ILTS series

Submersible Dual Level & Temperature Transmitter

- **Stainless steel, piezo-resistive sensor**
- **Level accuracy: <0.1% FS BFSL**
- **Pressure ranges from 1mWG to 10mWG**
- **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	mWG	1	5	10
Permissible Overpressure	mWG	20	50	50

Temperature Range

Temperature range	ºC	-20 to +60

The ILTS 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.*

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 $5\mu A$ (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
			+ve Supply	Red
Level (2-wire)	4-20mA	9-32Vdc	-ve Supply	Blue
			Ground	Green
			& Cable Screen	
Temperature (2-wire)	4-20mA	9-32Vdc	+ve Supply	White
			-ve Supply	Yellow
			Ground	Green
			& Cable Screen	

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

Made in the UK

www.cynergy3.com

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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

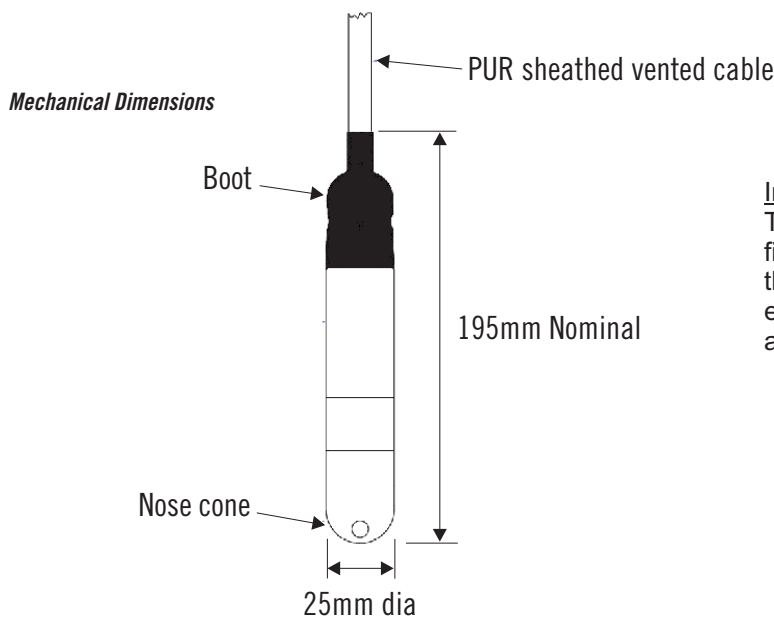|		
Media Temperature	-20ºC (Non-freezing) to +60ºC	
Storage temperature	-20ºC to +70ºC	
Compensated temperature range(level only)		20ºC±25ºC
Thermal Zero Shift (TZS) (level only)		<±0.02% /FS/ºC
Thermal Span Shift(TSS) (level only)		<-0.015% /ºC
Thermal Drift (temperature only)		1µA/ºC

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 300g inc. nose cone
	Cable: 48g per meter
Installation position	Any, small zero shift when tilted through 90º
Operational Life	> 100x 10^6 cycles

Part No	Pressure Range	Cable Length
ILTS-G0100-003	0-1mWG (0-39"WG)	3M
ILTS-G0500-007	0-5mWG (0-197"WG)	7M
ILTS-G1000-015	0-10mWG (0-394"WG)	15M

Mechanical Dimensions

PUR sheathed vented cable

Boot

195mm Nominal

Nose cone

25mm dia

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.

Mouser Electronics

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