



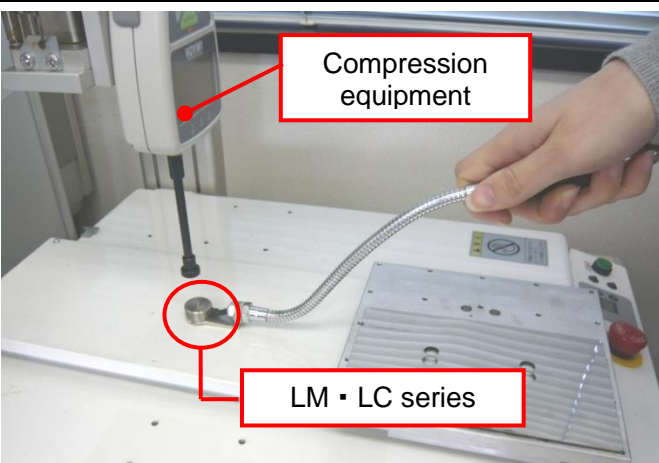


# Load cells for compression LM/LC/DD2/LMT series

- Exclusive use load cells for compression
- Ideal for a narrow space due to the slim shape
- They can be used by setting or gluing in equipment like a pressing machine.

Model	Coin shaped type : LM series	Standard type: LC series	High capacity type: DD2 series	For wide spread temperature: LMT series
Capacity	10N~20kN	500N~20kN	5000N~20kN	1000N
Photos				
Features	-Small and slim type	-High accuracy (+/-0.5%F.S. or less) -High stability and reliability by airtight structure -Corrosion resistance of stainless steel body	-Suitable for high load measurements.	-Usable for wide spread temperature -40 degree Celsius ~ +130 degree Celsius
How to fix	Putting or gluing on equipment			

An amplifier is required to read force values. Please refer page 4~6 for the details.

Custom made example	
Compression measurements for a pressing machine and a robot arm.	
	<p>Attach the sensor part to a movable rod with a grip and arrange the sensor on the necessary place.</p> <p>The measurements at narrow and unstable place can be smooth.</p>

\*It is possible to order the above grip and the equipment thermostat oven as a special order. Please contact us our service group +81-(0)532-33-3288 or your local distributor if you necessary.

[Specification]

Model	LM series	LC series	DD2 series	LMT series
Capacity	Refer to the model list	Refer to the model list	Refer to the model list	Refer to the model list
Rated output	+/-1mV / V+/-10%	+/-0.9~1.4mV / V	2mV/V	1.75~2.0mV/V
Nonlinearity	10N~10kN:1.0%R.O 20kN:2.0%R.O	0.15%R.O	0.25%R.O	0.5%R.O.
Hysteresis	10N~10kN:1.0%R.O 20kN:2.0%R.O	0.1%R.O	—	0.5%R.O.
Recommended voltage (allowable voltage)	1~3V AC or DC (5V AC or DC)	2~5V AC or DC (7V AC or DC)	Max.10V DC	1~3V AC/DC (5V AC/DC)
Safe overload rating	120%R.O	150%	120%	120%
Working environment (allowable temperature)	0~+50 degree Celsius(-10~ +60 degree Celsius)	0~+70 degree Celsius(-10~+70 degree Celsius)	-10~+50 degree Celsius(-30~+50 degree Celsius)	-40~+150 degree Celsius(-40~+160 degree Celsius)
Temperature influence for 0 point	10N~50N:0.2%/ degree Celsius 100N~20kN:0.5%/ degree Celsius	0.005%/ degree Celsius	0.005%/ degree Celsius	0.01%/ degree Celsius
Temperature influence for output	10N~50N:0.2%/ degree Celsius 100N~20kN:0.5%/ degree Celsius	0.01%/ degree Celsius	0.005%/ degree Celsius	0.01%/ degree Celsius
Cable	Approx.2m	Approx.3m	Approx.5m	Approx.2m
Dimensions	Refer to the dimension	Refer to the dimension	Refer to the dimension	Refer to the dimension
International Protection	-	-	IP67	-

\*IP is only approved for the load cell. An amplifier (an indicator)/ the connecting part/ the connector part are not approved.

