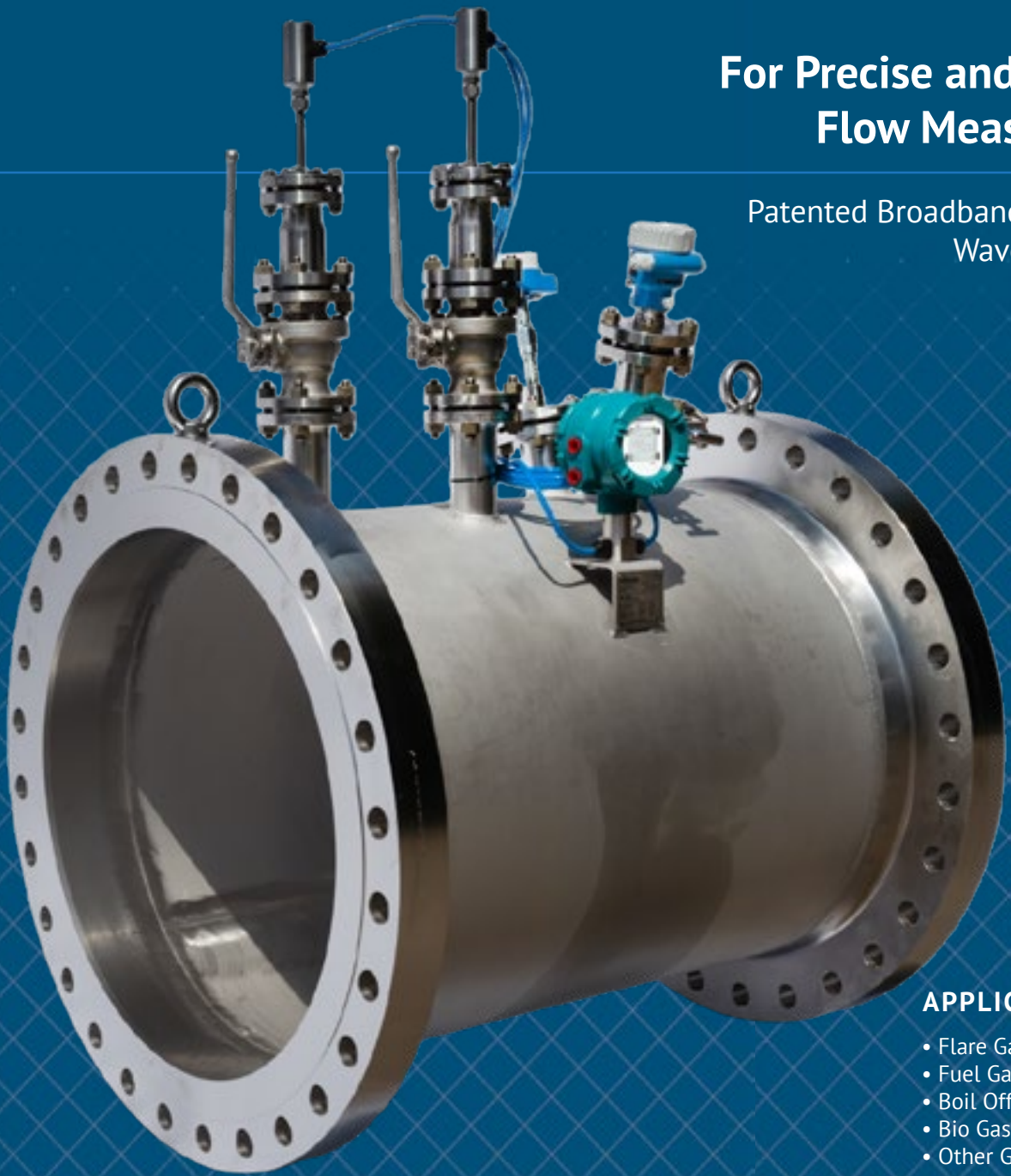
TrueShot
ULTRASONIC METERS

iTransus Instruments

UIM-1/2

For Precise and Reliable Flow Measurement

Patented Broadband Continuous Wave Technology



APPLICATIONS

- Flare Gas, Vent Gas
- Fuel Gas
- Boil Off Gas, Process Gas
- Bio Gas, Natural Gas
- Other Gases

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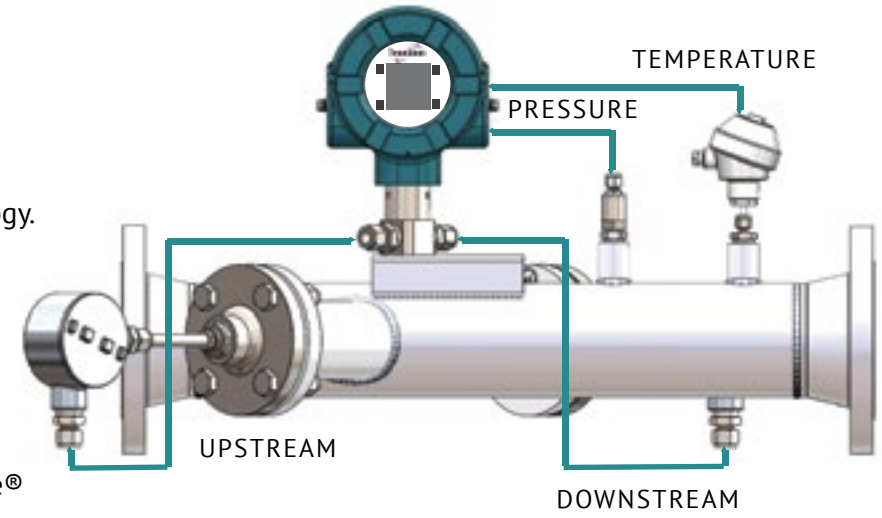
FEATURES

