LUH-F
High-accuracy Tension/Compression Load Cell

Specifications
Performance
- Rated Capacity: See table below.
- Nonlinearity: Within ±0.02% RO
- Hysteresis: Within ±0.02% RO
- Repeatability: 0.02% RO or less
- Zero Float: ±0.02% RO or less (LUF-50KF to 500KF)
- Rated Output: 2 mV/V (4000 × 10⁻⁶ strain) ±0.1%

Environmental Characteristics
- Safe Temperature: -35 to 80°C
- Compensated Temperature: -10 to 60°C
- Temperature Effect on Zero: Within ±0.0015% RO/°C
- Temperature Effect on Output: Within ±0.001%/°C

Electrical Characteristics
- Safe Excitation: 20 V AC or DC
- Recommended Excitation: 1 to 10 V AC or DC
- Input Resistance: 350 Ω±0.5%
- Output Resistance: 350 Ω±0.5%
- Cable: 6-conductor (0.5 mm²) chloroprene shielded cable, 9.5 mm diameter by 5 m long, with crimp-style terminals (For 4 mm)
  (Shield wire is not connected to the case.)

Mechanical Properties
- Safe Overloads: 150%
- Natural Frequencies: See table below.
- Weight: See table below.
- Others: Drop prevention stopper mountable
  *Customers have to prepare anti-dropping stoppers by themselves.
- RoHS Directive: EN50581

Standard Accessories
- 4 hexagon socket head bolts M5, L=10 mm
- 1 hexagon bar (Opposite side 2.5 mm)
- LUH-50KF
- LUH-100KF
- LUH-200KF
- LUH-500KF
- LUH-1TF
- LUH-2TF
- LUH-5TF
- LUH-10TF
- LUH-20TF

Models | Rated Capacity | Natural Frequencies | Weight* |
--- | --- | --- | --- |
LUH-50KF | ±500 N | 1.4 kHz | = 2.1 kg |
LUH-100KF | ±1 kN | 2.2 kHz | = 4 kg |
LUH-200KF | ±2 kN | 3.1 kHz | = 9 kg |
LUH-500KF | ±5 kN | 4.6 kHz | = 18 kg |
LUH-1TF | ±10 kN | 4.2 kHz | = 38 kg |
LUH-2TF | ±20 kN | 6.6 kHz | |
LUH-5TF | ±50 kN | 5.2 kHz | |
LUH-10TF | ±100 kN | 4.5 kHz | |
LUH-20TF | ±200 kN | 3.7 kHz | |

*Customers have to prepare anti-dropping stoppers by themselves.

**Zero Float**
Zero float means such a phenomenon that a cycle of continuously applied tensile & compressive loads causes the zero to float. The value is expressed in percentage of the rated output. It is also called cyclic zero shift.
Load Cells (Load Transducers)

**Dimensions**

**LUH-50KF to 5TF dimensions in combination with mount base**

When using in combination with special accessories, consult with our sales engineer.

<table>
<thead>
<tr>
<th>Models</th>
<th>A</th>
<th>B</th>
<th>φC</th>
<th>φD</th>
<th>φE</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N (P)</th>
<th>Q</th>
<th>SR</th>
<th>S</th>
<th>T</th>
<th>U</th>
<th>φV</th>
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<tbody>
<tr>
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<td>75</td>
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<td>25</td>
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<td>4</td>
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<td>10</td>
<td>8</td>
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<td>84.5</td>
<td>12</td>
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<td>9</td>
<td>10</td>
<td>8</td>
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<td>50</td>
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<td>LUH-20TF</td>
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<td>64</td>
<td>50</td>
<td>80</td>
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<td>25</td>
<td>d=10</td>
<td>40</td>
<td>135.5</td>
<td>15</td>
</tr>
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</table>

1. Load cell LUH-F
2. Saddle CA-2B
3. Mount base CF-80
4. Hexagon socket head bolt 4xM8, L=25 (Standard accessories of mount base)

**Models**

- LUH-50KF
- LUH-100KF
- LUH-200KF
- LUH-500KF

**LUH-50KF to 500KF**

- For mounting an anti-dropping stopper

**LUH-1TF to 20TF**

- 4xM8, d=15 (90 position)
- 2xM5, 6 drilled, d=36 (90 position)

**Load Cells (Load Transducers)**

- LUH-50KF
- LUH-100KF
- LUH-200KF
- LUH-500KF

**Ball Joints**

- Static Breaking Load (Approx.)
  - A: 1.4 kN
  - B: 2.9 kN
  - C: 5.8 kN
  - D: 14.7 kN

**Recommended products for combination**

- Instrumentation Amplifier WGA-710C
- Signal Conditioner CDV-900A

Note: Special accessories for tensile load measurement should be assembled at our factory.

*From the viewpoint of guaranteed accuracy, allows neither a hook nor a shackle to be combined.