[eZ-Connect series load cell specification]

Model	eLM series *1	eLC series	eDD2 series	eLMT series
Capacity	Refer to the model list	Refer to the model list	Refer to the model list	Refer to the model list
Accuracy	+/-2.0%F.S. or less	+/-0.5%F.S. or less	+/-0.5%F.S. or less	+/- 1.0%F.S. or less
Safe overload rating	120%R.O	150%	120%	120%
Working environment (allowable temperature)	0~+50 degree Celsius(-10~ +60 degree Celsius)	0~+70 degree Celsius(-10~+70 degree Celsius)	-10~+50 degree Celsius(-30~+50 degree Celsius)	-40~+150 degree Celsius(-40~+160 degree Celsius)
Cable	Approx.2m	Approx.3m	Approx.5m	Approx.2m
Dimensions	Refer to the dimension	Refer to the dimension	Refer to the dimension	Refer to the dimension
International Protection	-	-	IP67*2	-

\* Please refer to the Page 6 for eZ-Connect series details.

\*1 Please note there is NO eZ-Connect series for LM-5000N~20kN.

\*2 IP is only approved for the load cell. An amplifier (an indicator)/ the connecting part/ the connector part are not approved.

[Model list]

oLM series

Model	eZ-Connect series model	Capacity
LM-10N	eLM-10N	10N
LM-20N	eLM-20N	20N
LM-50N	eLM-50N	50N
LM-100N	eLM-100N	100N
LM-200N	eLM-200N	200N
LM-500N	eLM-500N	500N
LM-1000N	eLM-1000N	1000N
LM-2000N	eLM-2000N	2000N
LM-5000N	-	5000N
LM-10kN	-	10kN
LM-20kN	-	20kN

oLC series

Model	eZ-Connect series model	Capacity
LC-500N	eLC-500N	500N
LC-1000N	eLC-1000N	1000N
LC-2000N	eLC-2000N	2000N
LC-5000N	eLC-5000N	5000N
LC-10kN	eLC-10kN	10kN
LC-20kN	eLC-20kN	20kN

oDD2 series

Model	eZ-Connect series model	Capacity
DD2-5000N	eDD2-5000N	5000N
DD2-10kN	eDD2-10kN	10kN
DD2-20kN	eDD2-20kN	20kN

oLMT series

Model	eZ-Connect series model	Capacity
LMT-1000N	eLMT-1000N	1000N

**Force value display/ Data management/ Operating external device  
are ALL possible by combining with IMADA amplifier.**

→There are 3 selectable amplifiers.

Amplifier	Feature
ZT series	High accuracy and Easy operation
FA-Plus	Stable installation
eZ-Connect series :eZT	Interchangeable multiple sensors

Sensor separate type force gauge ZT series



- [Remote operation](#)  
→Measurement value is possible to check easily apart from the sensor. Users can keep safe distance even if the test involves some danger like Crushing test.
  - [Easy data management on PC](#)  
→Included software “ZT-Logger” helps to export continuous data to PC. Furthermore, separately-sold software “Force Recorder” enables to draw into a graph in real time at 2000Hz. It also inputs sampling date and time at the same. Data management can be easy.
  - [Various outputs for operating external devices](#)  
→It realizes machine working control by force, Pass/Fail decision and more.
- \*It is inappropriate to interchange the load cells.  
\*The accuracy adjustment and the calibration are necessary whenever changing load cells.

Accuracy Guarantee  
-The inspection certificate by force data is attached.  
-Please request us the calibration certificate if necessary.

[The range list connecting with ZT series]

Model		Capacity	Accuracy(*1)	Display	Resolution
ZTA-LM-10N	ZTS-LM-10N	10N	+/-2.0%F.S. or less	10.00N	0.01N
ZTA-LM-20N	ZTS-LM-20N	20N		20.00N	0.01N
ZTA-LM-50N	ZTS-LM-50N	50N		50.00N	0.01N
ZTA-LM-100N	ZTS-LM-100N	100N		100.0N	0.1N
ZTA-LM-200N	ZTS-LM-200N	200N		200.0N	0.1N
ZTA-LM-500N	ZTS-LM-500N	500N		500.0N	0.1N
ZTA-LM-1000N	ZTS-LM-1000N	1000N		1000N(1.000kN)	1N(0.001kN)
ZTA-LM-2000N	ZTS-LM-2000N	2000N		2000N(2.000kN)	1N(0.001kN)
ZTA-LM-5000N	ZTS-LM-5000N	5000N		5000N(5.000kN)	1N(0.001kN)
ZTA-LM-10kN	ZTS-LM-10kN	10kN	+/-3.5%F.S. or less	10.00kN	0.01kN
ZTA-LM-20kN	ZTS-LM-20kN	20kN		20.00kN	0.01kN

