

eZ-Connect Series: Sensor Interchangeable Amplifier eZT

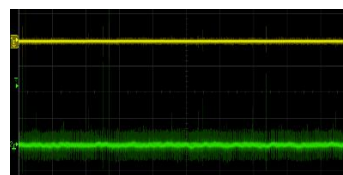
- Available for various measurements by replacing different loadcells without accuracy adjustment.
- Fast sampling for both Peak Values and Continuous Data, achieving high reproducibility
- Clear OLED display with a variety of significant capabilities
- Measurement benefit increased by external output and practical functions
- Allows easy Data acquisition and management with the included software

[Evolution to the Next Series]

Next Series is a generic term for IMADA measurement devices with upgraded functions and performances with the essential modifications.
New Series: eZT Firmware Ver.5 or later.

New Features

- Increased measurement stability achieved from further noise reduction to the measurement circuit.



Analog output comparison Yellow: Next series/Green: Old Model

- Force gauge program (firmware) online updates available.
- Various software and additional functions downloadable to increase the measurement conveniences.



IMADA Connected

(<https://www.imada-connected.com/>)



eZT

What eZ Connect Series is



eZ Connect is a generic term for an amplifier and load cells attachable to it without additional adjustment.

The various eZ-Connect load cells are compatible with eZT.

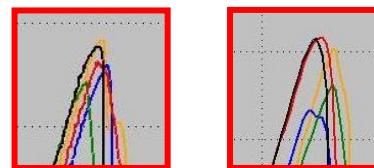
Also, users can reduce the risk to stop a working line by preparing another sensor as a spare.

[Features]

Fast sampling for both Peak Values and Continuous Data, achieving high reproducibility

High-speed sampling of up to 2000 times/second updates measured values for more accurate peak-value readings.

By using the optional software sold separately (refer to P.6), graphed as continuous Data with the sampling data of up to 2000 times/second, and even frictional Load changes visualized and evaluated.



Destructive test comparison of the same sample by sampling speed: -
-Left Sampling speed 2000Hz
-Right Sampling speed 100Hz
The less variation shown in the left results

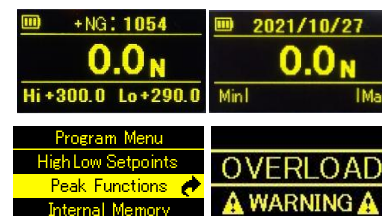
*The Test Results vary depending on the sample and measurement conditions.

Clear OLED display with a variety of significant capabilities

The OLED provides excellent contrast and high visibility, which reduces errors in reading measurement results.

In addition, the display screen can be divided into three sections, allowing to customize the display contents for liking, such as calendar, bar graph and Comparator setting values on the top and bottom.

In addition, it has various display capabilities such as a multi-language setting menu and overload warning display.



Measurement benefit increased by external output and practical functions

By providing a wide range of data output options such as USB, wireless, serial communication, and analog output, it can be used in a wide range of situations from data management on a PC to interlocking with various devices.

The system used to control external devices, such as stopping the machine at a specified load value, or to create an inspection device linked to a work process in order to improve the efficiency of the inspection process.



The warning light and other devices may be used to detect measurement abnormalities.

Allows easy data acquisition and management with the included software

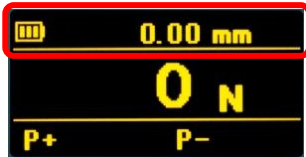


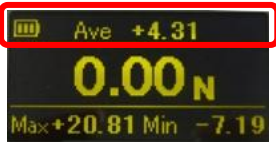
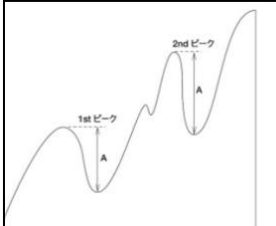

USB Cable and software *Force Logger* included in the original package to proceed with the data management when purchased.

With the software, displayed values and internal memory data stored in a force gauge and continuous data acquired (10 data per second).

It also allows to change and save the Force-Gauge settings from facilitating the management of measurement conditions. (Please refer to P.5 for the system requirements).



