



ILSU series

Submersible Level Transmitter



- **Stainless steel, piezo-resistive sensor**
- **Accuracy: <0.1% FS BFSL**
- **Depth ranges from 0-48" (0-4ft) to 0-3600" (0-300ft) WG**
- **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) $\lt; \pm 0.1\% / FS (BFSL)$
 Setting Errors (offsets) Zero & Full Scale, $\lt; \pm 0.5\% / FS$
 Permissible Load $R_{max} = [(Voltage\ Supply - 9) / 0.02] Ohms</math>
 Influence Effects Supply $\lt; 0.005\% FS / 1V$
 Load 0.05% FSO / kOhm$

Input Pressure Range

| | | | | | | | | |
|--------------------------|--------|-----|-----|------|------|------|------|------|
| Nominal Pressure, Gauge | inchWG | 40 | 100 | 200 | 400 | 800 | 1000 | 4000 |
| Permissible Overpressure | inchWG | 800 | 800 | 1000 | 1000 | 1000 | 2000 | 2000 |

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 ILSU 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 certificate.

Custom versions can be made for particular applications.

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ISO9001 CERTIFIED

www.cynergy3.com



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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 9oz (250g) Cable: 1.7oz (48g) per yard (metre) |
| Current consumption | Limits at 28mA |
| Installation position | Any, small zero shift when tilted through 90° |
| Operational life | > 100x 10 ⁶ cycles |

| Part No | Pressure Range | Cable Length | Output |
|----------------|----------------|--------------|--------|
| ILSU-Gi048-003 | 0-48" WG | 10ft | 4-20mA |
| ILSU-Gi120-005 | 0-120" WG | 16ft | 4-20mA |
| ILSU-Gi240-008 | 0-240" WG | 26ft | 4-20mA |
| ILSU-Gi360-016 | 0-360" WG | 52ft | 4-20mA |
| ILSU-Gi720-025 | 0-720" WG | 82ft | 4-20mA |
| ILSU-Gi1K8-060 | 0-1800" WG | 196ft | 4-20mA |
| ILSU-Gi3K6-110 | 0-3600" WG | 360ft | 4-20mA |

(Custom ranges and outputs available on request)

