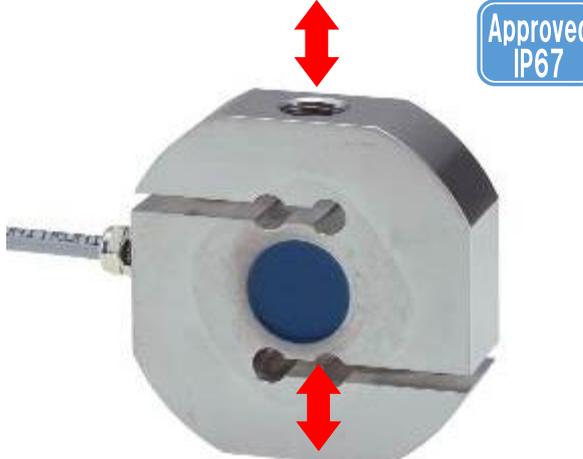


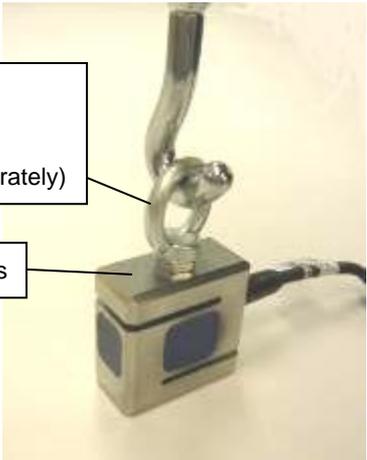
Load cell for compression and tension SW1 series/SW3 series

- You can easily mount it on equipment with the 2 female threads on the sides.
- The waterproof body enables measurement applications in wet factory environments.

SW1 series	SW3 series
Capacity:100N~5000N	Capacity:10kN~20kN
	

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

[Usage]

	<p>You can easily integrate it into your facility and equipment to compress and pull due to the easy mountable design.</p>
---	--

[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	100N,200N: +/-0.5%R.O 500N-5000N: +/-0.25%R.O	+/-0.25%R.O
Allowable voltage	10V DC	10V DC
Safe overload rating	120%	120%
Working environment (allowable temperature)	-5~50 degree Celsius (-30~70 degree Celsius)	-10~50 degree Celsius (-30~80 degree Celsius)
Temperature influence at 0 point	0.01%/ degree Celsius	0.01%/ degree Celsius
Temperature influence for output	0.02%/ degree Celsius	0.02%/ degree Celsius
Cable	Approx.0.5~2m(Curl cord)	Approx.5m
Dimensions	Refer to the dimension	Refer to the dimension
International Protection(*1)	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)	-5~50 degree Celsius (-30~70 degree Celsius)	-10~50 degree Celsius (-30~80 degree Celsius)
Cable	Approx.0.5~2m(Curl Cord)	Approx.5m
Dimensions	Refer to the dimension	Refer to the dimension
International Protection(*1)	IP67	IP67

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

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

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"> ● You can operate it apart from a load cell. ● Easy data management on PC ● Various outputs for controlling external devices 	<ul style="list-style-type: none"> ● Easy to integrate into facilities or standard use on a desk. ● High RS232C data output speed (continuous data rate: 100 data/sec) ● Enables detection of load cell using A/D (Analog to Digital) value display.
Road cell replacement	<ul style="list-style-type: none"> • Load cell connected with amplifier is recommended. • If you need to change load cells, adjustment and calibration are required. 	
Accuracy assurance	<ul style="list-style-type: none"> • An inspection certificate is attached. • We offer a calibration certificate at an extra charge. 	

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

•SW1series

Model			Capacity	Accuracy(*1)	Display	Resolution
ZTA	ZTS	FA Plus2				
ZTA-SW1-100N	ZTS- SW1-100N	FAP2-SW1-100N	100N	+/-0.5%F.S. or less	100.0N	0.1N
ZTA-SW1-200N	ZTS- SW1-200N	FAP2-SW1-200N	200N		200.0N	0.1N
ZTA-SW1-500N	ZTS- SW1-500N	FAP2-SW1-500N	500N		500.0N	0.1N
ZTA-SW1-1000N	ZTS- SW1-1000N	FAP2-SW1-1000N	1000N		1000N(1.000kN)	1N(0.001kN)
ZTA-SW1-2000N	ZTS- SW1-2000N	FAP2-SW1-2000N	2000N		2000N(2.000kN)	1N(0.001kN)
ZTA-SW1-5000N	ZTS- SW1-5000N	FAP2-SW1-5000N	5000N		5000N(5.000kN)	1N(0.001kN)

•SW3series

Model			Capacity	Accuracy(*1)	Display	Resolution
ZTA	ZTS	FA Plus2				
ZTA-SW3-10kN	ZTS-SW3-10kN	FAP2-SW3-10kN	10kN	+/-0.5%F.S. or less	10.00kN	0.01kN
ZTA-SW3-20kN	ZTS-SW3-20kN	FAP2-SW3-20kN	20kN		20.00kN	0.01kN

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

*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
SW1 series	SW1-100N	100N	M6
	SW1-200N	200N	M6
	SW1-500N	500N	M8
	SW1-1000N	1000N	M8
	SW1-2000N	2000N	M10
	SW1-5000N	5000N	M10
SW3 series	SW3-10kN	10kN	M16
	SW3-20kN	20kN	M16

*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
	 5 pin	 6 pin	Without Connector
Connect to	ZT series, FA Plus2, 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

Model		Capacity	Accuracy(*1)	Display	Resolution
eSW1 series	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)
eSW3 series	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.

