eZ-Connect Series: Sensor Interchangeable Amplifier eZT

- One amplifier for use with various load cells without readjustment.
- Interchangeable sensors of different types; compression, tension, torque and more.

For example...

| For small force (e.g. Approx. 3N) | For large force (e.g. Over 1000N) |

For measuring both...

Small

Large

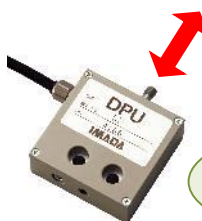Small capacity load cell

High capacity load cell

Only one amplifier enables both measurement!

For example...

| For compression/tension (e.g. durability, rupture test) | For torque (e.g. screw tightening, loosening test) |

For measuring both...

Compression/ tension

turning/ twisting

Load cell for compression/tension

Load cell for torque

Only one amplifier enables both measurement!

*Please calibrate (check the conformity of the indicated value) before use or ask us for calibration service (See page 2 for details.).

[Interchanging the load cells]

Load cell connected	Simply disconnect it and connect another	Ready for next measurement

[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):

> For example… eDPU-50N
>
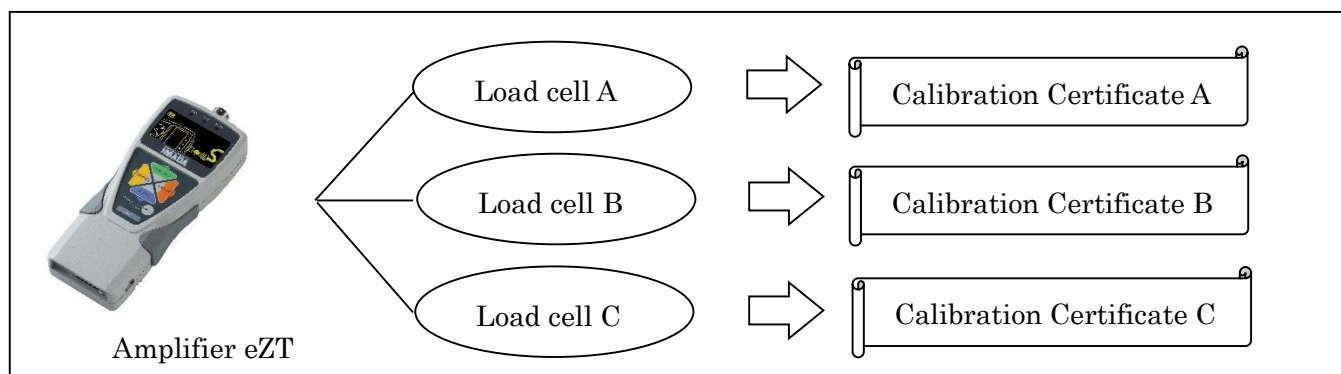> Amplifier (+/-0.2% F.S.)   +   eDPU (+/-0.2% F.S.)   =   Overall accuracy +/-0.4% F.S.

∗ For measurement requiring higher accuracy, there are 'Separate Sensor Model ZT series' and 'Desktop Force Amplifier FA Plus', 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).

Amplifier eZT	Load cell A	⇒	Calibration Certificate A
	Load cell B	⇒	Calibration Certificate B
	Load cell C	⇒	Calibration Certificate C

*Please contact us for details of our calibration service.

[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	8 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, Mitutoyo digimatic (*4), 2 VDC 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	SEND (a point of contact holding), Zero reset, Peak ON/OFF setting
Available liner scales (*5)	- 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.
Accesoories	AC adapter, CD driver (including simple software for data logging), Force Recorder Professional (Trial ver.) Attachments (The set of attachments varies according to range.), 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.
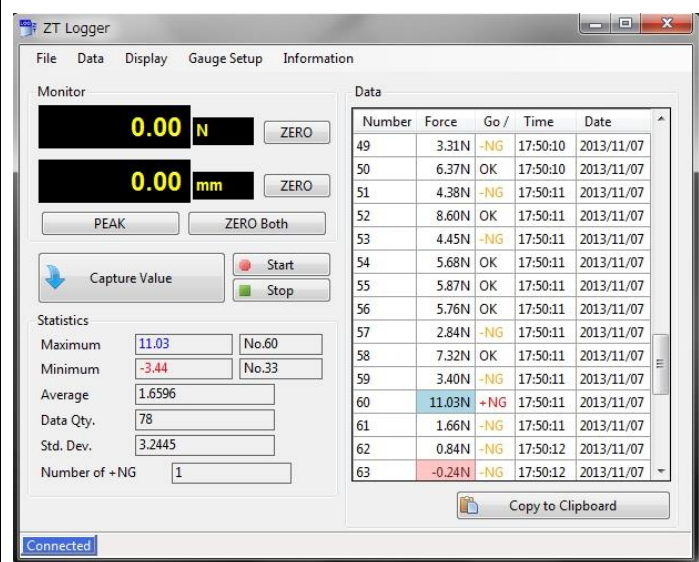*2 Up to 100 data/sec. is saved in USB memory (selectable among 1, 50, and 100 /sec)
*3 The battery is more consumed when connected to USB flash drive or a linear scale.
*4 Not always available for Mitutoyo digimatic products.
*5 Some linear scales could not be available even if they meet the mentioned specifications.
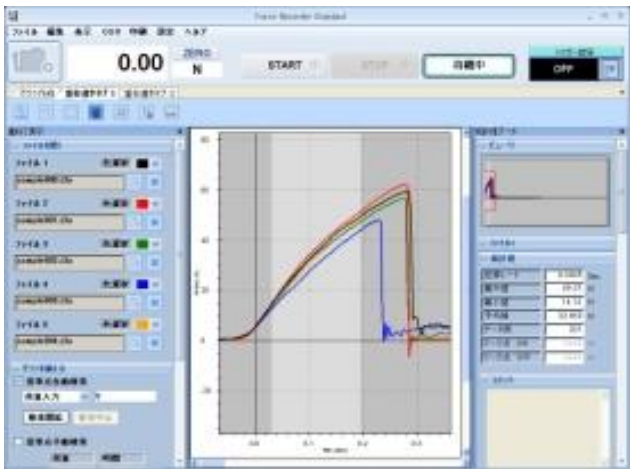*6 USB flash drive is not included.

