

Handheld torque measurement instrument for wide applications  
Changeable attachments expand application possibility  
High usability with bright display and various functions



Left: HTGA

Below: Accessories software ZT-Logger



Torque measurement of rotary switch



Precise measurement	High usability	Easy data management
<ul style="list-style-type: none"> <li>- Fast sampling rate 2000 Hz capture torque transition</li> <li>- Small influence of bending and slant force by double bearing structure.</li> </ul>	<ul style="list-style-type: none"> <li>- High bright organic EL display</li> <li>- Multi language set up menu of English, Spanish, French, Chinese, German, Italian, Korean and Japanese.</li> </ul>	<ul style="list-style-type: none"> <li>- Easy connection with PC by USB</li> <li>- Data download software is included</li> <li>- Optional software which is making a graph is available.</li> </ul>

### Replaceable attachment

Easy operation of changing attachments.



Prepare an attachment



Insert an attachment



Turn screw by attached L wrench

You can change the attachment according to a sample.

We offer custom made attachment for unique application.

\* Attachments are not included HTGS/HTGA series.

## [Specifications]

We have 2 models of torque gauges.

Model	HTGA	HTGS
Outline	Advanced model with various functions such as data saving in USB memory stick, angle(displacement) I/O and more.	Standard model
Accuracy	$\pm 0.5\%F.S. \pm 1$ digit	
Unit of measurement (*1)	N·m, N·cm, kgf·m, kgf·cm, lbf·in, ozf·in (N·cm, kgf·cm, lbf·in and ozf·in are available for 0.5N·m.)	
Display	4-digit Organic EL	
Display update	16 / sec	
Sampling rate	2000 data / sec at maximum (*2)	
Battery	Nickel-hydrogen battery / Operating time: 8 hours (2 hours full charge) (*3)	
Safe overload rating	Approx. 200%F.S.	
Operating environment	Temperature: 0 to +40 degree Celsius, Humidity: 20 to 80%RH	
Function	Customized display (header and footer), Peak hold (clockwise and counter-clockwise), 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, setting lock	
	1st/2nd peak, Angle detection at torque peak value (*4), Angle zero reset at selected torque(*4)	-
Output	USB, RS232C, Mitutoyo digimatic (*5), 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, Angle(displacement) (*4)	-
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	
Weight	Display : approx. 490g	
Dimensions	Please refer to dimensions.	
Accessory	AC adapter, Inspection certificate, CD driver (including simple software for data logging), Force Recorder Professional (Graphing software for demo), USB cable, Carrying case, L wrench, handles (10N·m range only)	
	USB flash drive adapter(*6)	-

\*1 These are the specifications for International model. Please note that this unit is different from Japanese domestic model and international one.

\*2 The recording rate to USB flash drive is selectable among 1, 50 and 100/sec.

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

\*4 Angle (displacement) scale is necessary to activate this function.

\*5 Not always available for Mitutoyo digimatic products.





\*6 USB flash drive is not included.

## [HTG series models]

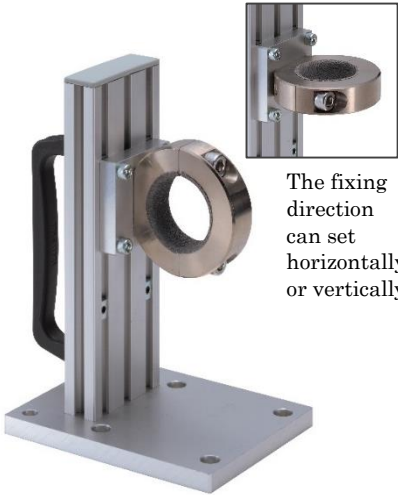

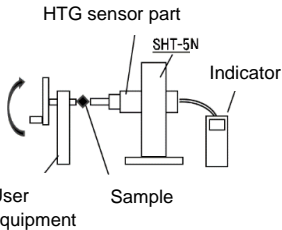

Model		Range	Display	Resolution
HTGA-0.5N	HTGS-0.5N	50N·cm	50.00N·cm	0.01N·cm
HTGA-2N	HTGS-2N	2 N·m (200N·cm)	2.000N·m (200.0N·cm)	0.001N·m (0.1N·cm)
HTGA-5N	HTGS-5N	5 N·m (500N·cm)	5.000N·m (500.0N·cm)	0.001N·m (0.1N·cm)
HTGA-10N	HTGS-10N	10N·m (1000N·cm)	10.00N·m (1000N·cm)	0.01N·m (1N·cm)

