

## Pen type load cell PN-50N

Pen shaped load cell for compression and tension testing.  
You can compress things locally by hand.  
Ideal for measurement of small parts, switches and the like.

### Pen type load cell : PN-50N

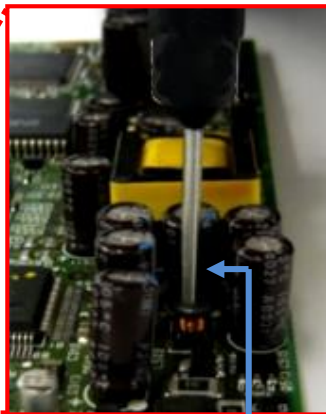
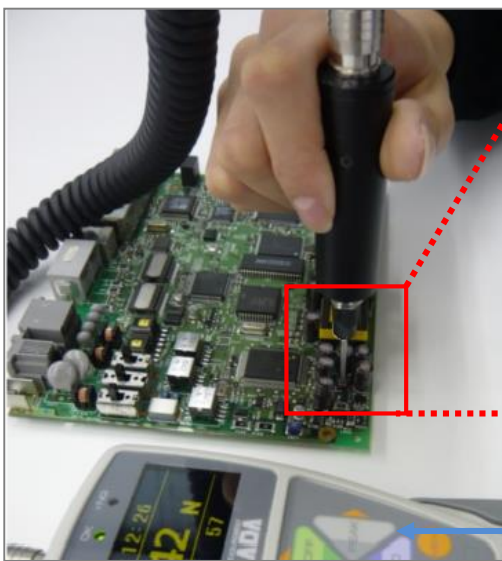
Capacity :50N



[Using images]

\*An indicator is required to read load values. Please refer to Page 3 and 4 for the detail.

### Compression test for small parts



You can apply force to a sample by hand, therefore, this load cell is ideal for small samples, or measurement at narrow spaces.

PG series (\*)

The indicator ZT series

\*An indicator and PG series are sold separately. Please refer to Page 3 and 4.

2016 /10/27

IMADA CO.,LTD  
Pen type load cell PN series

**[Specification]**

<b>Model</b>	PN-50N
<b>Capacity</b>	50N
<b>Rated output</b>	1mV / V+/-10%
<b>Nonlinearity</b>	0.3%R.O.
<b>Hysteresis</b>	0.3%R.O.
<b>Recommended voltage (Allowable applied voltage)</b>	5V DC or AC(8V DC or AC)
<b>Safe overload rating</b>	150%R.L.
<b>Working environment ( allowable temperature)</b>	0~+50 degree Celsius (-10 degree Celsius ~+60 degree Celsius)
<b>Temperature influence for 0 point</b>	0.05%/ degree Celsius
<b>Temperature influence for output</b>	0.05%/ degree Celsius
<b>Weight</b>	Approx. 50g
<b>Cable</b>	Approx. 2m
<b>Mount screw</b>	M6 P1.0
<b>Dimension</b>	Refer to the dimension

**[eZ-Connect series load cell specification]**



<b>Model</b>	ePN-50N
<b>Capacity</b>	50N
<b>Accuracy</b>	+/-2.0%F.S or less
<b>Safe overload rating</b>	150%R.L.
<b>Working environment ( allowable temperature)</b>	0 degree Celsius~+50 degree Celsius (-10 degree Celsius~+60°C)
<b>Weight</b>	Approx.50g
<b>Capacity</b>	Approx.2m
<b>Screw</b>	M6 P1.0
<b>Dimensions</b>	Refer to the dimension

\*Please refer to the Page 4 for the eZ connect series detail.

**1. For those who have a specific measurement / purpose**

**[Connect to an amplifier]**

- If you do not need to change load cells basically, we recommend the combination of a load cell and an indicator mentioned below.

Model	ZTA/ZTS Sensor separate type force gauge	FA Plus Desk top amplifier
Image		
Feature	<ul style="list-style-type: none"> <li>• You can operate it apart from a load cell.</li> <li>• Easy data management on PC</li> <li>• Various outputs for controlling external devices</li> </ul>	<ul style="list-style-type: none"> <li>• You can easily install on a desk or in equipment due to its box shape.</li> <li>• The sampling rate is 2000Hz.</li> <li>• You can change load cells if you adjust it.</li> </ul>
When you want to change sensor	<ul style="list-style-type: none"> <li>• You do not basically change load cells.</li> <li>• If you need to change load cells, adjustment and calibration are required.</li> </ul>	<ul style="list-style-type: none"> <li>• When you change load cells, you need to adjust and calibrate it.</li> </ul>
Accuracy assurance	<ul style="list-style-type: none"> <li>• An inspection certificate by force data is attached.</li> <li>• Please request us the calibration certificate if necessary.</li> </ul>	<ul style="list-style-type: none"> <li>• We offer an inspection certificate by force data only when you order the model (FAP-PN-50N) below.</li> <li>• We do not offer the inspection certificate when you order a FA Plus or a load cell separately.</li> <li>• Please request us the calibration certificate if necessary.</li> </ul>

**- Models of sensors combined with indicators (Sensor separate models)**

Model			Capacity	Accuracy(*1)	Display	Resolution
ZTA	ZTS	FA Plus				
ZTA-PN-50N	ZTS- PN-50N	FAP-PN-50N	50N	±2.0%F.S. or less	50.00N	0.01N

\*For further information about indicators, please refer to each specifications.

\*1 Accuracy here is calculated after sensor is combined with an indicator.

**[Load cell by itself]**



- If you need a load cell by itself, please refer to the models below.

Model	Capacity	Screw diameter
PN-50N	50N	M6 P1.0

\*We cannot undertake that our load cell can be combined with your equipment. Even though you could combine it, we cannot guarantee accuracy of force value.

