Strain Gauge Piezometer

Ported Nose

Piezometer Nose with sintered stainless steel porous filter

The Strain Gauge Piezometer is specifically designed to meet the rigorous environments encountered in level measurement applications and to provide repeatable, precision depth measurements. It is available with either a ported nose cap or a piezometer nose incorporating a sintered stainless steel porous filter.

Ideal for small bore applications, and the ability to withstand rigorous environments encountered in ground and sea water depth measurements, the Strain Gauge Piezometer can also be used for dynamic pore pressure measurement applications. Highly reliable multi-stage transient* protection is standard for 4-20 mA and RS-485 output.

Each unit is shipped with a calibration card that specifies I/O conditions as well as actual data reflecting the unit's static accuracy and thermal characteristics.

* Conducted transients from indirect lightning activities.

ordering info

ITEM	PART #
STRAIN GAUGE PIEZOMETER - SEALED	
When ordering, please state ranges required.	
Voltage output 0 - 5 Volts	ELSGP500S
4-20 mA output	ELSGP510S
RS485 output - Sealed	ELSGP520S
STRAIN GAUGE PIEZOMETER - VENTED	
When ordering, please state ranges required.	
Voltage output 0 - 5 Volts	ELSGP500V
4-20 mA output	ELSGP510V
RS485 output - Vented	ELSGP520V

output specs

SUPPLY	VDC	8 - 28 VDC
OUTPUT	2 wire analog	4 - 20 mA
	4 wire analog	0 - 5 VDC
	4 wire digital	RS485

optional equipment

- Readout
- Data loggers
- Terminal stations

specifications

ITEM	SPECIFICATION
Accuracy	±0.1% FS T.E.B.*
Standard Pressure Ranges	0 - 1 m through 0 - 300 m
Compensated Temp. Range	-10°C to 80°C
Field Rangeability	Yes
Pressure Output	0 to 5 VDC 4 to 20 mA, RS485
Temperature Output	Optional
Wetted Materials	Standard 316L SS Polyamide Fluorocarbon
Electrical Termination	Vented Hytrel Cable or Sealed Cable
Level Range (user specified)	Infinite between 0 to 3 through 0 to 900 ft. WC
Dimensions	109 mm X Ø21 mm

electrical cable specs

VENTED CABLE	
ITEM	**SPECIFICATION**
Material	Polyurethane jacketed shielded cable with polyethylene vent tube and Kevlar® tension members.
Pull Strength	200 lbs.
Conductors	22 AWG
Weight	0.04 lb./ft. (approx.)
SEALED CABLE	
Material	Two twisted pairs cable with polyurethane jacket.
Part Number	EL380004

ordering info

Cable length	Sealed or vented
Pressure range	Ported or piezometer nose cap

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applications

- Ground water and surface water monitoring.
- Well monitoring.
- Percolation tests.
- Hydrostatic pressure.
- Site remediation.
- Deep aquifer measurement.
- Sea water depth.
- Drawdown.
- Dewatering.
- Dams.
- Slug tests.

features

- 16-bit internal digital error correction.
- 316L SS flush-diaphragm sensor.
- Small, rugged package withstands harsh environments.
- Being calibrated and serialized, insures performance and NIST traceability.
- Broad selection of pressure ranges offer a standard range for your specific requirements.
- Unique cable seal system ensures water-tight integrity.
- Full temperature compensation provides accurate data over extreme temperature excursions.
- Instrumentation signal compatibility operates with RST dataloggers, and computer data acquisition systems.

* T.E.B.: Total Error Band: Includes the combined effects of non-linearity, hysteresis and non-repeatability as well as thermal dependencies, over the compensated temperature range, expressed as a percentage of the Basic Range. All intermediate ranges are realized by deranging from standard Basic Ranges of 30, 100, 300 and 900 ft WC.

specifications + ordering info

Strain Gauge Piezometer

features

- Class-leading 0.63” outside diameter is ideal for driven well applications.
- Built-in surge protection minimizes damage due to ground transients.
- User-rangeable analog output ensures compatibility as requirements change.
- RS485 modified-MODBUS compatible. Up to 128 transmitters on a single bus.
- Standard, dual (analog & RS485) outputs simplify interface to data collection systems.

The Micro-Bore Submersible Level Transmitter is the smallest diameter submersible level transmitter in its class.

specifications

ITEM	SPECIFICATION
Accuracy	±0.25% or ±0.1% FS T.E.B.*
Standard Pressure Ranges	0 - 3 through 0 - 900 ft WC
Compensated Temp. Range	0°C to 50°C
Field Rangeability	Yes
Supply	10 - 30 VDC
Pressure Output	4 to 20 mA, RS485
Temperature Output	RS485
Load Resistance (Ω)	mA: < (Supply - 10V) / 0.02A
Wetted Materials	Standard 316L SS Polyamide Fluorocarbon
Cable**	Hytrel-jacketed, vented & shielded (optional Tefzel® or Polyethylene jackets)
Surge Protection	Supply and RS485: 200A @ 8/20 µs GND/Case: 2000A @ 8/20 µs
Dimensions	123 mm X Ø16 mm

ordering info

ITEM	PART#
Micro-Bore Submersible Level Transmitter	ELSGP510SM

* T.E.B.: Total Error Band: Includes the combined effects of non-linearity, hysteresis and non-repeatability as well as thermal dependencies, over the compensated temperature range, expressed as a percentage of the Basic Range. All intermediate ranges are realized by deranging from standard Basic Ranges of 30, 100, 300 and 900 ft WC.

** Maximum continuous length: 1000 ft.

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