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Handy Model Digital Torque Gauge HTGS/HTGA series



[Option attachment]

Expand the usage with various attachments			
			
<b>Pin chuck</b> Suitable to fix shaft and rod type samples	<b>Socket holder</b> Suitable to fix torque wrench	<b>Torque driver</b> Suitable to measure tightening and loosening torque	<b>M10 adapter</b> Adaptable for M10 female attachment
<b>Large pin chuck</b> Model : HT-DC-13 Opening width : $\phi 1.2\sim 13\text{mm}$ Weight : approx. 600g *Cannot be used for 2N·m or 0.5N·m range	<b>Socket holder</b> Model : HT-9.5SQ Socket : 9.5mm square Weight : approx. 100g	<b>Torque driver</b> Model : HT-DBH Bit : + : No.1×50 + : No.2×50 - : No.3×50 Weight : approx. 100g	<b>M10 adapter</b> Model : HT-AD-M10 Screw : M10×L20 Weight : approx. 50g
<b>Standard pin chuck</b> Model : HT-DC-6.5 Opening width : $\phi 0.5\sim 6.5\text{mm}$ Weight : approx. 200g *Cannot be used for 0.5N·m range			
<b>Small pin chuck</b> Model : HT-DC-4 Opening width : $\phi 0.5\sim 4\text{mm}$ Weight : approx. 100g			

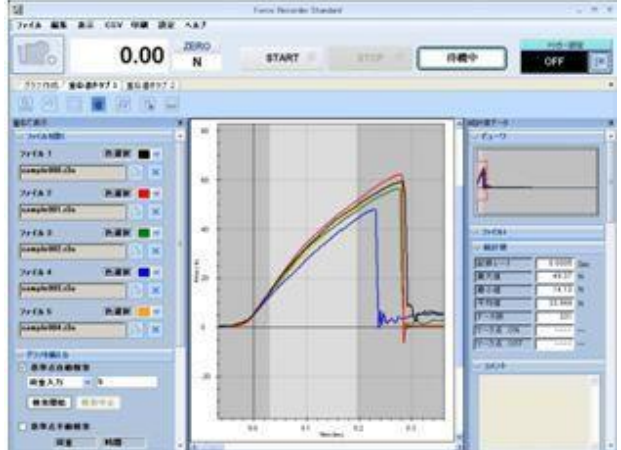


[Option Stand]

Sensor fixation for stable measurements		
 <p>The fixing direction can set horizontally or vertically.</p>		<p>The stand holds HTGS/HTGA series sensor. It realizes stable torque measurements.</p>
	 <p>HTG sensor part SHT-5N Indicator User equipment Sample</p>	<p>[Horizontal Sensor Fixing] Torque measurement of torsion spring etc.</p>
<b>Sensor Holder</b> Model: SHT-5N Capacity: 5N·m (500N·cm) Weight: Approx. 1100g Dimension: Please refer Page 6.  *DO NOT use the stand for 10N·m torque range. *It is possible to screw on equipment.		<p>[Vertical Sensor Fixing] Turning torque of small screws or turbines. Simple screw cap measurement etc.  *Use Small table HT-ST</p>

