

## BR-BT

## Stress Transducer

- Stress Measurement ● 2 to 10 MPa
- With Temperature Measuring Function



A pressure-sensing surface 160 mm in diameter. Enables to measure concrete stress directly as stress and not via strain

- Direct measurement of concrete stress without conversion from a detected strain quantity. This was backed by theory.
- Minimal effects of creep and changing elastic modulus of concrete, thereby ensures accurate stress measurement.
- Also usable for stress measurement of the natural ground by installing at the rear of a tunnel lining.

A temperature measuring function enable them to measure stress and temperature simultaneously.

## Specifications

## Performance

<b>● Stress Measurement</b>	
Rated Capacity	See table below.
Nonlinearity	Within $\pm 1\%$ RO
Hysteresis	Within $\pm 0.5\%$ RO
Rated Output	1 mV/V or more
<b>● Temperature Measurement</b>	
Rated Capacity	-30 to 70°C
Temperature Measurement Error	$\pm 0.5^\circ\text{C}$ (-30 to 70°C) (See page 7-32 for small-sized temperature transducer BTS-100AT.)

## Environmental Characteristics

Safe Temperature	-30 to 80°C
Compensated Temperature	-20 to 70°C
Temperature Effect on Zero	Within $\pm 0.05\%$ RO/ $^\circ\text{C}$
Temperature Effect on Output	Within $\pm 0.05\%$ / $^\circ\text{C}$

## Electrical Characteristics

Safe Excitation	10 V AC or DC
Recommended Excitation	2 to 10 V AC to DC
Input Resistance at 0°	$350 \Omega \pm 1\%$
Output Resistance at 0°	$450 \Omega \pm 0.8\%$
Cable	4-conductor (0.5 mm <sup>2</sup> ) chloroprene-coated cable, 8 mm diameter by 1 m long, bared at the tip

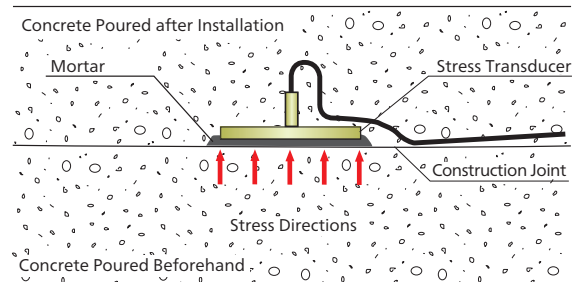
## Mechanical Properties

Safe over load Rating	150% (120% for 100KBT)
Weight	Approx. 2.9 kg

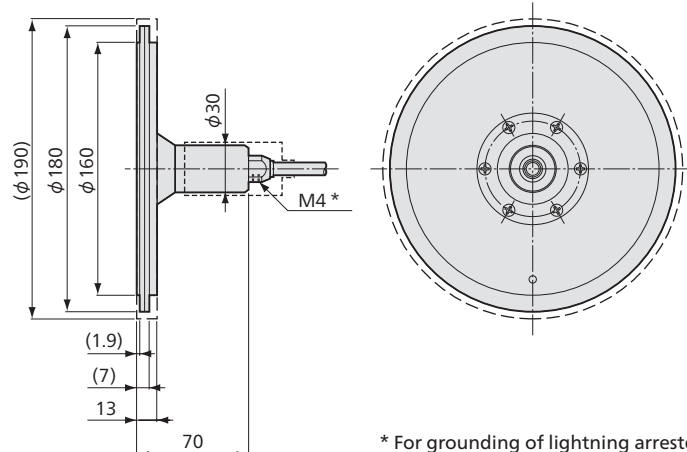
Models	Rated Capacity
BR-20KBT	2 MPa
BR-50KBT	5 MPa
BR-100KBT	10 MPa

\*Models providing smaller rated capacities (200 k, 500 k, and 1 Mpa) manufactured on option.

## Application Example



## Dimensions



\* For grounding of lightning arrester kit.

