

LU-E

Tension/Compression Load Cell

CE

1
-94

Sensor



Tension/compression load cells with hermetically-sealed structure filled with inert gas

● Rated capacity: ± 500 N to 200 kN

Load cells with excellent stability and reliability with the detector filled with inert gas to prevent aging variation.

Specifications

Performance

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

Environmental Characteristics

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

Electrical Characteristics

Safe Excitation	20 V AC or DC
Recommended Excitation	1 to 10 V AC or DC
Input Resistance	350 Ω $\pm 0.5\%$
Output Resistance	350 Ω $\pm 0.5\%$
Cable	4-conductor (0.3 mm ²) 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

Safe Overloads	150%
Natural Frequencies	See table below.
Weight	See table below.
Degree of Protection	IP32 (JIS C 0920/IEC 60529)
Compliance	Directive 2011/65/EU, (EU)/2015/863 (10 restricted substances) (RoHS)

Optional Accessories

Saddle CA
Mount base CF
Rotating attachment RJ
Ball joint TU
Hook THC
Shackle TRC

Models

Model	Rated Capacity	Natural Frequencies (Approx.)	Weight (Approx.) ^{*1}	Saddle	Mount Base
LU-50KE	± 500 N	1.54 kHz	2.8 kg	CA-1B	CF-50
LU-100KE	± 1 kN	2.16 kHz			
LU-200KE	± 2 kN	3.28 kHz			
LU-500KE	± 5 kN	2.66 kHz	4.5 kg		CF-80
LU-1TE	± 10 kN	4.2 kHz	2.8 kg	—	—
LU-2TE	± 20 kN	4.97 kHz			
LU-5TE	± 50 kN	3.5 kHz			
LU-10TE	± 100 kN	3.14 kHz	9.5 kg		
LU-20TE	± 200 kN	2.5 kHz	22.0 kg		

^{*1} Excluding cable

^{*}TEDS-installed models are available. Please contact us.



Strain Gage

Load Cell

Pressure Sensor

Acceleration Sensor

Torque Sensor

Displacement Sensor

Component Force Sensor

Automotive Sensor

Civil Engineering Sensor

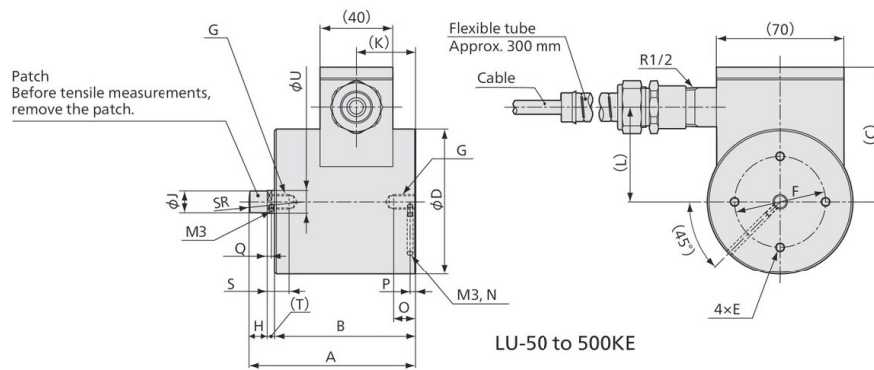


Strain Gage

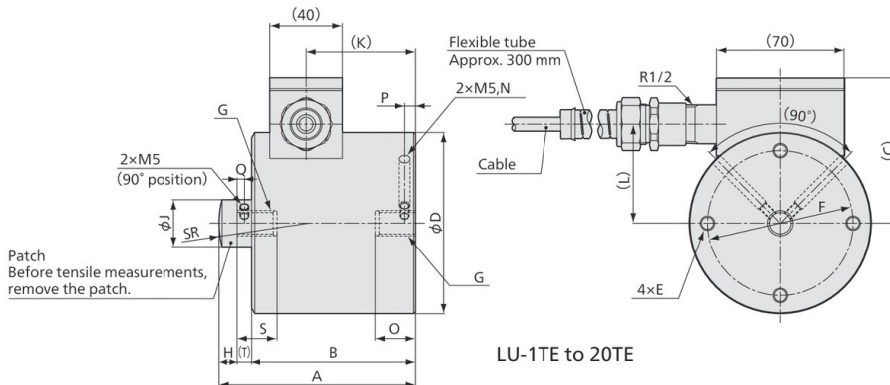
Load Cell

Pressure
SensorAcceleration
SensorTorque
SensorDisplacement
SensorComponent
Force
SensorAutomotive
SensorCivil
Engineering
Sensor

■ Dimensions



LU-50 to 500KE



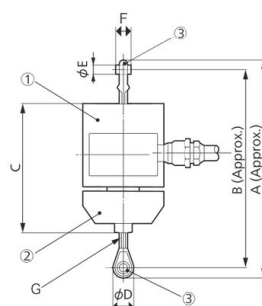
LU-1TE to 20TE

Model	A	B	(C)	φD	E	F	G	H	φJ	(K)	(L)	N	O	P	Q	S	(T)	φU	SR
LU-50KE																			
LU-100KE	91.5	77.5	74	80	M5×8	50	M8×1.25		12	32.5	52	φ3.2 d=30	12	3	2.3	12	4	12.5	30
LU-200KE																			
LU-500KE	105		84		M8×8		M12×1.75	10	19	40	62	φ3.5 d=38	17	7	2.7	17	5	20	
LU-1TE	108	90	80	100	M8×12	80	M14×2		26	60	54.5	φ6 d=36	22	6	4	22	8	—	50
LU-2TE							M18×1.5												
LU-5TE	167	140	88	112		95	M26×2	17	36	100	62.5	φ9 d=37	35			35			70
LU-10TE	220	190	103.5	138	M8×15	120	M36×2	19.5	50	145	78	φ9 d=43	45.01	10	5	45	10	—	
LU-20TE	277	235	128	186		160	M50×3	27.5	64	190	102.5	φ9 d=58	65	15	8	65	14	—	100

Connector plug (standard)
PRC03-12A10-7M

■ Configuration Diagram

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



① Load Cell	② Rotating Attachment	③ Ball Joint	A (Approx.)	B (Approx.)	C	φD	φE	F	G	Static Breaking Load (Approx.)
LU-50KE										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		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.