Series TFXL

Series TFXL is an ultrasonic flowmeter that clamps on to the outside of a pipe. It is designed to replace mechanical flowmeters in applications where liquid conditions tend to damage or impede mechanical flow meter operation. Installation of the TFXL is cost effective and requires no maintenance. The TFXL is offered on pipe sizes from ½" to 2" and can be ordered with or without a local display. All meters provide two flow rate outputs, 4-20mA analog and a choice of simulated turbine meter or TTL-pulse frequency, permitting the product to be interfaced with a variety of monitoring equipment. Windows® based software utility allows users to configure, calibrate and troubleshoot.

Features

- Series TFXL provides easy and low cost installation by clamping on the outside of existing piping systems.
- Non-invasive system allows solids to pass through the pipe with no affect on meter. Y-strainers or filtering devices are not needed.
- No maintenance is required due to no moving parts or contact with the liquid. Digital circuitry provides stable, reliable performance year after year without periodic calibration.
- Direct interface is provided to data collection systems via 4-20mA output and either TTL-pulse or simulated turbine meter outputs that are proportional to fluid flow rate.
- Series TFXL is a bi-directional flow measurement system. Multiple totalizers can simultaneously be operating to measure forward total, reverse total and net total.
- *UltraLink* Windows® software utility allows configuration, calibration and troubleshooting.
- Greater accuracy can be attained in applications consisting of entrained gases. The Series TFXL will automatically correct displayed flow rates and electronic outputs.
- Series TFXL will be used with Coal Bed Methane applications, but it will also be available for well water and any other liquids with less than 40% TSS or aeration.

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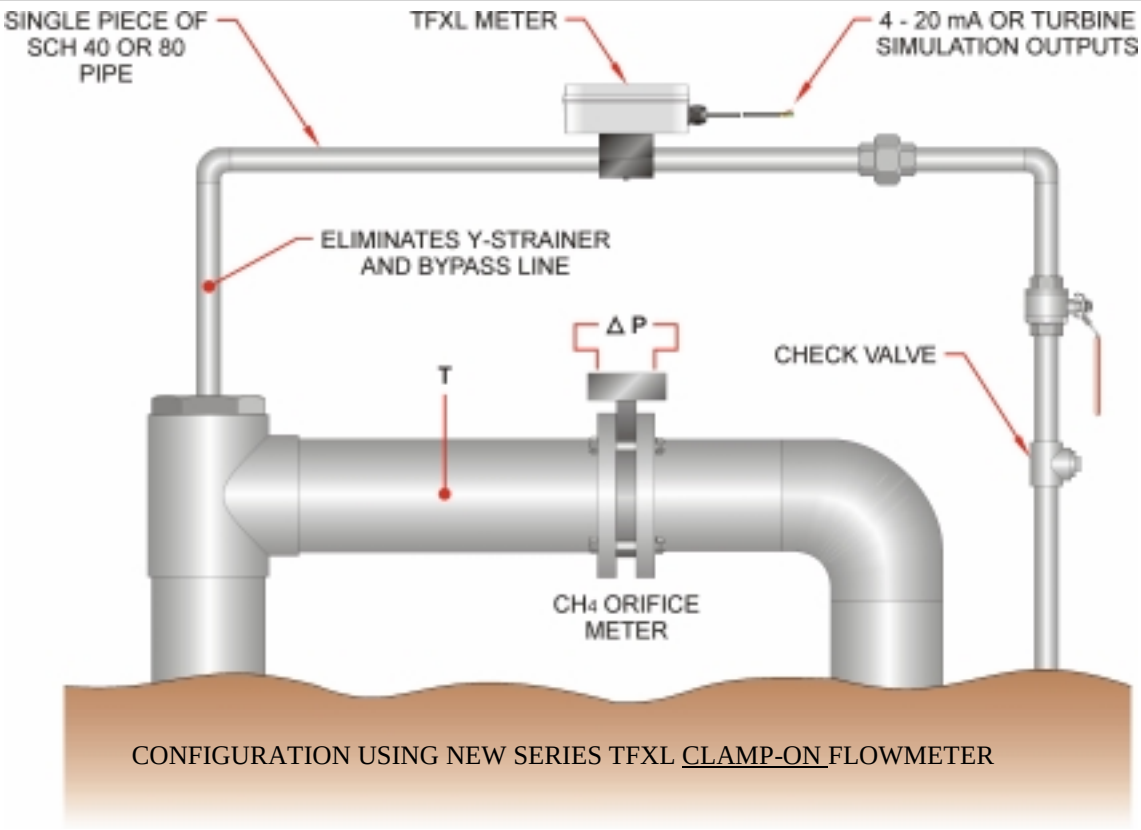
Series TFXL