[Included Accessories]

	Main functions	
Easy and reliable data management on PC ZT-Logger	- Captures peak data (*1) - Captures continuous data (10 data /sec) (*1) - The recall of memory data (*1) - Saves data in CSV format - Prints out the report **Operating environment (*2)** - OS: Windows XP/Vista/7/8/8.1 (32bit/64bit of 7/8/8.1) - CPU: more than 1GHz - Memory: more than 1GB - Hard disk : more than 2GB - .NET Framework4 later *1 Available data: Force, Displacement, Time *2 Please note that the software may not work in all environmental combinations.	

[Application of Force Gauge]

ZT series enable…

1. Controlling external equipment according to load value. (e.g. To stop or change operation of machine at a selected load value.)

2. Adding a certain load value. (e.g. To maintain sample pressed at a chosen load value.)

3. Producing inspection device synchronized with work process. (e.g. To improving efficiency of inspection process.)

4. Finding inferior goods earlier with OK/NG judgment function.(e.g. To do quality control thoroughly)

    >> Please contact us or our distributor in your country for further information.

[Related Products]

Graphing Software: Force Recorder			

*This image is from Standard ver.

You can make graphs at real time via USB connection at 2000Hz. There are 3 grades available:

Main Functions	Professional	Standard	Light
Drawing force-time graph (Max. sampling 2000 times/ sec.)	○	○	○
Force gauge function settings	○	○	○
Saving in CSV format	○	○	○
Overlaying graphs (5 graphs)	○	○	
Drawing force-displacement graph	○		

* Professional version is designed to be used with ZTA and a test stand with liner scale.

* Please refer to each specification sheet for details.

Sensor-separate force gauge ZTS/ZTA series	Printer: DP-1VR	Battery: BP-308
Broad line-up of sensors enables measurement in various environments with its high accuracy and repeatability.	Prints indicated values and data in internal memory. *CB-308 cable is necessary.	Battery for replacement.

[eZ-Connect series Load Cells]

eZ-Connect Model	eDPU series	eSW series	eLMU series	eLU series
Feature	Standard - Wide Use	Water-proof	Small Size	Small Size - Wide Use
Force	Tension/Compression	Tension/Compression	Tension/Compression	Tension/Compression
PCapacity	2N to 20kN	100N to 20kN	50N to 500N	50N to 2000N
Accuracy	+/- 0.2%F.S.	+/- 0.5%F.S.	+/- 1%F.S.	+/- 1%F.S.
Cable Length	Up to 500N:2m 1000N to 20kN:3m	Up to 5000N: 4m(Curl cord) 10kN to 20kN: 5m	2m	3m
Dimensions	From Approx. W58xD21xH71 up to Approx. W88xD40xH155mm	Approx. W40xD20xH40 to Approx. W80xD25xH80mm	Approx. φ18xH25mm	Approx. φ28xH35mm
Thread	Up to 500N: M6P1 (Male) 1000N to 5000N: M10P1.5 (Male) 10kN to 20kN: M18P1.5 (Length 22mm Female)	Up to 200N: M6P1 500N to 1000N: M8P1.25 2000N to 5000N: M10P1.5 10kN to 20kN: M16P2.0 (Female)	M5P0.8 (Male)	M8P1.25 (Length 8mm Female)
Image				

