TFX5000 SERIES

Accurate Readings from Outside the Pipe



2"+ Transducersr



BGR-TFX5000 Meter



3/4" & 1" Transducers



Temperature Sensors for BTU Models

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.

SPECIFICATIONS

SYSTEM	
Flow Accuracy	3/4 in. (20 mm) ±1% of full scale 1 in. (25 mm) ±1% ± 0.03 ft/s (0.009 m/s) of reading 2+ in. (50mm+) ± 0.5% ± 0.025 ft/s (0.008 m/s) of reading
Velocity	3/4 and 1 in. up to 20 ft/s, depending on pipe and fluid 2+ in. (50mm+) up to 40 ft/s, depending on pipe and fluid
Repeatability	0.2% above 1.5 ft/s
Straight Run Requirements	10 diameters upstream, 5 diameters down-stream from single elbow
MONITOR	
Power	85 to 264V AC 47 to 63 Hz @ 24VA max. 1 Amp slow-blow fuse, manually field replaceable. Over-Voltage Rating Category II (CAT II)
Display	128 × 64 pixel LED backlit graphical display; adjustable brightness and timeout; polycarbon-ate window Flow rate/total: 8-digit
Keypad	4-button navigation, keypad with tactile feed-back; polyester film
Housing	Aluminum construction, EPDM Gasket, NEMA Type 4X, IP67

Wide range of measurable fluids

Water, brine, sewage, ethylene glycol, glycerin, and more… flexibility in commercial and industrial applications

Communicating

Modbus RTU or BACnet MS/TP over EIA-485 and Modbus TCP/IP

Bi-directional

Measure forward flow, reverse flow, and net total

Rugged housing

Compact, rugged aluminum housing…long service in harsh environments

No fluid contact

Safe from fouling and damage from system pressure

LCD display

Easy to read

APPLICATIONS

- Liquid flow meter for water delivery, sewage, cooling water, glycol, alcohol and chemicals
- Heating/cooling energy flow meter ideal for hydronic process and HVAC

Ambient Temperature Range	-4 to 140 ° F (-20 to 60 °C)
Humidity	0 to 85%, non-condensing
Velocity	feet/second, meters/second
Engineering Units (User Configured)	Gal, liters, million gal, ft3, m3, acre-ft, oil barrels (42 gal); liquor barrels (31.5 gal), ft, m, lb, kg*
Energy Version	BTU, MBTU, MMBTU, Ton, Kwh, Kcal*
Outputs	4 to 20mA: 1 for Flow Model, 2 for Energy Model; Frequency Output, Pulse (totalizer, programmable)
Communication Protocols	EIA-485: Modbus RTU or BACnet MS/TP Ethernet: 10/100 Base T RJ45, communication via Modbus TCP/IP
TRANSDUCERS	
Construction	3/4 in. (20 mm) and 1 in. (25 mm): CPVC, Ul-tem®, Nylon cord grip, PVC cable jacket; –40 to 194° F (-40 to 90°C) 2+ in. (50mm+): PBT glass filled, Ultem®, Nylon cord grip; PVC cable jacket; –40 to 250° F (–40 to 121° C)
WARRANTY	
Limited Warranty	1 year

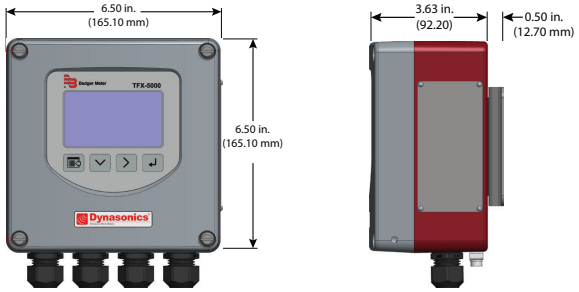
AGENCY APPROVALS

NRTL/C

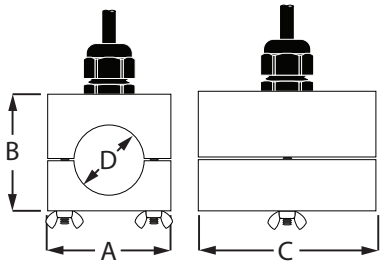
Electrical and Hazardous Location Safety E112904 (FSR Only)

* Additional non-HVAC units available in display menu.

