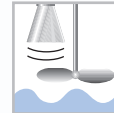


## OPTIWAVE 7300 C

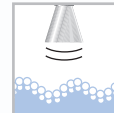
**Radar Level Meter  
for distance, level and volume  
of liquids, pastes and solids**

**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

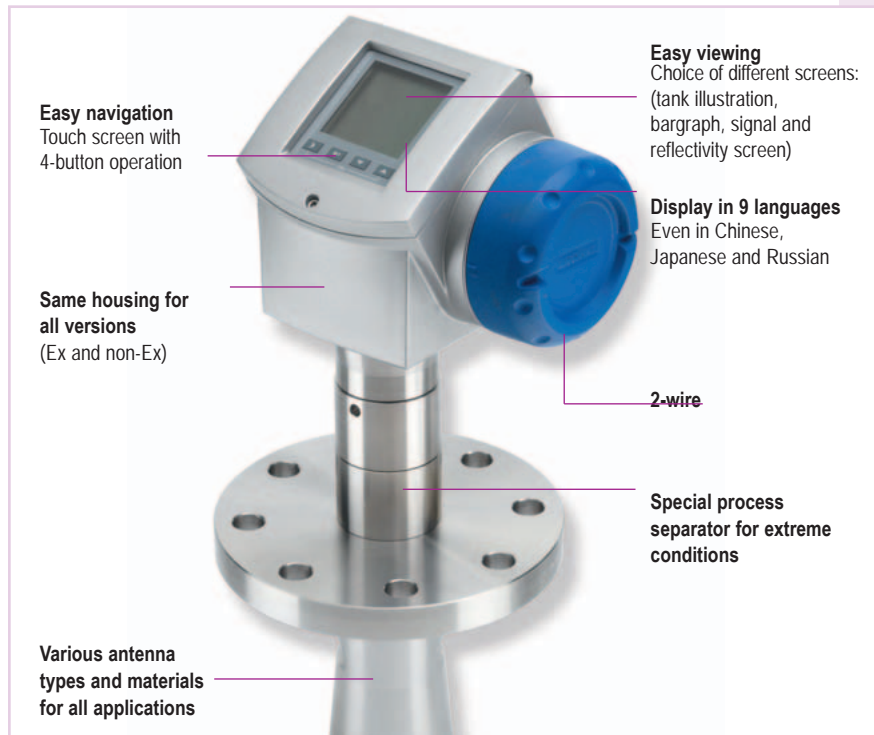
Pressure and temperature  
Heat metering  
Communications technology  
Switches, counters, displays and recorders  
Engineering systems & solutions



# OPTIWAVE

## works better than any radar ever before

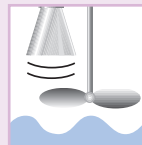
In contrast to earlier radar devices, the new OPTIWAVE with its new components and more advanced design solutions is able to operate over a larger bandwidth: This ensures a sharper resolution and higher accuracy. The higher signal dynamics of OPTIWAVE allow the detection of even the smallest level changes.



## Designed to satisfy better than any other radar

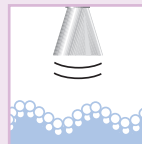
### Objects in tank

Agitators and other objects such as struts, inlets, ladders, have less effect on signal reduction. The better 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

The better signal production and the better 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:

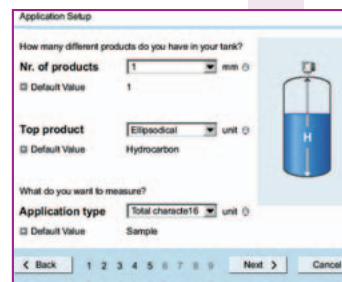
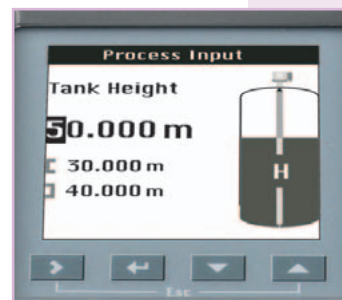
- Step 1** – OPTIWAVE tests itself to make sure its electronics are working perfectly.
- Step 2** – OPTIWAVE's Wizard walks you through a simple series of questions to define your tank and the product you want to measure.
- (Step 3)** – That's all you need. Your OPTIWAVE is already measuring.

