**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**

Model 510

Model 520

Model 530

Model 550

Model 540
Specifications

Measurement characteristics
Pressure range 0...20mH₂O
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

Ordering Details

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

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

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 ¾” 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

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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Series 500 Data Sheet (02/2019)