

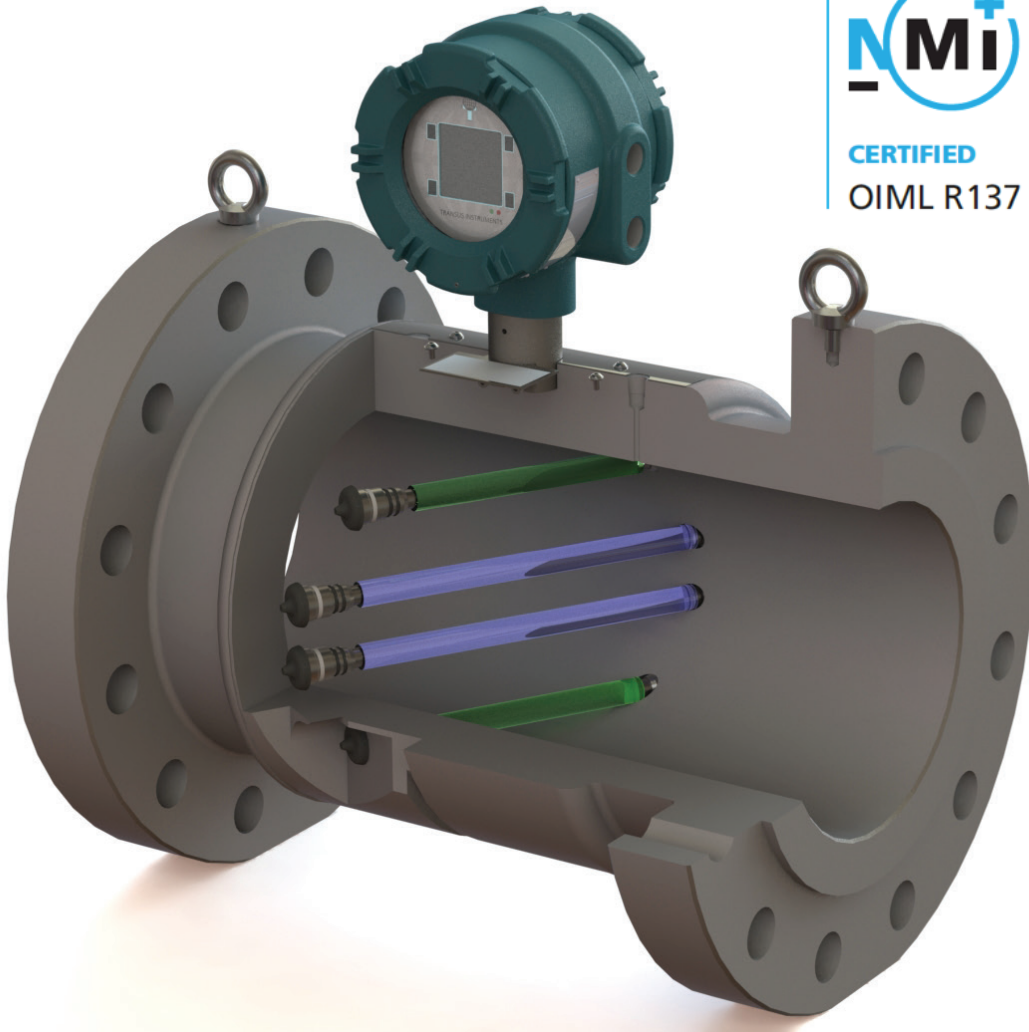
# Transus Instruments

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OIML R137



## Technical Datasheet

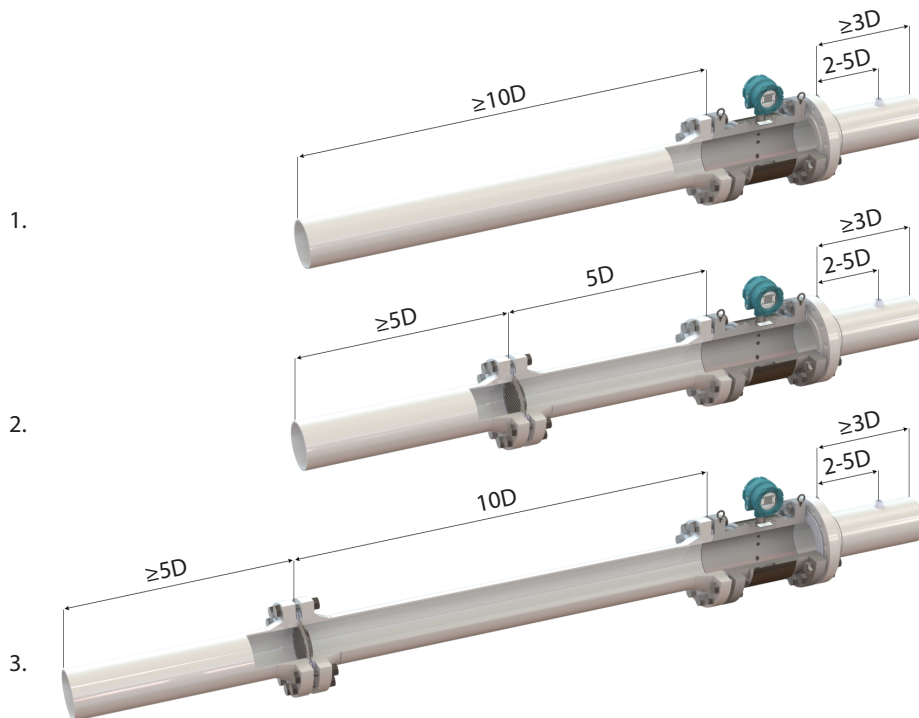
# UIM-4F

UIM Series Flowmeter

<b>Principle of operation</b>	Broadband continuous wave – transit time
<b>Sizes</b>	150, 300, 600 and 900lbs; 3 – 30”, other sizes on request
<b>Flange type</b>	ANSI, DIN, others on request
<b>Pressure ranges</b>	Up to 153 bar (2250 psi)
<b>Ambient temperature</b>	-40°F to + 140°F (-40 to + 60 °C)
<b>Process temperature</b>	-22°F to + 176°F (-30 to + 80 °C)
<b>Typical uncertainty</b>	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
<b>Metrology</b>	AGA-9 compliant OIML R137-1&2 MID 2014/32/EU
<b>Repeatability</b>	0.1%
<b>Turndown</b>	100:1 (pipe size dependent)
<b>Meter body materials</b>	Carbon steel ASTM A350-LF2 Cl.1 Stainless steel ASTM A182-F316 Other materials on request
<b>Transducers</b>	All metal Titanium; retractable version available as option
<b>Pressure port</b>	1/4” NPT female, others on request
<b>Electronic enclosure material</b>	Epoxy painted, low copper aluminum alloy
<b>Electronic enclosure cable entry</b>	M20x1.5 female 1/2” NPT female
<b>Power supply</b>	Main power: 14 - 28.8V, 670mW max  I/O option board power: 10.8 - 28.8V, 225mW max
<b>User interface</b>	128x128 dot matrix LC Display, 4 keys
<b>Interface ports</b>	1x USB (not intrinsically safe) 1x HF Frequency output / LF pulse output
