

# BER-A-12S/15S/17S/58S

## Wall-surface Soil Pressure Transducer

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Sensor



**Suitable for measuring shield machine chamber wall soil pressure or backfill pressure**

● **Rated capacity: 100 kPa to 5 MPa**

These load cell type transducers are designed for resistance to structural bending, and are suitable for measuring wall surface soil pressure.

### Models

Model	Rated Capacity	Calculated Loads	Weight (Approx.)*
BER-A-100KP12S	100 kPa	—	3.2 kg
BER-A-200KP12S	200 kPa	—	
BER-A-500KP12S	500 kPa	—	
BER-A-1MP12S	1 MPa	—	
BER-A-2MP12S	2 MPa	—	
BER-A-5MP12S	5 MPa	—	
BER-A-500KP58S	500 kPa	2.1 kN	3.1 kg
BER-A-1MP58S	1 MPa	4.2 kN	
BER-A-2MP58S	2 MPa	8.4 kN	
BER-A-5MP58S	5 MPa	20.9 kN	

Model	Rated Capacity	Weight (Approx.)*
BER-A-500KP15S	500 kPa	400 g
BER-A-1MP15S	1 MPa	
BER-A-2MP15S	2 MPa	
BER-A-5MP15S	5 MPa	
BER-A-500KP17S	500 kPa	500 g
BER-A-1MP17S	1 MPa	
BER-A-2MP17S	2 MPa	
BER-A-5MP17S	5 MPa	

\*Excluding cable

### BER-A-12S/58S Specifications

Performance	
Rated Capacity	See table below.
Nonlinearity	Within $\pm 1\%$ RO
Hysteresis	Within $\pm 1\%$ 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	Within $\pm 0.1\%$ RO/°C
Temperature Effect on Output	Within $\pm 0.1\%$ /°C (BER-A-12S only)
Electrical Characteristics	
Safe Excitation	10 V AC or DC
Recommended Excitation	2 to 5 V AC or DC
Input Resistance	350 $\Omega$ $\pm 2\%$
Output Resistance	350 $\Omega$ $\pm 2\%$
Cable	4-conductor (0.5 mm <sup>2</sup> ) chloroprene shielded cable, 9.7 mm diameter by 30 m long, bared at the tip (Shield wire is not connected to the case.)

Mechanical Properties	
Safe Overloads	120%*
Exterior	Pressure sensing surface: Stainless steel Flange and cable outlet: ZnC-plated MF
Water Pressure Resistance (Cable outlet)	600 kPa
Weight	See table below.

\*About 5MP, safe overloads of pore pressure (liquid and gas pressure) is 3 MPa.

### BER-A-15S/17S Specifications

Performance	
Rated Capacity	See table below.
Nonlinearity	Within $\pm 2\%$ RO
Hysteresis	Within $\pm 2\%$ RO
Repeatability	1% RO or less
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	Within $\pm 0.1\%$ RO/°C (500KP: Within $\pm 0.3\%$ RO/°C)
Temperature Effect on Output	Within $\pm 0.1\%$ /°C
Electrical Characteristics	
Safe Excitation	10 V AC or DC
Recommended Excitation	2 to 5 V AC or DC
Input Resistance	350 $\Omega$ $\pm 2\%$
Output Resistance	350 $\Omega$ $\pm 2\%$
Cable	4-conductor (0.3 mm <sup>2</sup> ) chloroprene shielded cable, 7.6 mm diameter by 30 m long, bared at the tip (Shield wire is not connected to the case.)

Mechanical Properties	
Safe Overloads	120%*
Exterior	BER-A-15S Stainless steel metallic finish BER-A-17S Pressure sensing surface and flange: Stainless steel metallic finish Cable outlet: ZnC-plated MF
Water Pressure Resistance (Cable outlet)	600 kPa
Weight	See table on left.

\*About 5MP, safe overloads of pore pressure (liquid and gas pressure) is 3 MPa.



Strain Gage

Load Cell

Pressure Sensor

Acceleration Sensor

Torque Sensor

Displacement Sensor

Component Force Sensor

Automotive Sensor

Civil Engineering Sensor