BER-S-12SA2
Wall-surface Soil Pressure Transducer

With a stopper, enables to support overload of 1000%

- High overload protection (Safe overload up to 1000%)
- Safe overload up to 1000% against the decenter load (With a stopper function)
- Selection of the rated overload as normal operation pressure possible

### Specification

**Performance**

- **Rated Capacity**: See table below
- **Nonlinearity**: Within ±1% RO
- **Hysteresis**: Within ±1% RO
- **Rated Output**: Approx. 1 mV/V

**Environmental Characteristics**

- **Safe Temperature**: -30 to 80°C
- **Compensated Temperature**: 0 to 70°C
- **Temperature Effect on Zero**: Within ±0.1% RO/°C
- **Temperature Effect on Output**: Within ±0.1%/°C

**Electrical Characteristics**

- **Safe Excitation**: 12 V AC or DC
- **Recommended Excitation**: 1 to 10 V AC or DC
- **Input Resistance**: 350 Ω ±2%
- **Output Resistance**: 350 Ω ±2%
- **Cable**: 4-conductor (0.5 mm²) chloroprene shielded cable, 10 mm diameter by 30 m long, bared at the tip (Shield is not connected to the case.)

**Mechanical Properties**

- **Safe Overloads**: 1000% soil pressure (Powdered & pore pressure)
- **And the pore pressure (Liquid & gas pressure)** is 3 MPa.
- **Material**: Stainless steel metallic finish (Pressure-sensing surface)
  - ZnC-plated MF (Flange and cable outlet)
- **Water Resistance (Cable outlet)**: 600 kPa
- **Weight**: Approx. See table below.

### Application Example

**Chamber**
**Soil Pressure Transducer**
**Segment**
**Shield Machine**

### Dimensions

- **Pressure-sensing surface**
  - Diameter: 28 mm
  - Thickness: 4.6 ±0.05 mm
- **Cable**
  - Diameter: 8 mm
  - Length: 30 m
- **Nitrile rubber**
  - O ring P90 (Standard Accessories)
  - Hexagon socket countersunk head screw M12
  - Please prepare by a user.

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**Note:**
1. Do not weld the transducer when the mounting fixture fixed on.
2. The O ring contact surface must be finished as smooth as Rz6.3.
3. t=12 (100 kPa to 500 kPa), t=24 (1 MPa to 3 MPa).

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**Table:**

<table>
<thead>
<tr>
<th>Models</th>
<th>Rated Capacity</th>
<th>Calculated Loads</th>
<th>Weight (Excluding cable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BER-S-100KP12SA2</td>
<td>100 kPa</td>
<td>4.20 N</td>
<td>3.1 kg</td>
</tr>
<tr>
<td>BER-S-200KP12SA2</td>
<td>200 kPa</td>
<td>8.4 N</td>
<td>3.1 kg</td>
</tr>
<tr>
<td>BER-S-500KP12SA2</td>
<td>500 kPa</td>
<td>4.2 kN</td>
<td>4.4 kg</td>
</tr>
<tr>
<td>BER-S-1MP12SA2</td>
<td>1 MPa</td>
<td>8.4 kN</td>
<td>4.4 kg</td>
</tr>
<tr>
<td>BER-S-3MP12SA2</td>
<td>3 MPa</td>
<td>12.6 kN</td>
<td>4.4 kg</td>
</tr>
</tbody>
</table>

*For pressure measurement of pulverulent bodies within φ10 mm (Powdered & pore pressure)