

## Load cell for compression and tension SW1 series/SW3 series

- The female screws on both end of sensor make easy mount on equipment.
- Strong for splashing water by waterproof sensor body .

SW1 series	SW3 series
Capacity:100N~5000N	Capacity:10kN~20kN
 <p style="text-align: right; border: 1px solid blue; border-radius: 10px; padding: 2px 5px; color: white; font-weight: bold;">Approved IP67</p>	 <p style="text-align: right; border: 1px solid blue; border-radius: 10px; padding: 2px 5px; color: white; font-weight: bold;">Approved IP67</p>

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

[Using image]

<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Eye bolt          EB series          (separately sold)</p> </div> 	<p>It is suitable for mounting on equipment and applying the force of compression or tension owing to its friendly shape.</p>
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[Load cell specification]

Model	SW1 series	SW3 series
Capacity	Refer to the model list	Refer to the model list
Rated output	+/-2mV/V	+/-2mV/V
Nonlinearity	+/-0.25%R.O	+/-0.25%R.O
Allowable voltage	10V DC	10V DC
Safe overload rating	120%	120%
Working environment (allowable temperature)	-10~50 degree Celsius (-30~50 degree Celsius)	-10~50 degree Celsius (-30~50 degree Celsius)
Temperature influence at 0 point	0.005%/ degree Celsius	0.005%/ degree Celsius
Temperature influence for output	0.005%/ degree Celsius	0.005%/ degree Celsius
Cable	Approx.0.5~4m(Curl cord)	Approx.5m
Dimensions	Refer to the dimension	Refer to the dimension
International Protection	IP67	IP67

\*Only the sensor parts are approved IP. An amplifier (an indicator) and connecting parts are not approved.

[eZ-Connect series load cell specification]

Model	eSW1 series	eSW3 series
Capacity	Please refer to the model list	Please refer to the model list
Accuracy	+/-0.5%F.S or less	+/-0.5%F.S or less
Safe overload rating	120%	120%
Working environment (allowable temperature)	-10~50degree Celsius (-30~50degree Celsius)	-10~50degree Celsius (-30~50degree Celsius)
Cable	Approx.0.5~4m(Curl Cord)	Approx.5m
Dimensions	Refer to the dimension	Refer to the dimension
International Protection	IP67	IP67

\*Please refer Page 4 for the detail of eZ-Connect series.

[Model list]

Model	eZ-Connect series model	Capacity	Diameter
SW1-100N	eSW1-100N	100N	M6
SW1-200N	eSW1-200N	200N	M6
SW1-500N	eSW1-500N	500N	M8
SW1-1000N	eSW1-1000N	1000N	M8
SW1-2000N	eSW1-2000N	2000N	M10
SW1-5000N	eSW1-5000N	5000N	M10

Model	eZ-Connect series model	Capacity	Diameter
SW3-10kN	eSW3-10kN	10kN	M16
SW3-20kN	eSW3-20kN	20kN	M16

**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-SW1-100N	ZTS- SW1-100N	100N	+/-0.5%F.S. or less	100.0N	0.1N
ZTA-SW1-200N	ZTS- SW1-200N	200N	+/-0.5%F.S. or less	200.0N	0.1N
ZTA-SW1-500N	ZTS- SW1-500N	500N	+/-0.5%F.S. or less	500.0N	0.1N
ZTA-SW1-1000N	ZTS- SW1-1000N	1000N	+/-0.5%F.S. or less	1000N(1.000kN)	1N(0.001kN)
ZTA-SW1-2000N	ZTS- SW1-2000N	2000N	+/-0.5%F.S. or less	2000N(2.000kN)	1N(0.001kN)
ZTA-SW1-5000N	ZTS- SW1-5000N	5000N	+/-0.5%F.S. or less	5000N(5.000kN)	1N(0.001kN)

Model		Capacity	Accuracy(*1)	Display	Resolution
ZTA-SW3-10kN	ZTS-SW3-10kN	10kN	+/-0.5%F.S. or less	10.00kN	0.01kN
ZTA-SW3-20kN	ZTS-SW3-20kN	20kN	+/-0.5%F.S. or less	20.00kN	0.01kN

\* 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-SW1-100N	100N	+/-0.5%F.S. or less	100.0N	0.1N
FAP-SW1-200N	200N	+/-0.5%F.S. or less	200.0N	0.1N
FAP-SW1-500N	500N	+/-0.5%F.S. or less	500.0N	0.1N
FAP-SW1-1000N	1000N	+/-0.5%F.S. or less	1000N(1.000kN)	1N(0.001kN)
FAP-SW1-2000N	2000N	+/-0.5%F.S. or less	2000N(2.000kN)	1N(0.001kN)
FAP-SW1-5000N	5000N	+/-0.5%F.S. or less	5000N(5.000kN)	1N(0.001kN)

Model	Capacity	Accuracy(*1)	Display	Resolution
FAP-SW3-10kN	10kN	+/-0.5%F.S. or less	10.00kN	0.01kN
FAP-SW3-20kN	20kN	+/-0.5%F.S. or less	20.00kN	0.01kN

