

LTZ-A

High-accuracy Tension Load Cell

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



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 (6000×10^{-6} strain) $\pm 0.2\%$

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 $\Omega \pm 0.5\%$
Output Resistance	350 $\Omega \pm 0.5\%$
Cable	4-conductor (0.5 mm ²) chloroprene shielded cable, 8.5 mm diameter by 3 m long, with crimp-style terminals (For 4 mm) (Shield wire is not connected to the case.)

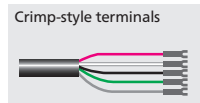
Mechanical Properties

Safe Overloads	150%
Materials	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 2-72) Movable saddle ER-B (Page 2-73) Boll Joints TU-C (Page 2-74)
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Models	Rated Capacity	Natural Frequencies	Weight*
LTZ-50KA	500 N	≈ 1.25 kHz	≈ 300 g
LTZ-100KA	1 kN	≈ 1.75 kHz	≈ 350 g
LTZ-200KA	2 kN	≈ 2 kHz	≈ 350 g
LTZ-500KA	5 kN	≈ 2.5 kHz	≈ 700 g
LTZ-1TA	10 kN	≈ 2.8 kHz	≈ 1.5 kg
LTZ-2TA	20 kN	≈ 2.6 kHz	≈ 1.5 kg
LTZ-5TA	50 kN	≈ 4.3 kHz	≈ 4.4 kg

*Excluding cable



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.)

Being simple in structure, the LTZ-A is easily handled and maintained. Installing with less burden to existing facilities, they are used as compact, lightweight load cells with excellent cost performance for weighing or testing systems in various fields.

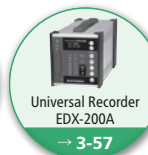
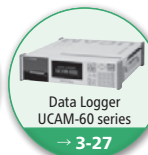
In combination with ball joints

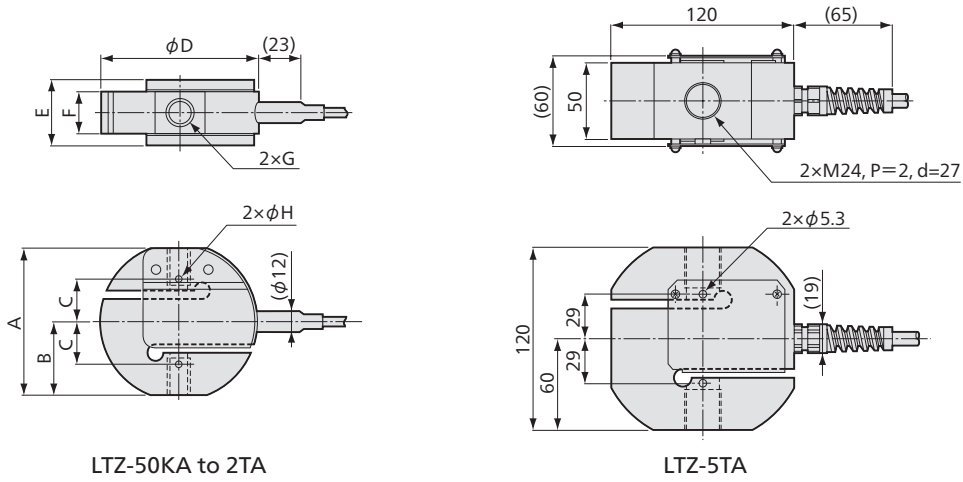


*Note: Don't use other accessories for tensile load except the ball joints.

