

WaveRadar REX

A stable and proven system for reliable measurement of waves, sea level and air gap in offshore, maritime and coastal environments.



Stable in all weather conditions



Suitable for permanent or temporary installation



No recalibration required



Accurate to mm precision

Microwave radar is a perfect medium for the extreme demands of the harsh offshore environment. The downward looking non-contact sensor uses a microwave radar technique to measure distance to the sea surface. Sampled at high frequency, the radar pulses provide an exceptionally stable and accurate measurement of sea surface profile. The microwave signals are very low in power and present no safety hazard. Information

is continuously collected and processed to provide precision distance measurement outputs to a data bus. Output values can be displayed and stored to industry standards on a remote PC or may be interfaced to multiparameter environmental monitoring systems. WaveRadar EX provides digital (RS-232) and analogue (current loop) outputs as standard with either AC (M) or DC (D) power options.

Technical specifications

Performance

Measuring range	3 - 65 metres to surface
Accuracy	Range < 50m = +/-6mm Range > 50m = +/-12mm
Maximum deviation	Range < 50m = +/-1mm
Beam Width	10 degrees included angle

Radar transmission

Transmitter frequency	9.7 to 10.3 GHz (linear sweep)
Effective radiated power	< 0.5 mW
Antenna type	parabolic reflector

Radar measurement

Measuring frequency	10 Hz
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Data output

Data bus	digital two wire FSK field bus binary data outpu
Connector cabling	Eex "e" (non intrinsically safe)
Output data rate	2 to 10 Hz (4 Hz default) factory selectable
Digital from FBM	RS-232 at 4800 baud
• Type	• 8 data bits, no parity, one stop bit
• Protocol	• Simplex
Analogue output	1 x current loop
• Range	• 4 - 20 mA
• Resolution	• 16 bits
• Refreshing rate	• 4 Hz (default)
• Connector cabling	• Eex "e" (non intrinsically safe)

Power supply - mains version [M]

Voltage	100 to 240 V AC max 50 - 60 Hz
Radar power rating	80 W maximum
Current consumption	2 A max: operating < 1 A

DC Version [D]

Voltage	20 to 28 V DC
Radar power rating	30 W maximum
Current consumption	1.25 A max: operating < 650 mA

Mechanical

Overall dimensions	635 x 440 x 440 mm
Weight	26 kg
Measurement datum	upper surface of TRL/2 adapter
Materials (external)	stainless steel 316 grade, anodised aluminium alloy ss4253, PTFE (teflon)

Environmental

Operating and storage temperature	40 °C to +70 °C
Environmental sealing	IP 67
CE conformity - approval number	0575
BASEEFA03ATEX (standard) - code	EX II 1/2G EEx d IIB T6 (T _{amb} = 40 °C to +70 °C)

Hazardous zone certification

Radar unit type no.	TH2015RTG3930
Certification no.	BASEEFA03ATEX0071X