\* 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	eSW1-100N	100N	+/-0.7%F.S. or less	100.0N	0.1N
	eSW1-200N	200N	+/-0.7%F.S. or less	200.0N	0.1N
	eSW1-500N	500N	+/-0.7%F.S. or less	500.0N	0.1N
	eSW1-1000N	1000N	+/-0.7%F.S. or less	1000N(1.000kN)	1N(0.001kN)
	eSW1-2000N	2000N	+/-0.7%F.S. or less	2000N(2.000kN)	1N(0.001kN)
	eSW1-5000N	5000N	+/-0.7%F.S. or less	5000N(5.000kN)	1N(0.001kN)

Amplifier Model	Load cell model	Capacity	Accuracy(*1)	Display	Resolution
eZT	eSW3-10kN	10kN	+/-0.7%F.S. or less	10.00kN	0.01kN
	eSW3-20kN	20kN	+/-0.7%F.S. or less	20.00kN	0.01kN

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

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

[Related products]

Hoisting attachments for load cell		
		
Eye bolt EB/RE series	Conversion connector CA series	Measuring shaft
Hoisting attachments for load cell. Measure tensile strength by letting a hook or a shaft through.	Conversion connector for connecting eye bolts or other attachments.	It can be attached to load cell as male screw shaft.

\*Please contact us (+81-(0)532-33-3288) or your local distributor for the details.

[Other load cell line-up]

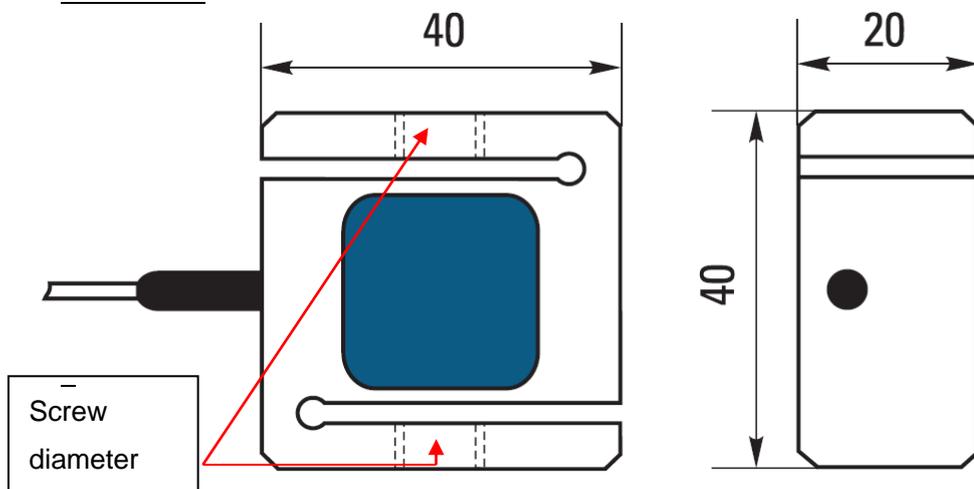
Variety of load cell is available.

Standard type DPU series	High accuracy type SK series	Crane scale type ZW1-10kN	For door closing and opening force SKM-1000N	For car foot brake PK2-1500N
				
High accuracy built-in type load cell for general use	Cuboid shaped load cell for compression or tension	High capacity load cell with a hook.	Load cell for measuring opening and closing force of doors and windows.	Load cell for car foot brakes.

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

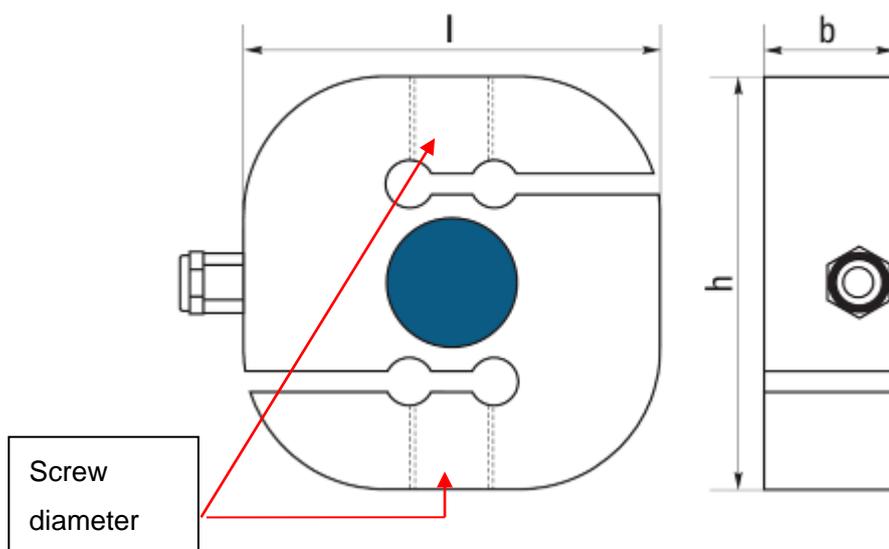
[Dimension]

SW1 series



Model	Screw
SW1-100N	M6
SW1-200N	M6
SW1-500N	M8
SW1-1000N	M8
SW1-2000N	M10
SW1-5000N	M10

SW3 series



Model	l	b	h	Screw
SW3-10kN	80	25	80	M16
SW3-20kN				

**[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.