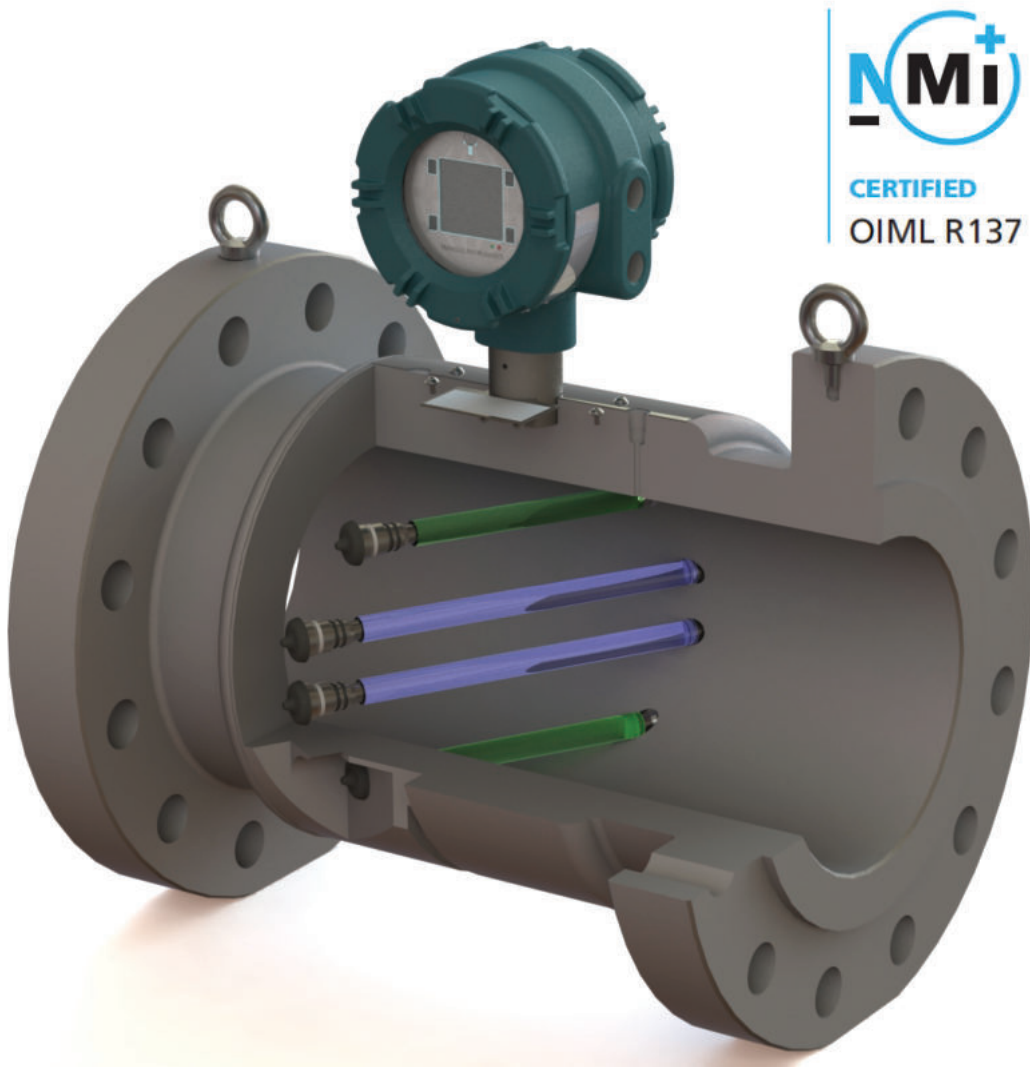




TRANSUS INSTRUMENTS



Technical Datasheet

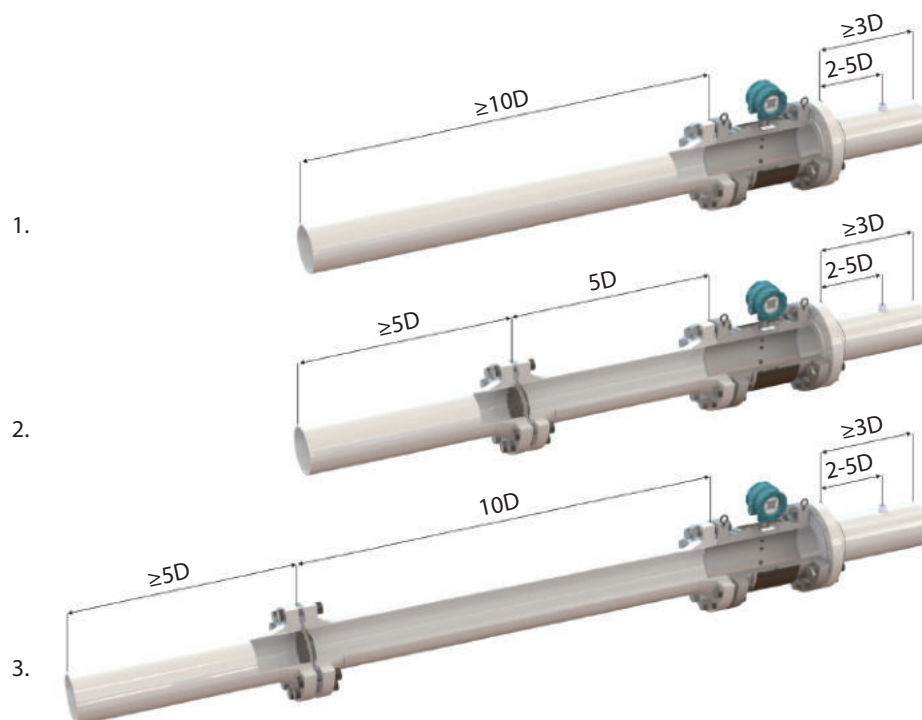
UIM-4F

UIM Series Flowmeter

Principle of operation	Broadband continuous wave – transit time
Sizes	150, 300, 600 and 900lbs; 3 – 30”, other sizes on request
Flange type	ANSI, DIN, others on request
Pressure ranges	Up to 153 bar (2250 psi)
Ambient temperature	-40°F to + 140°F (-40 to + 60 °C)
Process temperature	-22°F to + 176°F (-30 to + 80 °C)
Typical uncertainty	0.5% ($Q_t - Q_{max}$) factory calibration 1% ($Q_{min} - Q_t$) factory calibration 0.2% ($Q_t - Q_{max}$) flow calibration 0.5% ($Q_{min} - Q_t$) flow calibration
Metrology	AGA-9 compliant OIML R137-1&2 MID 2014/32/EU
Repeatability	0.1%
Turndown	100:1 (pipe size dependent)
Meter body materials	Carbon steel ASTM A350-LF2 Cl.1 Stainless steel ASTM A182-F316 Other materials on request
Transducers	All metal Titanium; retractable version available as option
Pressure port	¼” NPT female, others on request
Electronic enclosure material	Epoxy painted, low copper aluminum alloy
Electronic enclosure cable entry	M20x1.5 female 1/2” NPT female
Power supply	Main power: 14 - 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	1x USB (not intrinsically safe) 1x HF Frequency output / LF pulse output
Optional interface ports	<u>I/O Option Board</u> 1x RS485, two wire, externally powered 2x Digital, software configurable (HF, LF, status) 1 x 4-20mA loop powered output (pending) <u>PT Option board</u> Pressure and temperature sensors <u>4-20mA/HART Option Board</u> 1 x 4-20mA loop powered output (HART pending)
Communication protocols	MODBUS (RS485 and USB)
Hazardous area certification	ATEX EX II 1 G Ex ia IIC T4 Ga, Zone 0 IECEX Ex ia IIC T4 Ga CSA/FM Class I, Division 1, Group A,B,C,D T4
Ingress Protection	IP66, NEMA 4X

Flowranges [US Imperial]	Nominal Size [inch]	Schedule	Internal diameter [inch]	Flow [CFH]			Turndown
				Qmax	Qt	Qmin	
	3	3	40	3.068	21,230	2,123	250
80			2.900	18,970	1,897	220	87
4	4	40	4.026	34,980	3,498	420	84
		80	3.826	31,600	3,160	380	84
