

OPTISONIC Inline Ultrasonic Flowmeter

Application Information Form

Company name

RFQ Number:

Address

Project Name:

City, State, Zip

Contact name:

Tag Number (s):

Phone number:

Process Data

Media name:	Liquid state	Superheated steam
	Gas state	High temperature gas
Sp. gravity		
Density		
Viscosity		
Temperature		
Pressure:		
Flow Rate:		

Piping Details

Line size

Material:

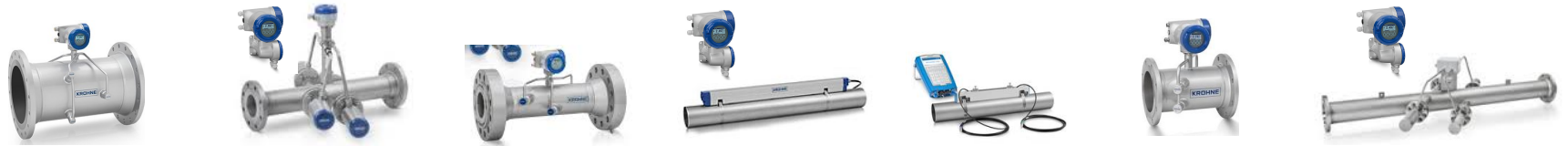
Notes / comments:

Ultrasonic Flow Sensor Specifications

Sensor Design	Inline version	Stationary clamp-on	Portable clamp-on																																																			
Sensor type Inline (wetted transducers) Stationary clamp-on Portable clamp-on KROHNE Model OPTISONIC 3000 OPTISONIC 3000 (Cryogenic) OPTISONIC 3000 (HT version) OPTISONIC 4000 HP OPTISONIC 4000 HT OPTISONIC 6300 (stationary) OPTISONIC 6300P (portable) OPTISONIC 7000 OPTISONIC 8000	Process Connections (size & type) <table border="1"> <tr><td>1"</td><td>8"</td><td>ASME 150 lb. RF</td></tr> <tr><td>1.25"</td><td>10"</td><td>ASME 300 lb. RF</td></tr> <tr><td>1.5"</td><td>12"</td><td>ASME 600 lb. RF</td></tr> <tr><td>2"</td><td>14"</td><td>ASME 900 lb. RF</td></tr> <tr><td>2.5"</td><td>16"</td><td>ASME 1500 lb. RF</td></tr> <tr><td>3"</td><td>18"</td><td>ASME 2500 lb RF.</td></tr> <tr><td>4"</td><td>24"</td><td></td></tr> <tr><td>5"</td><td></td><td></td></tr> <tr><td>6"</td><td></td><td></td></tr> </table> <table border="1"> <thead> <tr> <th>Measuring tube</th> <th>Transducer</th> <th>Transducer gasket</th> </tr> </thead> <tbody> <tr><td>Carbon steel</td><td>Standard</td><td>Standard</td></tr> <tr><td>LT carbon steel</td><td>316L</td><td>FKM/FPM</td></tr> <tr><td>316L</td><td>Titanium grade 29</td><td>FFKM</td></tr> <tr><td>Duplex</td><td>SS347</td><td>Spiral wound</td></tr> <tr><td>Super Duplex</td><td>SS321 (H)</td><td>graphite/SS</td></tr> <tr><td>Hastelloy</td><td>Inconel Alloy 625</td><td></td></tr> <tr><td>Inconel</td><td></td><td></td></tr> </tbody> </table>	1"	8"	ASME 150 lb. RF	1.25"	10"	ASME 300 lb. RF	1.5"	12"	ASME 600 lb. RF	2"	14"	ASME 900 lb. RF	2.5"	16"	ASME 1500 lb. RF	3"	18"	ASME 2500 lb RF.	4"	24"		5"			6"			Measuring tube	Transducer	Transducer gasket	Carbon steel	Standard	Standard	LT carbon steel	316L	FKM/FPM	316L	Titanium grade 29	FFKM	Duplex	SS347	Spiral wound	Super Duplex	SS321 (H)	graphite/SS	Hastelloy	Inconel Alloy 625		Inconel			Nominal diameter Small sensor rail (1/2" to 4" lines) Medium sensor rail (2" to 16" lines) Large sensor rail (8" to 160" lines) Sensor rail material Aluminum SS316L Sensor configuration Single pipe/path Dual pipe/path	Nominal diameter Small sensor rail (1/2" to 6" lines) Medium sensor rail (2" to 10" lines) Dual sensor rail (8" to 60" lines) Sensor rail material Aluminum Sensor configuration Single pipe/path Dual pipe/path
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Signal Converter / Transmitter Specifications