- Sensor Interchangeable Indicators *Please combine a load cell exclusive for eZ-Connect.

Model	Image	Feature	Accuracy
eZT		<ul style="list-style-type: none"> No adjustment is needed when you change load cells. You can measure different force range. You can measure different types of force. You can reduce risks in operation 	<p>*Accuracy here is the total of load cell's accuracy (refer to each specifications) and indicator's one (+/-0.2%F.S.). We offer higher accuracy models; ZT series (sensor separate type) and FA plus. For detail, please refer to page 3.</p>
eFA Plus2			

[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.

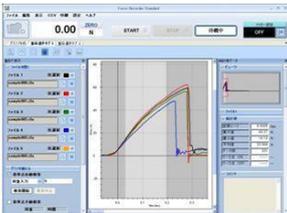
*Please contact us (+81-(0)532-33-3288) or your local distributor for the details.

- Cables

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-1VA(ZTS/ZTA/eZT)
CB-908	Open end connection cable	Output cable for loose wire 37 pin (Useful for connection with unique equipment.)
CTB-A	Cable with Terminal Block	Allows for connection with liner scale and external equipment such as PLC (*1)

*1 Only ZTA, eZT and FA Plus2 series are available to displacement function.

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

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

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

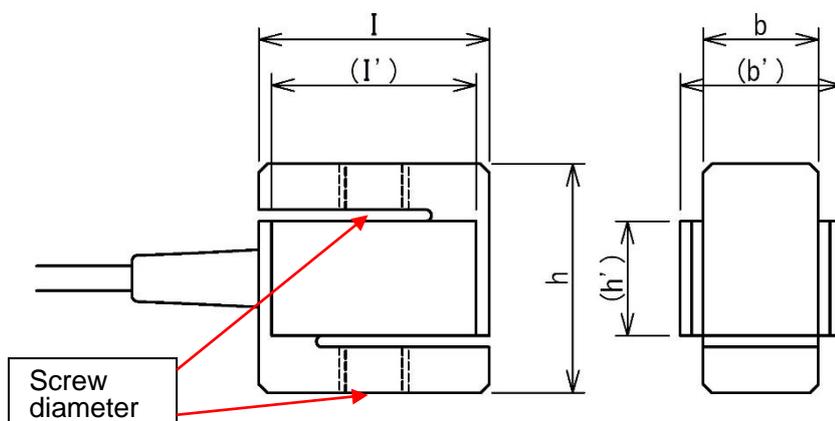
Standard type DPU series	High accuracy type SK series	Crane scale type ZW1-10kN	For door closing and opening force SKM-1000N	For car foot brake PK2-1500N
High accuracy built-in type load cell for general use	Cuboid shaped load cell for compression or tension	High capacity load cell with a hook.	Load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

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.
Please contact us for detail. Our service gr: +81-(0)532-33-3288

[Dimension]
SW1 series



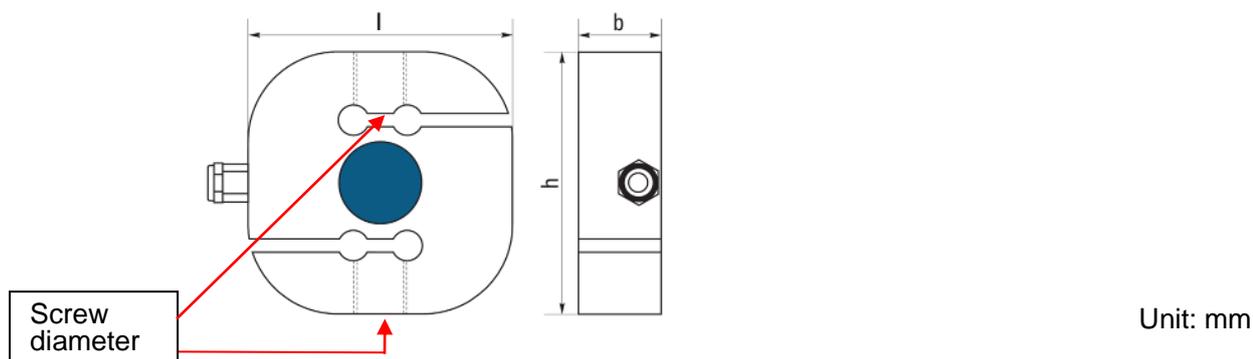
Unit: mm

Model	l	b	h	Screw※1	l'	b'	h'
SW1-100N	40	20	40	M6	36	28	20
SW1-200N				-	-	-	
SW1-500N							
SW1-1000N							
SW1-2000N							
SW1-5000N							

*The protective cover is attached on model SW1-100N and 200N. Refer to l', b', h' for dimensions of the cover.

※1 The depth is 8mm.

SW3 series



Model	l	b	h	Screw※1
SW3-10kN	80	25	80	M16
SW3-20kN				

*1 The depth is 11mm.

[Caution]

- Information in this document is subject to change without prior notice.
- This document is product descriptions and handling precautions, and do not guarantee various characteristics or safety.
- This product is designed for force measurement purpose only.
- Do not copy and use this content without authorization.
- Do not apply force more than its capacity or from incorrect direction to the measuring shaft.
- Do not use this product in the environments including fierce temperature changes, high temperature, high humidity, near water, dusty place.

IMADA CO., LTD

99 Jinnoshinden-cho aza Kanowari Toyohashi
Japan 441-8077
Tel: +81-(0)532-33-3288
Fax: +81-(0)532-33-3866
E-mail: info@forcegauge.net
Website: <http://www.forcegauge.net/en/>



Visit our website for more information on a wide range of product specifications, measurement applications and videos.