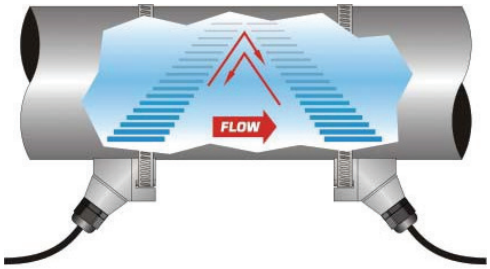
BGR-TXF5000 METER
Dimensional Drawing



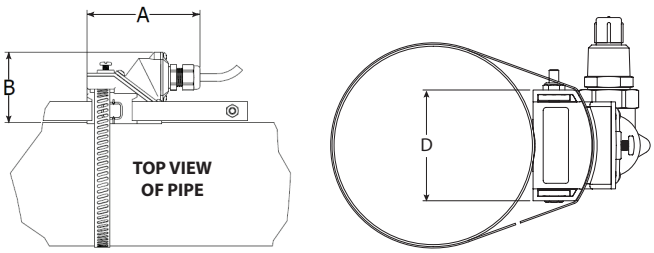
TRANSDUCERS FOR PIPES AND TUBING 3/4" AND 1"
Dimensional Drawing



OPERATING EXAMPLE



TRANSDUCERS FOR PIPES LARGER THAN 2"
Dimensional Drawing



PIPE SIZE	PIPE MATERIAL	A	B	C	D
3/4"	ANSI	2.46" (63 mm)	2.57" (66 mm)	2.66" (68 mm)	1.050" (27 mm)
	Copper	2.46" (63 mm)	2.50" (64 mm)	3.56" (91 mm)	0.875" (23 mm)
1"	ANSI	2.46" (63 mm)	2.92" (75 mm)	2.86" (73 mm)	1.315" (34 mm)
	Copper	2.46" (63 mm)	2.87" (73 mm)	3.80" (97 mm)	1.125" (29 mm)
2"+	Multi	3.75" (95 mm)	3.35" (60 mm)		2.19" (56 mm)

Note: Other transducer sizes available. Consult Veris for availability.

ORDERING INFORMATION

VERIS PART #	DESCRIPTION
BGR-DQ-G-RZ-R-S-AK-WW-N-XX-TGF	Flow Meter, 2+" Pipe, 110-220V, Keypad, 50' Cables, 4-20mA, Freq, Pulse, BACnet/Modbus
BGR-DR-G-RZ-R-S-AKWWCAKNXXTGRF	Flow Meter, BTU, 2+" Pipe, 110-220V, Keypad, 50' Cables, 4-20mA, Freq, Pulse, BACnet/Modbus
BGR-DR-G-CB-R-S-AKWWCAKNXXTGRF	Flow Meter, BTU, 3/4" Steel Pipe, 110-220V, Keypad, 50' Cables, 4-20mA, Freq, Pulse, BACnet/Modbus
BGR-DR-G-CH-R-S-AKWWCAKNXXTGRF	Flow Meter, BTU, 3/4" Copper Pipe, 110-220V, Keypad, 50' Cables, 4-20mA, Freq, Pulse, BACnet/Modbus
BGR-DR-G-CC-R-S-AKWWCAKNXXTGRF	Flow Meter, BTU, 1" Steel Pipe, 110-220V, Keypad, 50' Cables, 4-20mA, Freq, Pulse, BACnet/Modbus
BGR-DR-G-CT-R-S-AKWWCAKNXXTGRF	Flow Meter, BTU, 1" Copper Pipe, 110-220V, Keypad, 50' Cables, 4-20mA, Freq, Pulse, BACnet/Modbus

Note: Other meter sizes and configurations are available. Consult Veris for availability.

800.354.8556 | +1 503.598.4564 | sales@veris.com | intl@veris.com | veris.com