

OPTIWAVE 7300 C

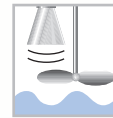
Radar Level Meter

for distance, level and volume of liquids, pastes and solids

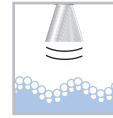


Designed to satisfy better than any other radar

For all applications



Objects in tank



Foam



Agitated surface

Setup-Wizard easier than ever before



- Electromagnetic flowmeters
- Variable area flowmeters
- Mass flowmeters
- Ultrasonic flowmeters
- Vortex flowmeters
- Flow controllers

Level measuring instruments

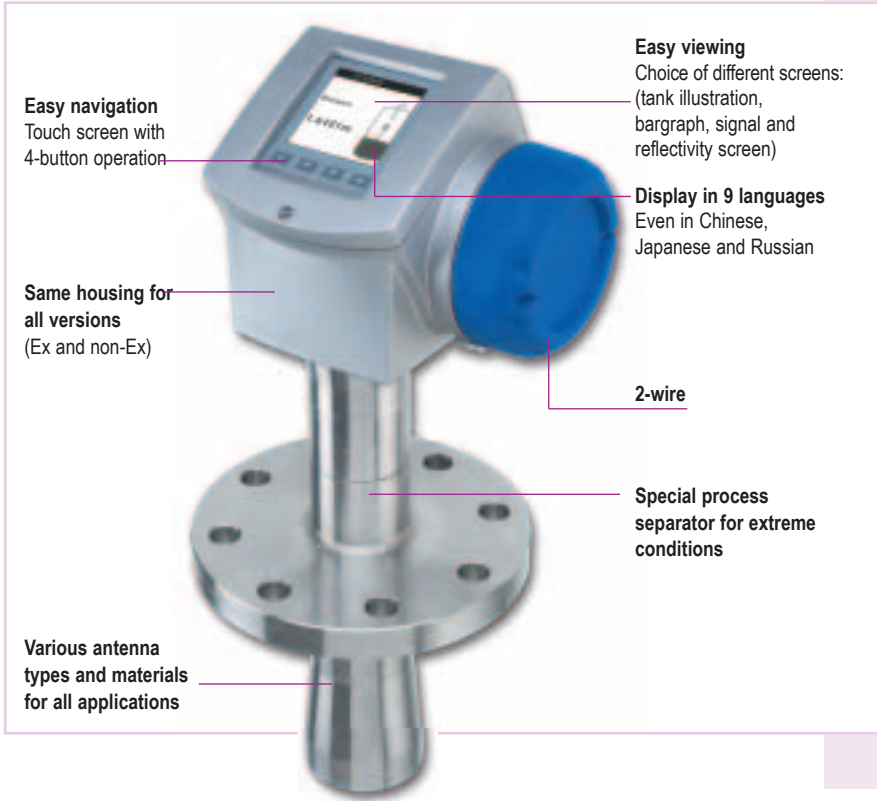
- Pressure and temperature
- Heat metering
- Communications technology
- Switches, counters, displays and recorders
- Engineering systems & solutions



OPTIWAVE

works better than any radar ever before

In contrast to earlier radar devices, the new OPTIWAVE with its more advanced design solutions is able to operate over a larger bandwidth. This ensures a sharper resolution and higher accuracy. The higher signal dynamics of OPTIWAVE allow the detection of even the smallest level changes.



Easy navigation
Touch screen with 4-button operation

Same housing for all versions
(Ex and non-Ex)

Various antenna types and materials for all applications

Easy viewing
Choice of different screens: (tank illustration, bargraph, signal and reflectivity screen)

Display in 9 languages
Even in Chinese, Japanese and Russian

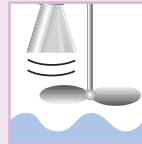
2-wire

Special process separator for extreme conditions

Designed to satisfy better than any other radar

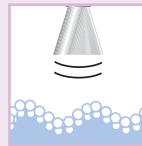
Objects in tank

Agitators and other objects such as struts, inlets, ladders, have less effect on signal reduction. The superior signal is easier to evaluate and the results are more accurate and repeatable.



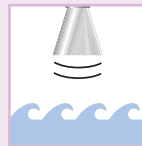
Foam

The better signal permits much clearer location of the product's true surface.



Agitated surface

Better signal production and improved PCB board characteristics allow the OPTIWAVE to determine the true level in the tank despite the agitated surface.



