

QSTAR ULTRASONIC FLOWMETERS (UFM)



These meters are available in two models:

- A portable for mobile sampling measurements
- A fixed for measuring tasks over an extended period of time and continuous measurements in fixed installations.

Both units use the proven and highly precise ultrasonic transit time difference method.

By employing state-of-the-art digital processors, these robust measurement flowmeters are extremely accurate and drift-free.

The non-intrusive flow measurement is virtually:

- 100% leak-proof
- 100% pressure-resistant
- 100% drift-free
- 100% wear-free and thus maintenance-free
- 100% free of pressure loss and thus energy-saving

PRODUCT IDENTIFIER

QM = Ultrasonic Flowmeter with QStar Technology

CLAMP-ON MOUNTING TYPE

- E** = Fixed Energy *
- F** = Fixed
- P** = Portable

TRANSDUCER CHOICE AND PIPE SIZE

- 05** = 1/2 MHz for Pipe Sizes 8" to 240"
- 10** = 1 MHz for Pipe Sizes 1.5" to 16"
- 20** = 2 MHz for Pipe Sizes 1/2" to 4"

QM + F + 05

ACCESSORIES

- QMF-PT100** = Temperature Sensors, Fixed (16 ft. / 4.87 m)
- QMP-PT100** = Temperature Sensors, Portable (16 ft. / 4.87 m)
- QMF-F05** = Transducer, 0.5 MHz, 1 Pair, Fixed (16 ft. / 4.87 m)
- QMF-F10** = Transducer, 1 MHz, 1 Pair, Fixed (16 ft. / 4.87 m)
- QMF-F21** = Transducer, 2 MHz, 1 Pair, Fixed (16 ft. / 4.87 m)
- QMP-F05** = Transducer, 0.5 MHz, 1 Pair, Portable (BNC)
- QMP-F10** = Transducer, 1 MHz, 1 Pair, Portable (BNC)
- QMP-F21** = Transducer, 2 MHz, 1 Pair, Portable (BNC)
- QMS-WTG** = Thickness Gauge

SPARE PARTS

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|--|---|
| QMF-CASE = Case, Fixed (Repair) | QMP-MK10 = Mounting Chains, 1 Pair (50 in./1.27 m) |
| QMF-IOAC = Board I/O, Fixed AC (Repair) | QMP-ML05 = Lashing Strap, 2 Pair (390 in./9.9 m) |
| QMF-IODC = Board I/O, Fixed DC (Repair) | QMP-MT21 = Textile Belt, 1 Pair (14 in./35.5 m) |
| QMF-MB05 = Mounting Belt, SS (98 ft./29.87 m) | QMP-PS = Power supply DC (Plug-In) |
| QMF-MB10 = Mounting Belt, 1 Pair, SS, (63 in./1.6 m) | QMP-RBNC = Cable, Red (BNC, 9 ft./2.74 m) |
| QMF-MB21 = Mounting Belt, 1 Pair, SS, (22 in./55.9 m) | QMP-TL = Textile Belt, 1 Pair (63 in./1.6 m) |
| QMF-RS232 = Board, RS232 | QMP-USB = Cable, USB (36 in./0.91 m) |
| QMP-BBNC = Cable, Blue (BNC, 9 ft./2.74 m) | QMS-KG = Grease, Coupling (.75 Oz/22.2 ml) |
| QMP-BP = Battery Pack, Portable (Repair) | QMS-MS = Spacer Bar, Long |
| QMP-CAB4 = Cable (4-20 mA Output) | QMS-SB = Spacer Bar, Short |
| QMP-CABR = Cable (Relay) | |
| QMP-CASE = Case, Portable (Repair) | |
| QMP-IOB = Board I/O, Portable (Repair) | |

* Energy: Includes a pair of Temperature Sensors (QMF-PT100).