Specifications

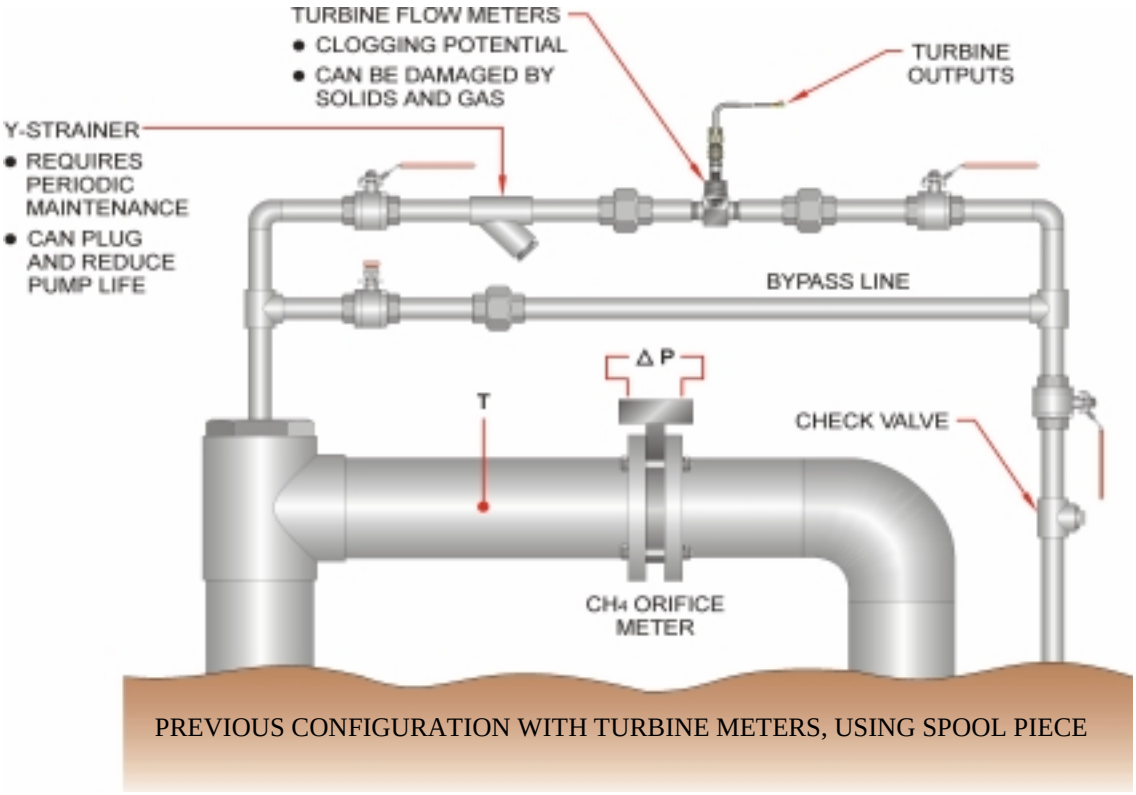
DESCRIPTION	SPECIFICATION
Liquid types	Most any liquid containing less than 40% total suspended solids (TSS) or aeration
Power requirements	11-30 VDC @ 0.25A
Velocity	.1 to 40 FPS [0.03 to 12.4 MPS]
Inputs/Outputs	4-20mA Output (standard output) Resolution of 12-bit for all outputs Power Source Insertion loss 5V max Loop impedance 900 ohms max. Isolation Can share ground common with power supply Turbine Frequency Output Type Non-ground referenced AC Amplitude 100mVpp minimum Frequency range 0-1,000Hz maximum Duty cycle 50% ±10% TTL—Pulse Output Type Ground referenced square-wave Amplitude 5VDC Frequency Range 0-1,000Hz maximum Duty Cycle 50% ±10%
Display	Type 2 line x 8 character LCD; top row: 0.7" [18mm] tall, 7-segment; Bottom row: 0.35" [9mm] tall, 14-segment none Rate 8 maximum rate digits, lead zero blanking Total 8 maximum totalizer digits, exponential multipliers from –1 to +6
Units	Feet, gallons, ft^3, milion-gal, barrels (liquor & oil), acre-feet, lbs., meters, m^3, liters, milion-liters, kg [Rate time: sec, min, hr, day]
Ambient conditions	0 to +105°F [-20 to +40°C]
Enclosure	NEMA 3 [Type 3] ABS or polycarbonate, CPVC, Ultem, brass or SS hardware, 3W x 6L x 2.5H inches [75W x 150L x 63L mm], pipe mount
Accuracy	±1% of reading at rates above 1 FPS [0.3 MPS]; ±0.01 FPS [.003 MPS] of reading at rates lower than 1 FPS [0.3 MPS]
Response time	3 to 30 seconds, adjustable
Protection	Reverse-polarity, surge suppression
Approvals	General Requirements: ANSI/ISA 582.01; Hazardous Locations: ANSI/ISA 12.12.01 Class I Div 2, Groups C & D
UltraLink software	Windows® based software utility, requires serial communication cable
Transducer type	Clamp-on, uses time of flight ultrasonic
Pipe sizes	½" to 2"
Pipe materials	Carbon steel, stainless steel, brass, and plastic

