

Tension/Compression Load Cell



Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within $\pm 0.1\%$ RO (500KN or larger: Within $\pm 0.2\%$ RO)
Hysteresis	Within $\pm 0.1\%$ RO (500KN or larger: Within $\pm 0.2\%$ RO)
Repeatability	0.05% RO or less (500KN or larger: 0.1% RO or less)
Rated Output	2 mV/V (4000×10^{-6} strain) $\pm 1\%$ 5 to 20KN: 2.4 mV/V (4800×10^{-6} strain) $\pm 10\%$

Environmental Characteristics

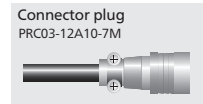
Safe Temperature	-35 to 80°C
Compensated Temperature	-10 to 70°C
Temperature Effect on Zero	Within $\pm 0.005\%$ RO/°C
Temperature Effect on Output	Within $\pm 0.005\%$ /°C

Electrical Characteristics

Safe Excitation	15 V AC or DC
Recommended Excitation	1 to 10 V AC or DC
Input Resistance	350 $\Omega \pm 1\%$
Output Resistance	350 $\Omega \pm 1\%$
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 not connected to the case.)

Mechanical Properties

Safe Overloads	150%
Natural Frequencies	See table.
Weight	See table.(Excluding cable)
Safe Lateral Force Component	See table.
Safe Moments	See table.
Degree of Protection	IP64 (IEC 60529)
RoHS Directive	EN50581

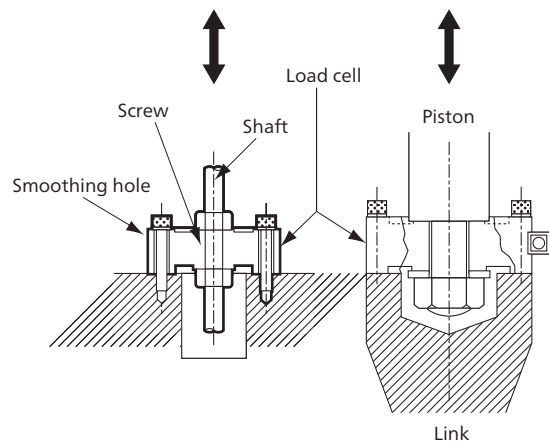


Compact & lightweight Tension/Compression load cells

The thin structure is suitable for installation where the height is limited. The service life will be extended by using with one-half the rated capacity if repetitive loads are applied continuously.

*When used for tension, make sure not to use special accessories such as ball-joint and rotating attachment. The LUK-A is not applicable to setscrews.

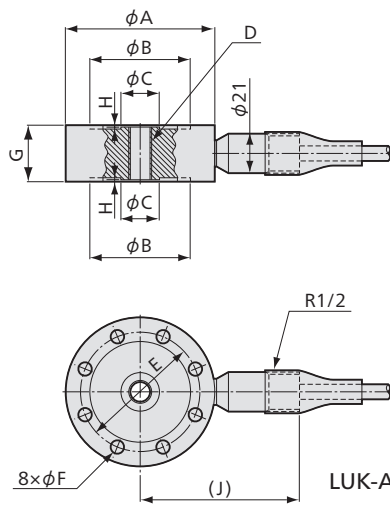
Installation Example



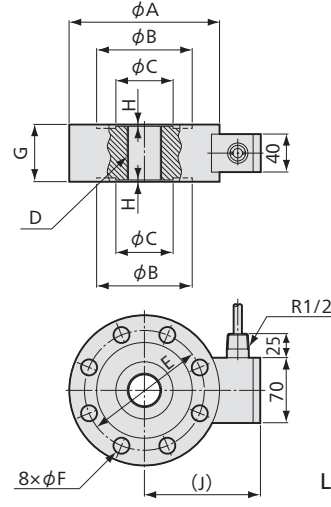
To Ensure Safe Usage

Be sure to prevent the shaft from turning when using for hanging load measurement.

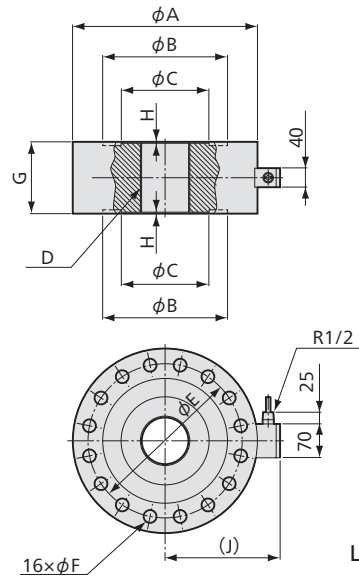
■ Dimensions



LUK-A-5KN to 20KN



LUK-A-50KN to 500KN



LUK-A-1MN to 2MN

Models	Rated Capacity	Natural Frequencies	Safe Moments	Safe Lateral Force Component	ϕA	ϕB	ϕC	D	ϕE	ϕF	G	H	(J)	Weight
LUK-A-5KN	±5 kN	≈ 7.4 kHz	15 N·m	250 N	77	52	20	M12, P=1.75	62	7	30	1	82	≈ 900 g
LUK-A-10KN	±10 kN	≈ 10.8 kHz	30 N·m	500 N										
LUK-A-20KN	±20 kN	≈ 8.5 kHz	60 N·m	1 kN	107	70	34	M18, P=1.5	85	9	40	1	97	≈ 2 kg
LUK-A-50KN	±50 kN	≈ 11 kHz	150 N·m	2.5 kN	127	77	40	M24, P=1.5	95	13	50	2	102	≈ 4 kg
LUK-A-100KN	±100 kN	≈ 9 kHz	500 N·m	5 kN	157	100	60	M36, P=2	125	17	60	2	119	≈ 7 kg
LUK-A-200KN	±200 kN	≈ 7.5 kHz	1 kN·m	10 kN	227	136	90	M50, P=2	180	22	70	2	157	≈ 18 kg
LUK-A-500KN	±500 kN	≈ 5.2 kHz	2.5 kN·m	25 kN	307	200	138	M76, P=3	256	26	105	3	198	≈ 50 kg
LUK-A-1MN	±1 MN	≈ 5 kHz	5 kN·m	50 kN	375	254	180	M100, P=3	314	26	150	3	233	≈ 90 kg
LUK-A-2MN	±2 MN	≈ 3.9 kHz	10 kN·m	100 kN	560	410	260	M150, P=4	485	36	200	3	326	≈ 245 kg

- Physical quantity indication
- Static measurement
- Dynamic measurement

