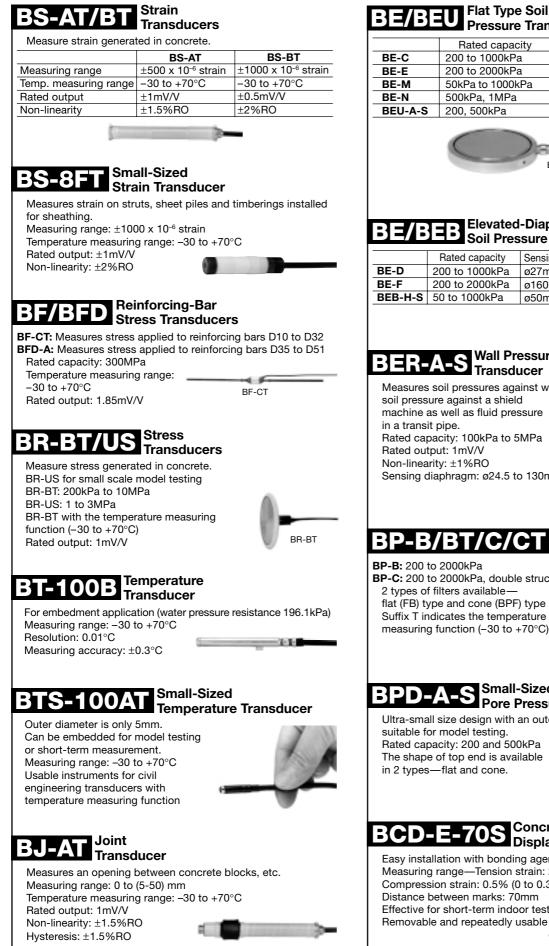
**CIVIL ENGINEERING MEASURING INSTRUMENTS** 

PART PDF ISSUE Kyowa Measuring Instruments for Stress Solutions KYOWA ELECTRONIC INSTRUMENTS CO., LTD.



### Flat Type Soil Pressure Transducers

	Rated capacity	Sensing diaphragm	
BE-C	200 to 1000kPa	ø30mm	
BE-E	200 to 2000kPa	ø160mm	
BE-M	50kPa to 1000kPa	ø80mm, all stainless steel	
BE-N	500kPa, 1MPa	ø70mm, for piling	
BEU-A-S	200, 500kPa	ø50mm, all stainless steel	
-	•	•	



### **Elevated-Diaphragm Type** Soil Pressure Transducers

	Rated capacity	Sensing diaphragm	
BE-D	200 to 1000kPa	ø27mm	
BE-F	200 to 2000kPa	ø160mm	Line .
BEB-H-S	50 to 1000kPa	ø50mm	
			BE-F

### Wall Pressure Transducer

Measures soil pressures against wall, soil pressure against a shield machine as well as fluid pressure Rated capacity: 100kPa to 5MPa Sensing diaphragm: ø24.5 to 130mm



#### Pore Pressure BT/C/C Transducers

BP-C: 200 to 2000kPa, double structure 2 types of filters availableflat (FB) type and cone (BPF) type

Suffix T indicates the temperature measuring function (-30 to +70°C)

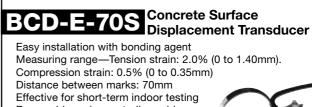


# Small-Sized Pore Pressure Transducer

Ultra-small size design with an outer diameter of 10mm makes it

The shape of top end is available in 2 types-flat and cone.







Measures water level and water temperature in a bore. Measuring range-Water level: 0 to 10, 20 or 30 m Water temperature: -20 to +60°C Rated output: 2mV/V Non-linearity: ±0.15%RO Built-in arrester and correction against an atmospheric pressure Stainless steel make, ø32 x 122mm



# BPT-A-80KPS Soil Moisture Transducer

For measurement of the moisture absorbing pressure of soil Rated load: -80kPa Rated output: -0.8mV/V Non-linearity: ±0.5%RO

## BLD-A-S Hollowed Load Cells

BL-B: 5 to 500kN

BI -DS: 50 to 500kN BL-E: 1 and 2MN Measure the load affected onto anchors and timberings. Rated output: 1mV/V min. Non-linearity: ±1, ±2%RO



# BKK-A Inclination Transducer Surface-Mounting Type

Measures disturbance due to adjacent civil engineering. Measuring range:  $\pm 1^{\circ}$  to  $\pm 5^{\circ}$ Rated output: 2 to 3mV/V min. Non-linearity: ±0.5%RO



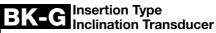
# Insertion Type Automatic Inclination Measuring System

Automatically measures inclination angles while inserting or winding up the transducer. Direct reading of laterial displacement by every 50cm depth Cumulative graph for review of total displacement Automatic inversion by 180° and automatic revolution by 90° Rated capacity: ±10° Non-linearity: Within ±0.05%RO (Transducer)

Hoist BKA-100A-50 can move the transducer down to 50m depth. Control/Data Acquisition Unit BKA-150A-

Analog input channel:

Resolution: 16 bits, Display 10.4-inch TFT color LCD, Recording media: ATA card (IC memory card)



Suitable for measurement of landslide of retaining wall

Measuring range:  $\pm 5^{\circ}$ ,  $\pm 10^{\circ}$ Rated output: ±1mV/V Cable: 60m long, with reel

### **Digital Inclination Indicator** SDB-350B

Rechageable battery with less power consumption makes it suitable for measurement in the field.



## **Embedment Type** Inclination Transducer

Can be embedded in up to 20 stages in a bore or pre-embedded aluminium guide pipe for quick measurement of inclination angles by depths.

Uniaxial and biaxial types are available. Rated capacity:  $\pm 5^{\circ}$ ,  $\pm 10^{\circ}$ Safe overload rating: 120% Rated output: 1.8mV/V





Bridge excitation with constant current

Applicable sensors: Strain gages, strain-gage transducers, civil engineering transducers with temperature measuring function, and thermocouples

Shoulder bag RS-232-C interface Operation on built-in NiCd battery Dimensions and mass: 148 x 50.5 x 155mm, approx. 750g



#### Data UCAM-20PC Logger

Ultimate structure having no operation/display panel

In combination with the standard control software and an existing personal computer, it performs as a stand-alone data logger. 30 channels with the dedicated scanner incorporated into the mainframe and up to 230 channels with additional external scanners

Refer to page 12 for details.





**JB-100C** Cable Splicing Kit with Arrester

Displacement: ±100, ±200, ±500 mm p-p

Dimensions and weight: 49 x 128.5 x 262.5mm, approx. 1.4kg

Output: ±10V

Protects the equipment against thunder.

Connection near transducers and indicators Outer diameter of applicable cable sheath: 6 to 16mm

Maximum dimensions: ø32 x 183mm long



#### Cable **JB-200A Connection Kit**

Outer diameter of sheath: 6 to 16mm Curing time: Approx. 1 hour at 23°C, 3 to 5 hours at  $0^\circ C$ Dimensions: Max. 32mmø x 183mm long

