

L20

Piezometers for monitoring the layer level



Piezometers are instruments that, when vertically introduced into the ground through a survey, allow to measure the water pressure of an underground aquifer. The pressure variations between the sensor reference chamber and the environmental chamber allow measuring the water level in wells, canals, reservoirs, rivers, lakes, landslides, landfills, groundwater measurement, geotechnical monitoring, water treatment plants, etc.

In the version with integrated datalogger, a data acquisition card automates the acquisition and storage of data. The sensor and the data logger are integrated and positioned at the end of a variable length cable depending on the installation depth.

At the end of the datalogger there is a connector for data download to PC for viewing and analysis through a special software interface provided.

In addition to the standard 21mm diameter version,

the 12mm miniature version is available for use on Casagrande piezometric tubes.

APPLICATIONS

- Interstitial pressure measurement;
- Water level measurement in piezometers;
- Water level measurement in wells, tanks, tanks;
- Water level measurement in canals, rivers, lakes.

MAIN FEATURES

- Absolute or relative pressure measurements;
- Reliability even for long-term monitoring;
- High resolution and accuracy;
- Degree of protection IP68;
- Robust construction in stainless steel;
- Version with sensor also 12 mm in diameter;
- Possibility to transmit the signal even over long distances.

TECHNICAL FEATURES

RESISTIVE ELECTRIC PIEZOMETER

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| • Type of sensor: | piezoresistive; |
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• Type of application:	for interstitial pressure measurements (absolute model) and for water level measurements (relative model);
• Cable:	self-supporting, PUR outer sheath, with internal tube;
• Measuring range:	
- Sensor diam. 21mm:	5 to 100 meters (water level);
- Sensor diam. 12mm:	20 to 100 meters (water level);
• Overpressure:	100% F.S.;
• Exit signal:	
- Sensor diam. 21mm:	4-20 mA with 2 wires;
- Sensor diam. 12mm:	mV / V (not amplified);
• Supply voltage:	
- Sensor diam. 21mm:	8 ... 32 Vdc;
- Sensor diam. 12mm:	5 Vdc;
• Total accuracy:	
- Sensor diam. 21mm:	+/- 0.25% F.S.;
- Sensor diam. 12mm:	+/- 0.5% F.S.
• Long-term stability:	2 mbar (= 1 cm);
• Operating temperature:	-20 + 80 ° C;
• Degree of protection:	IP68;
• Dimensions:	
- Sensor diam. 21mm:	21mm x 75mm (L);
- Sensor diam. 12mm:	12 mm x 110 mm (L);
• Material:	stainless steel.
<u>ELECTRIC PIEZOMETER WITH DATALOGGER</u>	
• Type of sensor:	piezoresistive;
• Measuring range:	
- Sensor diam. 21mm:	from 5m to 100m;
- Sensor diam. 12mm:	from 20m to 100m;
• Pressure measurement:	absolute and relative;
• Resolution:	
- Sensor diam. 21mm:	1mm;
- Sensor diam. 12mm:	2mm;
• Total accuracy:	
- Sensor diam. 21mm:	< 0.25% F.S.;
- Sensor diam. 12mm:	< 0.5% F.S.;
• Operating temperature:	-10 + 40 ° C;
• Dimensions:	
- Sensor diam. 21mm:	21mm x 75mm (L);
- Sensor diam. 12mm:	12 mm x 110 mm (L);
• Material:	stainless steel.

<u>DATALOGGER:</u>	
• Type of memory and capacity:	non-volatile – 32,000 measurements;
• A / D converter:	16 bit;
• Power supply:	lithium batteries;
• Connection cable interface:	USB;
• Measuring range:	programmable from 2 sec. at 24 hours;
• Resolution:	1mm;
• Dimensions:	30mm (diameter) x 250mm (L);
• Material:	stainless steel.

ACCESSORIES

RESISTIVE ELECTRIC PIEZOMETER

- Electric cable cut to size;
- Ventilated junction box.

ELECTRIC PIEZOMETER WITH DATALOGGER

- Battery Kit;
- Support for piezometric tubes;
- Software kit and USB cable;
- Electric cable cut to size.