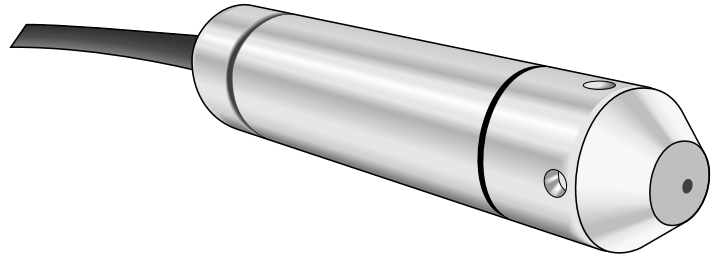


Submersible Pressure Transducers

Models Keller169-L and Keller173-L

These submersible pressure transducers, manufactured by Pressure Systems, measure surface water, ground water, or hostile fluid levels. They are piezoresistive sensors that incorporate an isolated stainless steel diaphragm into a stainless steel package. The sensor assembly is housed in welded 316 SS or titanium case that includes a diaphragm shield for protection against debris.



Each transducer is shipped with a calibration sheet. The sheet specifies I/O conditions, as well as actual data reflecting the unit's static accuracy and thermal characteristics. Each vented transducer is also shipped with a desiccant tube to extract water vapor from air entering the vent tube.

These units are designed for installation in a Class 1, Division 1, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; and Class III Division 1 hazardous location when connected to an approved electrical barrier.

Features

- High static accuracy and repeatability
- Small, rugged package
- User-specified pressure ranges available
- Welded 316 stainless steel construction
- Computer tested, calibrated and serialized
- Unique cable seal system
- Fully temperature compensated
- Compatible with Campbell Scientific's CR510, CR10(X), CR23X, CR7, CR5000 and CR9000 dataloggers

Ordering Information

When ordering a transducer, specify the desired psi range, choose either a polyurethane-jacketed or Tefzel-jacketed cable and specify the lead length, in feet, after the L.

Keller169_L	Four-wire pressure transducer with an accuracy of $\pm 0.25\%$ FSO. Compatible with the PST3/8 system and connects directly to a multiplexer. Requires an L7977 resistor assembly to connect with a datalogger.
Keller173_L	Four-wire pressure transducer with an accuracy of $\pm 0.1\%$ FSO. Compatible with the PST3/8 system and connects directly to a multiplexer. Requires an L7977 resistor assembly to connect to a datalogger.
L7977	100 Ohm Shunt Resistor Assembly for the Keller169-L or Keller173-L
L14421	Optional titanium housing for the Keller169-L or Keller173-L
L13462	Optional $\frac{1}{4}$ " NPT Pressure Cap
L7421	Optional Split Mesh Grip

Manufacturer's Specifications (Pressure Systems)

Performance

User Specified Pressure Ranges:	0-2 through 0-300 psig (Keller169-L, Keller173-L)
Static Accuracy:*	±0.25% FSO BFSL (Keller169-L) ±0.1% FSO BFSL (Keller173-L)
Thermal Error:**	0.022% FSO °C ⁻¹ worst case
Proof Pressure:	1.5 x rated pressure
Burst Pressure:	2.0 x rated pressure
Resolution:	Infinitesimal

* Static accuracy includes the combined errors due to nonlinearity, hysteresis and nonrepeatability on a Best Fit Straight Line (BFSL) basis, at 25°C, per ISA S51.1.

**Thermal error is the maximum allowable deviation from the Best Fit Straight Line due to a change in temperature, per ISA S51.1.

Environmental

Compensated temperature range:	0° to 27°C
Operating temperature range:	-20° to 60°C

Physical

Weight:	4 oz., 113 g (not including cable)
Cable:	Polyurethane-jacketed or Tefzel-jacketed, shielded cable with polyethylene vent tube and Kevlar tension members. Pull strength is 200 lbs. Conductors are 22 awg. Approximate weight is 0.04 lb, (18 g) per foot. Polyurethane-jacketed cables contain water-block tape to prevent moisture intrusion through small cuts in the cable from reaching the transducer.
Dimensions:	
Transducer:	4.5" (11.4 cm) length, 1.0" (2.5 cm) diameter
Cable:	0.28" (0.71 cm) diameter
Output:	30 to 65 mV full scale at 0.5 mA excitation, ratiometric (Keller169-L, Keller173-L)