◎When you order a load cell without indicators, please choose one from 3 of connector types.

\*Please feel free to contact us if the shape is not identified. +81-(0)532-33-3288

Connector Shape	①	②	③
			Without Connector
	5 pin	6 pin	
Connect to	ZT series FA Plus etc.	Some discontinued IMADA products	For installing in equipment
*Please check the connector shape of your equipment to connect.			

**2. For those who have a wide range of measurement purposes**

**[eZT series (Sensor interchangeable model) ]**

- If you need 2 or more different load cells, we recommend eZ-Connect series below since it can change load cells according to your purposes.


**- eZ-Connect load cell models**

Load cell model	Capacity	Accuracy(*1)	Display	Resolution
ePN-50N	50N	±2.2%F.S. or less	50.00N	0.01N

\*For further information about indicators, please refer to each specifications.

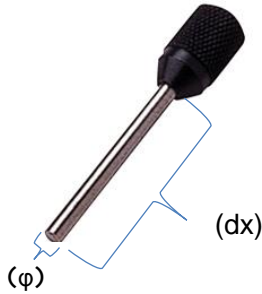
\*1 Accuracy here is calculated after sensor is combined with an indicator.

**- Indicator eZT** \*Please combine a load cell exclusive for eZ-Connect.

Image	Feature	Accuracy
	<ul style="list-style-type: none"> <li>● No adjustment is needed when you change load cells.</li> <li>● You can measure different force range.</li> <li>● You can measure different types of force.</li> <li>● You can reduce risks in operation</li> </ul>	<p>*Accuracy here is the total of load cell's accuracy (refer to each specifications) and indicator's one (+/-0.2%F.S.).</p> <p>We offer higher accuracy models; ZT series (sensor separate type) and FA plus. For detail, please refer to page 3.</p>

**[Related products]**

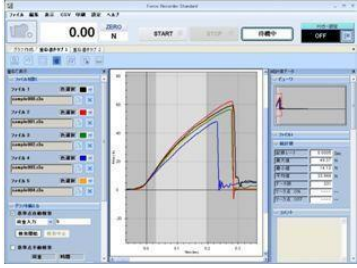
**- Attachment**

Pin gauge PG series				
	feature			
	The columnar fixture which diameter is φ2mm~5mm. It can be insert tiny spaces.			
	Model	Pin diameter (φ)	The head length (dx)	Mount screw
	PG-2	2mm	20mm	M6
	PG-3	3mm		
	PG-4	4mm		
PG-5	5mm			






**- Cables (for ZTS/ZTA/eZT)** \*Contact us for information of FAP.

Model	Explanation	Purpose of use
CB-108	Analog cable	To connect to a multi meter, oscilloscope.
CB-118	Analog cable (For -AN option)	To connect to a multi meter, oscilloscope.
CB-208	RS232C cable	To connect to a PC having its own system
CB-308	Digimatic cable	To connect to a printer DP-1VR
CB-908	Open end connection cable	Output cable for loose wire 37 pin (Useful for connection with unique equipment.)

**- Data analysis software Force Recorder (For ZTS/ZTA/eZT)**

Image	Feature
	<ul style="list-style-type: none"> <li>- You can draw graphs of force-displacement at real time via USB connection at 2000Hz.</li> <li>- 5 graphs at maximum can be overlaid. (Standard / Professional only)</li> <li>- You can write memo on each graph. For instance, you may write down testing conditions such as testing speed, attachment etc.</li> </ul> <p>* 3 models (Light/Standard/Professional) are available.</p>

**- Other load cell line-up** (We offer wide range of load cells to fit your measurement needs.)

Standard DPU series	Coin shaped type LM series	High accuracy coin shaped type LC series	Extra small type LMU series	For automatic doors DM-2000N
				
High accuracy built-in type. For general use.	Coin size load cell for compression	High accuracy coin shaped load cell for compression	Sensor diameter is only 18mm	Ideal to measure automatic door closing force.

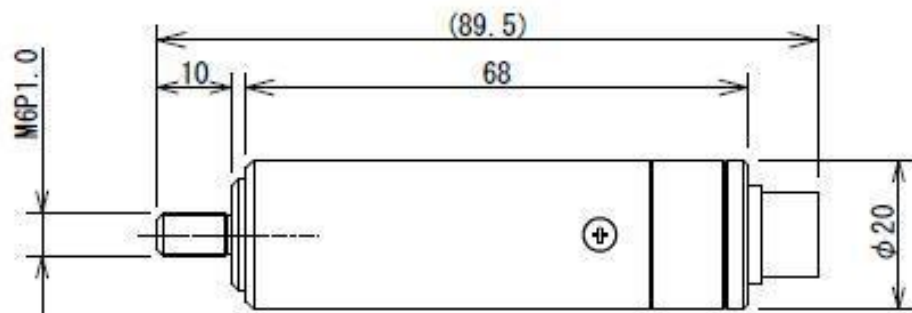
\*Please refer to the each load cell specification for the detail.

**Do you have any requests like mentioned below?**

☞ You need flexible cable.    ☞ You need to extend the length of cable.  
We can custom design and manufacture to meet your particular requirements.

**[Dimension]**

PN-50N



**[Caution]**

- This product is designed for force measurement only. Do not use it for other purposes.
- Please pay close attention for installation.
  - Never apply impact load especially on the sensing direction.
  - Do not apply bending or torsion stress to a sensing part.
- Do not use under the environment such as high temperature, high humidity, near water, dusty place, and rapid temperature changes.
- The contents may be changed without notice in advance.
- Please note that a load cell's capacity differs slightly depending on a selected unit of the indicators. Please contact us for detail.

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