

## OPTIWAVE Radar (FMCW) Level Transmitter

### Application Information Form

Company name  
Address  
City, State, Zip  
Contact name:  
Phone number:

RFQ Number:  
Project Name:  
Tag Number (s):

### Process Data

Media Name:

Media state	Characteristics	Media surface
Liquid	Clean	Smooth
Slurry	Coats	Agitated
Pastes	Crystalizes	Foams
Powder	Deposits	
Solids	Dusty	

Temperature

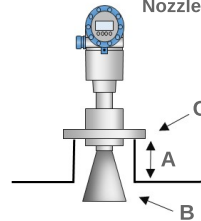
Pressure

Dielectric Constant

Comments/ Notes

### Radar Installation

Tank / vessel top mount  
Tank / vessel side mount  
Stilling well  
Bypass chamber  
Open channel  
Sump / pit



### Nozzle / Process Connections Details

Nozzle center to wall

A) Nozzle height

B) Nozzle diameter

C) Connection (size/type)

### Tank / Vessel Details

Height

Width

Material

Max fluid level

Min fluid level

### Stillwell / Bypass Chamber Details

Height

Diameter (ID)

Material

Max fluid level

Min fluid level

### Radar (FMCW) Specifications

KROHNE Model	Agency Approvals	Hazardous Area	Signal Converter	Converter Housing	IO Communications
OPTIWAVE 3500	SIL 2	without	Compact-mounted	without display	HART
OPTIWAVE 5200	NACE	cFMus (IS) C1, D1	Remote-mounted	Display on top	Foundation Fieldbus
OPTIWAVE 5400	ASME B31.3	cFMus (XP) C1, D1	<b>Remote signal cable</b> Not required for compact	Display on side	Profibus PA
OPTIWAVE 7400	CRN	cFMus (NI) C1, D2		Aluminum housing	Modbus RS485
OPTIWAVE 7500	FDA	ATEX		316L housing	
OPTIWAVE 6400	3A	IECEX		82 ft. (25m)	Sun protection cover
OPTIWAVE 6500	EHEDG	INMETRO		164 ft. (50m)	
OPTIWAVE 1010	API 2350		246 ft. (75m)		
			328 ft. (100m)		

Process Connections (size & type)	Gasket (process seal)	Antenna Type & Material	Antenna Size	Accessories
1" Threaded, NPT	without	Metallic horn	DN25 / 1"	Antenna purging system
1.5" Tri-clamp	FKM/FPM (viton)	Wave guide	DN40 / 1.5"	Heating/cooling system
2" ASME 150# RF	Kalrez 6375	Drop antenna	DN50 / 2"	PTFE flange protection plate
3" ASME 300# RF	EPDM	Lens	DN65 / 3"	PP flange protection plate
4" ASME 600# RF	Metaglass	316L stainless steel	DN80 / 4"	Purge flange
6" ASME 900# RF		PTFE	DN100 / 5"	Slanted flange (2°)
8" ASME 1500# RF		Polypropylene (PP)	DN200 / 6"	Low pressure flange
		PEEK		Ball/ rotatable flange
		<b>Antenna Extension</b>		Side fixing bracket
		Straight extension		Adjustable wall bracket
		S-shape extension		
		L-shape extension		