[Scalability of eZT]

| (1) Equipped with Displacement Output Function | | (2) USB flash-drive for Continuous Data Storage | |
|---|---|---|---|
|  | <p>eZT enables you to display displacement value on the top by connecting linear scale. Also, outputting the force-displacement data is available by using included or optional software.</p> <p>*Please refer to P.4 for available linear scale.</p> |  | <p>To USB flash-drive (*sold separately) Continuous data selected: -1 data/sec, 50 data/sec, 100 data/sec -Single data (with the button press) Data saved in CSV format.</p> <p>*USB flash-drive is sold separately</p> |
| (3) Display with Special ZTA Features | | | |
| Value Display Maximum / Minimum | Average Load Value | Peak Value Detection 1 st and 2 nd Values | |
|  <p>Displays the Max. and Min Load Values from the memory stored in the main unit.</p> |  <p>Calculate the average value of the memory stored in the unit</p> |  |  <p>When the value drops by more than the arbitrarily set value (A), or more, up to two previous maximum values are detected.</p> |
| The display convenient for grasping the tendency of measurement results when measuring peak values. | | Used to measure samples with click feelings: - Clicking tip of the Mechanical pencil and pens and the Camera Shutter Button. | |

[Specifications of eZT]

| Model | eZT |
|-----------------------------|---|
| Accuracy | +/-0.2%F.S. (*1) |
| Unit of measurement | Depends on load cell and settings (N, kN, kgf, lbf N-m, N-cm, kgf-m, kgf-cm, lbf-in, ozf-in) |
| Display | 4-digit |
| Display update | 16 / sec |
| Sampling rate | 2000 data / sec at maximum (*2) |
| Battery | Approx. 6.5 hours (2 hours charge) (*3) |
| Operating environment | Temperature: 0 to +40 degree Celsius, Humidity: 20 to 80%RH |
| Functions | Customized display (header and footer), Peak hold (tension and compression), Internal 1000 points data memory, Comparator (judgment of OK or NG), Reversible display, Sign inversion, Zero clear timer, +NG alarm, Off timer (auto power off), Dumping, Time display, 1st/2nd peak, Displacement detection at force peak value, Displacement zero reset at selected force, setting lock |
| Output | USB, RS232C, +/- 2VDC analog output (D/A), Comparator 3 steps (-NG/OK/+NG), Overload alarm, Sub comparator 2 steps (output of large or small judgment), USB flash drive, Displacement. |
| Overload warning | Approx.110%F.S. (Warning message and alarm) |
| External connecting switch | Power ON / OFF / Send and Hold / Zero reset / Peak and Real-time switching |
| Available liner scales (*4) | - Online driver output (a line receiver according to RS422/485 must be built in.) - Open collector output (Voltage drop between contacts must be smaller than 0.5V.) |
| Weight | Approx. 490g |
| Dimensions | Please refer to dimensions. |
| Accessory | AC adapter, CD driver (including data logging software) (*5), USB cable, Carrying case, Adaptor for USB flash drive (*6) |

*1 The accuracy of load cell is added when using connected with a load cell.

*2 Up to 100 data/sec. is saved in USB memory (selectable among 1, 50, and 100 /sec)

*3 The battery is more consumed when connected to USB flash drive or a linear scale.

*4 Some linear scales may not be available even if they meet the mentioned specifications.

*5 Please refer to [Included Accessory] below for the details.

*6 USB flash drive is not included.

[Cautions]

1. Accuracy

Overall accuracy is calculated as the total of the accuracy of amplifier (+/- 0.2%F.S.) and load cell (see each specification sheet)

E.g.) For eDPU-50N



Amplifier
(+/-0.2% F.S.)

+



eDPU
(+/-0.2% F.S.)

=

Overall accuracy +/-0.4% F.S.

* For measurement requiring higher accuracy, there are 'Separate Sensor Model ZT series' and 'Desktop Force Amplifier FA Plus²', which are calibrated individually to each load cell. Please refer to the specification sheet of Separate Sensor Model ZT series.

2. Accuracy Warranty

Please calibrate before using eZ-Connect series.

The amplifier is not calibrated with any load cell.

Please request calibration for each combination and calibration report if required (available at a charge).

[Included Accessories]

- Force Logger: Data Acquisition Software



Main Functions

- Easy Importing of the Measurement Data
- Display Acquired Data Value Statistics: -Maximum / Minimum / Average Values.
- Data saved in CSV format
- Continuous Data acquisition up to 10 times per second.
- Force-Gauge Function Settings.

