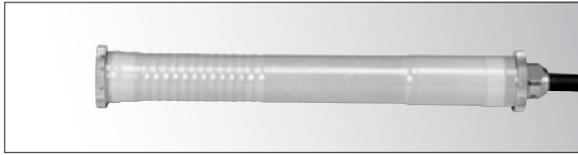


BS-25AT/25BT

- Strain Measurement
- ± 500 & $\pm 1000 \mu\text{m/m}$
- With Temperature Measuring Function

Strain Transducer

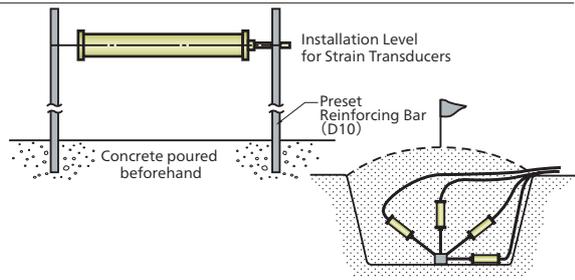


These transducers are intended for measurement of the strain occurring inside concrete with comparatively large aggregates.

- The linear expansion coefficient is approximated to that of concrete to minimize temperature effects, thereby enabling measurement of external force-initiated strain and the strain corresponding to temperature stress.
- Minimal damage against vibrator during embedment and endures vibration by the RCD method.

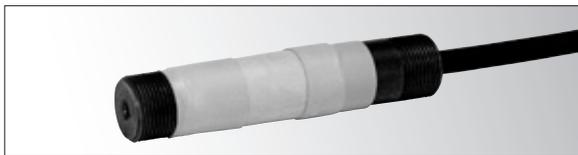
Strain transducers BS-25AT/BS-25BT are intended for measurement of the strain occurring inside concrete with comparatively large aggregates. Since a temperature measuring function is provided, these transducers can simultaneously measure strain and temperature.

Application Example



BS-8FT

Small-sized Strain Transducer



This transducer is designed to measure strain in the inside or on the surface of thin concrete wall or on the surface of H-shape steel beams.

- Self-temperature compensation type designed with a linear expansion coefficient approximated to that of concrete
- Wide application range including measurement of strain on an earth retaining strut, steel sheet-pile and tunnel support
- Usable for long-term measurement in place of a directly bonded strain gage

The BS-8FT strain transducer is designed to measure strain in the inside or on the surface of a thin concrete wall or on the surface of steel such as an H-shape steel beam. A temperature measuring function enables it to simultaneously measure strain and temperature. Since the compact design measures only 80 mm in length, embedment applications are limited to concrete with comparatively small aggregates.

Specifications

Performance

● Strain Measurement	
Rated Capacity	$\pm 500 \mu\text{m/m}$ for AT, $\pm 1000 \mu\text{m/m}$ for BT
Nonlinearity	Within $\pm 1.5\%$ RO for AT, within $\pm 2\%$ RO for BT
Hysteresis	Within $\pm 2\%$ RO
Rated Output	2.5 mV/V or more (From minus to plus rated output)
● Temperature Measurement	
Rated Capacity	-30 to 70°C
Measurement Error	Within $\pm 0.5^\circ\text{C}$ (-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 Output	Within $\pm 0.05\%/^\circ\text{C}$

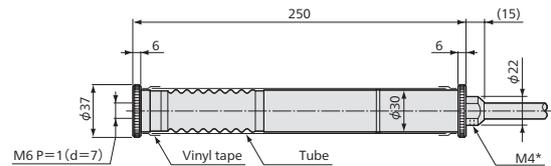
Electrical Characteristics

Safe Excitation	10 V AC or DC
Recommended Excitation	2 to 10 V AC or DC
Input Resistance	$350 \Omega \pm 1\%$ at 0°C
Output Resistance	$450 \Omega \pm 0.8\%$ at 0°C
Cable	4-conductor (0.5 mm ²) chloroprene shielded cable, 11.5 mm diameter by 1 m long, bared at the tip

Mechanical Properties

Instrument Length	250 mm
Safe Overloads	120%
Apparent Linear Expansion Coefficient	$(11.5 \pm 0.6) \mu\text{m/m per } ^\circ\text{C}$
Weight	Approx. 600 g

Dimensions



* For grounding of lightning arrester kit.

- Strain Measurement
- $\pm 1000 \mu\text{m/m}$
- With Temperature Measuring Function

Specifications

Performance

● Strain Measurement	
Rated Capacity	$\pm 1000 \mu\text{m/m}$
Nonlinearity	Within $\pm 2\%$ RO
Hysteresis	Within $\pm 3\%$ RO
Rated Output	2.6 mV/V or more (From minus to plus rated output)
● Temperature Measurement	
Rated Capacity	-30 to 70°C
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 Output	Within $\pm 0.05\%/^\circ\text{C}$

Electrical Characteristics

Safe Excitation	10 V AC or DC
Recommended Excitation	2 to 10 V AC or DC
Input Resistance	$350 \Omega \pm 1\%$ at 0°C
Output Resistance	$450 \Omega \pm 1.6\%$ at 0°C
Cable	4-conductor (0.3 mm ²) chloroprene shielded cable, 6 mm diameter by 1 m long, bared at the tip

Mechanical Properties

Instrument Length	80 mm
Safe Overloads	120%
Apparent Linear Expansion Coefficient	$(11 \pm 1) \times 10^{-6}/^\circ\text{C}$
Weight	Approx. 120 g

*For concrete stress transducers, see page 7-39.

Dimensions