## [Accessories]

<p>Data logger Simple software ZT-Logger</p>	<p><b>Main Functions</b></p> <ul style="list-style-type: none"> <li>- Captures peak data</li> <li>- Captures continuous data (10 data /sec)</li> <li>- The recall of memory data</li> <li>- Saves data in CSV format</li> <li>- Prints out reports</li> <li>* Available data: Torque, Angle, Time</li> </ul>	
	<p><b>Working Environment</b></p> <ul style="list-style-type: none"> <li>- OS: Windows XP/Vista(32bit) 7/8/8.1(32bit/ 64bit)</li> <li>- CPU: more than 1GHz</li> <li>- Memory: more than 1GB</li> <li>- Hard disk : more than 2GB</li> <li>- .NET Framework4 later</li> </ul> <p>* Please note that the software may not work in all environmental combinations.</p>	
<p>Graphing software Trial version</p> <p>Force Recorder Professional Trial Edition</p> <p>Trial limit is 30days</p>	<p><b>Main Functions</b></p> <ul style="list-style-type: none"> <li>- Making a graph with 2000Hz sampling speed</li> <li>- Function to input memo to record information</li> <li>* Some functions are limited with trial edition. Please refer specification of Force Recorder for the detail of functions.</li> </ul>	
	<p><b>Working Environment</b></p> <ul style="list-style-type: none"> <li>- OS: Windows XP/Vista(32bit) 7/8/8.1(32bit/ 64bit)</li> <li>- CPU: more than 1GHz</li> <li>- Memory: more than 1GB</li> <li>- Hard disk : more than 2GB</li> <li>- .NET Framework4 later</li> </ul> <p>* Please note that the software may not work in all environmental combinations.</p>	

## [Related products]

Graphing Software: Force Recorder		
	<p><b>Main functions</b></p> <ul style="list-style-type: none"> <li>- You can make graphs of force-displacement at real time via USB connection at 2000Hz.</li> <li>- 5 graphs at maximum can be overlaid. (Standard, Professional edition)</li> <li>- You can write memo on each graph. You may write down testing conditions such as testing speed.</li> <li>* 3 editions are available as Light, Standard, and Professional.</li> <li>* Please refer to each specification for further information.</li> </ul>	
<b>Printer : DP-1VR</b>	<b>Option cable</b>	<b>Replacement battery : BP-308</b>
	Analog(3m) : CB-108	
	RS232C Cable (3m) : CB-208	
	Digimatic cable(3m) : CB-308	
	Contact point cable (3m) : CB-808	
	Open end cable (3m):CB-908	
Prints indicated values and data in internal memory. *CB-308 cable is necessary.	Various cables are available.	Battery for replacement.

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#### eZ-Connect series Sensor-interchangeable Amplifier eZT



For measuring both torque and compression/tension force...

eZT is an amplifier which enables to connect to various eZ-Connect load cells of your choice.

\*The amplifier and the load cell are not calibrated (actual loading calibration) together therefore the inspection certificate is not included. Please calibrate them or ask us for calibration service.

\*The accuracy of load cell is dependent on the model. Please refer to each specification sheet for details.

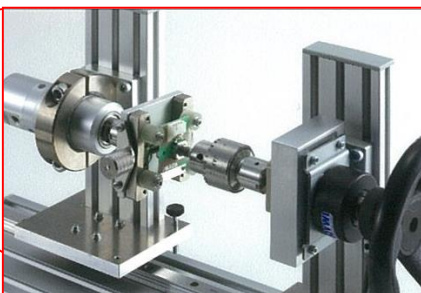
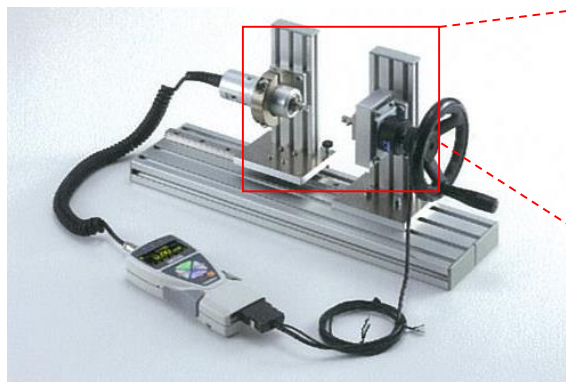
#### Handy Torque-Angle Measurement Unit (Custom-made)



For feeling test of rotary switches on car dashboard

- Easily analyze torque-angle measurement
- Enables stable measurement with the height adjustable stay.

#### Torque-Angle measurement Unit with Manual test stand (Custom-made)



Torque-Angle Measurement of a small switch

- The sensor and the jig for chuck can be fixed on the stand.
- The handle enables stable measurement and analysis of torque-angle and improves repeatability.

