

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

## Wall-surface Soil Pressure Transducer

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-234

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	—	3.1 kg
BER-A-500KP58S	500 kPa	2.1 kN	
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



Strain Gage

Load Cell

Pressure Sensor

Acceleration Sensor

Torque Sensor

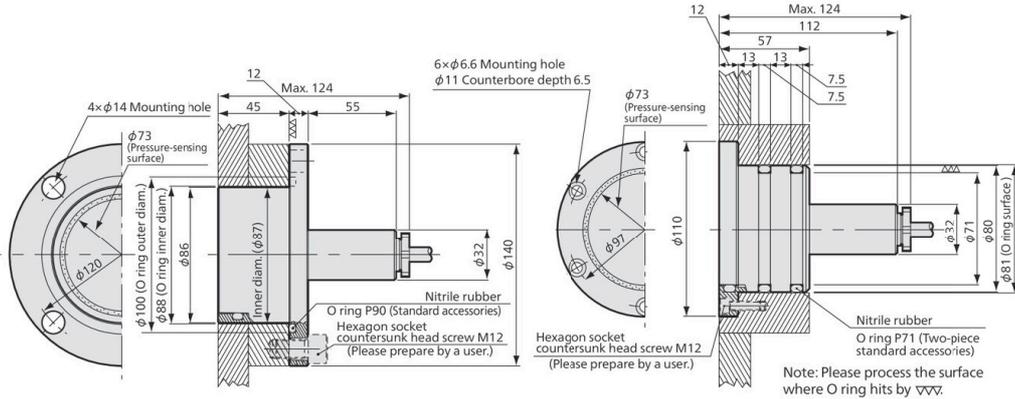
Displacement Sensor

Component Force Sensor

Automotive Sensor

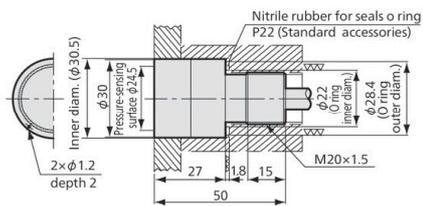
Civil Engineering Sensor

■ Dimensions

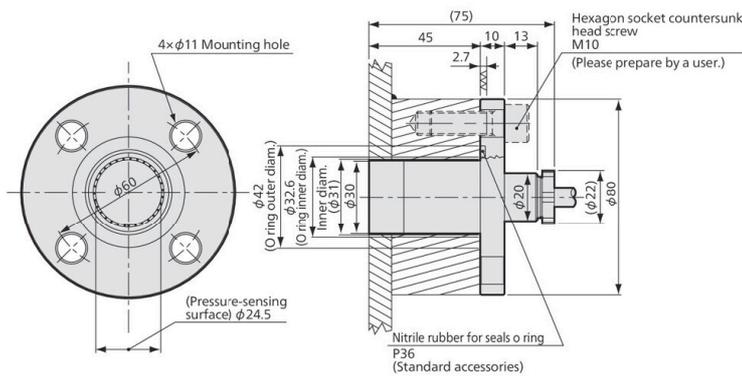
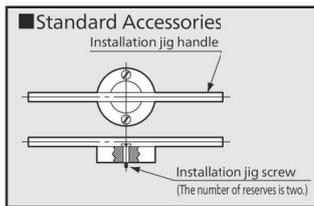


BER-A-12S

BER-A-58S



BER-A-15S



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

BER-A-17S

Bared at the tip (standard)