Operating environment






- OS: 8.1/10/11
- Hardware: CPU 1GHz or more recommended
Memory 2GB or more recommended
Hard disk 10GB (Data storage area) or more
- Platform: .NET Framework 4.8 or later

[eZ-Connect series Load Cells]

| Model | eDPU series | eDPUH series | eSW series | eSCX series |
|--------------|------------------------|------------------------|--|---------------------|
| Image | | | | |
| Feature | Standard - Wide Use | Standard - Wide Use | Waterproof | Extra small |
| Force | Tension/Compression | Tension/Compression | Tension/Compression | Tension/Compression |
| Capacity | 2N to 500N | 1000N to 20kN | 100N to 20kN | 100N to 2000N |
| Accuracy | +/- 0.2%F.S. | +/- 0.25%F.S. | +/- 0.5%F.S. | +/- 1%F.S. |
| Cable Length | 2m | 3m | Up to 5000N: 0.5 to 2m (Curl cord) 10kN and 20kN: 5m | 3m |

| Model | eLU series | eLMU series | ePN-50N | eLM series |
|--------------|-----------------------|---------------------|---------------------|--|
| Image | | | | |
| Feature | Small Size - Wide Use | Small Size | Pen type | Thin & Round |
| Force | Tension/Compression | Tension/Compression | Tension/Compression | Compression |
| Capacity | 500N,2000N | 50N,200N,500N | 50N | 10N to 20kN |
| Accuracy | +/- 1%F.S. | +/- 1%F.S. | +/- 2%F.S. | Up to 10kN: +/-2.0% F.S. 20kN: +/-3.5% F.S. |
| Cable Length | 3m | 2m | 2m | Up to 2000N: 2m 5000N to 20kN: 3m |

| Model | eLC series | eCFX series | eCLFX series | eCHX series |
|--------------|-----------------|--------------------|--------------|---|
| Image | | | | |
| Feature | Round & Precise | Flat & Extra small | Flat & Thin | Washer |
| Force | Compression | Compression | Compression | Compression |
| Capacity | 500N to 20kN | 20N to 200N | 50N to 500N | 100N to 2000N |
| Accuracy | +/- 0.5%F.S. | +/- 1%F.S. | +/- 2%F.S. | Up to 500N: +/-2%F.S. 2000N: +/-1%F.S. |
| Cable Length | 5m | 3m | 3m | 3m |

| Model | eZU series | eDM-2000N | ePK2-1500N | eHT series | eTFX series |
|--------------|---|---|---|---|---|
| Image |  |  |  |  |  |
| Feature | Attached Rod ends | For door | For car foot brakes | Torque Load Cell | Torque Load Cell |
| Force | Tension | Specialized | Specialized | For torque | For torque |
| Capacity | 10kN to 20kN | 2000N | 1500N | 0.5Nm to 10N-m | 5N-m to 10N-m |
| Accuracy | +/- 1.0% F.S. | +/- 2% F.S. | +/- 1% F.S. | +/- 0.5% F.S. | +/- 1%F.S. |
| Cable Length | 5m | 2m | 1.5m | 0.5 to 1m (Curl cord) | 2m |

* Please refer to each specification sheet for details.

[Related Products]

Graphing and Data Acquisition Software: Force Recorder



Force Recorder Next Professional

- High sampling rate of max. 2000Hz enables accurate graphing.
 - * Professional version is for force-time graphs and force-displacement graphs.
 - * Standard version is for force-time graphs.
- Test condition preset functions increase efficiency of recording and analyzing measurement results.
- Various data editing functions such as up to 10-graph overlaying enable analyzing measurement result.
- Adding Images and Comments functions are useful for recording the details of measurement.
- The Print Command allows users to output of measurement data as PDF/Word, Excel, and images and drawing up reports easily.
- * CD version software Force Recorder series is also available. Some specification such as operating environment is different from Downloadable version and CD version.
- * Please refer to the individual specification sheets for details.

Wireless Data Transmit System: WL01 Series



WL01-USB and WL01-ADP

- Wireless communication allows the Data received from remote locations.
- The Data reception detection and interference prevention functions support stable communication.
- The communication format opened to the public and incorporated into the available facilities possible.
- Note**
 - Compatible with firmware Ver3.10 or later.
 - Restrictions on the countries and regions for use.
- Please refer to [Wireless System] Specifications for details.

Linear Scale DMK series



Using with a ZTA series to do force-displacement measurement

Rechargeable Battery: BP-308







Rechargeable Battery for replacement

*1 To use this product, user & product registration on IMADA Connected and downloading the software are required. Only Next Series products (For the eZT series, firmware versions 5.00 or are available for the product registration. An Internet connection is required in process of user & product registration and downloading the software.