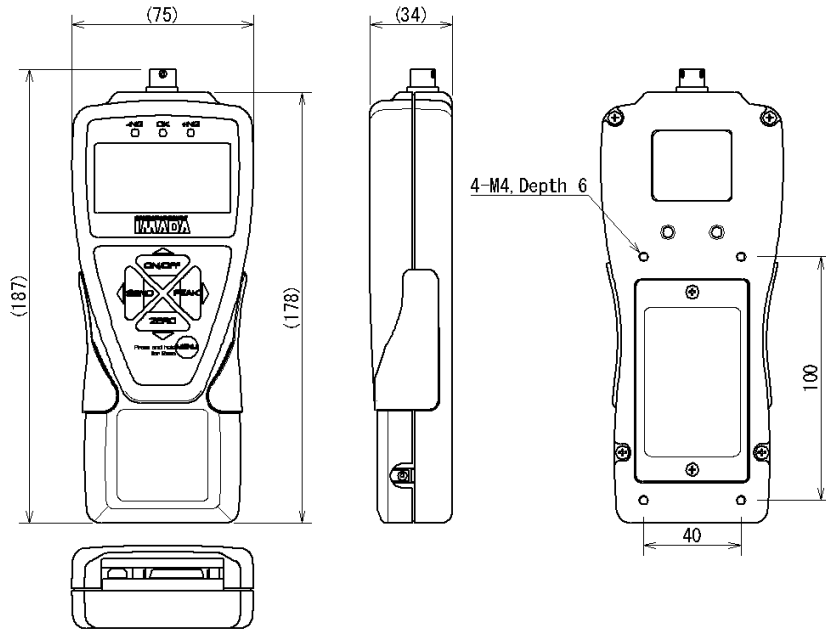
\*We offer custom-made products based on your needs. Please contact us for your measurement solutions.

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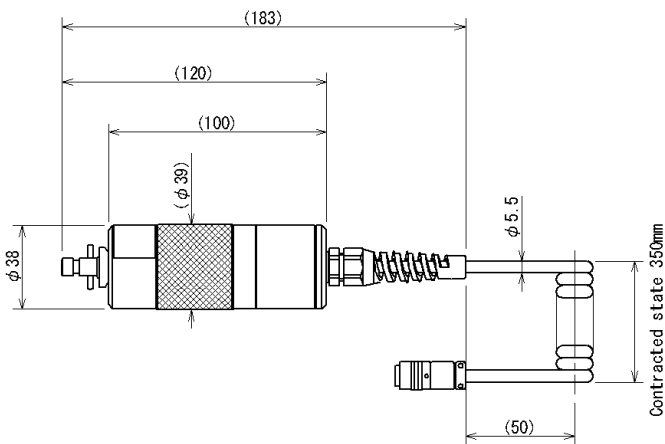
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## [Dimensions]

