

Load Cells
(Load Transducers)

Outline

Compressive

Tensile

Tensile &
compressive

Component

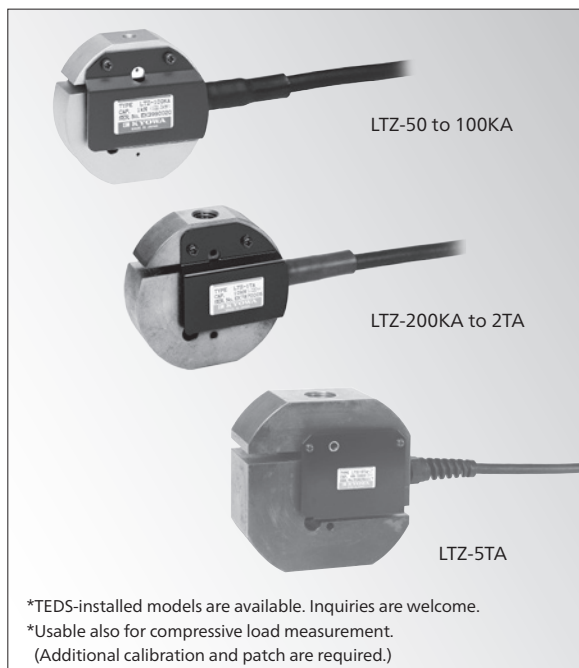
Special

Other

LTZ-A

High-accuracy Tension Load Cell

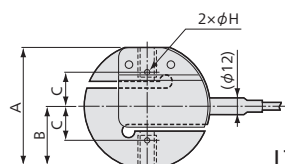
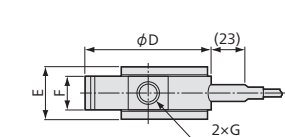
● Small-sized, high accuracy ● 500 N to 50 kN



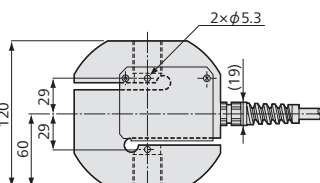
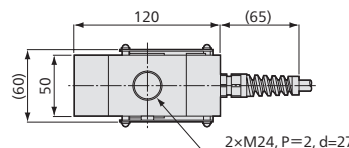
Adopt the Roberval's mechanism to ensure the linearity of within $\pm 0.05\%$ RO

- Compact & lightweight
- Large output
- Usable also for compressive load measurement (Extra calibration and patches are required.)

Dimensions



LTZ-50KA to 2TA

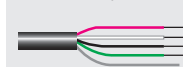


LTZ-5TA

Models	A	B	C	ϕD	E	F	G	ϕH
LTZ-50KA	64	32	19	68	32	22	M6, P=1, d=14	1.6
LTZ-100KA								
LTZ-200KA								
LTZ-500KA	74	37	21	78	32	22	M12, P=1.75, d=18	3.5
LTZ-1TA								
LTZ-2TA	94	47	23	98	40	30	M18, P=1.5, d=25	3.5
LTZ-5TA								

See dimensions above.

Bared at the tip



Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within $\pm 0.03\%$ RO (500KA or larger: Within $\pm 0.05\%$ RO)
Hysteresis	Within $\pm 0.03\%$ RO (500KA or larger: Within $\pm 0.05\%$ RO)
Repeatability	0.03% RO or less
Rated Output	3 mV/V $\pm 0.2\%$

Environmental Characteristics

Safe Temperature	-20 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	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 (0.5 mm ²) chloroprene shielded cable, 8.5 mm diameter by 3 m long, bared at the tip (Shield wire is not connected to the case.)

Mechanical Properties

Safe Overloads	150%
Material	Aluminum alloy (Case of 50KA to 200KA)
Natural Frequencies	See table below.
Weight	See table below.
Degree of Protection	IP64 (IEC 60529)

Optional Accessories Saddle CA-B (Page 2-72)
Patch CWM (Page 2-73)
Movable saddle ER-B (Page 2-73)
Boll joints TU (Page 2-75)

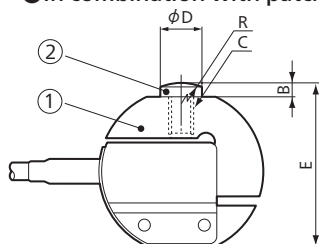
Models	Rated Capacity	Natural Frequencies (Approx.)	Weight* (Approx.)
LTZ-50KA	500 N	1.25 kHz	300 g
LTZ-100KA	1 kN	1.75 kHz	
LTZ-200KA	2 kN	2 kHz	350 g
LTZ-500KA	5 kN	2.5 kHz	700 g
LTZ-1TA	10 kN	2.8 kHz	
LTZ-2TA	20 kN	2.6 kHz	1.5 kg
LTZ-5TA	50 kN	4.3 kHz	4.4 kg

