

Digital Torque Gauge HTGS/HTGA series

- Handheld torque measurement instrument for wide applications
- A variety of optional attachments available to meet your needs
- High usability with bright display and various functions



HTGA series



Testing image of precision screw



Testing image of rotary switch

Feature 1: Precise Measurement	Feature 2: High Usability	Feature 3: Easy Data Management
<ul style="list-style-type: none"> - Fast sampling rate 2000 Hz for capturing torque transition - Small influence of bending and slant force by double bearing structure 	<ul style="list-style-type: none"> - Highly bright organic EL display - Multi language set up menu of English, Spanish, French, Chinese, German, Italian, Korean and Japanese 	<ul style="list-style-type: none"> - Simple connection with PC via USB - Easy data logging with supplied software - Optional graphing software (sold separately)

Feature 4: 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 to suit your samples.

* Attachments are not included in HTGS/HTGA series.

[Specifications]

Model	HTGS	HTGA
Outline	Standard model with various functions	Advanced model with additional functions of HTGS series such as input/output angles and saving to USB flash drive ,etc.
Accuracy	+/-0.5%F.S.+/-1digit	
Angle measurement range	-	0.1 to 9999.9 degrees (*4)
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%	
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	See [Dimensions]	
Accessory	AC adapter, Inspection certificate, CD driver (including simple software for data logging), USB cable, Carrying case, L wrench, Handles (10N-m range only)	
	-	USB flash drive adapter (*6)

*1 These are the specifications for International model. Note that this unit is different from Japanese domestic model.

*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 Compatibility is not always guaranteed for Mitutoyo digimatic products.

*6 USB flash drive is not included.

[HTG Series Models]

Model		Range	Display	Resolution
HTGA-0.5N (*1)	HTGS-0.5N (*1)	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)

*1 The available unit is only "N-cm".

Cable Options			
	Code	Length	Description
Extension cable	-()m	5m/10m	It is an option to extend the load cell cable which connects to the amplifier (indicator).
Flexible cable	-BR()m	2m/5m/10m	It is an option to change the cable to high flexible cable to reduce the risk of breakage during bending.

- * The cable type is changed from curly cord to straight one when the above option is selected.
- * When ordering cable extension option, add the code to the end of model.
For example, when ordering HTGS-5N with 10m cable extension, the product model is "HTGS-5N-10m".
- * Contact us if you need other length.

[Accessories]

Data Logging Software: Force Logger	
	<p>Features</p> <ul style="list-style-type: none"> - Measurement data can be imported easily. - You can continuously transfer data to PC at 10Hz with ease. - It automatically calculates Maximum, Minimum, and Average values. - You can store data in CSV format. - You can register measurement conditions and measurer's name. - You can setup the force gauge's function. <p>Operating environment</p> <ul style="list-style-type: none"> - OS: 7/8/8.1/10 (32/64bit version is available) - Hardware: CPU Pentium4(1GHz or more), Memory 2GB, Hard disk: 10GB or more recommend - Plat form: .NET Framework4 or later - Execute environment: Internet Explorer 6.0, Windows Installer 3.1 or later - Connection port: USB1.1, USB2.0 connector

[Related Products (Optional Attachment)] *Optional attachment is required for measurements using the HTGS/HTGA series.

Small table HT-ST	Wide table HT-STW	Light weight small table HT-STL	Light weight wide table HT-STLW
For gripping small samples such as small bottle and key	Wide type of HT-ST for gripping samples from φ10 to 100mm	For small force measurement with light weight small table	Wide type of HT-STL for gripping samples from φ10 to 100mm
*Only for 2/5N-m range	*Only for 2/5N-m range	*Only for 0.5/2N-m range	*Only for 0.5/2N-m range
Socket holder HT-9.5SQ	Pin chuck HT-DC series	Torque driver HT-DBH/HT-DBH-P	M10 adapter HT-AD-M10
For various tools such as torque wrench or screw drive bit	For gripping columnar samples	For measuring tightening/loosening torque	For converting to M10 attachment

[Related Products]

Rotation support jig for HTGS/A RSH series



- Manual rotation support jig for torque gauge HTGS/A series to measure torque in the horizontal direction
- Ideal for analyzing torque-angle relationships by using an angle-meter
- The sample of different sizes can be measured since the stage allows position adjustment for up to 105mm.
- Suitable for testing a sample such as a screw that moves back and forth due to rotation.
- The sample can be easily fixed and detached since the stage position is easily adjustable by lever.

Sensor Holder: SHT-5N



SHT-5N fixes the sensor both horizontally and vertically.

- Designed to hold the handheld type digital torque gauge horizontally or vertically
- Enables high repeatability torque measurement by fixing the sensor
- Attachable to your equipment by screws simply

[Horizontal Sensor Fixing]

- Torque measurement of torsion spring ,etc.