OPTIWAVE

makes level gauging easier than ever before

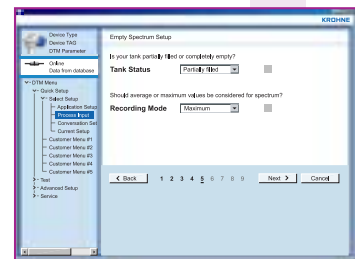
Wizard works wonders

Setting up a 2-wire level gauge couldn't be easier: Simply fit the gauge to the tank, wire it up and switch it on:

- Step 1** – OPTIWAVE tests itself to make sure its electronics are working perfectly.
- Step 2** – OPTIWAVE's Wizard walks you through a simple series of questions to define your tank and the product you want to measure.
- (Step 3)** – That's all you need. Your OPTIWAVE is already measuring.

Online help

Not certain what to do? You don't need a handbook. Simply wait 10 seconds, the help screen will appear and tell you what to do.



Process control

The easy-to-understand DTM screens make process setup, process analysis and also process control easier than with any other device.

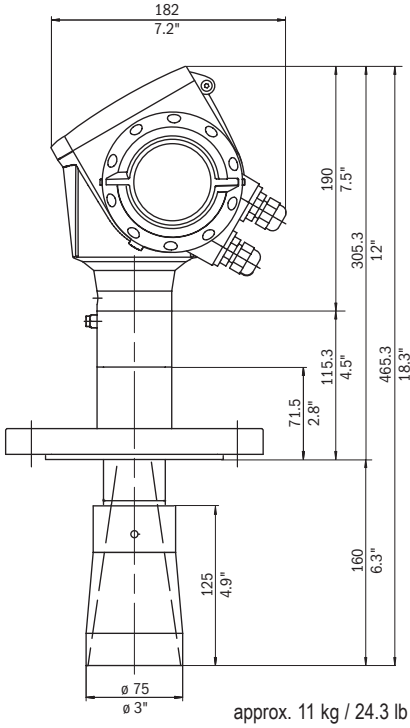


Technical data

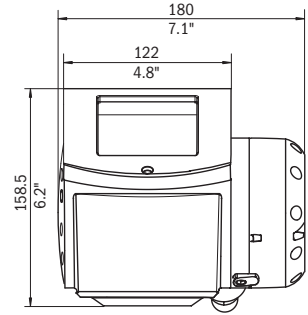
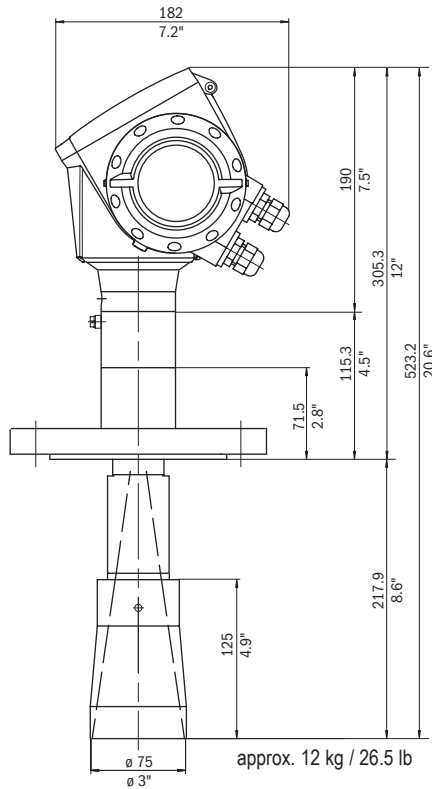
Input		
Function		K-band FMCW radar
Parameter		Level, distance, volume and reflectivity
Min. tank height		0.5 m / 1.5 ft
Max. measuring range		40 m / 131 ft
Blocking Distance (dead zone)		Antenna extension length + antenna length + 0.1 m / 4"
Output		
Output signal	Output 1	4 ... 20 mA HART® or 3.8 ... 20.5 mA acc. to NAMUR NE 43
Accuracy		0.05% (rel. 20 mA; 20°C / 68°F)
Resolution		±2 µA
Temperature drift		Typically 50 ppm/K
Error signal		High: 22 mA; Low: 3.6 mA acc. to NAMUR NE 43
Max. Load		350 ohm
Measuring accuracy		
Reference conditions acc. to IEC770	Temperature	+20°C ±5°C / +68°F ±9°F
	Pressure	1013 mbar abs. ±20 mbar / 14.69 psig ±0.29 psig
	Relative air humidity	60% ±15%
Resolution		1 mm / 0.04 "
Accuracy		±3 mm / ±0.12"
Beam angle	DN 40 / ANSI 1 1/2"	20°
	DN 50 / ANSI 2"	15°
	DN 80 / ANSI 3"	10°
Application conditions		