SPECIFICATIONS				
Model:	QSTAR PORTABLE		QSTAR FIXED	
Operation:	Intuitive via 8 main keys (Soft Keys), plain text display		Intuitive via 8 main keys (Soft Keys), plain text display	
Languages:	English, Spanish and French		English, Spanish and French	
Units:	Metric / US		Metric / US	
Outputs:	2x 4-20 mA, 1x Relay, 1x MicroUSB 1x Pulse		2x 4-20 mA, 1x Pulse, 1x MicroUSB 1x Relay, RS232 (opt.)	
Inputs:	2x PT100		2x PT100	
Integrated Data Logger:	2 GB		N/A	
Data Logged:	Measurement and totalizers		N/A	
Data Format:	Can be exported into standard office programs		N/A	
Memory Cycle:	Adjustable, 1 second to 24 hours		N/A	
Power Supply:	Integrated rechargeable battery and 100-240V AC adapter		85-264VAC, 18-36VDC (opt.)	
	Battery Duration: Approximately 5 hours		Power Consumption: 10 W	
Protection Class:	IP40		IP65, Ex/ATEX (in preparation)	
Housing:	Aluminium, PVC		PVC, wall-mounted	
Dimensions:	10.4 x 7.5 x 2.7 in. (26.4 x 19 x 6.8 cm)		10.2 x 9.4 x 4.7 in. (25.9 x 23.9 x 11.9 cm)	
Operating Temp:	-4° F to 140° F (-20° C to 60° C)		-4° F to 140° F (-20° C to 60° C)	
Transducer Temp:	-40° F to 300° F (-40° C to 149° C)		-40° F to 300° F (-40° C to 149° C)	
Weight:	3.3 lbs (1.5 kg)		2.9 lbs (1.3 kg)	
Display:	QVGA (320x240), black and white, adjustable backlighting		QVGA (320x240), black and white, adjustable backlighting	
Carrying Case:	20 x 16 x 16 (50.8 x 40.6 x 40.6 cm)		N/A	
MEASUREMENT		MEASUREMENT ACCURACY		
Principle:	Ultrasonic transit time difference with AFC technology	Inner Diameter Ø	Range	Deviation
Values Meas:	Flow, flow speed, heat flow	.39 - .98 in. (1.0 - 2.5 cm)	6.56-98.42 ft/s (2-30 m/s)	2.5% of reading
Totalizers:	Heat quantity, volume		0-6.56 ft/s (0-2 m/s)	± 0.16 ft/s (0.05 m/s)
Meas. Range:	+/- 98 ft/s (± 30 m/s)	.98-1.97 in. (2.5 - 5.0 cm)	6.56-98.42 ft/s (2-30 m/s)	1.5% of reading
Signal Damping:	0 - 100 sec (adjustable)		0-6.56 ft/s (0-2 m/s)	± 0.10 ft/s (0.03 m/s)
Diagnostic Functions:	Acoustic velocity, signal strength, SNR, signal quality, amplitude, energy Oscilloscope function allows graphical display and analysis of signals.	1.97-11.81 in. (5.0 - 30.0 cm)	6.56-98.42 ft/s (2-30 m/s)	1% of reading
			0-6.56 ft/s (0-2 m/s)	± 0.07 ft/s (0.02 m/s)
		11.81-236.22 in. (30.0 - 600.0 cm)	3.28-98.42 ft/s (1-30 m/s)	1% of reading
0-3.28 ft/s (0-1 m/s)	± 0.03 ft/s (0.01 m/s)			
Repeatability for majority of applications is <0.2%				
MODEL NO.	DESCRIPTION	MODEL NO.	DESCRIPTION	
QME05	Ultrasonic Flowmeter (ENERGY-FIXED, .5 MHz) 8" - 240"	QMP05	Ultrasonic Flowmeter (PORTABLE, .5 MHz) 8" - 240"	
QME10	Ultrasonic Flowmeter (ENERGY-FIXED, 1 MHz) 1.5" - 16"	QMP10	Ultrasonic Flowmeter (PORTABLE, 1 MHz) 1.5" - 16"	
QME20	Ultrasonic Flowmeter (ENERGY-FIXED, 2 MHz) .5" - 4"	QMP20	Ultrasonic Flowmeter (PORTABLE, 2 MHz) .5" - 4"	
QMF05	Ultrasonic Flowmeter (FIXED, .5 MHz) 8" - 240"	QMF-PT100	Temperature Sensor Kit, FIXED (16 ft. / 4.87 m)	
QMF10	Ultrasonic Flowmeter (FIXED, 1 MHz) 1.5" - 16"	QMP-PT100	Temperature Sensor Kit, PORTABLE (16 ft. / 4.87 m)	
QMF20	Ultrasonic Flowmeter (FIXED, 2 MHz) .5" - 4"	QMS-WTG	Pipe Wall Thickness Gauge	