# OPTIWAVE (FMCW) Radar

## PRODUCT OVERVIEW



measure the facts



	OPTIWAVE 3500	OPTIWAVE 5200	OPTIWAVE 5400	OPTIWAVE 7400	OPTIWAVE 7500	OPTIWAVE 6400	OPTIWAVE 6500
Measurable Products	Liquids, pastes & slurries Hygienic requirements	Liquids, paste & slurries Storage and process	Liquids, paste & slurries Storage and process	Liquids, paste & slurries Agitated and corrosive	Liquids, paste & slurries Narrow tanks w/ obstructions	Solids, granulates, rocks	Powders, dusty atmosphere
Measuring Range	164 ft. (50m)	98 ft. (30m)	328 ft. (100m)	328 ft. (100m)	328 ft. (100m)	328 ft. (100m)	328 ft. (100m)
Measuring Accuracy	±0.08" (2 mm)	±0.2" (5 mm)	±0.08" (2 mm)	±0.08" (2 mm)	±0.08" (2 mm)	±0.08" (2 mm)	±0.08" (2 mm)
Repeatability	±0.04" (1 mm)	±0.04" (1 mm)	±0.04" (1 mm)	±0.04" (1 mm)	±0.04" (1 mm)	±0.04" (1 mm)	±0.04" (1 mm)
Dielectric Constant	≥1.4 (1.1 TBF mode)	≥1.8 (1.1 TBF mode)	≥1.4 (1.1 TBF mode)	≥1.4 (1.1 TBF mode)	≥1.4 (1.1 TBF mode)	≥1.4 (1.1 TBF mode)	≥1.4 (1.1 TBF mode)
Process Temperature	302 °F max	302 °F max (SS antenna) 302 °F max (PTFE antenna) 212 °F max (PP antenna)	266 °F max (SS antenna) 212 °F max (PP antenna)	392 °F max (SS antenna) 302 °F max (PTFE antenna) 392 °F max (PEEK antenna)	392 °F max	266 °F max	302 °F max
Process Pressure	-14.5 to 362 psig	-14.5 to 580 psig (SS) -14.5 to 232 psig (PP)	-14.5 to 232 psig	-14.5 to 1,450 psig (SS) -14.5 to 580 psig (PTFE / PEEK)	-14.5 to 580 psig	-14.5 to 232 psig	-14.5 to 580 psig
Process Connections	1.5" to 2" Tri-clamp	1.5" to 2" NPT 2" to 8" ASME (150..300)	1" to 1.5" NPT 1.5" to 8" ASME (150..300)	1.5" NPT 1.5" to 8" ASME (150..1500)	3/4", 1", 1.5", 3" NPT 2" to 8" ASME (150..300)	1", 1.5" NPT 3" to 8" ASME (150..300)	1", 3" NPT 2" to 8" ASME (150..300)
Antenna types (materials)	Lens (PEEK)	Metallic horn (316L) Metallic wave guide (316L) Wave horn (PTFE) Wave horn (PP)	Metallic horn (316L) Drop antenna (PP)	Metallic horn (316L) Drop antenna (PTFE) Drop antenna (PEEK)	Lens (PEEK)	Metallic horn (316L) Drop antenna (PTFE) Drop antenna (PP)	Lens (PEEK)
Gasket (process seal)	PEEK	FKM/FPM (viton) Kalrez 6375 EPDM PFA	FKM/FPM (viton) Kalrez 6375	FKM/FPM (viton) Kalrez 6375 EPDM	FKM/FPM (viton) Kalrez 6375 EPDM	FKM/FPM (viton) Kalrez 6375 EPDM	FKM/FPM (viton) EPDM
Signal Converter	Compact or remote Display on top Die-cast Aluminum 316L	Compact or remote without display Display on top or side Die-cast Aluminum 316L	Compact or remote Display on top Die-cast Aluminum 316L	Compact or remote Display on top Die-cast Aluminum 316L	Compact or remote Display on top Die-cast Aluminum 316L	Compact or remote Display on top Die-cast Aluminum 316L	Compact or remote Display on top Die-cast Aluminum 316L
IO Communications	mA (HART) Foundation Fieldbus Profibus PA	mA (HART) Foundation Fieldbus Profibus PA Modbus RS485	mA (HART) Foundation Fieldbus Profibus PA	mA (HART) Foundation Fieldbus Profibus PA	mA (HART) Foundation Fieldbus Profibus PA	mA (HART) Foundation Fieldbus Profibus PA	mA (HART) Foundation Fieldbus Profibus PA
Agency Approvals	cFMus (IS) C1, D1 cFMus (XP) C1, D1 cFMus (NI) C1, D2 ATEX, IECEx, NEPSI CRN/ ASME B31.3 FDA, 3A, EHEDG	cFMus (IS) C1, D1 cFMus (XP) C1, D1 cFMus (NI) C1, D2 ATEX, IECEx, NEPSI CRN/ ASME B31.3 NACE SIL2	cFMus (IS) C1, D1 cFMus (XP) C1, D1 cFMus (NI) C1, D2 ATEX, IECEx, NEPSI CRN/ ASME B31.3 NACE API 2350	cFMus (IS) C1, D1 cFMus (XP) C1, D1 cFMus (NI) C1, D2 ATEX, IECEx, NEPSI CRN/ ASME B31.3 NACE API 2350	cFMus (IS) C1, D1 cFMus (XP) C1, D1 cFMus (NI) C1, D2 ATEX, IECEx, NEPSI CRN/ ASME B31.3 NACE API 2350	cFMus (IS) C1, D1 cFMus (XP) C1, D1 cFMus (NI) C1, D2 ATEX, IECEx, NEPSI CRN/ ASME B31.3 NACE	cFMus (IS) C1, D1 cFMus (XP) C1, D1 cFMus (NI) C1, D2 ATEX, IECEx, NEPSI CRN/ ASME B31.3 NACE