ILTSU series

Submersible Dual Level & Temperature Transmitter



- ***Stainless steel, piezo-resistive sensor***
- ***Level accuracy: <0.1% FS BFSL***
- ***Depth ranges from 0-48" (0-4ft) to 0-360" (0-30ft) WG***
- ***Temperature range: -20 to +60ºC***
- ***Dual independent 4-20mA outputs***

Suitable applications

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

Pressure Ranges

Nominal Pressure, Gauge	inchWG	40	200	400
Permissible Overpressure	inchWG	400	2000	2000

Temperature Range

Temperature range	ºC	-20 to +60

Level Performance

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

Temperature Performance

Measurement Accuracy	(mA output/2000) or 5µA (whichever is the greater)
Thermal drift	1 µA/ºC
Loop Voltage effect	0.2µA/V
Maximum output load	[(Vsupply-10)/21] kOhms (Example: 700 Ohms @ 24V)
Output Timing	Transmitter start up time: 4 seconds (I out <4mA during start up) Warm up time: 1 minute to full accuracy Update time: 500ms Response time: 1 second

Output Signals and Supply Voltages

	Output	Supply Voltage	Connection	Wire Colours
Level (2-wire)	4-20mA	9-32Vdc	+ve Supply -ve Supply Ground & Cable Screen	Red Blue Green
Temperature (2-wire)	4-20mA	9-32Vdc	+ve Supply -ve Supply Ground & Cable Screen	White Yellow Green

Custom versions can be made for particular applications. **Calibration data is supplied as a sticker affixed to the product packaging - do not discard*

The ILTSU is designed for use in continuous submersion in liquids such as water, oil and fuels. The probe uses the latest piezo-resistive media-isolated silicon sensing technology and a stainless steel diaphragm. Housed within a 316L stainless steel, or high grade Duplex stainless steel housing, this submersible transmitter is the ideal product for hydrostatic level measurement where temperature is also a critical part of the measurement.

It offers excellent stability, repeatability and resolution, as required for use in rivers and reservoirs.

This type incorporates a Class 'B' accuracy platinum resistance thermometer.

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

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ISO9001CERTIFIED

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Made in the UK

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Electrical Protection

Supply reverse polarity	No damage but also no function
Lightning protection	Internally fitted
Electromagnetic compatibility	CE Compliant

Mechanical Stability

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

Temperatures & Thermal Effects

Media Temperature	-20ºC (Non-freezing) to +60ºC
Storage temperature	-20ºC to +70ºC
Compensated temperature range(level only)	20ºC±25ºC
Thermal Zero Shift (TZS) (level only)	<±0.02% /FS/ºC
Thermal Span Shift(TSS) (level only)	<-0.015% /ºC
Thermal Drift (temperature only)	1µA/ºC

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

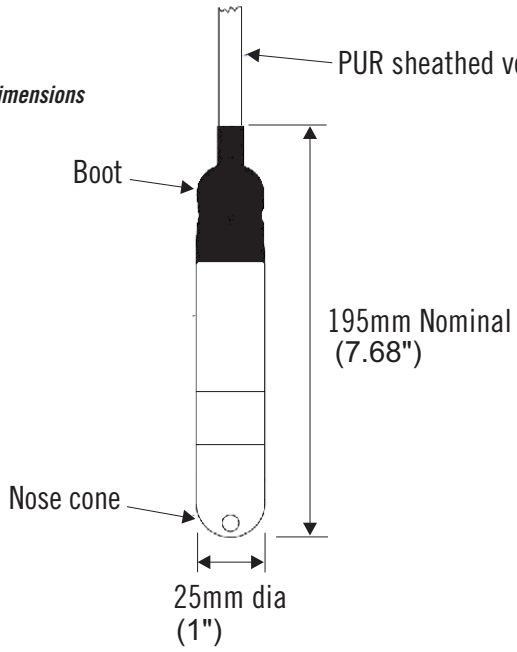
Miscellaneous

Current Consumption	Level transmitter limits at 28mA Temperature transmitter limits at 21.5mA
Weight	Transmitter: approx 10.5oz (300g) inc. nose cone Cable: 1.7oz (48g) per yard (meter)
Installation position	Any, small zero shift when tilted through 90º
Operational Life	> 100x 10^6 cycles

Part No	Pressure Range	Cable Length
ILTSU-Gi048-003	0-48" WG	10ft
ILTSU-Gi180-007	0-180" WG	22ft
ILTSU-Gi360-015	0-360" WG	48ft

(Custom ranges and outputs available on request)

Mechanical Dimensions



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.



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