Model		Capacity	Accuracy(*1)	Display	Resolution
ZTA-LC-500N	ZTS-LC-500N	500N	+/-0.5%F.S. or less	500.0N	0.1N
ZTA-LC-1000N	ZTS-LC-1000N	1000N		1000N(1.000kN)	1N(0.001kN)
ZTA-LC-2000N	ZTS-LC-2000N	2000N		2000N(2.000kN)	1N(0.001kN)
ZTA-LC-5000N	ZTS-LC-5000N	5000N		5000N(5.000kN)	1N(0.001kN)
ZTA-LC-10kN	ZTS-LC-10kN	10kN		10.00kN	0.01kN
ZTA-LC-20kN	ZTS-LC-20kN	20kN		20.00kN	0.01kN

Model		Capacity	Accuracy(*1)	Display	Resolution
ZTA-DD2-5000N	ZTS-DD2-5000N	5000N	+/-0.5%F.S. or less	5000N(5.000kN)	1N(0.001kN)
ZTA-DD2-10kN	ZTS-DD2-10kN	10kN		10kN	0.01kN
ZTA-DD2-20kN	ZTS-DD2-20kN	20kN		20kN	0.01kN

Model		Capacity	Accuracy(*1)	Display	Resolution
ZTA-LMT-1000N	ZTS-LMT-1000N	1000N	+/-1.0%F.S. or less	1000N(1.000kN)	1N(0.001kN)

\* Please refer to the each amplifier specification for the detail.

\*1The accuracy is only available for combinations with sensor separate type ZT series.

**Desktop amplifier FA Plus**



- [The box shape realizes easy installations on a desk or in equipment](#)
- [The sampling rate is equals to ZT series 2000Hz.](#)

**Accuracy Guarantee**

- The inspection certificate is attached only when the below set models are ordered.
- The inspection certificate is NOT attached when FA Plus and the load cell are separately ordered.
- Please request us the calibration certificate if necessary.

[The range list connecting with FA Plus]

Model		Capacity	Accuracy(*1)	Display	Resolution
FAP-LM-10N		10N	+/-2.0%F.S. or less	10.00N	0.01N
FAP-LM-20N		20N		20.00N	0.01N
FAP-LM-50N		50N		50.00N	0.01N
FAP-LM-100N		100N		100.0N	0.1N
FAP-LM-200N		200N		200.0N	0.1N
FAP-LM-500N		500N		500.0N	0.1N
FAP-LM-1000N		1000N		1000N(1.000kN)	1N(0.001kN)
FAP-LM-2000N		2000N		2000N(2.000kN)	1N(0.001kN)
FAP-LM-5000N		5000N		5000N(5.000kN)	1N(0.001kN)
FAP-LM-10kN		10kN	10.00kN	0.01kN	
FAP-LM-20kN		20kN	+/-3.5%F.S. or less	20.00kN	0.01kN

Model		Capacity	Accuracy(*1)	Display	Resolution
FAP-LC-500N		500N	+/-0.5%F.S. or less	500.0N	0.1N
FAP-LC-1000N		1000N		1000N(1.000kN)	1N(0.001kN)
FAP-LC-2000N		2000N		2000N(2.000kN)	1N(0.001kN)
FAP-LC-5000N		5000N		5000N(5.000kN)	1N(0.001kN)
FAP-LC-10kN		10kN		10.00kN	0.01kN
FAP-LC-20kN		20kN		20.00kN	0.01kN

Model	Capacity	Accuracy(*1)	Display	Resolution
FAP-DD2-5000N	5000N	+/-0.5%F.S. or less	5000N(5.000kN)	1N(0.001kN)
FAP-DD2-10kN	10kN		10kN	0.01kN
FAP-DD2-20kN	20kN		20kN	0.01kN

Model	Capacity	Accuracy(*1)	Display	Resolution
FAP-LMT-1000N	1000N	+/-1.0%F.S. or less	1000N(1.000kN)	1N(0.001kN)

\* Please refer to the each amplifier specification for the detail.

\*1The accuracy is only available for combinations with FA Plus.

**eZ-Connect: Interchangeable sensor amplifier eZT**



- [ONE amplifier can be used with multiple load cells.](#)  
→It is possible to be carried out different range, circumstance and other measurements by changing load cells.
- [Basic functions are equal to ZTA.](#)

Accuracy Guarantee

-The inspection certificate by force data is NOT attached.  
-Please request us the calibration or the calibration document if necessary.

