

Tension/Compression Load Cell

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.

To Ensure Safe Usage

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

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 $\pm 1\%$ 5 to 20KN: 2.4 mV/V $\pm 10\%$

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 Ω $\pm 1\%$
Output Resistance	350 Ω $\pm 1\%$
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.
Safe Lateral Force Component	See table.
Safe Moments	See table.
Degree of Protection	IP64 (IEC 60529)



Load Cells
(Load Transducers)

Outline

Compressive

Tensile

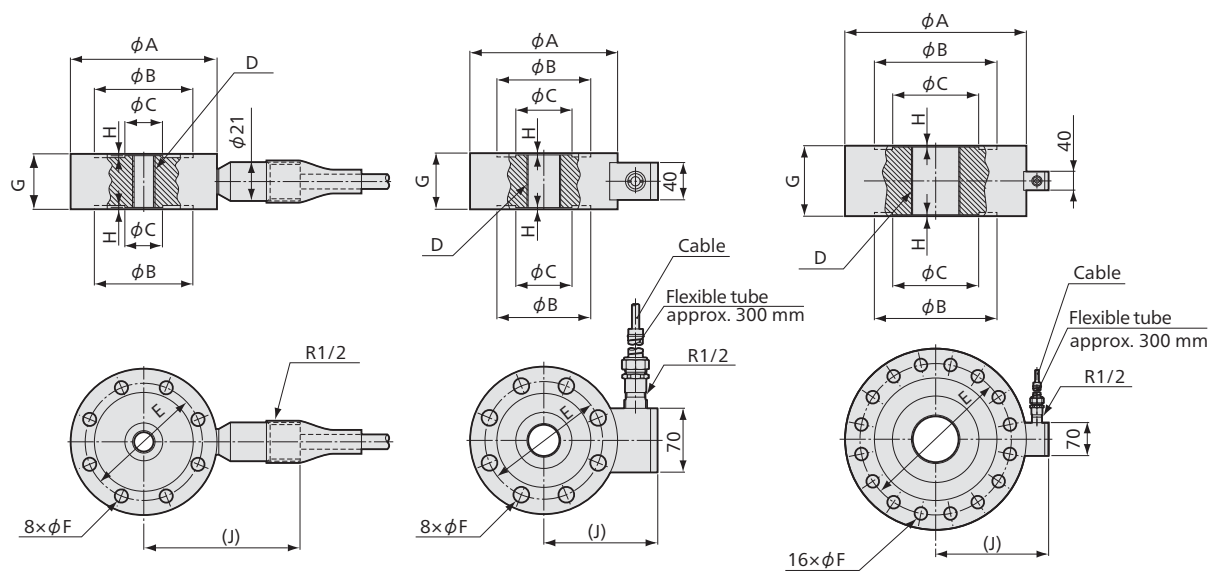
Tensile &
compressive

Component

Special

Other

■ Dimensions



LUK-A-5KN to 20KN

LUK-A-50KN to 500KN

LUK-A-1MN to 2MN

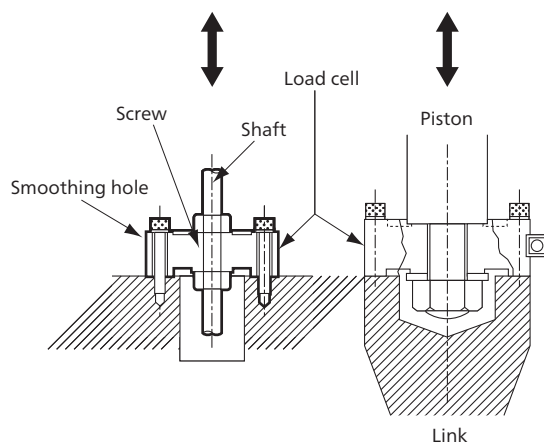
Connector plug
PRC03-12A10-7M

Models	Rated Capacity	Natural Frequencies (Approx.)	Safe Moments	Safe Lateral Force Component	φA	φB	φC	D	E	φF	G	H	(J)	Weight* (Approx.)
LUK-A-5KN	±5 kN	7.4 kHz	15 N·m	250 N	77	52	20	M12×1.75	62	7	30	1	82	900 g
LUK-A-10KN	±10 kN	10.8 kHz	30 N·m	500 N	107	70	34	M18×1.5	85	9	40	1	97	2 kg
LUK-A-20KN	±20 kN	8.5 kHz	60 N·m	1 kN	127	77	40	M24×1.5	95	13	50	2	102	4 kg
LUK-A-50KN	±50 kN	11 kHz	150 N·m	2.5 kN	157	100	60	M36×2	125	17	60	2	119	7 kg
LUK-A-100KN	±100 kN	9 kHz	500 N·m	5 kN	227	136	90	M50×2	180	22	70	2	157	18 kg
LUK-A-200KN	±200 kN	7.5 kHz	1 kN·m	10 kN	307	200	138	M76×3	256	26	105	3	197.5	50 kg
LUK-A-500KN	±500 kN	5.2 kHz	2.5 kN·m	25 kN	375	254	180	M100×3	314	26	150	3	232.5	90 kg
LUK-A-1MN	±1 MN	5 kHz	5 kN·m	50 kN	560	410	260	M150×4	485	36	200	3	326	245 kg
LUK-A-2MN	±2 MN	3.9 kHz	10 kN·m	100 kN										

● For delivery date, please contact us.

*Excluding cable

■ Installation Example

Load Cells
(Load Transducers)

Outline

Compressive

Tensile

Tensile &
compressive

Component

Special

Other