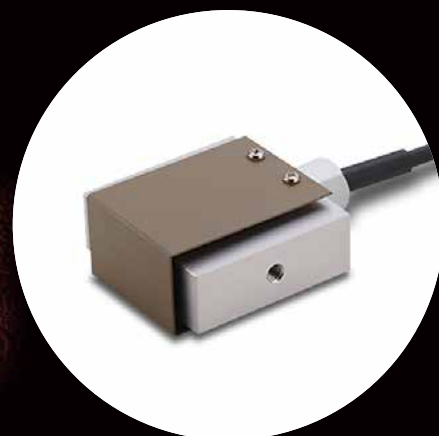


## 1/2000 of High Precision Tension/Compression Load Cell



### Applications

For measurement of test equipment and conveyor tank scale

### Type of Mounting

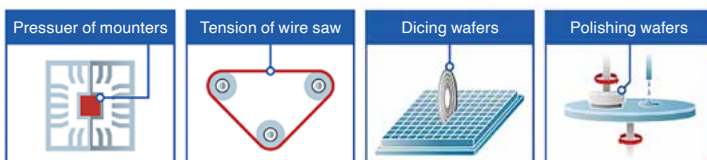
Fix with screws

### Advantages of the TEAC Load Cells

#### TEAC Load Cells

Since the 1980s, when TEAC started manufacturing and selling load cells, we have cultivated technologies to achieve higher precision and smaller size with our unique structures. With these technologies, a number of load cells that achieve high response, high accuracy, and high stability, as well as products that take environmental conservation into consideration have been developed to match customers' applications. We also offer customization for specific conditions (usage environment, space) that are difficult to meet with standard ones. From one-off prototypes to mass production, we support engineers involved in research and development on manufacturing technology.

