

# ILS series

## Submersible Level Transmitter



- **Stainless steel, piezo-resistive sensor**
- **Accuracy: <0.1% FS BFSL**
- **Pressure ranges from 1mWG to 100mWG**
- **Various cable lengths**

### Suitable applications

River level  
 Reservoir level  
 Tank level  
 Borehole level  
 Aquifer level  
 Environmental monitoring  
 V-notch weir flow measurement

### Performance

Accuracy (Non-Linearity & Hysteresis) <math>\lt; \pm 0.1\% / FS (BFSL)</math>  
 Setting Errors (offsets) Zero & Full Scale, <math>\lt; \pm 0.5\% / FS</math>  
 Permissible Load  $R_{max} = [(Voltage\ Supply - 9) / 0.02] Ohms</math>  
 Influence Effects Supply <math>\lt; 0.005\% FS / 1V</math>  
 Load 0.05% FSO / kOhm$

### Input Pressure Range

|                          |     |    |     |    |    |    |     |     |
|--------------------------|-----|----|-----|----|----|----|-----|-----|
| Nominal Pressure, Gauge  | mWG | 1  | 2.5 | 5  | 10 | 20 | 50  | 100 |
| Permissible Overpressure | mWG | 20 | 20  | 50 | 50 | 50 | 100 | 100 |

### Output Signals and Supply Voltages

|                    |                |              |              |
|--------------------|----------------|--------------|--------------|
| Wire system Output | Supply Voltage | Connection   | PUR sheath   |
| 2-wire 4-20mA      | 9-32Vdc        | +ve Supply   | Wire Colours |
|                    |                | -ve Supply   | Red          |
|                    |                | Ground       | Blue         |
|                    |                | Cable Screen | White        |
|                    |                |              | Green        |

The ILS is designed for use in continuous submersion in liquids such as water, oil and other non-aggressive chemicals. The submersible uses the latest piezo-resistive media-isolated silicon sensing technology and a stainless steel diaphragm within a 316L stainless steel housing.

It offers excellent stability, repeatability and resolution, as required for use in rivers and reservoirs. This submersible level transmitter is the ideal product for reliable and repeatable hydrostatic level measurement.

The electronics incorporate a microprocessor based amplifier, requiring no adjusting and giving stable electronics.

Each device is temperature compensated, calibrated and supplied with a traceable serial number and calibration data.\*

\*Calibration data is supplied as a sticker affixed to the product packaging - do not discard

Custom versions can be made for particular applications.

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ISO9001 CERTIFIED  
 ILS 2018



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## Submersible Level Transmitter

### Electrical Protection

|                                    |                       |
|------------------------------------|-----------------------|
| Supply reverse polarity protection | No damage/no function |
| Lightning protection               | Internally fitted     |
| Electromagnetic compatibility      | CE Compliant          |

### Mechanical Stability

|           |                       |
|-----------|-----------------------|
| Shock     | 100g / 11ms           |
| Vibration | 10g RMS (20 - 2000Hz) |

### Temperature & Thermal Effects

|                               |                               |
|-------------------------------|-------------------------------|
| Media temperature             | -20°C (Non-freezing) to +60°C |
| Storage temperature           | -20°C to +70°C                |
| Compensated temperature range | 20°C±25°C                     |
| Thermal zero shift (TZS)      | <±0.02%/FS/°C                 |
| Thermal span shift (TSS)      | <±0.01%/°C                    |

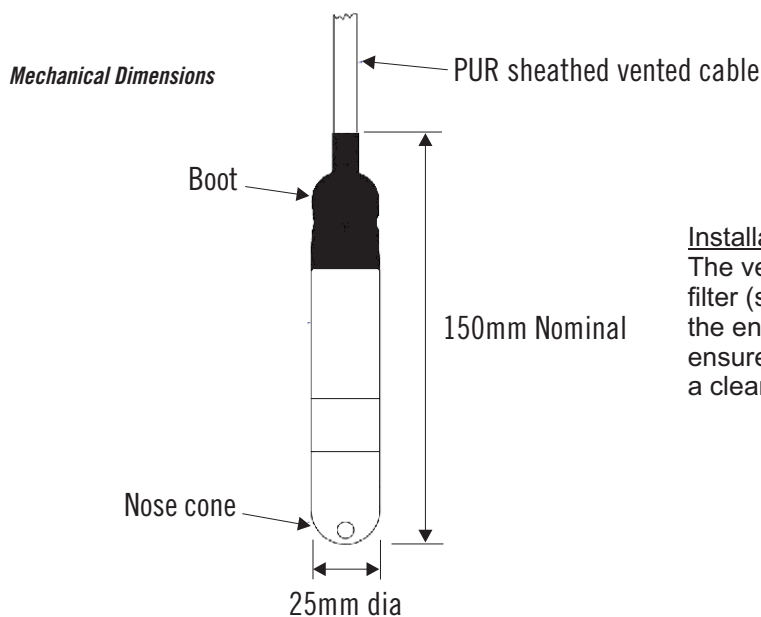
### Material Specifications

|                       |  |
|-----------------------|--|
| Housing               | 316L Stainless Steel                             |
| "O" ring seals        | Viton  |
| Diaphragm             | 316L Stainless Steel                             |
| Cable sheath material | PUR  |
| Media wetted parts    | Housing, "O" ring seal, diaphragm & cable sheath |

### Miscellaneous

|                       |  |
|-----------------------|--|
| Weight                | Transmitter: approx 250g<br>Cable: 48g per metre |
| Current consumption   | Limits at 28mA                                   |
| Installation position | Any, small zero shift when tilted through 90°    |
| Operational life      | > 100x 10 <sup>6</sup> cycles                    |

| Part No       | Pressure Range       | Cable Length | Output |
|---------------|----------------------|--------------|--------|
| ILS-G0100-003 | 0-1mWG (0-39"WG)     | 3M           | 4-20mA |
| ILS-G0250-005 | 0-2.5mWG (0-98"WG)   | 5M           | 4-20mA |
| ILS-G0500-007 | 0-5mWG (0-197"WG)    | 7M           | 4-20mA |
| ILS-G1000-015 | 0-10mWG (0-394"WG)   | 15M          | 4-20mA |
| ILS-G2000-025 | 0-20mWG (0-788"WG)   | 25M          | 4-20mA |
| ILS-G5000-060 | 0-50mWG (0-1970"WG)  | 60M          | 4-20mA |
| ILS-G1002-110 | 0-100mWG (0-3940"WG) | 110M         | 4-20mA |



### Installation Note.

The vented cable is fitted with a filter (shown below) to prevent the entry of moisture. If removed, ensure vent tube is positioned in a clean, dry area.

