

Thin Load Cell "Multi Force Sensor"



*TEDS-installed models are available. Inquiries are welcome.

Advanced thin design 1/2 to 1/3 height to the conventional one

- 1/2 to 1/3 height to the conventional one enables wide application.
- Optional dedicated rubber attachment enables fixing the top and bottom with bolts, thereby making it possible to design the system with no tension rod or stay rod used.
- Safety factor is 3 to 5 times higher than conventional type. Endures lateral loads up to 20% of the rated capacity.
- Rubber attachment attenuates impact energy and lessens the effects of thermal expansion of system and the moment of fixed section.
- Rubber attachment enables easy installation without concern for parallelism.
- Varieties of accuracies and output signals are available, enabling configuration of the most suitable system for each application.
- Combination instruments such as amplifiers are easily connected since the wirings are the same as conventional load cells.

Specifications

Performance

| | |
|-----------------------|--|
| Rated Capacity | See table below. |
| Nonlinearity | Within $\pm 0.05\%$ RO (100kN: Within $\pm 0.1\%$ RO) |
| Hysteresis | Within $\pm 0.05\%$ RO (100kN: Within $\pm 0.1\%$ RO) |
| Repeatability | 0.03% RO or less (100kN: 0.05% RO or less) |
| Rated Output | 2 mV/V (4000 $\times 10^{-6}$ strain) $\pm 0.2\%$ |

Environmental Characteristics

| | |
|-------------------------------------|----------------------------|
| Safe Temperature | -20 to 70°C |
| Compensated Temperature | -10 to 60°C |
| Temperature Effect on Zero | Within $\pm 0.003\%$ RO/°C |
| Temperature Effect on Output | Within $\pm 0.003\%$ /°C |

Electrical Characteristics

| | |
|-------------------------------|--|
| Safe Excitation | 20 VDC |
| Recommended Excitation | 1 to 10 VDC |
| Input Resistance | 350 $\Omega \pm 1.5\%$ |
| Output Resistance | 350 $\Omega \pm 1.5\%$ |
| Cable | 4-conductor (0.3 mm ²) chloroprene shielded cable, 6 mm diameter by 5 m long (10 m long with 100kN), bared at the tip (Shield wire is not connected to the case.) |

Mechanical Properties

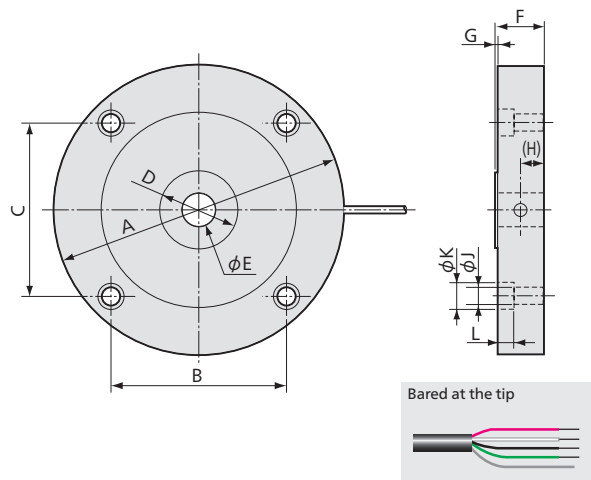
| | |
|------------------------------|---|
| Safe Overloads | 150% |
| Ultimate Lateral Load | 50% (Max. load which does not cause any mechanical damage) |
| Weight | See table below. |
| Materials | Special steel |

(Note 1) No LCTE-A is used for any onboard measurement.

(Note 2) No LCTE-A is used in an environment where it is frequently exposed to lateral loads.

(Note 3) No LCTE-A is installed to any inclined or vertical surfaces.

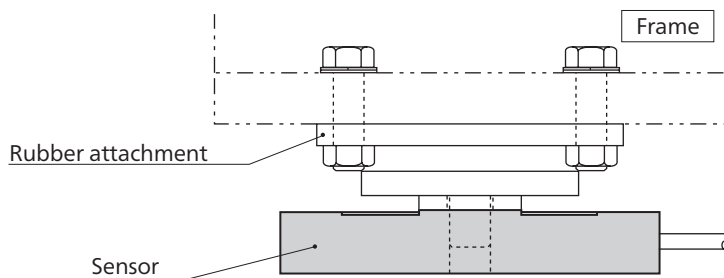
Dimensions



| Models | Rated Capacity | A | B | C | D | ϕE | F | G | (H) | ϕJ | ϕK | L | Weight* |
|--------------|----------------|-----|-----|-----|----|----------|----|---|-----|----------|----------|-----|------------------|
| LCTE-A-10KN | 10 kN | 148 | 90 | 90 | 40 | 16 | 25 | 1 | 13 | 9 | 14 | 8.5 | ≈ 3.2 kg |
| LCTE-A-20KN | 20 kN | 178 | 110 | 110 | 62 | | 31 | | 15 | 11 | 18 | 11 | ≈ 5.1 kg |
| LCTE-A-30KN | 30 kN | 198 | 124 | 124 | 80 | 20 | 35 | 3 | 17 | 14 | 20 | 13 | ≈ 6.9 kg |
| LCTE-A-50KN | 50 kN | | | | | | 37 | | | | | | ≈ 7.2 kg |
| LCTE-A-100KN | 100 kN | | | | | | | | | | | | |

*Excluding cable

Optional Accessories




Applicable Accessories

| Models | Rubber Attachment |
|--------------|-------------------|
| LCTE-A-10KN | RA01-2T |
| LCTE-A-20KN | |
| LCTE-A-30KN | RA01-5T |
| LCTE-A-50KN | RA01-5T, RA01-10T |
| LCTE-A-100KN | |




● Physical quantity indication ● Static measurement ● Dynamic measurement


LCTE-A
Recommended
products for
combination




Instrumentation Amplifier
WGA-900A
→ 3-95




Instrumentation Amplifier
WGA-680A
→ 3-97



Data Logger
UCAM-60 series
→ 3-27



Universal Recorder
EDX-200A
→ 3-57



Universal Recorder
EDX-100A
→ 3-65