



Strain Gage

Load Cell

Pressure Sensor

Acceleration Sensor

Torque Sensor

Displacement Sensor

Component Force Sensor

Automotive Sensor

Civil Engineering Sensor

LTZ-A

High-accuracy Tension Load Cell



Highly accurate models using Roberval's mechanism

- Rated capacity: 500 N to 50 kN
- High accuracy (nonlinearity: within $\pm 0.03\%$ RO^{*1})
- Uses BISELCOM gage^{*2}

Tension load cells that make use of a Roberval's mechanism. They use a BISELCOM gage for increased output and improved reliability.

Models

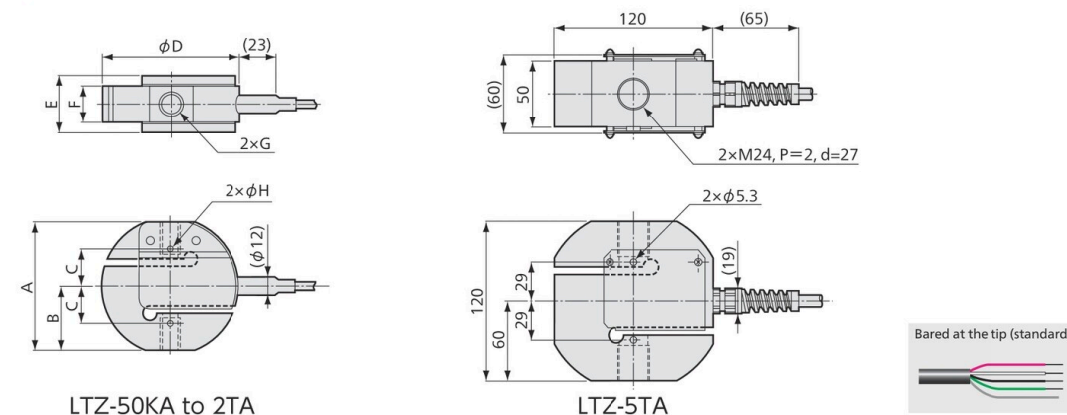
Model	Rated Capacity	Natural Frequencies (Approx.)	Weight (Approx.) ^{*1}	A	B	C	φD	E	F	G	φH
LTZ-50KA	500 N	1.25 kHz	300 g	64	32	19	68	32	22	M6, P=1, d=14	1.6
LTZ-100KA	1 kN	1.75 kHz	350 g	74	37	21	78			M12, P=1.75, d=18	3.5
LTZ-200KA	2 kN	2 kHz	700 g	94	47	23	98	40	30	M18, P=1.5, d=25	
LTZ-500KA	5 kN	2.5 kHz									
LTZ-1TA	10 kN	2.8 kHz									
LTZ-2TA	20 kN	2.6 kHz									
LTZ-5TA	50 kN	4.3 kHz									

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

^{*}Usable also for compressive load measurement. (Additional calibration and patch are required.)

^{*1} Excluding cable

Dimensions



Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within $\pm 0.03\%$ RO (500KA or more: within $\pm 0.05\%$ RO)
Hysteresis	Within $\pm 0.03\%$ RO (500KA or more: 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%
Natural Frequencies	See table below.
Weight	See table below.
Material	50KA to 200KA: Aluminum alloy 500KA to 5TA: Special steel
Degree of Protection	IP64 (JIS C 0920/IEC 60529)
Compliance	Directive 2011/65/EU, (EU)/2015/863 (10 restricted substances) (RoHS)

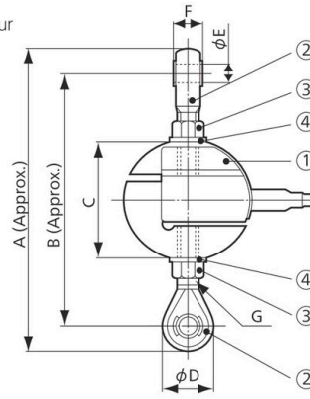
- Optional Accessories**
- Saddle CA
 - Patch CVM
 - Movable saddle ER-B
 - Ball joints TU

^{*1} LTZ-50 to 200KA

^{*2} BISELCOM gages are self-temperature-compensation strain gages with added sensitivity temperature compensation functionality.

● In combination with ball joint (TU)

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

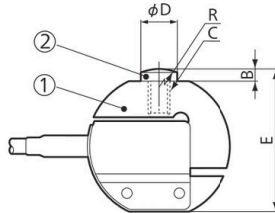


① Main Body	② Ball Joint	③ Hexagon Nut	④ Spring Washer	A	B	C	φD	φE	F	G	Static Breaking Loads (Approx.)
LTZ-50KA	TU-6C	M6 P=1	2# 6S	128	110	64	18	6	9	M6 P=1	1.4 kN
LTZ-100KA											2.9 kN
LTZ-200KA											5.8 kN
LTZ-500KA	TU-12C	M12 P=1.75	2# 12S	196	166	74	30	12	16	M12 P=1.75	14.7 kN
LTZ-1TA											29.4 kN
LTZ-2TA											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 a screw-in type.

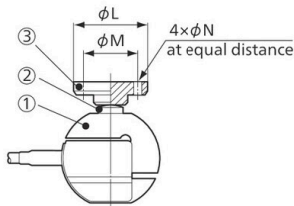
*Don't use other accessories for tensile load except the ball joints.

● In combination with patch (CWM)



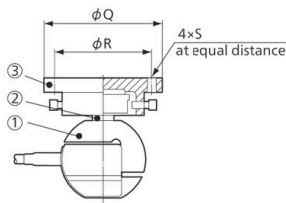
① Main Body	② Patch	B	C	φD	E	R
LTZ-50KA	CWM-6	4	M6 P=1	10	68	SR30
LTZ-100KA						
LTZ-200KA						
LTZ-500KA	CWM-12	7	M12 P=1.75	19	81	SR70
LTZ-1TA						
LTZ-2TA						
LTZ-5TA	CWM-18	10	M18 P=1.5	26	104	SR70
	CWM-24	17	M24 P=2	36	137	

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



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

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



① Main Body	② Patch	③ Movable Saddle	φQ	φR	S
LTZ-50KA	CWM-6	ER-2B	108	90	M8
LTZ-100KA					
LTZ-200KA					
LTZ-500KA	CWM-12	ER-2B	108	90	M8
LTZ-1TA					
LTZ-2TA					
LTZ-5TA	CWM-18	ER-5B	148	128	M12
	CWM-24				



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