Temperature	Ambient temperature	-40...+80°C / -40...+175°F; EEx i: -40...+60°C / -40...+140°F
	Storage temperature	-40...+85°C / -40...+185°F
	Flange temperature	-40...+150°C / -40...+300°F (Ex: refer to relevant device's approval and temperature class)
Thermal shock resistance		100°C/min
Process conditions	Operating pressure	-1...40 bar / -14.5...580 psig; subject to process connection used and flange temperature
	Dielectric constant	≥1.5
Vibration resistance		IEC 68-2-6 and prEN 50178 (10...57Hz: 0.075 mm / 57...150 Hz: 1 g)
Protection category		IP 66/67 equiv. to NEMA 6-6X
Mechanical data		
Material	Housing	Aluminium
	Wetted parts	Stainless steel (1.4404 / 316L); Hastelloy C-22 (2.4602)
	Process fitting	Stainless steel (1.4404 / 316L); Hastelloy C-22 (2.4602)
	Gaskets	Viton (-40...+150°C / -40...+300°F); Kalrez 6375 (-20...+150°C / -5...+300°F)
Process connection	Thread	G 1 1/2"; NPT 1 1/2"
	Flange	DN 40...DN 150 (PN 40 / PN 16); 1 1/2"...8" (150 lb / 300 lb); 10 K (40...100A)
Electrical connection		
2-wire power supply	Terminals output 1	
	Non-Ex / EEx i	24 V DC (14 ... 30 V DC)
	EEx d	24 V DC (20 ... 36 V DC)
Cable entry		M20x 1.5; NPT 1/2"; G 1/2"
Terminals		0.5...1.5 mm ²
Human machine interface		
Display		9 lines, 160x160 pixels in 8-step greyscale with 4-button keypad
Operating languages		English (UK), German, French, Italian, Spanish, Portuguese, Japanese, Chinese (Mandarin), Russian
Approvals		
	Overfill protection	WHG
	ATEX	ATEX II G/D 1, 1/2, 2 EEx ia IIC T6; ATEX II G/D 1/2, 2 EEx d ia IIC T6
	FM	IS class I Div. 1 Gr. A...G; XP class I Div. 1 Gr. A...G
	CSA	IS class I Div. 1 Gr. A...G; XP class I Div. 1 Gr. A...G

Dimensions and weights

Flange (Antenna DN 80)



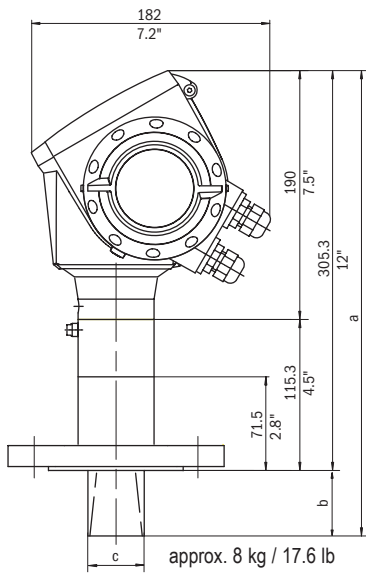
Antenna DN 80 with antenna extension



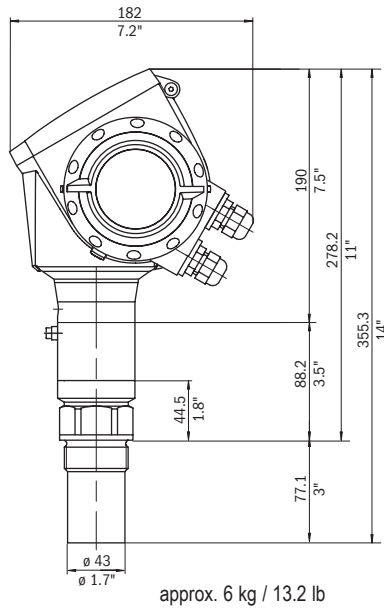
Note:
Cable glands are not delivered with the device.

