IMSL

SUBMERSIBLE LEVEL TRANSMITTER - SILICON SENSOR

The IMSL has been 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 it offers excellent stability, repeatability and resolution required for use in rivers and reservoir measurement. Housed within a 316L stainless steel housing, this submersible level transmitter is the ideal product for reliable and repeatable hydrostatic level measurement. Every device is temperature compensated and calibrated, supplied with a traceable serial number and calibration certificate. The electronics incorporate a microprocessor based amplifier, this means there are no adjusting pots and therefore the electronics are very stable.

Suitable Applications

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

Features

- Stainless steel, Silicon piezo-resistive sensor
- Accuracy: <±0.1% FS BFSL (0.06% optional)
- Pressure ranges from 0.5mWG to 100mWG
- Selection of housing & cable materials
- Variety of outputs including mV, Volts and mA

SPECIFICATIONS

Input Pressure Range

Nominal Pressure, Gauge	mWG	0.5	1	2.5	3.5	5	7	10	20	35	70	100
Permissible Overpressure	mWG	10	10	10	10	10	21	21	60	105	210	210

Output Signal & Supply Voltage

Wire System	Output	Supply Voltage
2-wire	4 - 20mA	9 – 32V dc

Performance

Accuracy (Non-linearity)	<±0.1% / FS (BFSL)	
	<±0.06% / FS (BFSL) optional	
Hysteresis	<±0.05% / FS typ.	
Setting Errors (Offsets)	2-wire	Zero & Full Scale, <±0.5% / FS
Permissible Load	2-wire	R_{max} = [(Voltage Supply – 9 min) / 0.02] Ω
Influence Effects	Supply	- <0.005% FS / 1V

Permissible Temperature & Thermal Effects

Media Temperature	-20°C to +60°C (non freezing)
Storage Temperature	-20°C to +70°C
Compensated Temperature Range	+5°C to +45°C
Thermal Zero Shift (TZS)	<±0.01% / FS /°C
	<±0.02% / FS /°C
Thermal Span Shift (TSS)	<-0.01% /°C

Electrical Protection

Supply Reverse Polarity Protection	No damage/no function
Lightening Protection	Internally fitted
Electromagnetic Compatibility	UKCA, CE EMC directive · BS EN 61326-1:2013

Mechanical Stability

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

Materials

Housing	303 Stainless Steel
“O” Ring Seals	Viton
Diaphragm	316L Stainless Steel
Cable Sheath Material	PUR Polyurethane
Media Wetted Parts	Housing, ‘O’ ring seal, diaphragm & cable sheath

Miscellaneous

Current Consumption	2-wire	Limits at 25mA
Weight	Transmitter: Approx. 250g including nose cone	
	Cable: Approx. 48g per meter	
Installation Position	Any	
Operation Life	> 100 x 10^6 cycles	

Wiring Designation

		PUR Sheath
2-wire	+ve Supply	Red
	-ve Supply	Blue
	Ground	White
	Cable Screen	Green

ORDERING OPTIONS

Example : IMSL-G0200-5A1-AAV-005-000

IMSL - G 0200 - 5 A 1 - A A V - 005 - 000

Type

IMSL

Datum

(G) Gauge

Range

(0100) 0-1mW
(0200) 0-2mW
(0300) 0-3mW
(0400) 0-4mW
(0500) 0-5mW
(0700) 0-7mW
(1000) 0-10mW
(2000) 0-20mW
(3500) 0-35mW
(7000) 0-70mW
(1002) 0-100mW

Output Signal & Supply voltage

(5) 4 – 20mA, 2-wire & 9-32VDC

Non-Linearity and Hysteresis

(A) 0.1% /FS BFSL
(B) 0.06% /FS BFSL

Thermal Zero Shift (TZS)

