TGD-R97™

Tank Level Radar

Product data sheet

Main features:

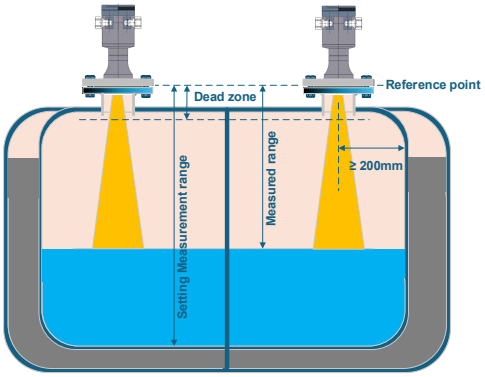
- 80 GHz tank radar
- Applicable for oil, product & chemical tankers
- Non-contact measuring, no wear and tear
- High accuracy
- Smaller measuring dead zone
- Customized variations
- Easy installation & maintenance
- Measuring range 0-30m

General description

The API Marine Tank Radar is especially designed for marine applications. The tank radar is a very compact solution with measuring range up to 30 meters. It can be delivered with flange size DN-80, and as such with small on-deck space requirements.

The tank radar is very easy to install and service friendly with easy access to main electronics from the main housing without having to access or open the tank. For ease of service and set-up the radar has the possibility for all necessary settings and adjustments through the main electronics. The tank radar provides a standard analogue output of 4-20mA to the control cabinet. The radar has a built-in display which at all times gives the current level in the tanks.

The radar level transmitter antenna emits narrow pulses, which will be transmitted via the antenna. The micro wave will be reflected at the surface of a medium. The reflected wave will be received by the antenna system and fed into the electronic circuit, which automatically turns it into a level signal.

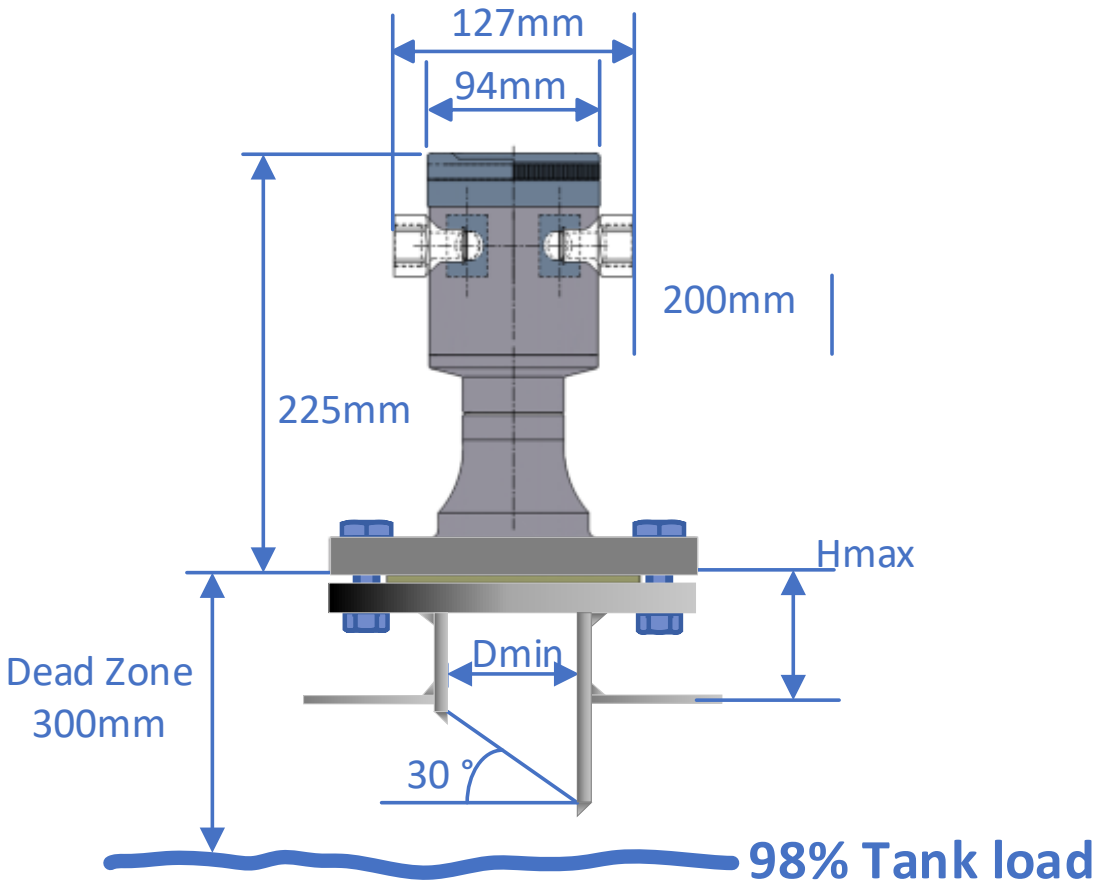


Measuring reference is the sealing surface of a flange.

Note: when using the radar level transmitter, the highest level of medium must be kept out of the dead zone.

Technical specifications

Input/Output signal:	24VDC/4-20mA HART (2-wire)
Power supply voltage:	16 – 31 VDC
Power Consumption:	Less than 0,75 W
Measuring range max.:	30m (depending on working conditions)
Frequency range:	80 GHz
Accuracy: - Level	+/- 3mm (for liquids), +/-10mm (for solids)
Repeatability:	+/-1mm
Operating temperature:	-40°C to +50°C
Relative ambient humidity:	Up to 98% at 40°C
Protection rate:	IP67
Housing type:	AISI316L
Wetted parts:	AISI316L/PTFE
Process connection:	Flange DN80
Cable entry:	M20, M24, PG 13,5 and others as requested. Protected hoze optional supply
Media conditions:	
a) Temperature:	Flange temperature: -40°C to +200°C Process temperature: -200°C to +200°C Thermal shock resistance: 100°C/min
b) Pressure:	Operating pressure: -1 to 4,0 ATM
c) Density:	Density above 0,3 g/cm^3
Ex protection:	II 1G/D Ex ia IIC T6….T2 Ga Ex ia IIIC T80^{o}C….T280^{o}C Da
Radar beam width:	3^o



Flange dimensions [mm]						
Flange nominal size	Flange outer diameter	Diameter of bolt circle	Diameter of bolt holes	Flange thickness	Dmin	Hmax
DN80/PN16	200	160	18	20	Ø80	100