TrueShot
ULTRASONIC METERS

Transus Instruments

UIM-2

Accurate Measurement
Economical Cost

Patented Broadband Continuous Wave Technology

APPLICATIONS

- Allocation Metering
- LDC Gate Stations
- Production Gas
- Flare Gas
- Turbine Meter Replacement
- Biogas
- Landfill Gas

TMCO
THE MEASUREMENT COMPANY

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FEATURES

- Two path ultrasonic flowmeter, available as a factory calibrated meter for field installation.
- Available in sizes from 2" to 8" and flange ratings up to 150, 300 and 600#.
- Patented Broadband Continuous Wave BCW Signal Processing.
- Integrated volume conversion utilizing AGA-8 gross and detailed methods.
- Low power operation.
- Simultaneous transmission on multiple paths.

BENEFITS

- The UIM-2 provides a reliable and accurate 2-path gas flow measurement at the price of most single path meters.
- The UIM-2 is an economical solution for accurate measurement where the very high accuracy of UIM-4F is not required.
- Optional on-board pressure and temperature sensors allow an integrated solution for PTZ calculation, volume conversion, molecular weight calculations for flare gas or methane concentration biogas.
- Flow readings and extensive diagnostics information may be accessed using the local LCD graphics display and keypad or TIM® software to provide constant monitoring of the 'health' of the flow system.
- Full intrinsic safety also reduces wiring costs and installation costs and greatly simplifies field maintenance. Display/keypad and field wiring may be accessed in hazardous areas without special precautions.

UIM SERIES: UIM-2

FLOW RANGES

UIM SERIES: UIM-2

Nominal Size	Schedule	Internal diameter [mm]	Internal diameter [inch]	Flow [m3/hr]			Flow [CFH]			Turndown
				Qmax	Qt	Qmin	Qmax	Qt	Qmin	
2" / DN50	40	52.5	2.067	320	32	2.8	11.010	1.101	96	115
	80	49.3	1.939	280	28	2.5	9.690	969	85	112
3" / DN80	40	77.9	3.068	610	61	4.9	21.223	2.122	170	125
	80	73.7	2.900	540	54	4.3	18.970	1.897	160	126
4" / DN100	40	102.3	4.026	1000	100	8	34.980	3.498	290	125
	80	97.2	3.826	900	90	7.2	31.600	3.160	260	125
6" / DN150	40	154.1	6.065	2020	202	16	71.090	7.109	550	127
	80	146.3	5.761	1820	182	14	64.150	6.415	500	130
8" / DN200	40	202.7	7.981	3490	349	27	123.100	12.310	950	130
	80	193.7	7.625	3190	319	25	112.370	11.237	870	128

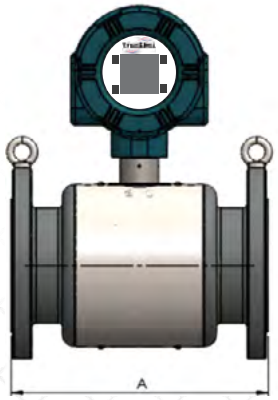
* Actual flowrange may vary depending on application

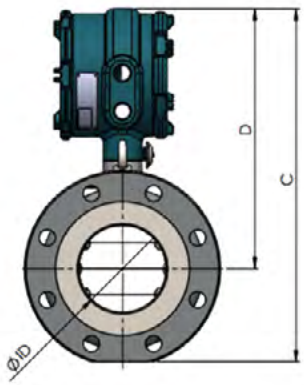
DIMENSIONS & WEIGHTS

UIM SERIES: UIM-2

Nominal Size [inch]	Rating	A- Length [mm]	B- Width [mm]	C - Height [mm]	Weight [kg]	A- Length [IN]	B- Width [IN]	C - Height [IN]	Weight [lb]
2" / DN50	150	260	155	362	28	10.24	6.10	14.25	62
	300/600	280	165	365	32	11.02	6.50	14.37	71
3" / DN80	150	300	190	390	41	11.81	7.48	15.35	90
	300/600	320	210	400	53	13.81	8.27	15.75	117
4" / DN100	150	300	230	410	55	11.81	9.06	16.14	121
	300	350	255	440	65	15.75	10.04	17.32	143
	600	350	275	450	82	15.75	10.83	17.72	181
6" / DN150	150	400	280	460	78	15.75	11.02	18.11	172
	300	400	320	480	96	15.75	12.60	18.90	212
	600	400	355	510	123	15.75	13.98	20.08	271
8" / DN200	150	400	345	515	125	15.75	13.58	20.28	276
	300	500	380	532	165	19.69	14.96	20.94	364
	600	500	420	570	205	19.69	16.54	22.44	452

* Actual weights and dimensions may vary for specific designs





TECHNICAL DATA UIM-2

Principle of Operation	Broadband continuous wave-transit time
Flange Rating and Sizes	150, 300 and 600lbs. 2 -8", other sizes on request
Flange Type	ANSI, DIN, others on request
Pressure Ranges	Up to 102 bar (1480 psi), other ranges on request
Ambient Temperature	-40 to +60°C (-40 to 140°F)
Process Temperature	- 30 to +80°C (-22 to + 176°F)
Typical Uncertainty	Factory calibration Q_t - Q_{max} 1% Q_{min} - Q_t 2%
Turndown	>100:1 (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
Pressure Port	1/4" NPT female, other options on request
Electronic Enclosure Material	Epoxy painted, low copper aluminium alloy
Electronic Enclosure Cable Entry	M20x1.5 female 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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