PX633
Submersible Level Transmitter

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Safety Precautions

⚠️ Pressure transmitter should be installed by professional engineers or qualified technical personnel. The product specifications and important information provided on the label should be carefully read before installation and wiring operations.

⚠️ Pressure transmitter is powered by an external power supply. The power supply circuit should comply with energy-limiting circuit by relevant standards, and pay attention to the high voltage circuits that may exist.

⚠️ The maximum static pressure overload has been stated on the product label, the process maximum pressure should not exceed the full span of sensor.

⚠️ When using pressure transmitter in hazardous areas, installation, use and maintenance should also comply with the operation manual and relevant requirements of national standards.

Product usage

Protection sleeve

Submersible Level Transmitter should be suspended inside the protective sleeve to avoid the impact on the level transmitter from fast flowing medium.

Top end of protection casing should extend above the level surface, to avoid the influence on measurement accuracy from surface disturbances.

Level transmitter probe should be higher than the bottom, at least 20cm, to avoid the blockage of impurities and sand.

Counter weight

In cases where a protective tube is unable to be used, a counterweight can be used to stabilize a transmitter in fast flowing areas.

Wire rope supporting

For products with more than 50 meters cable, the wire rope and cable bundled multi-point should be used to strengthen the level transmitter support.

Clamps Installation

Clamps can be used to fix and support the entire product for direct cable connection level transmitter. Cable outlet should be of sufficient length to be directly connected to the control room, or adapter junction box, avoid bare connections in the field environment.

⚠️ In order to avoid damage to the diaphragm, do not remove the package and cover before installation. Be sure to keep the protective cap installed snugly.

⚠️ The pressure transmitter must be installed and secured against collision or turbulence. At the same time consider the medium flow conditions and other factors on the pressure transmitter location and measurement.

⚠️ During installation or maintenance, the pressure transmitter should be carefully submerged into the medium, to avoid damage to the diaphragm due to impact with the liquid surface.
**Electrical connection**

**Cable outlet**

- Red
- Black
- Blue
- Yellow

**Power supply**

It is recommended to use an independent linear direct-current power supply. Verify that the combined loop resistances (signal cable, display meter, and other equipment) are not too high, so that the voltage supplied to the pressure transmitter meets the normal operating requirements.

- **Standard current signal output**: 12-30VDC

**Grounding**

- Using cable with shielded twisted-pair signal has the best effect. To avoid ground loop, shielded layer adopts single-end grounded.
- Transient protection module is effective only in the case of good grounding. Metal shell and internal grounding terminals are used to the nearest ground directly.

**Maintenance**

Requires no maintenance.

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**External cleaning**

Please notice the following when cleaning:

- Use washing agent which will not damage to the instruments
- Protect process diaphragm from mechanical damage, eg: the mechanical damage caused by sharp objects.
- Mechanical cleaning of metal diaphragm is prohibited.
- Do not point the nozzles to the diaphragm directly when doing internal cleaning by pressure washer.

**Transitnion / storage**

- Do not store outside
- Keep dry and dust-free
- Do not expose to the corrosive medium
- Avoid solar radiation
- Avoid mechanical shock and vibration
- Storage temperature: -30-80°C
- Maximum relative humidity: 95%

**EMC statement**

- This pressure transmitter conforms to 2014/30/EU EMC standard and bears the CE mark
- Users need to ensure the whole equipment conform to all the applicable standards.

**Retransport**

- Remove all media from surfaces of the pressure transmitter. Always refer safety data sheet for proper personal protection equipment when handling dangerous medium!
- Please adopt proper package to avoid damage in transportation.

**Discard disposal**

- The instrument is not restrained by WEEE instruction 2002/96/EG and laws of relevant countries.
- Please pass the instrument to specialized recycling companies other than local recycling points.
1. **Cable core structure:**

<table>
<thead>
<tr>
<th>The conductor core</th>
<th>Number of Core * section</th>
<th>number of piles / Diameter</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>5×0.2mm²</td>
<td>7/0.2mm</td>
<td>tinned copper wire</td>
<td></td>
</tr>
</tbody>
</table>

**Insulated wire core**

<table>
<thead>
<tr>
<th>Material</th>
<th>Color</th>
<th>Outer diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE</td>
<td>Yellow, red, green, black, blue</td>
<td>1.4±0.1mm</td>
</tr>
<tr>
<td>Air tube</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>Color</th>
<th>Outer diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>Red</td>
<td>2.2±0.2mm</td>
</tr>
</tbody>
</table>

2. **Cabling and structure**

   Cabling direction: S (counter-clockwise)

   Wrapped in a layer of polyester film after stranded cable

   Structure

3. **Shielding**

   144 Net tinned copper braid shielding, wrapped with a layer of polyester film after knitting.

4. **Sheath**

<table>
<thead>
<tr>
<th>Material</th>
<th>PU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Nominal thickness (mm)</td>
<td>0.6</td>
</tr>
<tr>
<td>Outer diameter</td>
<td>7.3 ± 0.2mm</td>
</tr>
</tbody>
</table>
5. **Function**

<table>
<thead>
<tr>
<th>Function</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Working voltage</strong></td>
<td>Less than 60V</td>
</tr>
<tr>
<td><strong>DC resistance of conductor (20°C)</strong></td>
<td>Less than 89.6Ω/km</td>
</tr>
<tr>
<td><strong>Insulation resistance</strong></td>
<td>Between the cores of cable: Over 1000MΩ/km</td>
</tr>
<tr>
<td></td>
<td>Between the cable cores and the cable of Ground connection: Over 1000 Ω/KM</td>
</tr>
<tr>
<td><strong>withstand voltage</strong></td>
<td>between the cores of cable: 50Hz, 1kV(AC), won't be shrinking in 1minut</td>
</tr>
<tr>
<td></td>
<td>between the cable cores and the cable of Ground connection: 50Hz, 1kV(AC), won't be shrinking in 1minut</td>
</tr>
<tr>
<td><strong>Working temperature</strong></td>
<td>-40 to 80°C</td>
</tr>
</tbody>
</table>
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FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:
1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

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