

BS-15CT

- Strain Measurement ● $\pm 2000 \mu\text{m/m}$
- With Temperature Measuring Function

Surface-mounting Type Strain Transducer



For measurement of strain on steel and concrete surfaces.

- Self-temperature compensation type with linear expansion coefficient approximated to that of concrete ($11 \mu\text{m/m per } ^\circ\text{C}$)
- Large capacity ($\pm 2000 \mu\text{m/m}$), shock- and vibration-resistance, and integrated mounting legs
- Applicable for steel pipe piles, steel pipe laggings, steel sheet piles and hydraulic iron pipes in power stations

The BS-15CT surface mounting type strain transducer is developed especially for measurement of strain on steel and concrete surfaces. A temperature measuring function enables simultaneous measurement of strain and temperature. Installed on a pile or steel sheet pile, the rugged design endures vibration initiated by driving the pile.

Specifications

Performance

● Strain Measurement	
Rated Capacity	$\pm 2000 \mu\text{m/m}$
Nonlinearity	Within $\pm 2\%$ RO
Hysteresis	Within $\pm 2\%$ RO
Rated Output	1.25 to 2.5 mV/V (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 $\pm 0.05\%/^\circ\text{C}$

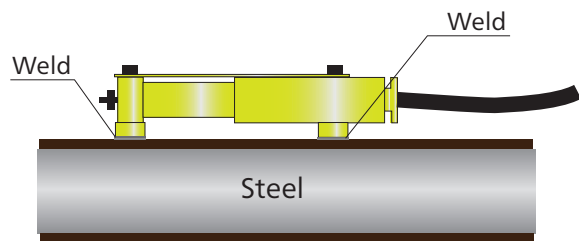
Electrical Characteristics

Safe Excitation	10 V AC or DC
Recommended Excitation	2 to 10 V AC or DC
Input Resistance	$350 \Omega \pm 2\%$ at 0°C
Output Resistance	$450 \Omega \pm 1.6\%$ at 0°C
Cable	4-conductor (0.5 mm^2) chloroprene shielded cable, 9.6 mm diameter by 1 m long, bared at the tip

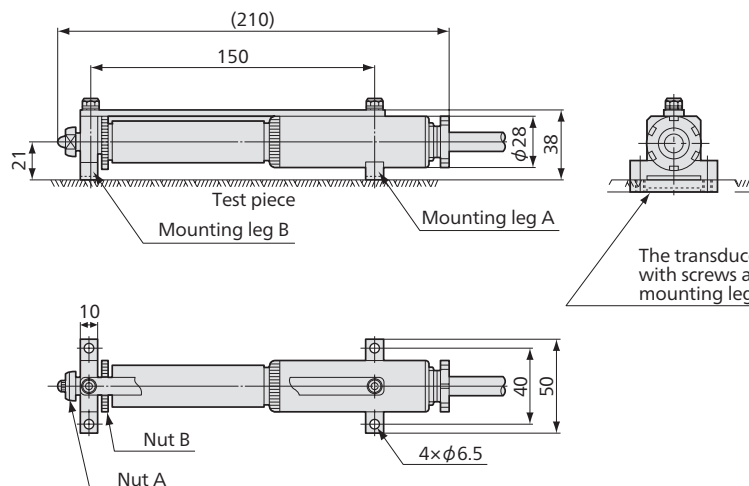
Mechanical Properties

Instrument Length	150 mm
Safe Overloads	150%
Apparent Linear Expansion Coefficient	$(11 \pm 1) \times 10^{-6}/^\circ\text{C}$
Weight	Approx. 700 g

Application Example



Dimensions



The transducer can be fixed with screws after welding the mounting legs to the test piece.

- After welding mounting legs A and B, initial adjustment is possible with nuts A and B.