Series TFXL



CONFIGURATION USING NEW SERIES TFXL CLAMP-ON FLOWMETER

ADVANTAGE



PREVIOUS CONFIGURATION WITH TURBINE METERS, USING SPOOL PIECE

DISADVANTAGE

TYPICAL COAL BED METHANE WELL CONFIGURATION

Series TFXL

Part Number Construction

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Display Options

1) Blind
2) Rate and Totalizer Display

Pipe Size and Measurement Range

A) 1/2 –inch Pipe [0.5—25 GPM]
B) 3/4 –inch Pipe [1—55 GPM]
C) 1 –inch Pipe [2—100 GPM]
D) 1¼ -inch Pipe [4—150 GPM]
E) 1½ -inch Pipe [5—220 GPM]
F) 2 –inch Pipe [8—400 GPM]

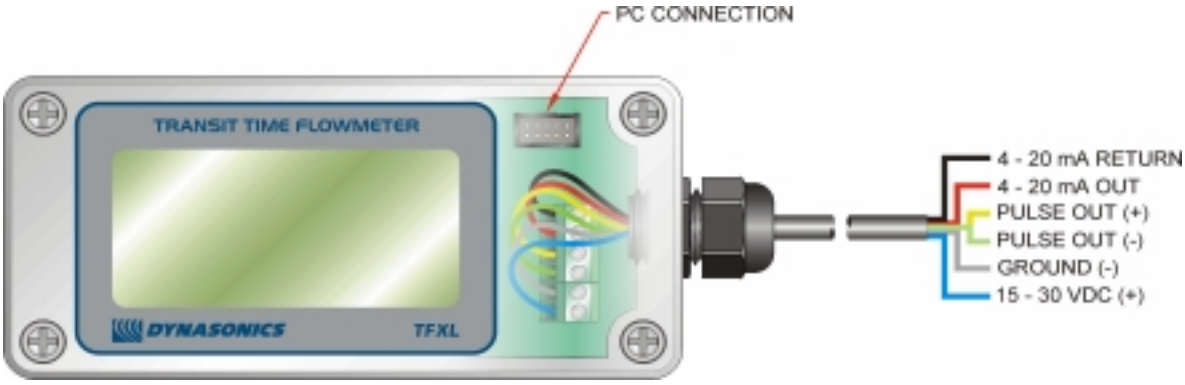
Output Options

1) 4-20 mA and Turbine-type
2) 4-20 mA and TTL-pulse

Connector Options

N) ½-inch Conduit Hole
A) Water-tight Cable Clamp
C) Circular MIL-style Connector
D) ½-inch Flexible Conduit Connector

Accessories	**Part Number**
PC Cable with UltraLink software:	D010-0204-001
90-240VAC Power Supply:	D005-2502-005



INSTALLATION:

1. Place couplant grease to the two clamp surfaces that contact the pipe.
2. Mount the flowmeter onto the pipe and secure with the two included screws.
3. Connect and apply DC power.
4. Connect the 4-20mA, frequency or both outputs to the monitoring system.

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