

Series 500

Liquid Level Transmitters

Hydrostatic Depth Measurement

Local & Remote Indication

4...20mA & RS485 outputs

Compatible with Digital Monitoring Systems

Sea Water, Oil and Chemical Resistant

DNV Type Approved / LRS Marine Certified

ATEX Intrinsic Safety Certified



Overview

The *Series 500* is a pressure transmitter suitable for hydrostatic depth measurement which continuously outputs both analogue (4...20mA) and digital (RS485) signals simultaneously. The temperature of the process can also be monitored.

The RS485 interface provides a communication link to digital monitoring systems, such as the *GWK Tank Gauging System*. The transmitter's parameters, including zero and span, can also be adjusted via the RS485 interface.

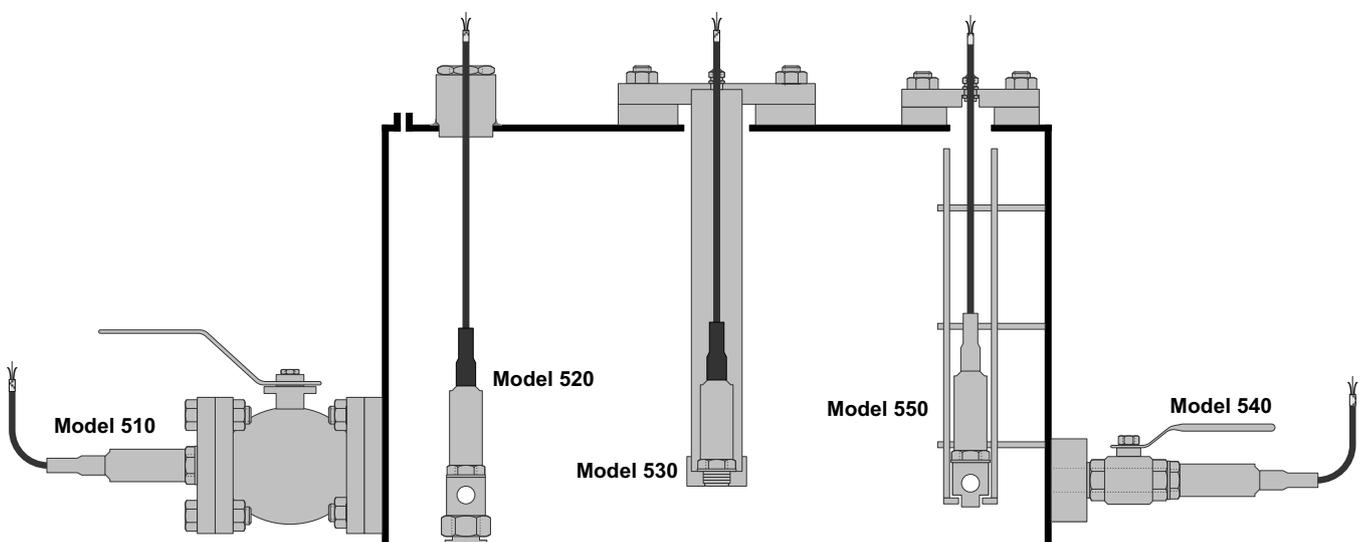
This transmitter offers a very high accuracy over a wide temperature range, an excellent repeatability and very long term stability. Large numbers of transmitters can be interconnected in a multi-drop configuration to help cut down on cabling.

The sensor is isolated from the process by a stainless steel diaphragm and a filling liquid. The electronics are located within the hermetically sealed transmitter housing which gives the *Series 500* an excellent resistance to shock and vibration.

The electronics is a state-of-the-art signal processing unit fitted with a fast micro-controller allowing the compensation of drift effects due to temperature on the sensor signal, over a wide temperature range with a fast response time.

The mounting adaptability of the *Series 500* makes it ideally suited for use in tanks of all shapes and sizes onboard ships and in a wide range of industrial applications from water to stringent Chemical processes.

Mounting Options



Specifications

Measurement characteristics

Pressure range	0...20mH ₂ O
Overpressure	At least 1.5 times nominal value
Accuracy	± 0.25% FS
Hysteresis & Repeatability	± 0.05% FS
Long term stability	± 0.25% FS
Response time	25 ms

Temperature influence (in compensated range)

Zero	TC ± 0.2% FS
Span	TC ± 0.2% FS

Temperature

Compensation	-10°C...70°C
Operating	-20°C...85°C
Storage	-40°C...100°C

Materials specification

Diaphragm/Port/Housing	Stainless Steel 316L
Cable	Polyurethane (vented)

Electrical specification

Supply voltage	8...28VDC (4...20mA)
Output - Analogue	4...20mA
Output - Digital	RS485
Insulation Resistance	100MΩ, 50VDC
Load Resistance	(U – 8V) / 0.02A (Ω)
Protected against reverse signal polarity	

Oil filling

Silicon Oil Temperature range from -30°C to +125°C

Mounting Options

Model 510	External flange mount (typically DN25)
Model 520	Internal (submersible) running nut/boss connection
Model 530	Internal (submersible) pole mount
Model 540	External ¼" BSP male connection
Model 550	Internal (submersible) guide pipe

EMC

Influence of EMC	Less than 0.15% FS
Conformity	EN 61326

Intrinsic Safety

Explosion Protection	Ex ia IIB T4
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Environmental specification

Vibrations	20g, 20...500Hz
Shocks	30g, 11ms

Protection class

External Mount	IP 68
Internal Mount	IP 68

Physical characteristics

Weight	200g
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Ordering Details

Please specify the following information when requesting a quotation or placing an order:

Tank Name	Tank Description	<i>Example - Marine</i>	<i>Example - Industrial</i>
Model	510, 520, 530, 540, 550	520	540
Cable Length	m	5m	5m
Tank Height	mm	2000mm	2000mm
Sensor Height	mm	50mm	50mm
Liquid	Water, Fuel Oil, etc.	Fuel Oil	Fresh Water
Specific Gravity	Fresh Water = 1.00	0.85	1.00
Optional Extras	LI02 Digital Indicator, Penetration Gland	LI02 + Pen. Gland	LI02 + Ball Valve



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