*Excluding cable

■ Dimensions in combination with special accessories

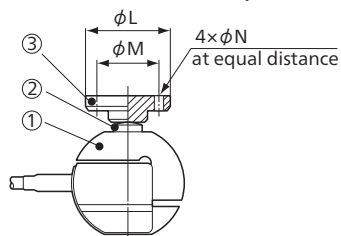
Contact us for using the tension load cell in combination with special accessories.

● In combination with patch (CWM)



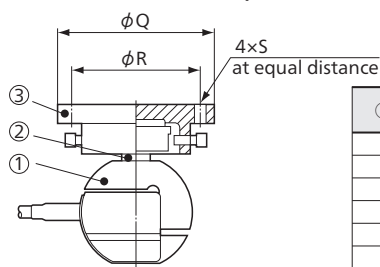
① Load Cells	② Patches	B	C	ϕD	E	R
LTZ-50KA	CWM-6	4	M6, P=1	10	68	SR30
LTZ-100KA						
LTZ-200KA						
LTZ-500KA						
LTZ-1TA	CWM-12	7	M12, P=1.75	19	81	SR30
LTZ-2TA						
LTZ-5TA						
LTZ-5TA						
LTZ-2TA	CWM-18	10	M18, P=1.5	26	104	SR30
LTZ-5TA	CWM-24	17	M24, P=2	36	137	

● In combination with patch (CWM) and saddle (CA)



① Load Cells	② Patches	③ Saddle	ϕL	ϕM	ϕN
LTZ-50KA	CWM-6	CA-2B	53	38	7
LTZ-100KA					
LTZ-200KA					
LTZ-500KA					
LTZ-1TA	CWM-12	CA-2B	53	38	7
LTZ-2TA					
LTZ-5TA					
LTZ-5TA					
LTZ-2TA	CWM-18	CA-2B	53	38	7
LTZ-5TA	CWM-24	CA-10B	98	80	11

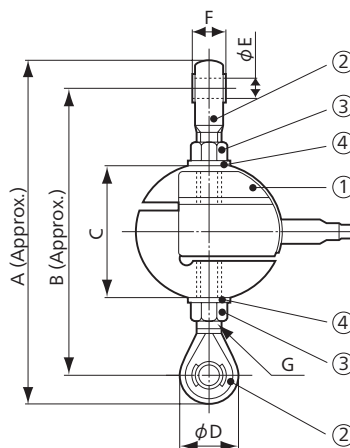
● In combination with patch (CWM) and movable saddle (ER)



① Load Cells	② Patches	③ Movable Saddles	ϕQ	ϕR	S
LTZ-50KA	CWM-6	ER-2B	108	90	M8
LTZ-100KA					
LTZ-200KA					
LTZ-500KA					
LTZ-1TA	CWM-12	ER-2B	108	90	M8
LTZ-2TA					
LTZ-5TA					
LTZ-5TA					
LTZ-2TA	CWM-18	ER-2B	108	90	M8
LTZ-5TA	CWM-24	ER-5B	148	128	M12

● In combination with ball joint (TU)

Note: Ball joints should be mounted to load cells at our factory.



① Load Cells	② Ball Joints	③ Hexagon Nuts	④ Spring Washers	A	B	C	ϕD	ϕE	F	G	Static Breaking Loads (Approx.)
LTZ-50KA	TU-6C	M6, P=1	2# 6S	128	110	64	18	6	9	M6, P=1	1.4 kN
LTZ-100KA											2.9 kN
LTZ-200KA											5.8 kN
LTZ-500KA											14.7 kN
LTZ-1TA	TU-12C	M12, P=1.75	2# 12S	196	166	74	30	12	16	M12, P=1.75	29.4 kN
LTZ-2TA											58.8 kN
LTZ-5TA											147 kN
LTZ-5TA											147 kN
LTZ-2TA	TU-18C	M18, P=1.5	2# 18S	232	190	94	42	18	23	M18, P=1.5	58.8 kN
LTZ-5TA	TU-24C	M24, P=2	3# 24S	346	276	120	70	25	37	M24, P=2	147 kN

Dimensions A and B are approximate, since the ball joint is screw-in type.

Note: Don't use other accessories for tensile load except the ball joints.