#### Examples of application

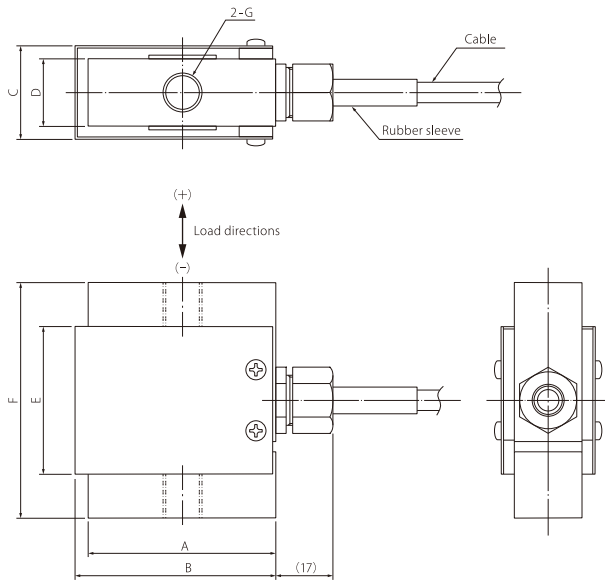


### Specifications

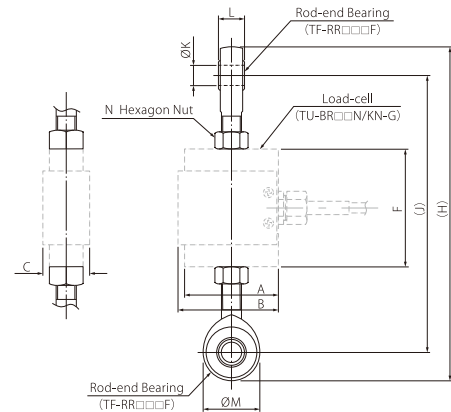
| Type                               | Tension/Compression Load Cell  |             |            |            |            |             |             |
|------------------------------------|--|-------------|------------|------------|------------|-------------|-------------|
| Model                              | <b>TU-BR□□N/KN-G</b>   |             |            |            |            |             |             |
|                                    | <div>RoHS</div> <div>(10 substances)</div>                           |             |            |            |            |             |             |
| Rated Capacity (R.C.)              | <b>200N</b>  | <b>500N</b> | <b>1kN</b> | <b>2kN</b> | <b>5kN</b> | <b>10kN</b> | <b>20kN</b> |
| Natural Frequency                  | 0.6kHz   | 1.2kHz      | 1kHz       | 1.5kHz     | 2.7kHz     | 2.3kHz      | 2.2kHz      |
| Weight (Approx.)                   | 0.3kg  | 0.3kg       | 0.3kg      | 0.45kg     | 0.5kg      | 0.5kg       | 1.6kg       |
| Safe overload rating               | 150% R.C.  |             |            |            |            |             |             |
| Rated Output (R.O.)                | 3mV/V ±1%  |             |            |            |            |             |             |
| Linearity                          | 0.05% R.O.   |             |            |            |            |             |             |
| Hysteresis                         | 0.05% R.O.   |             |            |            |            |             |             |
| Repeatability                      | 0.03% R.O.   |             |            |            |            |             |             |
| Zero Balance                       | ±10% R.O.  |             |            |            |            |             |             |
| Safe Excitation Voltage            | 20V  |             |            |            |            |             |             |
| Input Terminal Resistance          | 350Ω ±3.5Ω   |             |            |            |            |             |             |
| Output Terminal Resistance         | 350Ω ±5Ω   |             |            |            |            |             |             |
| Insulation Resistance              | 1000MΩ or more (DC 50V)  |             |            |            |            |             |             |
| Compensated Temperature Range      | -10°C to 70°C  |             |            |            |            |             |             |
| Permissible Temperature Range      | -30°C to 80°C  |             |            |            |            |             |             |
| Temperature Effect on Zero Balance | 0.05% R.O./10°C  |             |            |            |            |             |             |
| Temperature Effect on Output       | 0.05% R.C. / 10°C  |             |            |            |            |             |             |
| Cable                              | Φ6mm, 4-core shield cable, 5m direct connection with bare lead wires |             |            |            |            |             |             |
| Mounting Method                    | Screw holes  |             |            |            |            |             |             |
| Body Material                      | Aluminum   |             |            | Steel      |            |             |             |

Dimensional drawings (Units: mm)

Polarity: Tension (+), Compression (-)



### Rod-end Bearing



| Model       | Capacity | A  | B  | C  | D  | E  | F  | G                   |
|-------------|----------|----|----|----|----|----|----|---------------------|
| TU-BR200N-G | 200N     | 56 | 60 | 28 | 20 | 44 | 60 | M6 x 1 Depth 12     |
| TU-BR500N-G | 500N     | 56 | 60 | 28 | 20 | 44 | 60 | M6 x 1 Depth 12     |
| TU-BR1KN-G  | 1kN      | 56 | 60 | 28 | 20 | 44 | 60 | M6 x 1 Depth 12     |
| TU-BR2KN-G  | 2kN      | 56 | 60 | 28 | 20 | 44 | 70 | M12 x 1.75 Depth 16 |
| TU-BR5KN-G  | 5kN      | 56 | 60 | 28 | 20 | 44 | 70 | M12 x 1.75 Depth 16 |
| TU-BR10KN-G | 10kN     | 56 | 60 | 28 | 20 | 44 | 70 | M12 x 1.75 Depth 16 |
| TU-BR20KN-G | 20kN     | 70 | 74 | 33 | 25 | 58 | 90 | M16 x 2 Depth 20    |

| Loadcell    | Rod-end Bearing | H   | J   | ØK   | L  | ØM | N          |
|-------------|-----------------|-----|-----|------|----|----|------------|
| TU-BR200N-G | TF-RR006F       | 126 | 108 | 6H7  | 9  | 18 | M6 x 1.0   |
| TU-BR500N-G |                 |     |     |      |    |    |            |
| TU-BR1KN-G  |                 |     |     |      |    |    |            |
| TU-BR2KN-G  | TF-RR012F       | 199 | 165 | 12H7 | 16 | 34 | M12 x 1.75 |
| TU-BR5KN-G  |                 |     |     |      |    |    |            |
| TU-BR10KN-G |                 |     |     |      |    |    |            |
| TU-BR20KN-G | TF-RR016F       | 229 | 190 | 16H7 | 19 | 39 | M16 x 2.0  |

