

# Thin Load Cells "Multiforce Sensor"

LCTB-A

5 to 50 kN

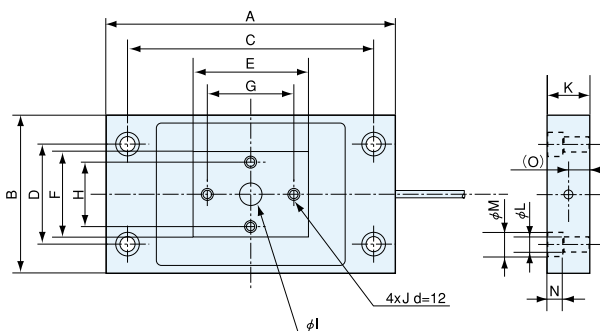
Thin



## Features

- Advanced thin design – When compared with conventional load cells, the height is 1/2 to 1/3. Space saving expands the application range.
- Usable with top and bottom fixed – Optional dedicated rubber attachment enables fixing the top and bottom with bolts, thereby making it possible to design the system with no tension rod or stay rod used.
- Strong against lateral load – Safety factor is 3 to 5 times higher than conventionals. Endures lateral loads up to 50% of the rated capacity.
- Excellent impact/vibration resistance – Rubber attachment attenuates impact energy and lessens the effects of thermal expansion of system and moment of fixed section.
- Easy installation – Rubber attachment facilitates installation with less care about parallelism.
- Wide variation in accuracy and reliability – Varieties of accuracies and outputs are available, enabling configuration of the most suitable system for each individual application.
- Compatibility with peripheral equipment – Since wirings are the same as conventional load cells, peripheral instruments such as amplifiers can easily be connected.

## Dimensions



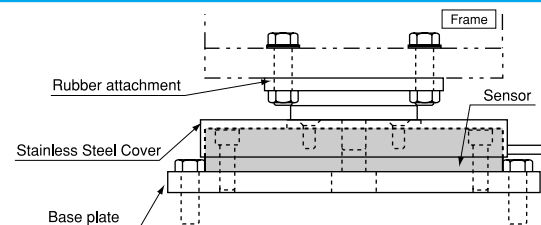
Model	Rated Capacity	A	B	C	D	E	F	G	H	$\phi I$	J	K	$\phi L$	$\phi M$	N	O	Weight (App.)
LCTB-A-5KN	5 kN	200	110	170	70	80	60	60	45	16	M8	29	11	17	11	15	1.8 kg
LCTB-A-10KN	10 kN											35				16.5	2.3 kg
LCTB-A-20KN	20 kN	260	150	220	90	90	80	60	60	20	M10	39	13	19	13	19	4.3 kg
LCTB-A-30KN	30 kN											49				24	5.3 kg
LCTB-A-50KN	50 kN											49				24	5.3 kg

## Specifications

Performance	
Rated Capacity	See table below.
Nonlinearity	Within $\pm 0.03\%$ RO
Hysteresis	Within $\pm 0.03\%$ RO
Repeatability	0.02% RO or less
Rated Output	1.5 mV/V (3000 $\mu\text{m/m}$ ) $\pm 0.2\%$
Environmental Capability	
Safe Temp. Range	-20 to 70°C
Comp. Temp. Range	-10 to 60°C
Temp. Effect on Zero Bal.	Within $\pm 0.005\%$ RO/°C
Temp. Effect on Out.	Within $\pm 0.005\%$ /°C
Electrical Characteristics	
Safe Excit. Voltage	20 V DC
Recom. Excit. Voltage	1 to 10 V DC
Input Resistance	350 $\Omega \pm 1.5\%$
Output Resistance	350 $\Omega \pm 1.5\%$
Cable	4-conductor (0.5 mm <sup>2</sup> ) chloroprene shielded cable, 6 mm dia. by 5 m long, bared at the tip (Shield wire is not connected to the mainframe.)
Mechanical Properties	
Safe Overload Rating	150%
Critical Lateral Load	50% (Maximum load which does not cause any mechanical damage)
Weight	See table below.
Enclosure	Aluminum alloy

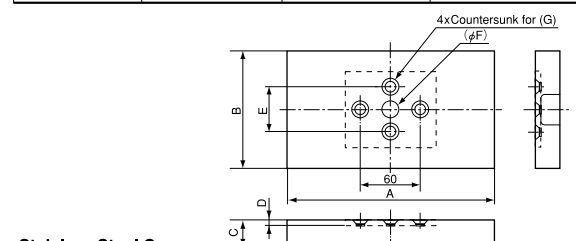
## Precautions

1. LCTB-A cannot be used for any onboard measurement.
2. LCTB-A cannot be used in an environment where it is frequently exposed to lateral load.
3. LCTB-A cannot be installed to any inclined or vertical surface.



## Applicable Accessories

Model	Stainless Steel Cover	Rubber Attachment	Base Plate
LCTB-A-5KN	COV01-2T	RA01-2T	BP01-2T
LCTB-A-10KN			
LCTB-A-20KN			
LCTB-A-30KN	COV01-5T	RA01-5T	BP01-5T
LCTB-A-50KN			



## Stainless Steel Cover

Model	A	B	C	D	E	$\phi F$	G	Weight (App.)
COV01-2T	206	116	25	5.5	45	18	M8	400 g
COV01-5T	270	160	35	9.5	60	22	M10	900 g

For rubber attachment and base plate, refer to page 40.