Converter Design			IO Options		
Hazardous Area without cFMus (Class 1, Div 2) cFMus (Class 1, Div 1)	Signal Converter (type) Compact-mounted Remote/ field-mounted Remote/ wall-mounted Hand-held (portable)	Remote cable length Not required 9 ft. 15 ft. 30 ft. 45 ft. 60 ft. 75 ft. 90 ft.	IO Signal Current output Pulse / frequency Status output / limit switch Control input	IO Communications HART Foundation Fieldbus Modbus RS485 Profibus PA/DP	P&T Correction (input) Not applicable Manual input External P&T sensor
Power supply 12-24 VDC 100-230 VAC Battery powered	Housing (material) Aluminum housing 316L housing Offshore coating Polyamide (portable)		IO Modules Base IO Module 1st IO Module 2nd IO Module		



	OPTISONIC 3400	OPTISONIC 4400 HT	OPTISONIC 4400 HP	OPTISONIC 6300	OPTISONIC 6300P	OPTISONIC 7300	OPTISONIC 8300
	Process liquids Cryogenic version	High-temperature liquids	High-pressure liquids	Process liquids	Process liquids	Process gases	Super heated steams High-temperature gases
	3-beam design Bi-directional Full bore sensor tube	1 and 2 beam design Bi-directional Full bore sensor tube	Dual beam design Bi-directional Full bore sensor tube	Stationary clamp-on Single / Dual path	Portable clamp-on Single / Dual path Hand held converter	2 path design Integrated volume correction	2 path design Integrated flow computer for mass flow & enthalpy calculation
Measuring Accuracy	± 0.3% of MV	± 1% of MV (1 path) ± 0.5% of MV (2 path)	± 1% of MV	± 1% of MV	± 1% of MV	± 1% ± 1.5%	± 1% ± 1.5%
Measuring Range	0.98 to 65 ft/s	1.65 to 66 ft/s	1.65 to 66 ft/s	1.65 to 66 ft/s	1.65 to 66 ft/s	-98.4 to 98.4 ft/s	-197 to 197 ft/s
Max gas content	≤ 2% (by volume)	≤ 2% (by volume)	≤ 2% (by volume)	≤ 2% (by volume)	≤ 2% (by volume)		
Max solids content	≤ 5% (by volume)	≤ 5% (by volume)	≤ 5% (by volume)	≤ 5% (by volume)	≤ 5% (by volume)		
Process Temperature	-328 to 356 °F	-49 to 1,112 °F	-49 to 284 °F (compact) -49 to 356 °F (remote)	-40 to 392 °F	-40 to 248 °F	-40 to 356 °F	-13 to 1,004 °F
Process Connections	1" to 120" ASME 150..1500 lb.	1" to 40" ASME 150..900 lb.	1" to 8" ASME 150..4500 lb.	1/2" to 160" line sizes	1/2" to 60" line sizes	2" to 24" ASME 150..900 lb.	4" to 24" ASME 150..2500 lb. (flanged or weld-in design)
Measuring Tube and Flange materials	Carbon steel 316L Hastelloy	Carbon steel 316L	316L Duplex Super Duplex	Aluminum sensor (rail) 316L sensor (rail)	Aluminum sensor (rail)	Carbon steel 316L Duplex Hastelloy	Carbon steel HT
Signal Converter Type	UFC 400 C (compact) UFC 400 F (remote)	UFC 400 F (remote)	UFC 400 C (compact) UFC 400 F (remote)	UFC 300 W (wall) UFC 300 F (field)	Hand held	GFC 400 C (compact) GFC 400 F (remote)	GFC 400 F (remote)
IO Communications	mA (HART) Foundation Fieldbus Profibus PA / DP RS485 Modbus	mA (HART) Foundation Fieldbus Profibus PA / DP RS485 Modbus	mA (HART) Foundation Fieldbus Profibus PA / DP RS485 Modbus	mA (HART)	USB slave	mA (HART) Foundation Fieldbus RS485 Modbus	mA (HART) Foundation Fieldbus RS485 Modbus
Power Supply	12-24 VDC 100-230 VAC	12-24 VDC 100-230 VAC	12-24 VDC 100-230 VAC	12-24 VDC 100-230 VAC	Battery powered	12-24 VDC 100-230 VAC	12-24 VDC 100-230 VAC
Converter materials	Die-cast Aluminum SS316L	Die-cast Aluminum SS316L	Die-cast Aluminum SS316L	Die-cast Aluminum SS316L	Polyamide	Die-cast Aluminum SS316L	Die-cast Aluminum SS316L
Hazardous Area	FM (C1, D1) ATEX	FM (C1, D1) ATEX IECEX	FM (C1, D1) ATEX IECEX	FM (C1, D1) ATEX IECEX	General purpose	FM (C1, D1) ATEX IECEX	FM (C1, D1) ATEX IECEX