### Related Products (Indicators and Signal Conditioners)



92 x 92mm  
Panel opening size

Color Graphics Digital Indicator  
**TD-9000T**  
RS-485 model  
EtherNet/IP™ model  
CC-Link model



92 x 45mm  
Panel opening size

Digital Indicator  
**TD-700T**  
Standard model  
CC-Link model  
RS-485 model



**New**  
EtherNet/IP.  
model  
CC-Link  
model

Signal Conditioner  
**TD-SC1**  
D/A model  
RS-485 model  
EtherNet/IP™ model  
CC-Link model



Weights only 320g  
(incl. batteries)

Portable Digital Indicator  
**TD-01 Portable**

### High performance model with large LCD

Supporting two inputs, force sensor and displacement sensor, various comparison judgments function, and direct saving of waveform data onto large capacity internal memory.

|                  |                        |               |
|------------------|------------------------|---------------|
| TEDS             | RoHS                   | 4.3" LCD      |
| Touch Panel      | 5,000 time/sec.        | 24-bit        |
| Load/Vary Inputs | Waveform               | Static Strain |
| Interrupt Check  | High/Low Limit Compare | Judgements    |
| D/A OUT          | RS-232C                | Bilingual     |

CE US CC-Link EtherNet/IP

### Excellent model with compact and high functionality

Supporting five key functions in one unit, numeric display, graph display, TEDS function, static strain display, and signal conditioner. This small and cost-effective TD-700T achieves equal or even higher performance to upper-class models, with high-visibility color LCD and various hold functions.

|               |               |                 |             |
|---------------|---------------|-----------------|-------------|
| TEDS          | RoHS          | 4,000 time/sec. | 24-bit      |
| Static Strain | Waveform      | Bar Meter       | D/A OUT     |
| Data Rec      | Various Holds | Bilingual       | AC/DC Power |

CE US CC-Link

### Slim and light-weight signal conditioner

Supporting high-speed sampling of 20,000 times/second, PC-based configuration via USB connection, selectable network, and TEDS calibration function.

|                  |                        |                |
|------------------|------------------------|----------------|
| TEDS             | RoHS                   | Plug-in        |
| 20,000 time/sec. | 24-bit                 | Static Strain  |
| Bilingual        | High/Low Limit Compare | Hold Functions |

CE US CC-Link EtherNet/IP

### On-site checking tool with versatility

Supporting various functions that equal to embedded systems, in hand-held size, allowing you to take measurements anytime anywhere, according to your purpose.

|              |                     |                        |
|--------------|---------------------|------------------------|
| TEDS         | RoHS                | Color LCD              |
| Waveform     | Bar Meter           | High/Low Limit Compare |
| Data Rec     | Static Strain       | Interrupt Check        |
| D/A OUT      | Dual I/O            | 24-bit                 |
| AA Batteries | Long Time Operation | Bilingual              |

CE

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### TEAC CORPORATION

1-47 Ochiai, Tama-shi, Tokyo  
206-8530, Japan

E-mail: cs\_ipd@teac.jp  
Web: https://loadcell.jp/en/

### TEAC America, Inc.,

E-mail: datarecorder@teac.com

### TEAC EUROPE GmbH.

E-mail: info@teac.eu

### TEAC SALES & TRADING (ShenZhen) CO., LTD.

E-mail: teacservice3@teac.com.cn