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Cargo Tank Measuring System

PULS RADAR TYPE (PS60 SERIES) FOR CARGO TANK MONITORING SYSTEM (HANLA-VEGA)





GENERAL

Extremely short microwave inpulses are emitted by the antenna system to the measured product, reflected by the product surface and received again by the antenna system. They spread with ligh velocity and the time from emission to reception of the signals is proportional to the level in the vessel. A special time spreading procedure enables the reliable and precise measurement if the extremely short times.

STANDARD MODEL AND SPECIFICATION

Model		1		1	1	T
	PULS61	PULS 62	PULS 63	PULS 65	PULS 66	PULS 68
Application	aggresive liquids in samll vessels under easy process conditions	storage and process vessels under arduous process conditions	aggresive liquids under arduous process conditions	aggresive liquids under easy process conditions	storage and process vessels under arduous process conditions	large solid vessels under aroduous process conditions
Measuring range	up to 20m	up to 35m	up to 20m	up to 35m	up to 35m	up to 70m
Process temperatue	-4080°C	-40200°C	-40150°C	-40150°C	-40500°C	-40200°C
Process pressure	-13bar	-140bar	-116bar	-116bar	-1160bar	-140bar
Accuracy	±5mm	± 3 mm	<u>+</u> 3mm	<u>+</u> 10mm	±10mm	<u>+</u> 15mm



APPRICATIONS

Two different emitting frequencies are available for these applications, the compact, high frequency sensors are particulary suitable for applications for whinch high accuracy is reached. Low frequency C band sensors can penetrate foam and strong condensation and are thus particularly suitable for arduous process conditions. Unaffected by steam, gas composition, pressure and temperature changes the sensors detecr the product surface of different products reliably.

FEATURES

- Small housing and small protection collection - Low cost with high quality - Two-wire technology loop powered Accurate and rugged design - Adjustment choice

The radar sensors work with low emitted power in the C and K-band frequency range. The proven ECHOFOX signal processing selects the correct level echo reliably from a number of false reflections. An adjustment with empty and full vessel is not necessary.

COMUNICATION AND SAFETY UNIT



TEMP. & PRESS. TRANSMITTER



FOR IG PRESSURE TRANSMITTER MODEL : TLP100S RANGE : 800~2000mbar ACCURACY : ±0.2% FOR I.G PRESSURE



SPECIFICATIONS

- Power Supply : 24VDC

- Cargo Tank : Up to 24 (Radar)

- Ballast & Other Tank : Up to 31

3 X RS232 / 485 / 422 (Output)

Relay output : 4 X NO / NC

- Protocol : Modbus RTU Operating temperature : 0~60 °C

- Communication : 1 X RS232 / 485 / 422 (Input)

SPECIFICATION FOR TEMPERATURE TRANSMITTER MODEL : TLP100S ACCURAY : $\pm 0.3D \, \text{eg}^{\circ}\text{C}$ ACCURACY : -20~80°C EEX ia IIB T4 PT 1000 RTD MAX. 3 POINTS OF TEMP.

DECK MOUNTING METHOD FOR RADAR, TEMPERATURE AND PRESSURE SENSOR

