

## High Repeatable Type for Handheld Use

## DSV Series

Covering measurement of low, medium force area, from 2N~1000N.  
Increase the reproducibility of measurements of hand-held, with warning function of posture change.

High-end model with a few additional functions while keeping the performance of DST series (Page 14)

## ●Features of DSV Series

## Increase reproducibility

- Detection of posture change, notification by alarm (tilt alarm)
- Data record of posture change abnormalities

## Higher operability

## ○Internal memory

Record 1000 data with date & time / judgment results

## ○Continuous peak mode

Increase productivity of measurement by continuously acquiring peak value without button operation

## Compression / Tension compatible

- Size:Approx.W72×D32×H181mm
- Weight:Approx.460g



## Check force transition on graphs

Software ZLINK4 ————— To Page 22



## Improve Measuring Repeatability

Test Stand ————— To Page 28



CE

DSV set



## Apply Stable Force by Hand

Handle FOH-1 ————— To Page 43

## ■Model table of DSV series

Model	Capacity (N)	Display	Thread
DSV-2N	2N	2.000N(2000mN)	
DSV-5N	5N	5.000N(5000mN)	
DSV-20N	20N	20.00N	
DSV-50N	50N	50.00N	
DSV-200N	200N	200.0N	
DSV-500N	500N	500.0N	
DSV-1000N	1000N	1000N(1.000kN)	

M6

## ■Specifications of DSV series

Accuracy	+/-0.2%F.S. +/- 1 digit
Unit of measurement	N(mN/kN), kg(g) (※1)
Display	4-digit
Sampling rate	1000Hz (1000 data / sec) at maximum
Battery	Approx. 30 hours (backlight off); Approx. 14 hours (backlight on) (4.5 hours full charge)
Power	Built-in Ni-MH battery, USB power supply (PC, mobile battery, AC adapter)
Operating environment	Temperature: 0 - 40° C Humidity: 20 - 80% RH
Function	Peak hold (tension and compression)/Comparator (judgement of acceptance or rejection)/Setting sensitivity(3 Levels)/Reversible display/Reversible symbols/Setting lock/ Date time setting/ Off timer/Calibration time notice/Tilt alarm/Continuous peak mode/Internal memory(1000 data)
Output	USB/RS232C
Overload alarm	Advance notice alarm: Range 90% or above Overload warning (Alarm/Display): Range 110%
Accessory	Force Logger (Data capturing software)/USB cable/AC adaptor/ Attachment (※3)/Carrying/Operation manual/Inspection certificate

※1 The model less than 5N can be displayed mN, the model more than 1000N can be displayed kN. Japanese domestic model does not indicate kgf and lbf units.  
※2 Weight varies slightly depending on the range.  
※3 Please refer to Page 35 for the detail of accessory attachments.  
◎Weight are slightly different by the ranges.  
◎Specifications for international models only. Specifications for Japanese domestic models vary on functions and performance.

## Load Cells and Amplifiers

Load cells convert sensing force to electric signal. You need an amplifier to indicate the force value measured by load cells. They are ideal for built-in or use under unique environment such as dangerous / narrow / dusty and the like.

## eZ Connect series

[This is recommended in these cases below.]


Measure things from low load to high load.

Carry out different types of tests such as tension and torque.

Keep a spare load sensor to reduce risks in operation.

## eZ Connect series are...

○eZ Connect is composed of an amplifier and load cells. You can replace load cells without additional adjustment.

- You can choose a load cell from page 17 to 19 to connect with the amplifier. Available load cells have a mark .
- Its overall accuracy is calculated as the total of the accuracy of the amplifier (+/- 0.2%F.S.) and a load cell connected with it.
- We do not offer inspection certificate when we ship it out. Therefore, please calibrate it by yourself, or request calibration for each combination if needed (available at a charge).

## ■eZT Specifications

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)
Functions	Customized display (header and footer), Peak hold (tension and compression), Internal 1000 points data memory, Comparator (judgement 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 (※3), 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
Operating environment	Temperature: 0 to +40 degree Celsius, Humidity: 20 to 80%RH
Battery	8 hours (2 hours charge) (※4)
Accessories	AC adapter, CD driver (including simple software for data logging), USB cable, Operation manual, Carrying case, Adaptor for USB flash drive (※5)

※Japanese domestic model does not indicate kgf (kgf-m, kgf-cm) and lbf (lbf-in, ozf-in).  
※1 The accuracy of load cell is added during measurement.  
※2 You can save up to 100 data/sec in USB flash drive (selectable among 1, 50, and 100 /sec)  
※3 You cannot use it with Mitutoyo digimatic products in some cases.  
※4 A USB flash drive and a liner scale consume more battery.  
Thus, when you combine ZTA with the USB flash drive or the liner scale, the battery runs out faster.  
※5 USB flash drive is not included.  
◎If you would like to use this amplifier combined with a test stand, please contact us or our sales partner.

## Models of load cells for eZ Connect series

○Add "e" to model name of a load cell for eZ Connect series as stated below.

## Example

Normal load cell: DPU-50N

## Load cell for eZ Connect series:eDPU-50N

## Sensor Interchangeable Amplifier eZT

## Precise

- You can capture test data precisely due to its high sampling rate (Max.2000Hz).

## Easy

- No additional adjustment is needed to replace load cells.

## Multifunctional

- It has many useful functions such as OK/NG judgement, saving data in USB flash drive, and more.

□Size (Amplifier only) : Approx. W75×D34×H188mm

□Weight (Amplifier only) : Approx. 490g



## Check Force Transition on Graphs

Software Force Recorder ————— To Page 20



## Print The Results

Printer DP-1VR ————— To Page 24



## Connect with External Devices

Cable Using Applications ————— To Page 24



## Connect with a Linear Scale

Built-in Linear Scale Unit ————— To Page 24

## Desktop Amplifier FA Plus

- This desktop amplifier is ideal for being incorporated in your equipment. With its input/output functions, you can interlock it with your equipment.



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□Size:W210×D160×H99mm

□Weight:Approx. 1.5kg

## Accuracy

## ○High speed sampling :2000Hz

It shows force value precisely and even follows rapid force change due to its high sampling rate.

## Synchronized with external equipment

○You can use it as a part of factory automation equipment using input and output signals.

Measurement unit	N(kN), kgf(gf), lbf(ozf)
Display	4 digit LTD
Sampling rate	2000Hz (2000 data/ sec)
Functions	Peak hold, Comparator (OK/NG judgment), Setting sensitiveness and so on.
Output function	USB/ Serial (RS232C)/ Analog (Approx. ±2V), Each comparator/ Overload caution
Accessory	Power cable, Spare fuse, USB cable, Driver CD-ROM, Load Capturing software FAP logger

You can connect this amplifier with all load cells from page 17 to 19 except SKM-1000N and eZ Connect load cells.

You can replace load cells in the most cases although they need adjustments. However, some load cells are incompatible, and they cannot be combined with an amplifier. Please contact us for the details.