<b>Optional interface ports</b>	<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 Option Board</u> 1 x 4-20mA loop powered output
<b>Communication protocols</b>	MODBUS (RS485 and USB)
<b>Hazardous area certification</b>	ATEX EX II 1 G Ex ia IIC T4 Ga, Zone 0 IECEX Ex ia IIC T4 Ga USA / Canada Class I, Division 1, Group A,B,C,D T4
<b>Ingress Protection</b>	IP66, NEMA 4X

	Nominal Size [inch]	Schedule	Internal diameter [inch]	Flow [CFH]			Turndown
				Qmax	Qt	Qmin	
Flowranges [US Imperial]	3	40	3.068	21,230	2,123	250	85
		80	2.900	18,970	1,897	220	87
	4	40	4.026	34,980	3,498	420	84
		80	3.826	31,600	3,160	380	84
	6	40	6.065	71,090	7,109	720	99
		80	5.761	64,150	6,415	650	99
	8	40	7.981	123,100	12,310	1,240	100
		80	7.625	112,370	11,237	1,130	100
	10	40	10.020	194,100	19,410	1,950	100
		80	9.562	176,700	17,670	1,770	100
	12	STD	11.938	278,200	27,820	2,790	100
		80	11.376	250,200	25,020	2,510	100
14	STD	13.126	339,200	33,920	3,400	100	
	80	12.500	302,000	30,200	3,020	100	
16	STD	15.000	449,500	44,950	4,500	100	
	80	14.314	395,900	39,590	3,960	100	
18	STD	15.000	574,600	57,460	5,750	100	
	80	14.314	502,000	50,200	5,020	100	
20	XS	15.000	697,700	69,770	6,980	100	
	80	14.314	621,900	62,190	6,220	100	
24	XS	15.000	989,700	98,970	10,240	97	
	80	14.314	868,800	86,880	8,990	97	
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.

# Flowranges and configurations

# 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	