### 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.



**Input**

Function	K-band FMCW radar
Parameter	Level, distance, volume and reflectivity
Min. tank height	1.5 ft / 0.5 m
Max. measuring range	131 ft / 40 m
Blocking Distance (dead zone)	Antenna extension length + antenna length + 4" / 0.1 m

**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; 68°F / 20°C)
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	+68°F ±9°F / +20°C ±5°C
	Pressure	14.69 psig ±0.29 psig / 1013 mbar abs. ±20 mbar
	Relative air humidity	60% ±15%
Resolution		0.04 " / 1 mm
Accuracy		±0.12" / ±3 mm
Beam angle	ANSI 1 1/2" / DN 40	20°
	ANSI 2" / DN 50	15°
	ANSI 3" / DN 80	10°

**Application conditions**

Temperature	Ambient temperature	-40...+175°F / -40...+80°C; EEx i: -40...+140°F / -40...+60°C
	Storage temperature	-40...+185°F / -40...+85°C
	Flange temperature	-40...+300°F / -40...+150°C (Ex: refer to relevant device's approval and temperature class)
Thermal shock resistance		100°C/min
Process conditions	Operating pressure	-14.5...580 psig / -1...40 bar; subject to process connection used and flange temperature
	Dielectric constant	≥ 1.8
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)
		*For corrosive and aggressive products coated antenna in PFA, silver, gold and platinum available.
	Process fitting	Stainless steel (1.4404 / 316L); Hastelloy C-22 (2.4602)
	Gaskets	Viton (-40...+300°F / -40...+150°C); Kalrez 6375 (-5 ...+300°F / -20...+150°C)
Process connection	Thread	G 1 1/2; 1 1/2 NPT
	Flange	1 1/2"...8" (150 lb / 300 lb) / DN 40...DN 150 (PN 40 / PN 16); 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		M20x1.5; 1/2 NPT; G 1/2
Terminals		0.5...1.5 mm²

**Human machine interface**

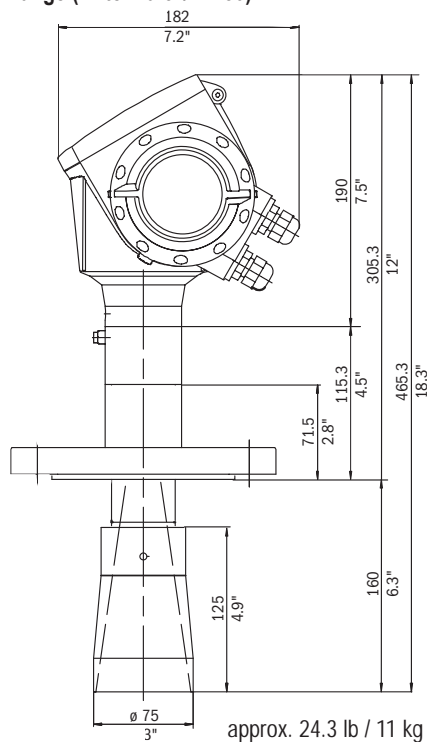
Display	9 lines, 160x160 pixels in 8-step grey scale with 4-button key pad
Operating languages	English (UK), German, French, Italian, Spanish, Portuguese, Japanese, Chinese (Mandarin), Russian

**Approvals**

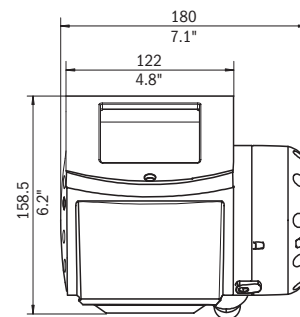
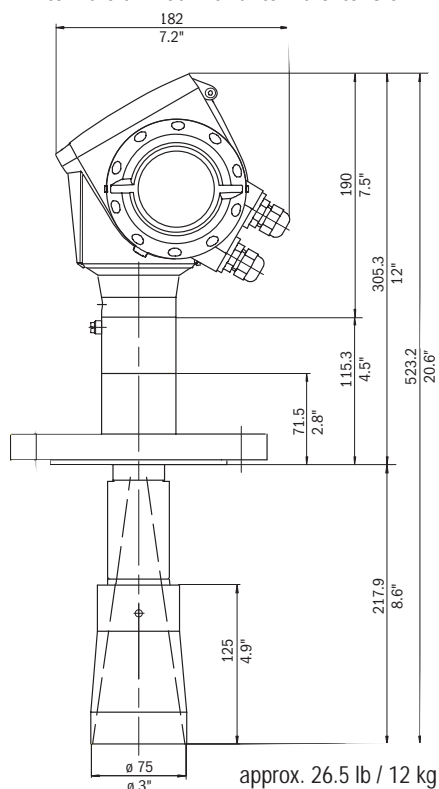
Overfill protection	WHG
ATEX	ATEX II G/D 1, 1/2, 2 EEx ia IIC T6...T1; ATEX II G/D 1/2, 2 EEx d ia IIC T6...T1
FM / CSA	XP / IS Class I, II, III Div. 1, NI Div. 2 Group A...G except CSA Group B...G
FM	Class I Zone 0 AEx d [ia] IIC
FM	Class I Zone 2 GR IIC
CSA	Class I Zone 0 Ex d [ia] IIC
FCC	FCC Part 15 for Horn antenna and only when device is installed within closed metal tanks as indicated in Certification filing (see Installation manual).