eZ-Connect Model	eLM series	eLC series	eDD series	eLMT series
Feature	Thin & Round	Round & Precise	High Accuracy & Water-proof	Low/High Temperature Resistance (-40 to 130 degree Celsius)
Force	Compression	Compression	Compression	Compression
Capacity	10N to 20kN	500N to 20kN	5000N to 20kN	1000N
Accuracy	+/- 1 to 2.5%F.S.	+/- 0.5%F.S.	+/- 0.5%F.S.	+/- 5%F.S.
Cable Length	2m	3m	5m	2m
Dimensions	Approx.φ12xH4 to φ21xH10mm	Approx.φ50xH25mm	Approx.φ94xH48mm	Approx.φ14xH4.3mm
Image				

eZ-Connect Model	ePN series	ePK2 series	eDM series
Feature	Pen type	For car foot brakes	For door
Image			

eZ-Connect Model	eZD series	eZU series	eZW1 series
Feature	Small Size - High capacity	Two rod ends	Crane scale type
Image			

* Please refer to each specification sheet for details.

[Related Cable]

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-508	Test stand option cable (For MX)	To connect to a test stand to enable force control or overload prevention functions.
CB-518	Test stand option cable (For MX2,EMX)	To connect to a test stand to enable force control or overload prevention functions.
CB-718	Test stand connection cable for displacement measurement (For MX2-FA)	To connect to a test stand having length meter to enable force-displacement measurement.
CB-728	Test stand connection cable for displacement measurement (For 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.)

[Dimensions]

センサ取り付け部
Sensor connector

4-M4
(Screws Max. 6mm)
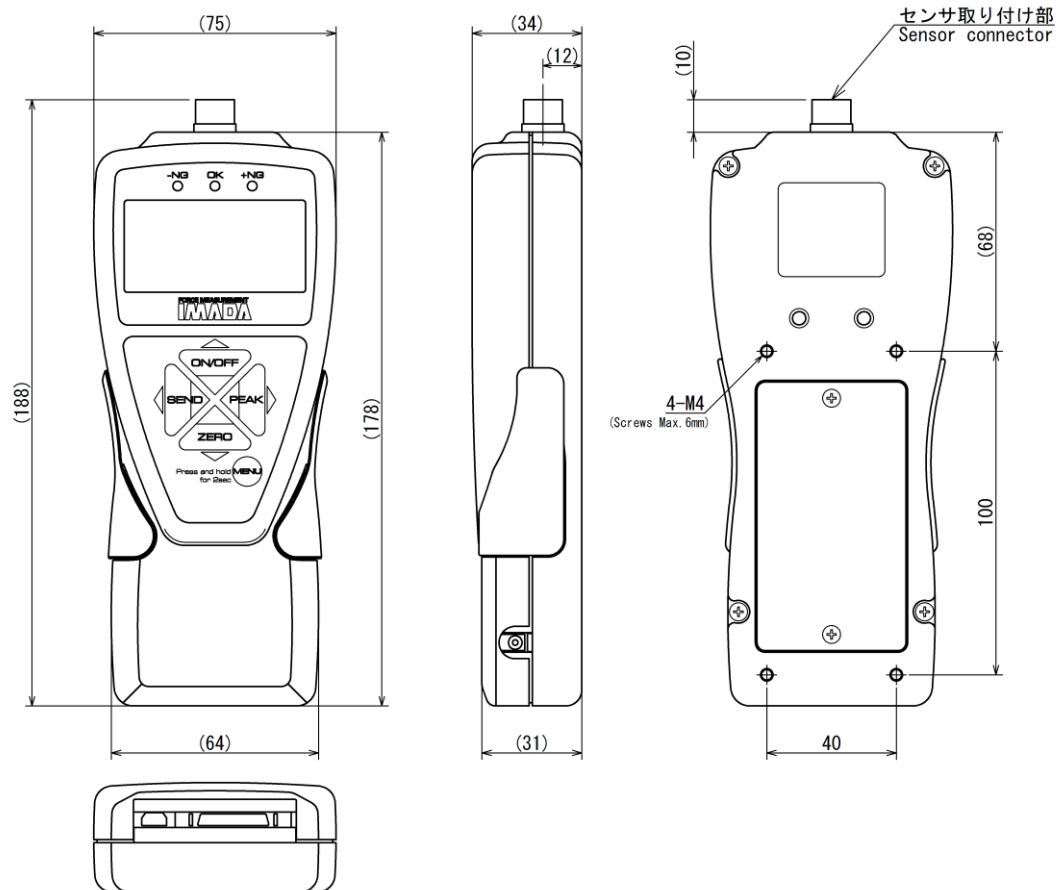
*Please refer to load cell's specification sheet for each dimensions.

[Cautions]

- The contents may be changed without previous notice.
- All of products are designed for measurement purpose only.
- Do not copy and use this content without authority.
- Please note that the capacity is dependent on the displayed unit. Please contact us for details.