[The range list connecting with eZT]

Amplifier Model	Load cell model	Capacity	Accuracy(*1)	Display	Resolution
eZT	eLM-10N	10N	+/-2.2%F.S. or less	10.00N	0.01N
	eLM-20N	20N		20.00N	0.01N
	eLM-50N	50N		50.00N	0.01N
	eLM-100N	100N		100.0N	0.1N
	eLM-200N	200N		200.0N	0.1N
	eLM-500N	500N		500.0N	0.1N
	eLM-1000N	1000N		1000N(1.000kN)	1N(0.001kN)
	eLM-2000N	2000N		2000N(2.000kN)	1N(0.001kN)

Amplifier Model	Load cell model	Capacity	Accuracy(*1)	Display	Resolution
eZT	eLC-500N	500N	+/-0.7%F.S. or less	500.0N	0.1N
	eLC-1000N	1000N		1000N(1.000kN)	1N(0.001kN)
	eLC-2000N	2000N		2000N(2.000kN)	1N(0.001kN)
	eLC-5000N	5000N		5000N(5.000kN)	1N(0.001kN)
	eLC-10kN	10kN		10.00kN	0.01kN
	eLC-20kN	20kN		20.00kN	0.01kN

Amplifier Model	Load cell model	Capacity	Accuracy(*1)	Display	Resolution
eZT	eDD2-5000N	5000N	+/-0.7%F.S. or less	5000N(5.000kN)	1N(0.001kN)
	eDD2-10kN	10kN		10.00kN	0.01kN
	eDD2-20kN	20kN		20.00kN	0.01kN





Amplifier Model	Load cell model	Capacity	Accuracy(*1)	Display	Resolution
eZT	eLMT-1000N	1000N	+/-1.2%F.S. or less	1000N(1.000kN)	1N(0.001kN)

\* Please refer to the each amplifier specification for the detail.

\*1The accuracy is only available for combinations with eZT series.

**[Other load cell line-up]**

Please choose the suitable one matching your needs from our varieties of load cell.

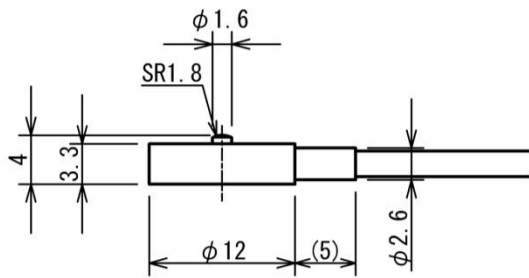
Standard type DPU series	Extra small type LMU series	Pen type PN-50N	For automatic doors DM-2000N
Compression & Tension	Compression & Tension	Compression	Compression
			
General type load cell with a shaft. Easy to install.	Sensor diameter is only 18mm.	Pen-shaped to fit for measuring control force of small samples.	Fit to measure automatic door closing force.

\*please refer to each load cell specification for the detail.