**Dimensions and weights**

**Flange (Antenna 3"/DN 80)**



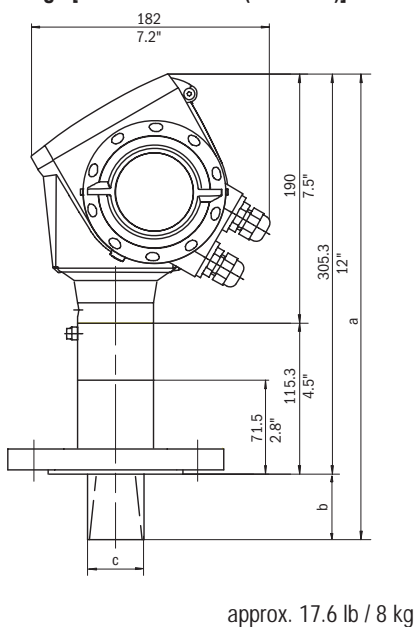
**Antenna 3"/DN 80 with antenna extension**



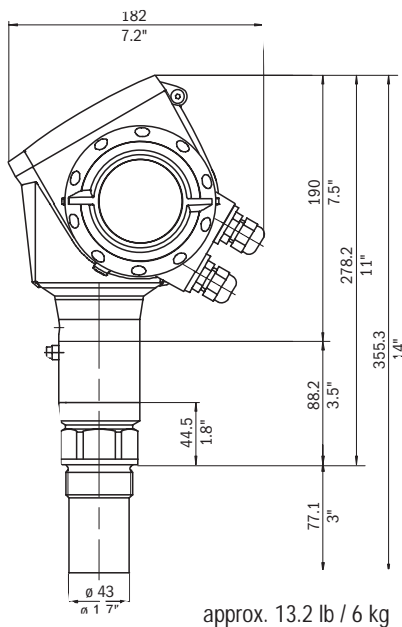
**Note:**

Cable glands are delivered with non-Ex, EEx i and EEx d approved devices. Non-Ex and EEx i fittings are plastic and EEx d fittings are metal. Non-Ex fittings are black and EEx i fittings are blue. The diameter of the outer sheath of the cable must be 0.2...0.5" or 6...12 mm. Cable glands for FM/CSA approved devices must be supplied by the customer.

**Flange [Antenna 1 1/2" / 2" (DN 40/50)]**



**Thread**



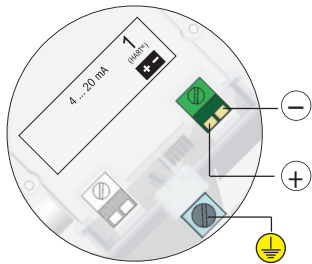
**Note:**

Additional antenna extensions of 4.1" / 105 mm length are available.

Antenna type	c inch / mm	b inch / mm	a inch / mm
Antenna 1 1/2"	1.5 / 39	1.5 / 38.5	13.5 / 343.8
Antenna 2"	1.7 / 43	2 / 50	14 / 355.3

