



ILSE series

External Mount Hydrostatic Level Transmitter



- **Piezo-resistive sensor**
- **Accuracy $\leq \pm 0.25\%$ FS BFSL**
- **Various outputs including Volts and mA.**
- **Level ranges from 1mWG to 10 mWG**

The external mount hydrostatic level transmitter, ILSE, has a piezo-resistive silicon pressure sensor which is an oil-filled isolated diaphragm. The sensor and housing are made from stainless steel with a choice of internal O ring seals to ensure the product is suitable for a wide range of applications.

The electronics incorporate a microprocessor based amplifier, requiring no adjusting and giving stable electronics, especially in high vibration/shock applications.

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

Input Pressure Ranges

Nominal level, Gauge,	mWG	1	2.5	5	7	10
Permissible Overpressure	mWG	20	20	20	50	50

Suitable applications

Environmental engineering	Container or chamber level
Rainwater harvesting	Automotive testing
Static tank level	Vehicle tank level
Laboratory testing	IBC, IBC Tote or pallet tank

Performance

Accuracy (Non-Linearity & Hysteresis)	$\leq \pm 0.25\%$ / FS (BFSL)	
Setting Errors (offsets)	2-wire	Zero & Full Scale, $\leq \pm 0.5\%$ / FS
	3-wire	Zero & Full Scale, $\leq \pm 0.5\%$ / FS
Permissible Load	2-wire	$R_{max} = [(VS-VSmin)/0.02]k\Omega$
	3-wire	$R_{min} = 10k\Omega$
Influence Effects	Supply	$< 0.005\%$ FS / 1V
	Load	0.05% FSO / k Ω

Material Specifications

Housing	303 Stainless Steel
"O" ring seals	Viton
Diaphragm	316L Stainless Steel
Media wetted parts	Housing & process connection, "O" ring seal, diaphragm

Miscellaneous

Current consumption	2-wire - limits at 28mA 3-wire - typical 6mA
Weight	Approx 100g
Installation position	Any, small zero shift when tilted through 90°
Operational Life	$> 100 \times 10^6$ cycles
Insulation resistance	$> 50M\Omega$ at 50Vdc

Electrical Protection

Supply reverse polarity	No damage but also no function
Electromagnetic compatibility	CE Compliant

Mechanical Stability

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

Temperatures & Thermal Effects

Media Temperature	-40°C to +125°C
Ambient Temperature	-20°C to +80°C
Storage temperature	-40°C to +125°C
Compensated temperature range	+20°C to +80°C
Thermal Zero Shift (TZS)	$\leq \pm 0.04\%$ /FS/°C
Thermal Span Shift (TSS)	$< -0.015\%$ /°C

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ISO9001 CERTIFIED

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Output Signal and Supply Voltage

Wire system	Output	Supply Volts	Connection	Pin No. (Large plug and socket)
2-wire	4-20mA	9-32Vdc	+ve Supply -ve Supply Ground	Pin 1 Pin 2 Earth pin
3-wire	0.5 - 4.5Vdc (non-ratiometric)	9-32 Vdc	+ve Supply -ve Supply +ve Output Ground	Pin 1 Pin 2 Pin 3 Earth Pin

Part No	Pressure Range	Output
ILSE-G0100-5	0 - 1mWG	4-20mA
ILSE-G0250-5	0 - 2.5mWG	4-20mA
ILSE-G0500-5	0 - 5mWG	4-20mA
ILSE-G0700-5	0 - 7mWG	4-20mA
ILSE-G1000-5	0 - 10mWG	4-20mA
ILSE-G0100-D	0 - 1mWG	0.5 to 4.5V 3Wire
ILSE-G0250-D	0 - 2.5mWG	0.5 to 4.5V 3Wire
ILSE-G0500-D	0 - 5mWG	0.5 to 4.5V 3Wire
ILSE-G0700-D	0 - 7mWG	0.5 to 4.5V 3Wire
ILSE-G1000-D	0 - 10mWG	0.5 to 4.5V 3Wire

