

Load cell for compression or tension SK series

The beam shape load cell having a robust body provides easy installation.
It allows detailed analysis due to the high accuracy.
Simply change the installing direction to switch detecting force.



*Install the load cell according to force applied direction.

What is IP?

IP(International Protection) is a standard which is based on IEC Standard 529 for solid foreign materials, electric devices for water and cabinet.

IPxx


- The second code
(IP 0 to 8 for water penetration)
- The first code
(IP 0 to 8 for human body and sold foreign materials)

IP67

- Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1m of submersion for 30 minutes).
- No ingress of dust; complete protection against contact (dust tight)

: eZ-Connect series

eZ-Connect is composed of an amplifier and load cells.
Enables to replace load cells without additional adjustment.
Suitable for different types of tests such as tension and torque, measuring from low load to high load etc.

Available load cells have a mark .

| Using images | |
|--------------|---|
| | <p>Fix the load cell to make its head out from the edge of your facility. Apply and measure force of compression/tension.</p> <p>*It measures either compression or tension. Please decide the load cell direction according to applied force</p> |

| Specifications | | |
|--|---|------------|
| Model | SK series | eSK series |
| Capacity | See model list | |
| Accuracy | +/-0.25%F.S. or less | |
| Rated output | +/-2mV/V | - |
| Nonlinearity | ±0.25% R.O | - |
| Hysteresis | - | - |
| Recommended voltage (Allowable applied voltage) | 10V DC | - |
| Safe overload rating | 110% | |
| Working environment (Allowable temperature) | -10~50 degree Celsius (-30~80 degree Celsius) | |
| Temperature influence for 0 point | 0.02%/ degree Celsius | - |
| Temperature influence for output | 0.01%/ degree Celsius | - |
| Weight | Approx. 300g | |
| Cable | Approx.5m | |
| Dimensions | See [Dimensions] | |
| International Protection | IP67(*1) | |

*1 Only a load cell itself secure protection grade IP. An amplifier (an indicator)/ the connecting part/ the connector part are not secured.

* An amplifier (indicator) is required to read values. Please refer to below “Available amplifiers (indicators)” for the detail.

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

| Code | -5P | -6P | -OC |
|---|---------------------------|--|--------------------------------|
| Connector shape | 5 pin | 6 pin | Without Connector |
| 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. | | | |

Add the code to the end of model. When 5 pin is required with SK-2000N, the product model is “SK-2000N-5P”.

| Available Amplifiers (Indicators) | | | | | |
|-----------------------------------|---|---|--|--|---|
| Type | Separated Sensor Model | | | eZ-Connect series Sensor Interchangeable Amplifier | |
| Indicator | Handy type ZTS series | Handy type ZTA series | Desktop type FA Plus2 | Desktop type eFA Plus2 | Handy type eZT |
| Image | | | | | |
| Feature | <ul style="list-style-type: none"> - Handheld use - Specific purpose - Higher accuracy | <ul style="list-style-type: none"> - Handheld use - Specific purpose - Higher accuracy - I/O displacement - Data saving to USB | <ul style="list-style-type: none"> - Desktop use - Specific purpose - Higher accuracy | <ul style="list-style-type: none"> - Desktop use - Load cell interchangeable (such as measurement of tension and torque, or low and high load) | <ul style="list-style-type: none"> - Handheld use - Load cell interchangeable (such as measurement of tension and torque, or low and high load) |

* Please refer to each indicator specification for the detail.

[Separated Sensor Model]

| Model | | | Capacity | Accuracy (*1) | Display | Resolution |
|--------------|--------------|---------------|----------|---------------------|--------------------|-----------------|
| ZTS | ZTA | FA Plus2 | | | | |
| ZTA-SK-2000N | ZTS-SK-2000N | FAP2-SK-2000N | 2000N | ±0.25% F.S. or less | 2000N (2.000kN) | 1N (0.001kN) |
| ZTA-SK-5000N | ZTS-SK-5000N | FAP2-SK-5000N | 5000N | | 5000N (5.000kN) | 1N (0.001kN) |
| ZTA-SK-10kN | ZTS-SK-10kN | FAP2-SK-10kN | 10kN | | 10.00kN | 0.01kN |
| ZTA-SK-20kN | ZTS-SK-20kN | FAP2-SK-20kN | 20kN | | 20.00kN | 0.01kN |

*1 The accuracy is only available for combinations with the amplifier (indicator).