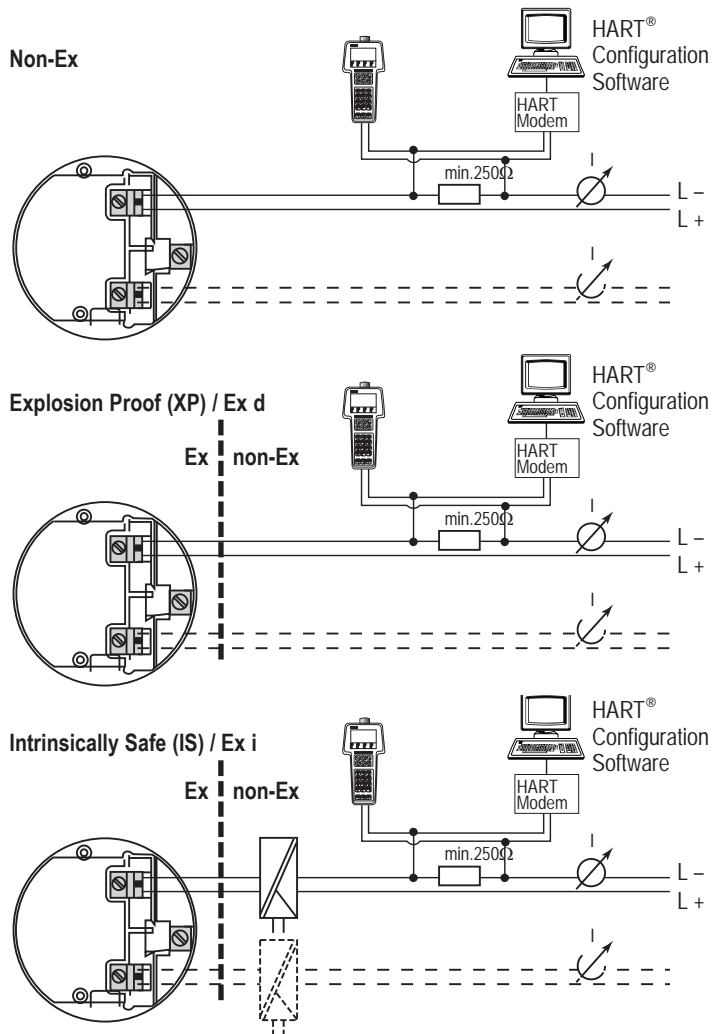
Dimensions in inch and mm

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 to connect the HHC (Hand Held Communicator) and modem to the HART® loop are available.

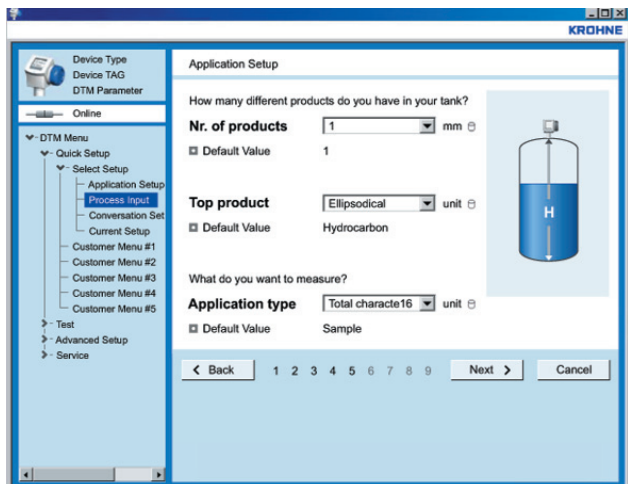


State-of-the-art with PACTware

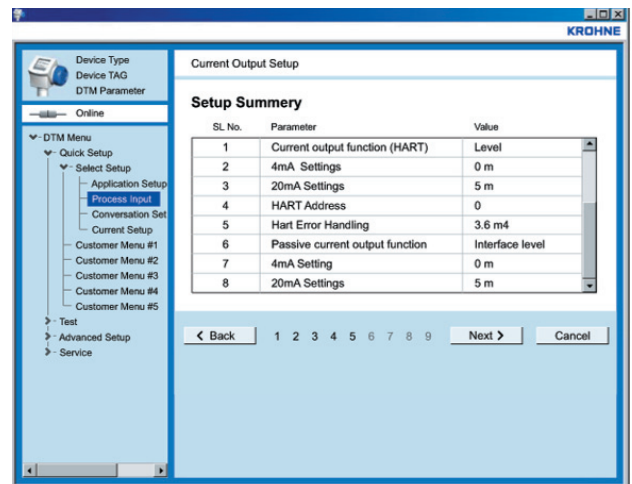
OPTIWAVE is PACTware-ready. Each device is supplied ex-factory with the appropriate DTM. A DTM (Device Type Manager) is a device driver making available the device functionality independent from the FIELDBUS protocol and providing a graphical user interface optimized for device operation and configuration. 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 a guarantee for perfect results.

All features of PACTware are fully supported:

- Online device setup
- Displays measured values
- Records measured information during operation
- Shows status of device



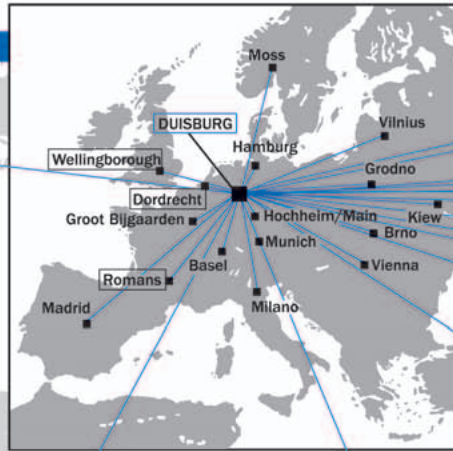
Gives stepwise setup with on-screen progress check



Displays summary of setup selection for final supervision







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