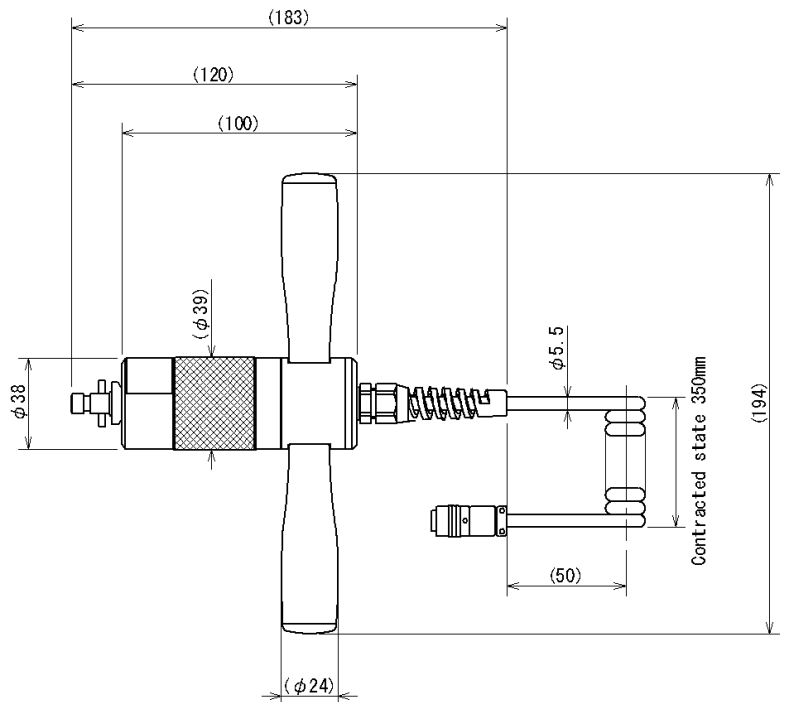
### Indicator



### Sensor : 0.5N, 2N and 5N

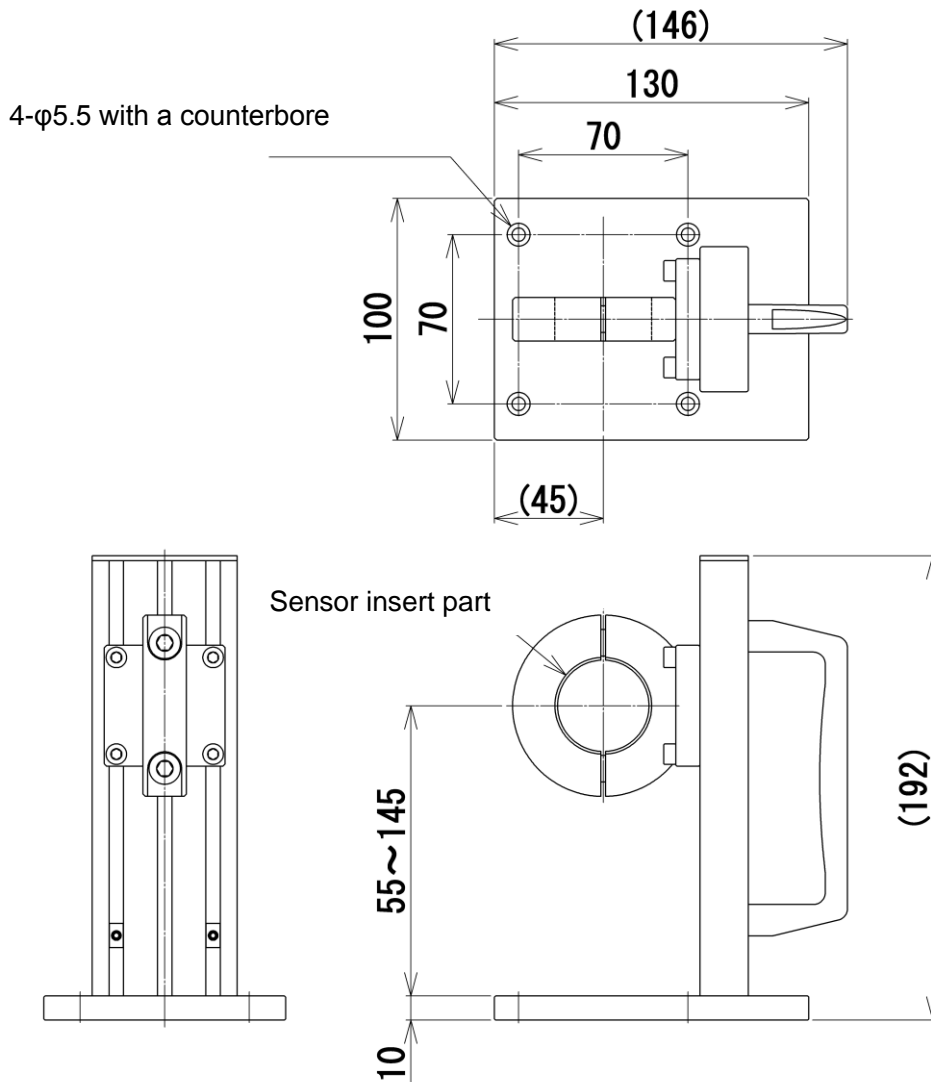


### Sensor : 10N



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SHT-5N



**[Calibration Certificate]**

- We offer calibration certificate with extra charge.
- \* Please contact us or our distributor in your country for further information.

**[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 if you add load over capacity, its sensor would be broken down.
- Please note that the capacity is dependent on the displayed unit. Please contact us for details.

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