



| ILLS SERIES

SUBMERSIBLE TANK GAUGING LEVEL TRANSMITTER



The ILLS 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 1m through to 7.5m 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
- Pressure ranges from 1mWG to 7.5mWG

Suitable Applications

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



Options Available

- Pressure range
- Voltage or current output
- Cable length



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	$R_{min} = 10 k\Omega$
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	UKCA, CE EMC directive · BS EN 61326-1:2013

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 75g	Cable: 48g per meter
Installation Position	Any, small zero shift when tilted through 90°	
Operational Life	> 100x 10 ⁶ cycles	
Insulation Resistance	50MΩ@50Vdc	

PRESSURE RANGES

Pressure Ranges & Passive mV/V Outputs

Nominal Pressure, Gauge	mW G	1	2.5	5	7.5
Permissible Overpressure	mW	20	20	10	50

Output Signal & Supply Voltage

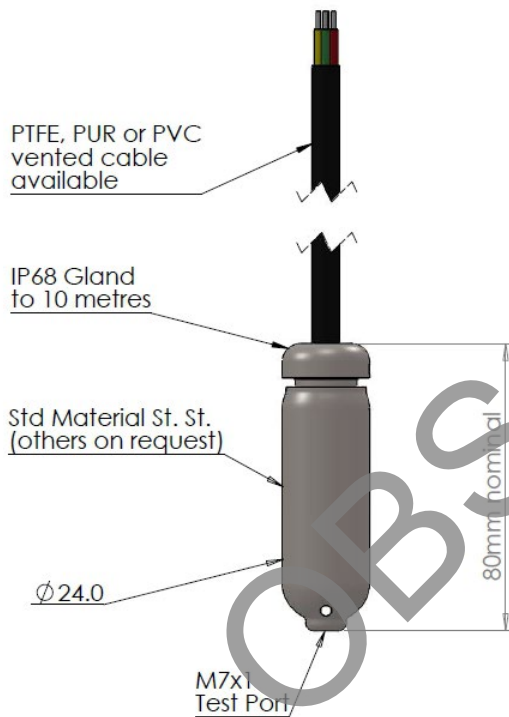
Wire System	Output	Supply Voltage	Connection	Wire Colours
2-wire	4 - 20mA	9 – 32V dc	+ve Supply	Brown
			-ve Supply	White
			Ground	Pink
			Cable Screen	Green
3-wire	0.5 - 4.5Vdc non-ratiometric	9 – 32V dc	+ve Supply	Brown
			-ve Supply	White
			+ve Output	Yellow
			Ground	Pink
			Cable Screen	Green

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

Part No	Pressure Range	Cable Length	Output
ILLS-G0100-5-003	0-1mWG (0-39"WG)	3M	4-20mA
ILLS-G0250-5-005	0-2.5mWG (0-98"WG)	5M	4-20mA
ILLS-G0500-5-007	0-5mWG (0-197"WG)	7M	4-20mA
ILLS-G0750-5-010	0-7.5mWG (0-276"WG)	10M	4-20mA
ILLS-G0100-D-003	0-1mWG (0-39"WG)	3M	0.5 to 4.5V 3Wire
ILLS-G0250-D-005	0-2.5mWG (0-98"WG)	5M	0.5 to 4.5V 3Wire
ILLS-G0500-D-007	0-5mWG (0-197"WG)	7M	0.5 to 4.5V 3Wire

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.



Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at www.sensata.com SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

CONTACT US

+44 (0)1202 897969
support@sensata.com
Sensata | Cynergy3
7 Cobham Road,
Ferndown Industrial Estate,
Wimborne, Dorset,
BH21 7PE, United Kingdom