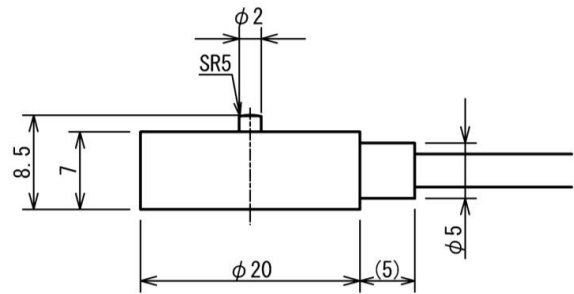
**[Dimension]**

**LM series**

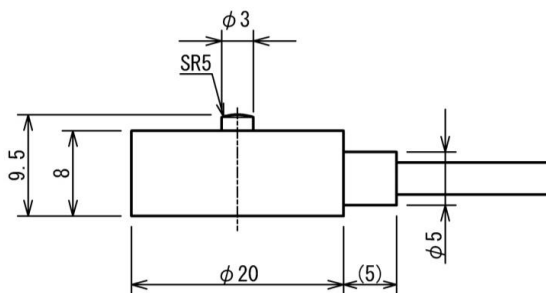
LM-10N~50N



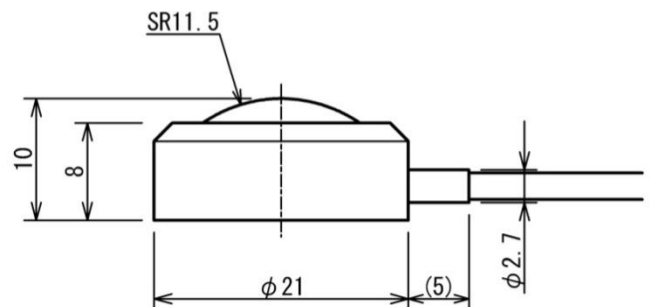
LM-100N~1000N



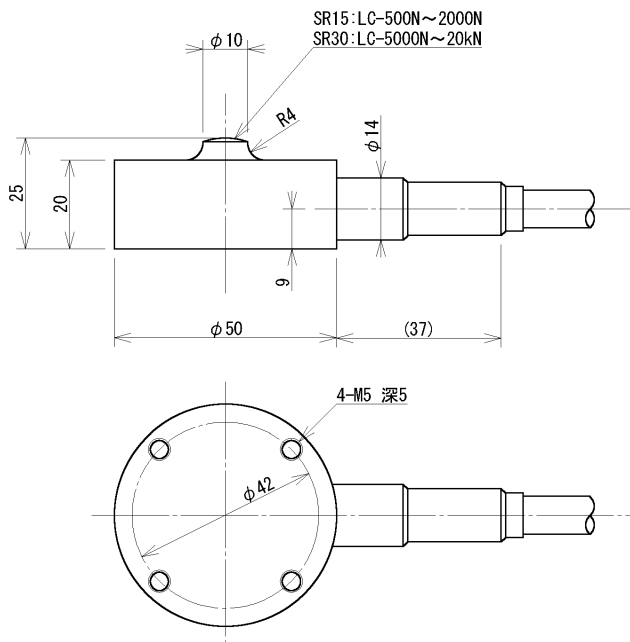
LM-2000N



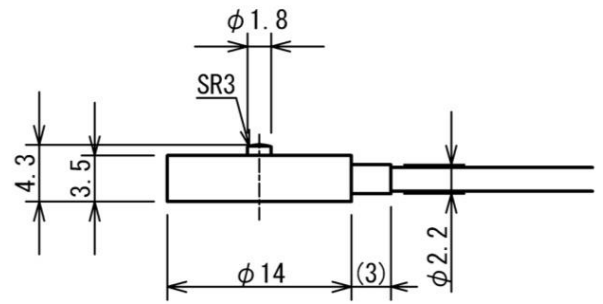
LM-5000N~20kN



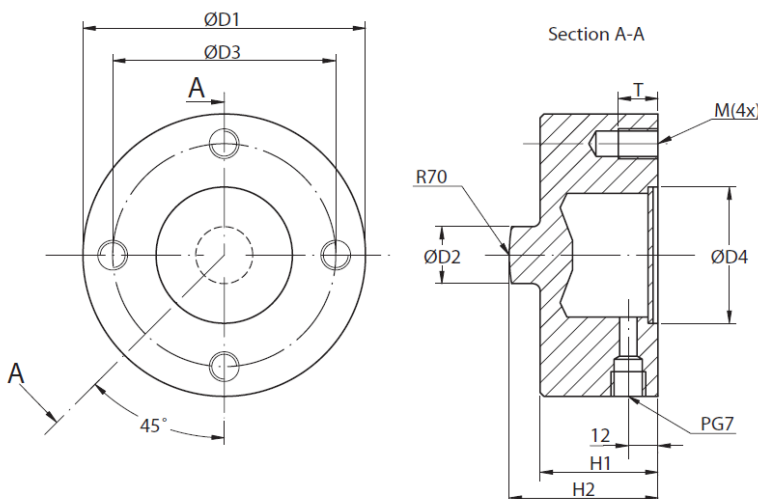
LC series



LMT series



DD2 series



Model	D1	H1	D2	H2	D3	M	T
DD2-5000N	φ94	35.5	φ23	48	φ80	M5	12
DD2-10kN							
DD2-20kN							

**[Caution]**

- This product is designed for force measurement only. Do not use it for other purpose.
- Please pay close attention to install this products.
  - Never apply strong force or impact especially on the sensing direction.
  - Do not apply bending or torsion stress when setting up the sensing shaft to a measuring object.
- Do not use in the condition of rapid temperature changes, high temperature, high humidity, near water and dusty place.
- The contents may be changed without notice in advance.
- Please note the allowable values are a little different by the selecting unit of the amplifier. Please contact us if you need the details.

Please feel free to contact us (+81-(0)-532-33-3288) for your measurement.