

ILLSU SERIES

SUBMERSIBLE TANK GAUGING LEVEL TRANSMITTER



The ILLSU is designed for use in continuous submersion in liquids such as water, oils and fuels in small tanks, where conventional mechanical level switches and sensors are not ideal and more level 'control' and measurement is required.

The probe uses a piezo-resistive silicon sensing technology, isolated from the media by a diaphragm within the stainless steel housing. It offers excellent stability, repeatability and resolution for applications where a small tank level is required, from as low as 3ft through to 40ft high tanks.

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.

Features

- Piezo-resistive sensor
- Stainless steel housing and diaphragm
- Accuracy <0.5% FS BFSL
- Various outputs including Volts and mA
- Depth ranges from 0-48" (0-4ft) to 0-480" (0-40ft) WG

Options Available

- Pressure range
- Voltage or current output
- Cable length

Suitable Applications

- Static tank level
- Container or chamber level
- Vehicle tank level
- IBC, IBC Tote or Pallet Tank
- Rainwater harvesting

SPECIFICATIONS

Performance

Accuracy (Non-linearity & Hysteresis)	<±0.5% / FS (BFSL)	
Setting Errors (Offsets)	2-wire	Zero & Full Scale, <±0.5% / FS
	3-wire	Zero & Full Scale, <±0.5% / FS
Permissible Load	2-wire	$R_{max} = [(Supply-9min)/0.02] \Omega$
	3-wire	$R_{min} = 10 \text{ k}\Omega$
Influence Effects	Supply	<0.005% FS / 1V
	Load	0.05% FSO / kΩ

Custom versions can be made for particular applications.

Electrical Protection

Supply Reverse Polarity	No damage/no function
Electromagnetic Compatibility	CE Compliant

Mechanical Stability

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

Temperature & Thermal Effects

Media Temperature	-20°C (Non-freezing) to +60°C
Storage Temperature	-20°C to +70°C
Compensated Temperature Range	+5°C to +75°C
Thermal Zero Shift (TZS)	<±0.04% /FS/°C
Thermal Span Shift (TSS)	<±0.015% /°C

Materials

Housing	303 Stainless Steel	
"O" Ring Seals	Viton	
Diaphragm	316L Stainless Steel	
Cable Sheath Material	FEP standard	
Media Wetted Parts	Housing, "O" ring seal, diaphragm, cable sheath	
Weight	Transmitter: approx 2.65oz (75g)	Cable: 1.7oz (48g) per yard
Installation Position	Any, small zero shift when tilted through 90°	
Operational Life	> 100x 10 ⁶ cycles	
Insulation Resistance	50MΩ@50Vdc	

Pressure Ranges & Passive mV/V Outputs

Nominal Pressure, Gauge	inchWG	48	120	240	360	480
Permissible Overpressure	inchWG	800	800	800	2000	2000

Output Signal & Supply Voltage

Wire System	Output	Supply Voltage	Connection	Wire Colors
2-wire	4 - 20mA	9 – 32V dc	+ve Supply	Brown
			-ve Supply	White
			Ground	Pink
			Cable Screen	Green

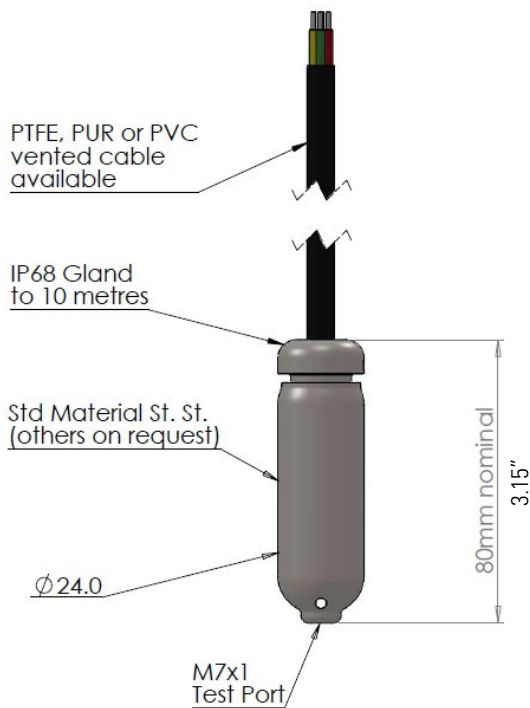
Care must be taken regarding screening and earthing when using voltage output.

Part No	Pressure Range	Cable Length	Output
ILLSU-Gi048-5-003	0-48" WG	10ft	4-20mA
ILLSU-Gi120-5-005	0-120" WG	16ft	4-20mA
ILLSU-Gi240-5-008	0-240" WG	26ft	4-20mA
ILLSU-Gi360-5-012	0-360" WG	40ft	4-20mA
ILLSU-Gi480-5-016	0-480" WG	52ft	4-20mA
ILLSU-Gi048-D-003	0-48" WG	10ft	0.5 to 4.5V 3Wire
ILLSU-Gi120-D-005	0-120" WG	16ft	0.5 to 4.5V 3Wire
ILLSU-Gi240-D-008	0-240" WG	26ft	0.5 to 4.5V 3Wire
ILLSU-Gi360-D-012	0-360" WG	40ft	0.5 to 4.5V 3Wire
ILLSU-Gi480-D-016	0-480" WG	52ft	0.5 to 4.5V 3Wire

(Custom ranges and outputs available on request)

DIMENSIONS

All dimensions are in millimeters.



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.



Made in the UK

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