(1) 0.01% / FS/ °C
(2) 0.02% / FS/ °C

Connector Types

(A) Vented PUR Cable

Housing Material

(A) 303 Stainless Steel

'O' ring seals

(V) Viton

Cable Length

Specified in meters see part number list for available options

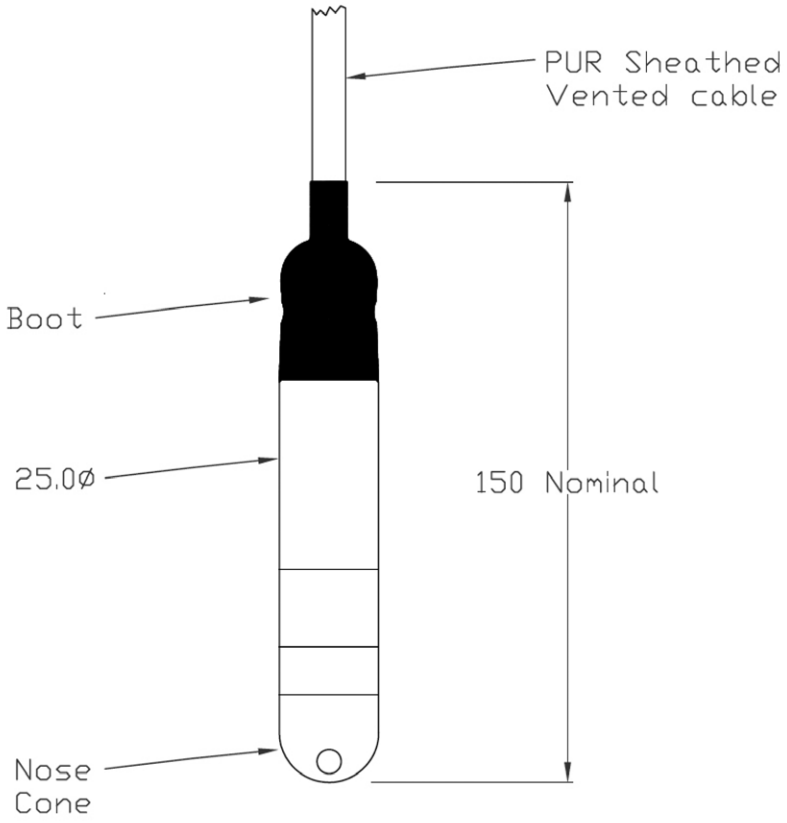
Special Codes

The IMSL pressure sensor was designed to be easily customized, and in addition to the standard options for electrical and mechanical configuration, the sensor can also be specially tailored to a particular OEM requirement and given a unique part number code.

Part number	Range mWG	Output Signal	NLH	TZS	Cable Length
IMSL-G0100-5B1-AAV-002-000	0-1	4-20mA	0.06% FS	0.01% FS	2M
IMSL-G0100-5B1-AAV-005-000	0-1	4-20mA	0.06% FS	0.01% FS	5M
IMSL-G0100-5B1-AAV-010-000	0-1	4-20mA	0.06% FS	0.01% FS	10M
IMSL-G0200-5B1-AAV-003-000	0-2	4-20mA	0.06% FS	0.01% FS	3M
IMSL-G0200-5B1-AAV-005-000	0-2	4-20mA	0.06% FS	0.01% FS	5M
IMSL-G0200-5B1-AAV-010-000	0-2	4-20mA	0.06% FS	0.01% FS	10M
IMSL-G0300-5B1-AAV-005-000	0-3	4-20mA	0.06% FS	0.01% FS	5M
IMSL-G0300-5B1-AAV-010-000	0-3	4-20mA	0.06% FS	0.01% FS	10M
IMSL-G0300-5B1-AAV-015-000	0-3	4-20mA	0.06% FS	0.01% FS	15M
IMSL-G0400-5B1-AAV-010-000	0-4	4-20mA	0.06% FS	0.01% FS	10M
IMSL-G0400-5B1-AAV-015-000	0-4	4-20mA	0.06% FS	0.01% FS	15M
IMSL-G0400-5B1-AAV-020-000	0-4	4-20mA	0.06% FS	0.01% FS	20M
IMSL-G0100-5A2-AAV-002-000	0-1	4-20mA	0.1% FS	0.02% FS	2M
IMSL-G0100-5A2-AAV-005-000	0-1	4-20mA	0.1% FS	0.02% FS	5M
IMSL-G0100-5A2-AAV-010-000	0-1	4-20mA	0.1% FS	0.02% FS	10M
IMSL-G0200-5A2-AAV-003-000	0-2	4-20mA	0.1% FS	0.02% FS	3M
IMSL-G0200-5A2-AAV-005-000	0-2	4-20mA	0.1% FS	0.02% FS	5M
IMSL-G0200-5A2-AAV-010-000	0-2	4-20mA	0.1% FS	0.02% FS	10M
IMSL-G0300-5A2-AAV-005-000	0-3	4-20mA	0.1% FS	0.02% FS	5M
IMSL-G0300-5A2-AAV-010-000	0-3	4-20mA	0.1% FS	0.02% FS	10M
IMSL-G0300-5A2-AAV-015-000	0-3	4-20mA	0.1% FS	0.02% FS	15M
IMSL-G0400-5A2-AAV-010-000	0-4	4-20mA	0.1% FS	0.02% FS	10M
IMSL-G0400-5A2-AAV-015-000	0-4	4-20mA	0.1% FS	0.02% FS	15M
IMSL-G0400-5A2-AAV-020-000	0-4	4-20mA	0.1% FS	0.02% FS	20M
IMSL-G0500-5A2-AAV-010-000	0-5	4-20mA	0.1% FS	0.02% FS	10M
IMSL-G0500-5A2-AAV-015-000	0-5	4-20mA	0.1% FS	0.02% FS	15M
IMSL-G0500-5A2-AAV-020-000	0-5	4-20mA	0.1% FS	0.02% FS	20M
IMSL-G0700-5A2-AAV-010-000	0-7	4-20mA	0.1% FS	0.02% FS	10M
IMSL-G0700-5A2-AAV-015-000	0-7	4-20mA	0.1% FS	0.02% FS	15M
IMSL-G0700-5A2-AAV-020-000	0-7	4-20mA	0.1% FS	0.02% FS	20M
IMSL-G1000-5A2-AAV-015-000	0-10	4-20mA	0.1% FS	0.02% FS	15M
IMSL-G1000-5A2-AAV-020-000	0-10	4-20mA	0.1% FS	0.02% FS	20M
IMSL-G2000-5A2-AAV-025-000	0-20	4-20mA	0.1% FS	0.02% FS	25M
IMSL-G3500-5A2-AAV-040-000	0-35	4-20mA	0.1% FS	0.02% FS	40M
IMSL-G7000-5A2-AAV-075-000	0-70	4-20mA	0.1% FS	0.02% FS	75M
IMSL-G1002-5A2-AAV-105-000	0-100	4-20mA	0.1% FS	0.02% FS	105M

DIMENSIONS

All dimensions are in millimeters.



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