

## Tension/Compression Load Cell



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

### Hermetically-sealed structure with inert gas filled in. Tension/Compression load cells

The detection portion is hermetically sealed with inert gas filled in to prevent aging deterioration and to ensure reliability and stability for a long period of time.

#### Specifications

##### Performance

<b>Rated Capacity</b>	See table below.
<b>Nonlinearity</b>	Within $\pm 0.2\%$ RO
<b>Hysteresis</b>	Within $\pm 0.1\%$ RO
<b>Repeatability</b>	0.1% RO or less
<b>Rated Output</b>	2 mV/V $\pm 0.2\%$

##### Environmental Characteristics

<b>Safe Temperature</b>	-30 to 85°C
<b>Compensated Temperature</b>	-10 to 70°C
<b>Temperature Effect on Zero</b>	Within $\pm 0.005\%$ RO/°C
<b>Temperature Effect on Output</b>	Within $\pm 0.005\%$ /°C

##### Electrical Characteristics

<b>Safe Excitation</b>	20 V AC or DC
<b>Recommended Excitation</b>	1 to 10 V AC or DC
<b>Input Resistance</b>	350 $\Omega$ $\pm 0.5\%$
<b>Output Resistance</b>	350 $\Omega$ $\pm 0.5\%$
<b>Cable</b>	4-conductor (0.3 mm <sup>2</sup> ) chloroprene shielded cable, 7.6 mm diameter by 5 m long, terminated with a connector plug PRC03-12A10-7M (Shield wire is connected to the case.)

##### Mechanical Properties

<b>Safe Overloads</b>	150%
<b>Natural Frequencies</b>	See table below.
<b>Weight</b>	See table below.

##### Optional Accessories

- Saddle CA-B (Page 2-72)
- Mount base CF (Page 2-72)
- Rotating attachment RJ (Page 2-74)
- Ball joint TU (Page 2-75)
- Hook THC (Page 2-75)
- Shackle TRC (Page 2-76)



Load Cells  
(Load Transducers)

