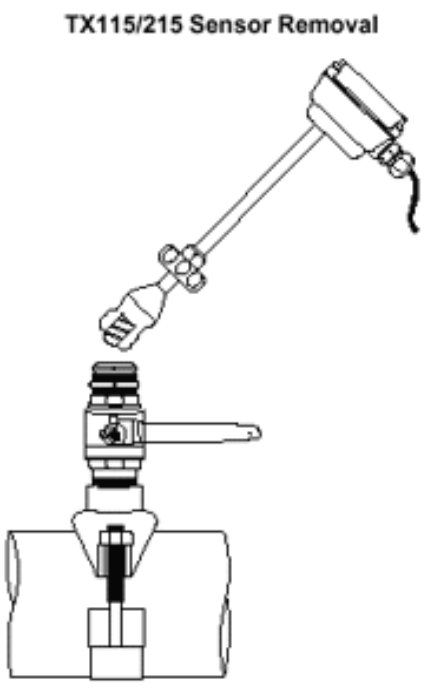
Sensor	
Hall Effect Sensor	12 VDC current sinking pulse materials
Material	
Sensor Body	Brass or 316 SS
Rotor	Polypro (PVDF opt.)
Shaft	Nickel-bound tungsten carbide (Zirconia ceramic opt.)
Bearings	Ruby jewels
Isolation Valve	Bronze STD, 316SS opt.
Pipe Size	
TX115	2 to 10 in (50 to 250mm)
TX215	10 to 48 in (250 to 1200mm)
Fitting Size	2 inch NPT
Maximum Pressure	200 psi (14 bar)

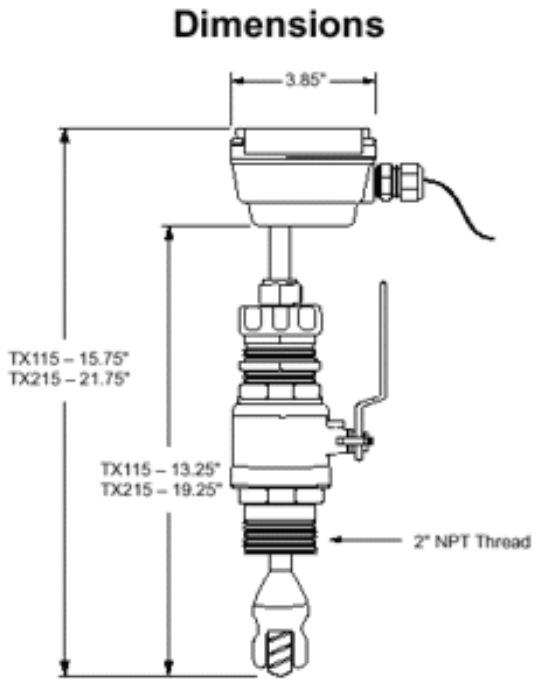
Maximum Temperature	200°F (93°C)
Range	0.2 to 30 FPS (0.006 to 9 M/s)
Accuracy	± 1% FS
Insertion Force	0.44 X pressure in pipe
Power	5 to 24 VCD, 1.5 mA
Cable	#22 AWG 3-con, 18 ft 2,000 ft (650m)
Maximum Temperature	200°F (93°C)
Range	0.2 to 30 FPS (0.006 to 9 M/s)
Accuracy	± 1% FS
Insertion Force	0.44 X pressure in pipe
Power	5 to 24 VCD, 1.5 mA
Cable	#22 AWG 3-con, 18 ft
Max Cable Run	2,000 ft (650m)

Flow Range (Gallon Per Minute)

	2 inch	3 inch	4 inch	6 inch	8 inch	10 inch	12 inch	16 inch	24 inch
Min	2	5	8	18	30	50	70	110	250
Max	300	700	1100	2500	4500	7000	10000	16000	35000

Dimensions





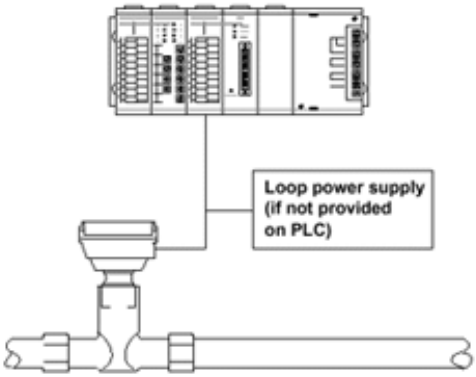
TX115(Material Code)**-**(Option Code)

TX215(Material Code)**-**(Option Code) (*ex.* TX115S-06 is a Stainless Steel TX101 with a LMI Connector)

Material Code	**Option Code**	**Option Code**
B: Brass	**03** Bidirectional flow/Dual Output	**06** LMI Connector
S: 316 Stainless Steel	**04** Micropower sensor	**07** SeaMetrics Connector
	05 PVDF rotor/ceramic shaft	**40** Submersible

FT420 Loop-powered flow indicator, displays rate and total flow

Typical 4-20 mA Application



- **Pulse and 4-20 mA analog outputs, both numerically scaled by the user**
- **Rugged cast aluminum housing, covered with a heat-fused coating**
- **For maximum moisture protection, the electronic components are potted solid**
- **Wall, flow meter, and panel mounting**
- **Non-volatile memory saves settings and total without a battery**

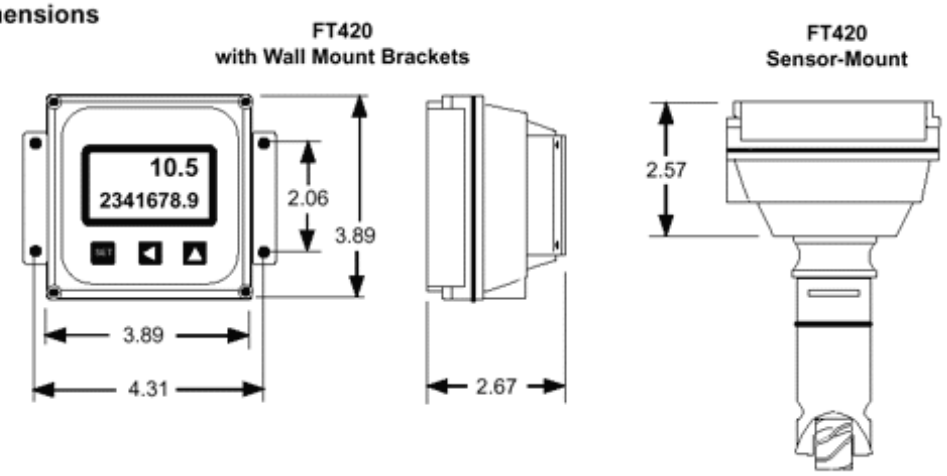
Power	4 mA DC (4 to 20 mA loop), 12 to 32 VDC
Display	
Rate	6-digit autorange, ½ in character height
Total	8-digit, 5/16 in character height
Pulse Output	
Scaled	0.1 second open collector
Unscaled	Sensor pulse; high alarm or low alarm
Input	Pulse frequency + 5 VDC
K factor Range	0.050 to 2000
Pulse Output Range	0.1 to 200,000 units/pulse

Temperature	32° to 158°F (0° to 70°C)
Environmental	NEMA 4X

Models

FT420M	(Meter Mounted)
FT420W	(Wall Mounted)
FT420P	(Panel Mounted)

Dimensions



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