● Physical quantity indication

● Static measurement ● Dynamic measurement



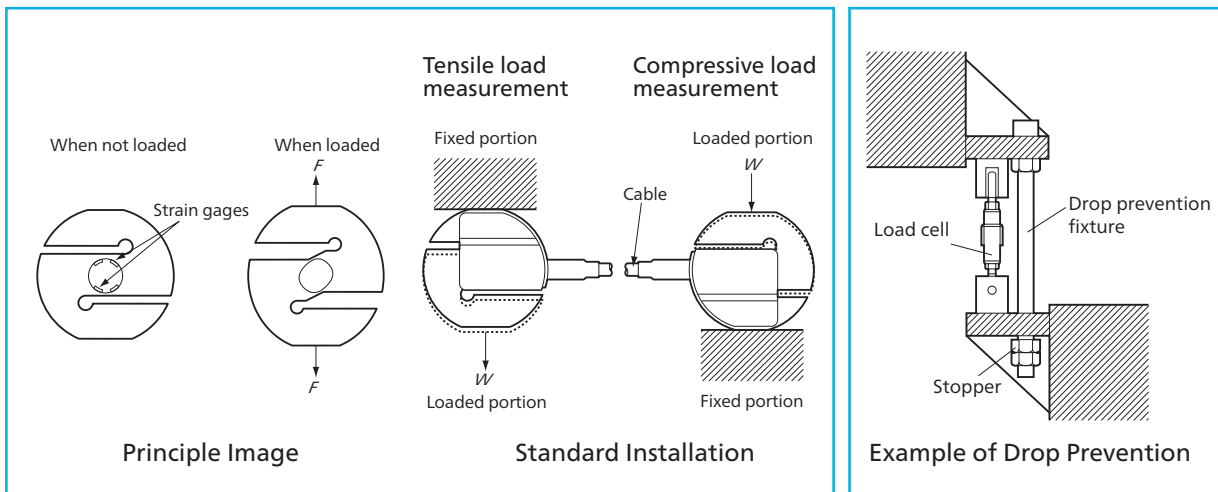


LTZ-50KA to 2TA

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								

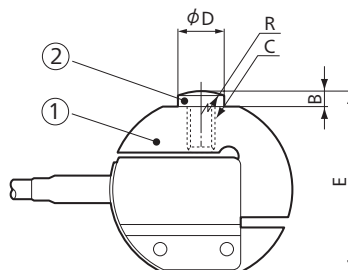
See dimensions above.



■ Dimensions in combination with special accessories

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

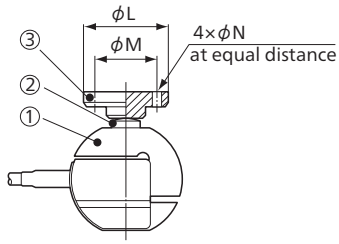
● In combination with patch (CWM)



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	CWM-12	7	M12, P=1.75	19	81	SR30
LTZ-1TA						
LTZ-2TA	CWM-18	10	M18, P=1.5	26	104	SR30
LTZ-5TA	CWM-24	17	M24, P=2	36	137	

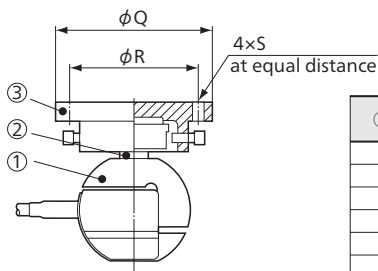
■ Dimensions in combination with special accessories

● 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	CWM-12	CA-2B	53	38	7
LTZ-500KA					
LTZ-1TA					
LTZ-2TA	CWM-18	CA-2B	53	38	7
LTZ-5TA	CWM-24	CA-10B	98	80	11

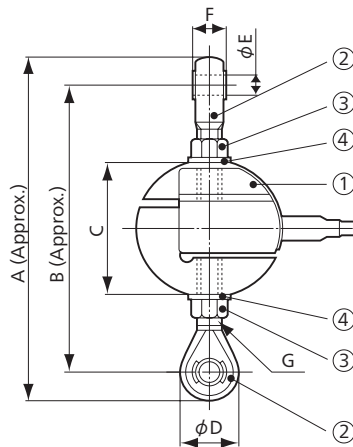
● In combination with patch (CWM) and movable saddle (ER)



① Load Cells	② Patches	③ Movable Saddles	φQ	φR	S
LTZ-50KA	CWM-6	ER-2B	108	90	M8
LTZ-100KA					
LTZ-200KA	CWM-12	ER-2B	108	90	M8
LTZ-500KA					
LTZ-1TA					
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	TU-12C	M12, P=1.75	2# 12S	196	166	74	30	12	16	M12, P=1.75	5.8 kN
LTZ-500KA											14.7 kN
LTZ-1TA											29.4 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.