Outline

Compressive

Tensile

Tensile & compressive

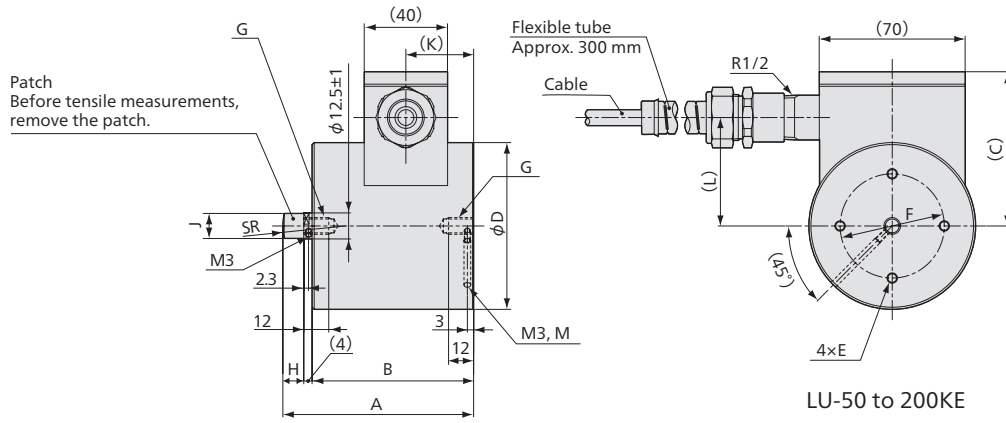
Component

Special

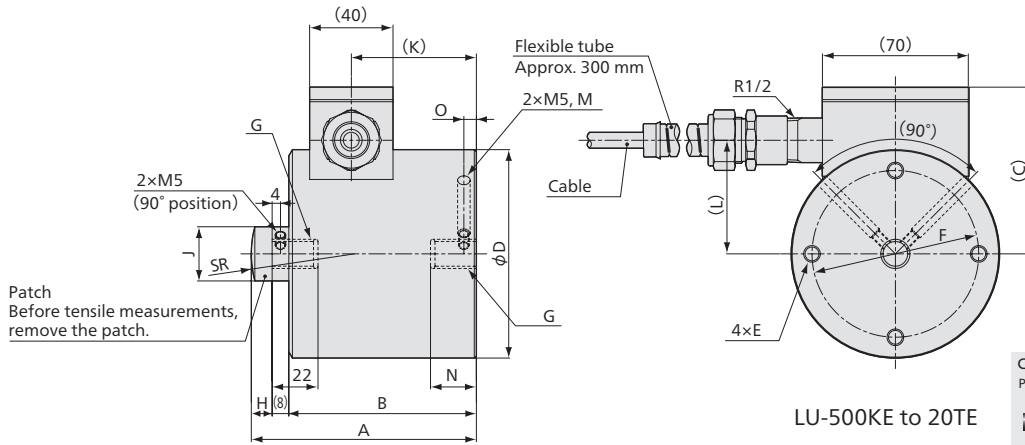
Other

Models	Rated Capacity	Natural Frequencies (Approx.)	Weight* (Approx.)	Saddles	Mount Bases	
LU-50KE	$\pm 500$ N	1.54 kHz	2.8 kg	CA-1B	CF-50	
LU-100KE	$\pm 1$ kN	2.16 kHz				
LU-200KE	$\pm 2$ kN	3.28 kHz				
LU-500KE	$\pm 5$ kN	2.66 kHz			CF-80	
LU-1TE	$\pm 10$ kN	4.2 kHz				
LU-2TE	$\pm 20$ kN	4.97 kHz	5.0 kg	-	-	
LU-5TE	$\pm 50$ kN	3.5 kHz				
LU-10TE	$\pm 100$ kN	3.14 kHz				9.5 kg
LU-20TE	$\pm 200$ kN	2.5 kHz				22.0 kg

\*Excluding cable

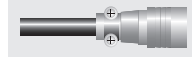


LU-50 to 200KE



LU-500KE to 20TE

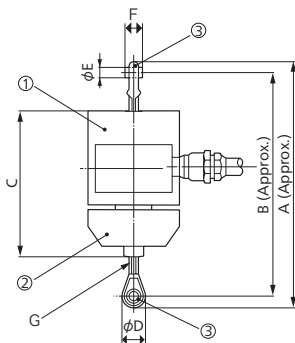
Connector plug  
PRC03-12A10-7M



Models	A	B	(C)	ϕD	E	F	G	H	ϕJ	(K)	(L)	ϕM	O	SR
LU-50KE	91.5	77.5	74	80	M5×8	50	M8×1.25	10	12	32.5	52	3.2 d=30	3	30
LU-100KE														
LU-200KE														
LU-500KE	105	90	134	100	M8×8	80	M12×1.75	10	19	40	62	3.5 d=38	7	30
LU-1TE	108	90	130	100	M8×12	80	M14×2	10	26	60	54.5	6 d=36	6	50
LU-2TE	108	90	130	100	M8×12	80	M18×1.5	10	26	60	54.5	6 d=36	6	70
LU-5TE	167	140	144	112	M8×15	95	M26×2	17	36	100	62.5	9 d=37	10	70
LU-10TE	220	190	172.5	138	M8×15	120	M36×2	20	50	145	78	9 d=43	10	70
LU-20TE	277	235	221	186	M8×15	160	M50×3	27	64	190	102.5	9 d=58	15	100

■ Dimensions in combination with special accessories

● In combination with rotating attachment (RJ) and ball joint (TU)



① Load Cells	② Rotating Attachments	③ Ball Joints	A (Approx.)	B (Approx.)	C	ϕD	ϕE	F	G	Static Breaking Loads (Approx.)
LU-50KE	RJ-02	TU-8	217	195	125	22	8	11	M8, P=1.25	1.4 kN
LU-100KE										2.9 kN
LU-200KE										5.8 kN
LU-500KE	RJ-05	TU-12	262	232	140	30	12	16	M12, P=1.75	14.7 kN
LU-1TE	RJ-1	TU-14	283	246	160	37	14	17	M14, P=2	29.4 kN
LU-2TE	RJ-2	TU-18	304	262	160	42	18	23	M18, P=1.5	58.8 kN
LU-5TE	RJ-5	TU-26	463	393	235	70	25	37	M26, P=2	136.3 kN
LU-10TE	RJ-10	—	678	573	315	105	40	60	M36, P=2	—
LU-20TE	RJ-20	—	842	706	414	136	50	75	M50, P=3	—

\*Rotation attachment RJ is not applicable for compressive load measurement.  
\*Special accessories for tensile loads should be mounted at our factory.  
\*Dimensions A and B are approximate, since the ball joint is screw-in type.

● Physical quantity indication   ● Static measurement   ● Dynamic measurement

LU-E Recommended products for combination

- Instrumentation Amplifier WGA-910A → 3-91
- Data Logger UCAM-60 series → 3-27
- Strain Amplifier DPM-900 series → 3-5
- Universal Recorder EDX-200A → 3-55
- Universal Recorder EDX-100A → 3-63
- Sensor Interface PCD-400A/430A → 3-78