6	6	40	6.065	71,090	7,109	720	99
		80	5.761	64,150	6,415	650	99
8	8	40	7.981	123,100	12,310	1,240	100
		80	7.625	112,370	11,237	1,130	100
10	10	40	10.020	194,100	19,410	1,950	100
		80	9.562	176,700	17,670	1,770	100
12	12	STD	11.938	278,200	27,820	2,790	100
		80	11.376	250,200	25,020	2,510	100
14	14	STD	13.126	339,200	33,920	3,400	100
		80	12.500	302,000	30,200	3,020	100
16	16	STD	15.000	449,500	44,950	4,500	100
		80	14.314	395,900	39,590	3,960	100
18	18	STD	15.000	574,600	57,460	5,750	100
		80	14.314	502,000	50,200	5,020	100
20	20	XS	15.000	697,700	69,770	6,980	100
		80	14.314	621,900	62,190	6,220	100
24	24	XS	15.000	989,700	98,970	10,240	97
		80	14.314	868,800	86,880	8,990	97
30	30	30	15.000	1,490,900	149,090	15,980	94
		wt = 35	14.314	1,338,900	133,890	14,350	94

* Actual flowrange may vary depending on application



Configuration 1. – Recommended configuration without flow conditioner

Configuration 2. – Recommended configuration with flow conditioner

Configuration 3. – Conservative configuration with flow conditioner

For bi-directional flow; the upstream piping spools and flow conditioner as applicable from configurations 1, 2 and 3 can be used on both ends of the metering package.

Any thermowell should be positioned 3-5 diameters away from meter flanges.

Dimensions and weights

Dimensions and weights [US Imperial]	Nominal Size	Rating	A- Length [IN]	B- Width [IN]	C - Height [IN]	Weight [lb]
	3	150	11.8	7.5	14.6	77
		300	13.8	8.3	15.0	79
		600	13.8	8.3	15.0	84
	4	150	13.8	9.1	16.1	123
		300	13.8	10.0	16.6	132
		600	15.7	10.8	17.6	179
	6	150	15.7	11.0	18.0	172
		300	15.7	12.6	18.8	212
		600	15.7	14.0	20.1	265
	8	150	17.7	13.6	20.3	320
		300	19.7	15.0	20.9	386
		600	19.7	16.5	22.4	423
10	300	21.7	17.5	24.0	540	
	600	21.7	20.1	25.2	650	
12	300	23.6	20.5	26.6	628	
	600	23.6	22.0	27.4	805	
14	300	23.6	23.0	27.8	893	
	600	23.6	23.8	28.7	959	
16	300	27.6	15.0	29.7	386	
	600	27.6	16.5	30.5	423	
18	600	35.4	29.3	35.6	2095	
20	600	39.4	32.1	37.0	2536	
24	600	43.3	37.0	39.8	3308	
30	600	51.2	44.5	48.0	5402	

