**BER-A-12S/58S**

Wall-surface Soil Pressure Transducer

Suitable for the chamber soil pressure of a shield machine, or backfill pressure measurement.

- Wear of the pressure-sensing surface does not affect output or initial values.
- Load cell-based design is less affected by bending effects.
- This is for granular material pressure measurement whose particle diameter is about φ10.

BER-A-12S/58S are load cell type soil pressure transducers designed not to be subject to the influence of a structure bending. These are suitable for surface-of-a-wall soil pressure measurement. 2 models (12S, 58S) are available to suit the installation directions.

### Specifications

#### Performance
- **Rated Capacity**: See table below
- **Nonlinearity**: Within ±1% RO
- **Hysteresis**: Within ±1% RO
- **Rated Output**: 1 mV/V or more

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

#### Electrical Characteristics
- **Safe Excitation**: 10 V AC or DC
- **Recommended Excitation**: 2 to 5 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**: 120%
- **Pressure-sensing Surface**: Approx. φ73
- **Material**
  - Stainless steel metallic finish (Pressure-sensing surface)
  - ZnC-plated MF (Flange and cable outlet)
- **Water Resistance (Cable outlet)**: 600 kPa
- **Weight**: Approx. 3.2 kg for 12S, Approx. 3.1 kg for 58S

#### Models
<table>
<thead>
<tr>
<th>Models</th>
<th>Rated Capacity</th>
<th>Calculated Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td>BER-A-100KP12S</td>
<td>100 kPa</td>
<td>419 N</td>
</tr>
<tr>
<td>BER-A-200KP12S</td>
<td>200 kPa</td>
<td>837 N</td>
</tr>
<tr>
<td>BER-A-500KP12S</td>
<td>500 kPa</td>
<td>2.1 kN</td>
</tr>
<tr>
<td>BER-A-1MP12S</td>
<td>1 MPa</td>
<td>4.2 kN</td>
</tr>
<tr>
<td>BER-A-2MP12S</td>
<td>2 MPa</td>
<td>8.4 kN</td>
</tr>
<tr>
<td>BER-A-5MP12S</td>
<td>5 MPa</td>
<td>20.9 kN</td>
</tr>
<tr>
<td>BER-A-100KP58S</td>
<td>500 kPa</td>
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<tr>
<td>BER-A-1MP58S</td>
<td>1 MPa</td>
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</tr>
</tbody>
</table>

### Application Example

![Application Example](image)

**To Ensure Safe Usage**

Do not apply a load more than the rated capacity (Pressure, load) to the applied pressure surface.

### Dimensions

![Dimensions](image)

Note: Please process the surface where O ring hits by Nitrile rubber.

BER-A-12S

BER-A-58S