UIM SERIES: UIM-1/2



- Highly accurate single or dual path ultrasonic flowmeter.
- Highly customizable for specific applications.
- Available in sizes from 2" and larger.
- Patented Broadband Continuous Wave Technology.
- Extremely low power operation.
- Simultaneous transmission on multiple paths resulting in very fast response.
- Fully intrinsically safe.
- Extensive diagnostic information using TIMCare® software.
- Rugged, highly efficient all metal transducers.
- Extensive range of versatile I/O including optional pressure and temperature sensors for PTZ compensation.
- Optional retraction mechanism for removal and insertion of transducers under operating conditions.

BENEFITS

- The combination of cutting edge electronic processing, rugged and powerful transducers and international certifications result in the optimum solution for custody transfer gas measurement conditions.
- Simultaneous transmission and fast response provide reliability and accuracy in the most challenging flow regimes and pulsating flow conditions.
- TIMCare® software provides extensive diagnostic information to determine the "health" of the flow system, including blockages, dirt build-up and up-stream disturbances.
- On-board diagnostics and flow readings may also be accessed using the LCD and keypad.
- Complete intrinsic safety means there are no restrictions accessing the display/keypad even in hazardous areas.
- Full Intrinsic safety also reduces wiring costs and installation costs and greatly simplifies field maintenance.

TECHNICAL DATA UIM-1/2

Principle of Operation	Broadband continuous wave-transit time
Flange Rating and Sizes	150, 300, 600 and 900lbs. 3 -36", other sizes on request
Flange Type	ANSI, DIN, others on request
Pressure Ranges	Up to 153 bar (2250 psi), depending on transducer type
Ambient Temperature	-40 to +60°C (-40 to 140°F)
Process Temperature	UIM-U3, U2, U5 transducers - 30 to +80°C (-22 to + 176°F) Tl55-NT transducers -40 to +120°C (-40 to +248°F) Tl55-LT transducers -200 to +120°C (-328 to +248°F) TI55-HT transducers -40 to + 275°C (-40 to +527°F)
Accuracy	UIM-1 2% (>10 ft/sec) 3% (0.3 - 10 ft/sec) UIM-2 1.5% (>10 ft/sec) 3% (0.3 - 10 ft/sec)
Flow Range	1 - 210 ft/sec (0.1 - 65 m/sec)
Repeatability	0.2%
Turndown	>650:1 (pipe size dependent)
Meter Body Materials	Carbon steel ASTM A350 LF2 Cl.1, Stainless steel ASTM A182-F316/316L Other materials on request
Transducers	All metal Titanium; retractable version available as option
Material Certification	EN 10204 3.1 (additional certifications on request)
Pressure Port	1/2" or 1/4" NPT female, optionally fitted with PT100 4-wire sensor. options on request
Temperature Port	1/2" or 3/4" NPT female, optionally fitted with absolute pressure sensor. options on request
Electronic Enclosure Material	Epoxy painted, low copper aluminium alloy
Electronic Enclosure Cable Entries	4 x M20x1.5 female or 4 x 1/2" NPT female
Power Supply	Main power: 12 - 28.8V, 670mW max I/O option board power 10.8 -28.8V, 225mW max
User Interface	128X128 dot matrix LC Display, 4 keys
Interface Ports	1 x USB (not intrinsically safe) 1 x Frequency output (HF or LF)
Optional Interface Ports	01-0020 - I/O Option Board 1 x RS485, two wire, externally powered 2 x Digital, software configurable (HF, LF, Status) 01-0251 - Dual RS485 Option board 2 x RS485, two wire, externally powered 2 x Digital, software configurable (HF, LF, Status) 1 x PT100, 4-wire temperature sensor interface 1 x Bridge type, 4-wire pressure sensor interface 01-0022 - PT Option Board 1 x PT100, 4-wire temperature sensor interface 1 x Bridge type, 4-wire pressure sensor interface 01-0203 - 4-20mA Option Board (Not available when Dual RS485 board fitted) 1 x 4-20mA loop powered output
Communication Protocols	MODBUS (RS485 and USB)
Hazardous Area Certification	ATEX Ex II G Ex ia IIC T4 Ga (Zone 0) IECEx Ex ia IIC T4 Ga (Zone 0) ATEX Ex ec IIC T4 Gc (Zone 2) USA/Canada Class 1, Divion 1, Group A, B, C,D T4
Ingress Protection	IP66, NEMA 4x

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TS-UIM-1/2 05-2024