Note:
Additional antenna extensions of 105 mm / 4.1 inch length are available.

Flange (Antenna DN 40/50)



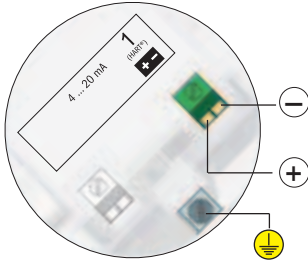
Thread



Antenna type	c mm / inch	b mm / inch	a mm / inch
Antenna DN 40	39 / 1.5	38.5 / 1.5	343.8 / 13.5
Antenna DN 50	43 / 1.7	50 / 2	355.3 / 14

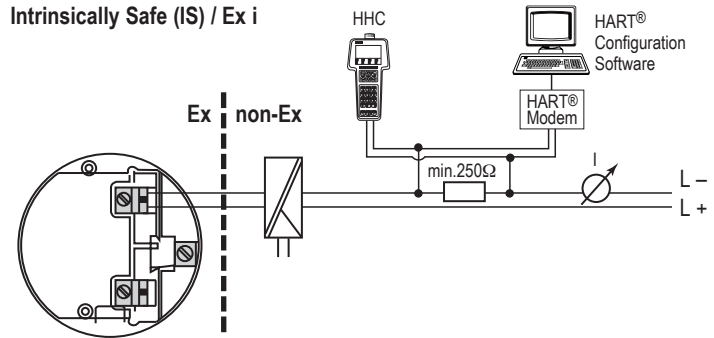
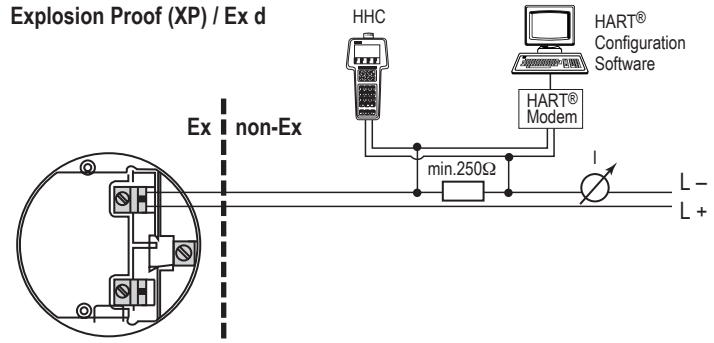
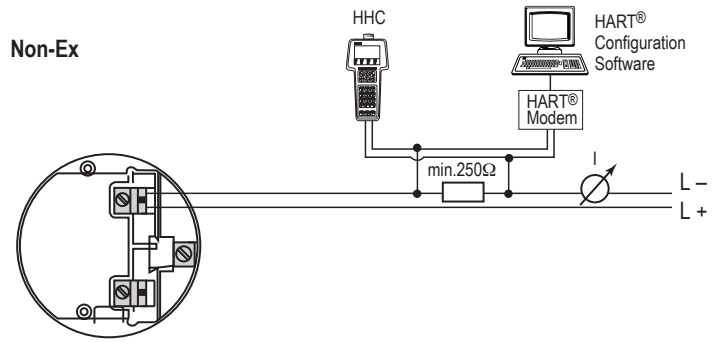
Dimensions in mm and inch

Electrical connection and wiring



Output 1
 4 ... 20 mA/HART
 or
 3.8 ... 20.5 mA/HART
 acc. to NAMUR NE 43

Note: Other options how to connect the HHC (Hand Held Communicator) and modem to the HART® loop are available.



State-of-the-art with PACTware

OPTIWAVE is PACTware-ready. Each device is supplied ex-factory with the appropriate DTM.

A DTM (Device Type Manager) is a device driver making available the device functionality independent from the FIELDBUS protocol and providing a graphical user interface optimized for device operation and configuration.

Simple on-screen and intuitive setup procedure for devices without a display, or for setup from the Central Control Room. Summarized setup provides perfect control of initial input, and guarantees perfect results.

All features of PACTware are fully supported:

- Online device setup
- Displays measured values
- Records measured information during operation
- Shows status of device
- Gives stepwise setup with on-screen progress check
- Displays summary of setup selection for final supervision