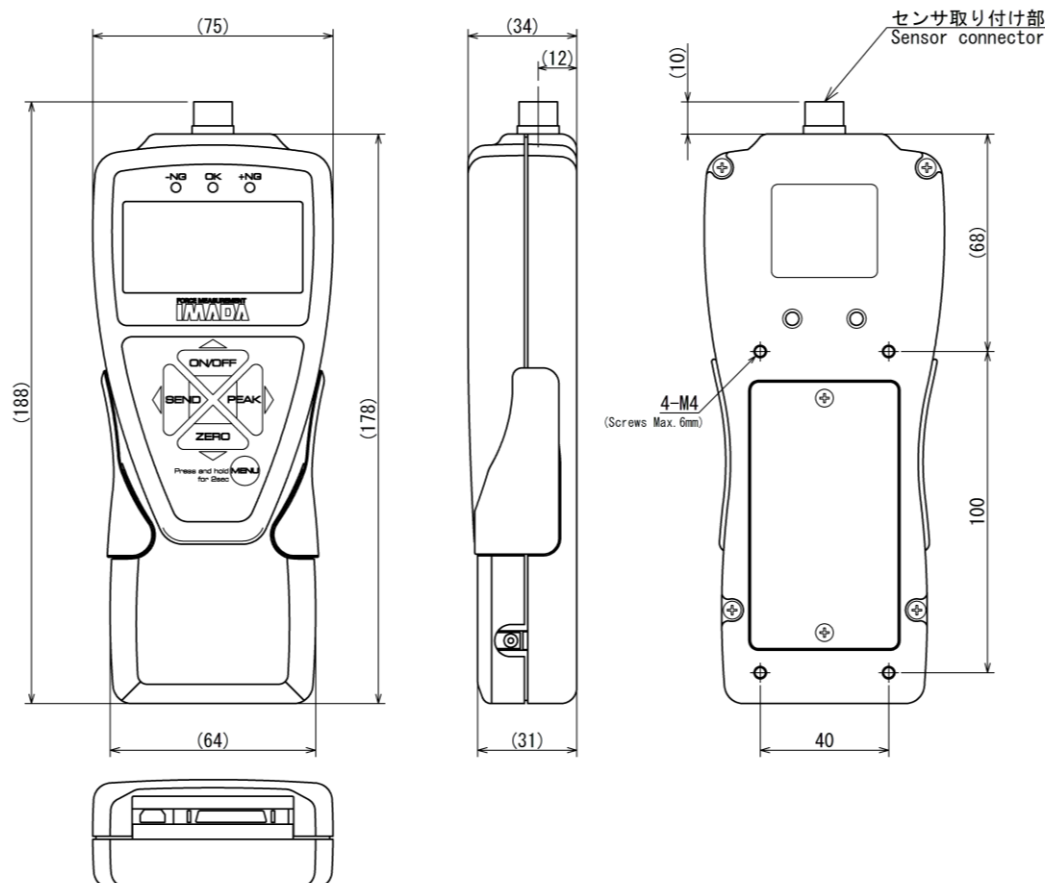
[Related Cable]

| Model | Explanation | Purpose of use |
|--------|--|--|
| CB-108 | Analog cable | To connect to a multi meter, oscilloscope. |
| CB-208 | RS232C cable | To connect to a PC having its own system |
| CB-508 | Test stand option cable (For MX) | To connect to a test stand to enable force control or overload stop functions. |
| CB-528 | Test stand option cable (For MX2, EMX) | To connect to a test stand to enable force control or overload stop functions. |
| CB-718 | Test stand connection cable for displacement measurement (For MX2-FA, EMX-FA) | To connect to a test stand having length meter to enable force-displacement measurement. |
| CB-908 | Open end connection cable | Output cable for loose wire 37 pin (Useful for connection with unique equipment.) |

[Related Force Gauges]

| Digital force gauge ZTS/ZTA series | Sensor-separate force gauge ZTS/ZTA Series |
|--|---|
|  |  |
| Functional yet user-friendly model force gauge. Highly precise measurement with high sampling rate of 2000Hz. | External sensor type for use in the restricted environment (narrow space etc.) or installing into the specific facilities. |
| Desktop Force Amplifier FA Plus2/eFA Plus2 series | Quad Sensor Measuring Amplifier QSMA-400 |
|  |  |
| Ideal for integration into facilities due to the box-shaped design and a variety input/output function. | Measuring amplifier capable of connecting up to four eZ Connect series load cells. With dedicated cables (separately sold), input strain and voltage can be input. To use QSMA-400, the graphing Software Quad Graph Drawer is required to be downloaded. |

[Dimensions]



Unit: mm

*Please refer to load cell's specification sheet for each dimension.

[Calibration Certification and ISO/IEC17025 calibration service]

- We offer calibration certification for eZT connected with the load cell at extra charge.
- We also offer ISO/IEC 17025:2017 calibration service for eZT with some load cells at extra charge.

* Please contact us or your local distributor for detailed information.

[Cautions]

- Information in this document is subject to change without prior notice.
- 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.
- Note that the allowable values may vary slightly depending on the unit selected on display. Please contact us for more information and details.

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: <https://www.forcegauge.net/en/>



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