[eZ-Connect series]

| Model | | Capacity | Accuracy (*1) | Display | Resolution |
|--|--|----------|--------------------|-----------------|------------|
| Amplifier: eZT Load cell: eSK-2000N | Amplifier: eFA Plus2 Load cell: eSK-2000N | 2000N | | | |
| Amplifier: eZT Load cell: eSK-5000N | Amplifier: eFA Plus2 Load cell: eSK-5000N | 5000N | 5000N (5.000kN) | 1N (0.001kN) | |
| Amplifier: eZT Load cell: eSK2-10kN | Amplifier: eFA Plus2 Load cell: eSK2-10kN | 10kN | 10.00kN | 0.01kN | |
| Amplifier: eZT Load cell: eSK2-20kN | Amplifier: eFA Plus2 Load cell: eSK2-20kN | 20kN | 20.00kN | 0.01kN | |

*1 The accuracy is only available for combinations with the amplifier (indicator).

[Load cell by itself]

| Model | Capacity |
|----------|----------|
| SK-2000N | 2000N |
| SK-5000N | 5000N |
| SK-10kN | 10kN |
| SK-20kN | 20kN |

| Custom-made Order | |
|---|---|
| <u>Extend the length of a cable</u> Enables to extend the length of a cable for gauge-PC connection or load cell-amplifier connection. | <u>Enhance flexibility of a cable</u> Enables to offer high-flex cable to reduce risks of disconnection. |

* Please contact us for details such as cable length etc.

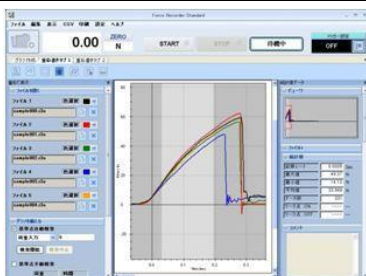
[Related products]

- 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-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

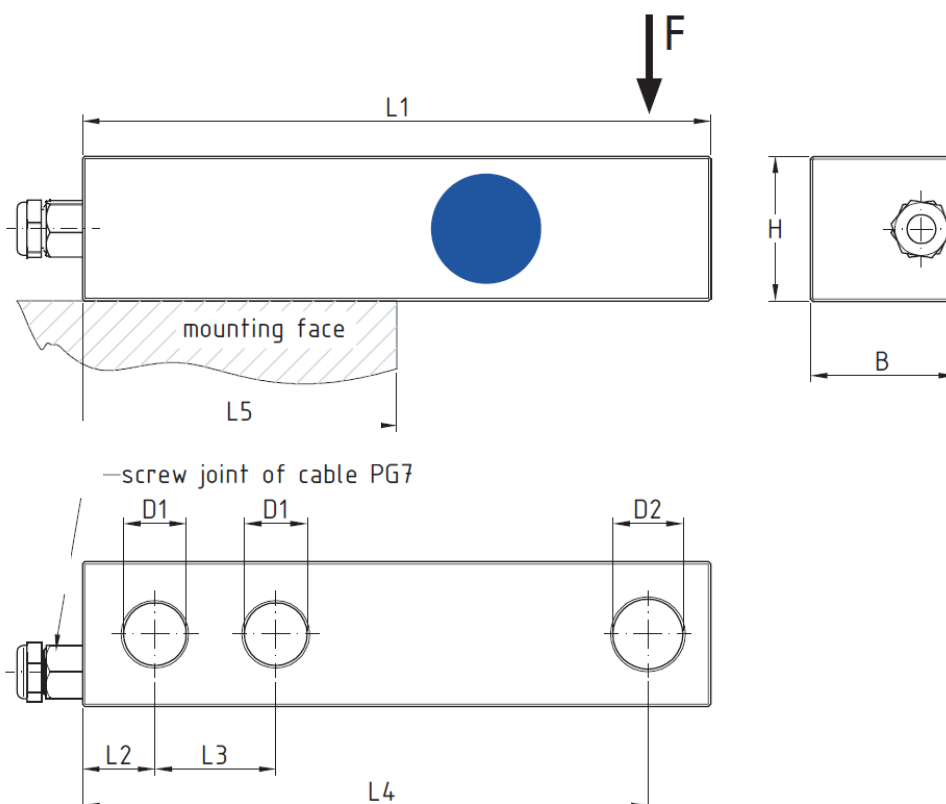
| Image | Feature |
|---|--|
|  | <ul style="list-style-type: none"> - You can draw graphs of force-displacement at real time via USB connection at 2000Hz. - 5 graphs at maximum can be overlaid. (Standard / Professional only) - You can write memo on each graph. For instance, you may write down testing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

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

| Standard type DPU series | High capacity type SW3 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. | High capacity waterproof type. | 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 each specification for the detail.

[Dimensions]



| Model | H | B | L1 | L2 | L3 | L4 | L5 | D1 | D2 |
|----------|----|----|-----|----|----|-----|----|-------|-------|
| SK-2000N | 30 | 30 | 130 | 15 | 25 | 117 | 65 | φ12.6 | φ12.6 |
| SK-5000N | | | | | | | | | φ14.5 |
| SK-10kN | | | | | | | | | |
| SK-20kN | | | | | | | | | |

Unit: mm

[Cautions]

- 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.

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