Earth pressure cells are designed to monitor total pressure in earthfill dams, embankments, and at the interface between structures and soil.

Pressure applied to the surface of the pressure cell is transmitted hydraulically to a pressure transducer which can be read with a portable readout or a data logger.

**APPLICATIONS**
- Embankments
- Retaining walls
- Diaphragm walls

**FEATURES**
- High-tech transducer offers reliability, fast response, and long-term stability.
- High accuracy and resolution
- Stainless steel construction, hermetically sealed
- One-side sensitive pad
- Output signal suitable for long distance transmission

Meet the essential requirements of the EMC Directive 2014/30/UE
## TRANSDUCERS SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>L143 MODEL</th>
<th>L141 MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full scales (FS)</td>
<td>VW pressure transducer</td>
<td>piezo-resistive pressure transducer</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0-350 kPa up to 0-10.0 MPa</td>
<td>0-200 kPa up to 0-10.0 MPa</td>
</tr>
<tr>
<td>Temperature sensor</td>
<td>built-in thermistor</td>
<td></td>
</tr>
<tr>
<td>Overload</td>
<td>100% FS</td>
<td>30% FS (FS=200 kPa)</td>
</tr>
<tr>
<td>Pol. MPE (1)</td>
<td>&lt; ±0.25% FS                  (&lt; ±0.1% FS on request)</td>
<td>&lt; ±0.20% FS (for 200kPa FS)</td>
</tr>
<tr>
<td>Electrical supply</td>
<td></td>
<td>12-40 V DC</td>
</tr>
<tr>
<td>Typical frequency range (2)</td>
<td>2250 - 3000 Hz</td>
<td>4-20 mA current loop</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-20°C  +80°C</td>
<td>-20°C  +80°C</td>
</tr>
<tr>
<td>Transducer size</td>
<td>OD 27mm, 180mm long</td>
<td>OD 27mm, 180mm long</td>
</tr>
<tr>
<td>Material / weight</td>
<td>stainless steel / 0.6 kg</td>
<td>stainless steel / 0.6 kg</td>
</tr>
<tr>
<td>Cables</td>
<td>0WE104K002ZH LSZH cable</td>
<td>0WE102KE02ZH</td>
</tr>
<tr>
<td></td>
<td>0WE104X202ZH LSZH armoured cable</td>
<td>0WE104X202ZH LSZH armoured cable</td>
</tr>
<tr>
<td>Max cable length to logger</td>
<td>1000 m (for more information see FAQ#77)</td>
<td>1000 m (for more information see FAQ#77)</td>
</tr>
</tbody>
</table>

(1) MPE is the Maximum Permitted Error on the measuring range (FSR). In the Calibration Report, the accuracies of the gauge are calculated using both linear regression (≤ Lin. MPE) and polynomial correction (≤ Pol. MPE)
(2) The expressed frequency may vary +/-10%
(3) Refer to FAQ section of Sisgeo website: www.sisgeo.com/faq

## PRESSURE PAD

<table>
<thead>
<tr>
<th>Material</th>
<th>Stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total weight</td>
<td>4.5 Kg (9.9 lbs)</td>
</tr>
<tr>
<td>Hydraulic line</td>
<td>6 mm OD (0.25” OD), stainless steel tube</td>
</tr>
</tbody>
</table>

![Pressure Pad Diagram]

- 790 mm (31.1”)
- 281.5 mm (11”)
- 180 mm (7.1”)
- 238 mm (9.4”)
- Ø 27 mm (1”)
ACCESSORIES AND SPARE PARTS

2-WIRE SIGNAL CABLE
OEW102XKEOZH
Two conductor, LSZH cable (20 AWG) with Kevlar stress member for 4-20mA pressure cells. Cables are factory fitted to the electrical transducer during manufacture.

4-WIRES ARMoured SIGNAL CABLE
OEW104XR20ZH
Four conductor, LSZH cable (22 AWG) armoured with stainless steel wire. Cables are factory fitted to the electrical transducer during manufacture.

SWITCH TERMINAL JB
OEP0000S00
Available in different sizes to connect up to 6, 12, 18 or 24 instruments. Equipped with up to four 6-position rotary switches and connector for readout.

INSTALLATION PROCEDURES

In many cases, the soil to be investigated is not uniform: for a good installation of total pressure cells it is important to prepare a hand-compacted sand bed for the pressure cells about 50 to 100 mm thick. Then, after placing the cell, cover it with thicker, 100 to 200 mm layer of hand-compacted sand.

READABLE BY

SISGEO S.R.L.
Via F. Serpero 4/F1
20060 Masate (MI) Italy
Phone +39 02 95764130
Fax +39 02 95762011
info@sisgeo.com

TECHNICAL ASSISTANCE

SISGEO offers customers e-mail and phone assistance to ensure proper use of instruments and readout and to maximize performance of the system.

For more information, email us: assistance@sisgeo.com