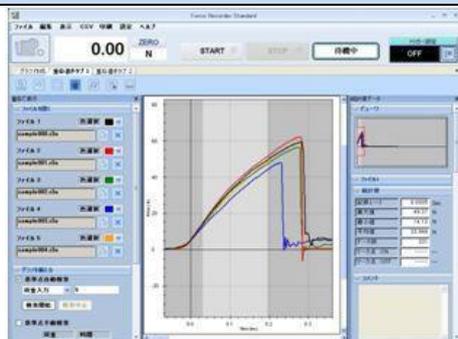
[Vertical Sensor Fixing]

- Turning torque of small screws or turbines.
- Simple screw cap measurement ,etc.

* This sensor holder cannot be used with 10N-m range.

* Refer to specification for SHT-5N for further information.

Graphing Software: Force Recorder



*The image is Force Recorder Standard.

- Plots graphs of force-displacement at real time via USB connection at 2000Hz
- Comment function for keeping a note of testing conditions such as testing speed
- Overlays up to 5 graphs (Standard, Professional edition)
- Analyzes torque-angle relationships. (Professional edition)

* Refer to each specification for further information.

Wireless Data Transmit System: WL01 series



WL01-USB and WL01-ADP



Setting Image



WL01-BOX

- Transmits acquired measurement data to a device such as PCs wirelessly
- Ideal for receiving data from remote location
- Ensures accurate data transmission with data reception detection and interference prevention.
- Available for using your own equipment by publishing communication formats

*Available for firmware Ver.3.10 and later

*Available countries and regions are limited.

*Refer to the specification for details.

RS232C printer (NOT supplied – prepare it yourself)	Printer DP-1VA
RS232C Printer can be connected to print out the results and conditions. *Compatible device: BL2-58 (Sanei Electric INC.) *Required cable: CB-208	It prints out the displayed force values. *Required cable: CB-308
	

Handheld Torque-Angle Measurement Unit TAA-HTG series	
	<ul style="list-style-type: none"> - Easy analysis of torque-angle measurement - Stable measurement with the adjustable stay <p>Items</p> <ol style="list-style-type: none"> 1. Handheld digital torque gauge HTGA series 2. Angle Meter Unit AMK-360 3. Software Force Recorder Professional <p>*Custom-made stay and attachments for torque measurement are required to perform torque-angle testing (sold separately).</p> <div style="text-align: right;">  <p>Tactile test of rotary switches on car dashboard</p> </div>

[Optional Cables]

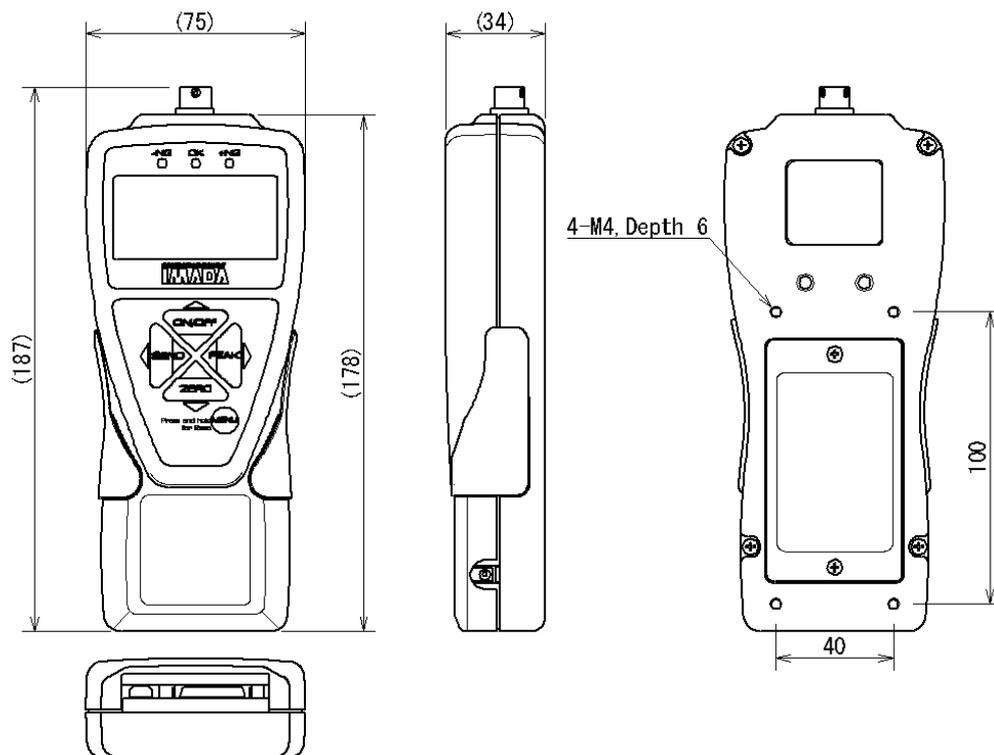
Optional cables		
Analog Cable (3m)	CB-108	To connect to a multi meter, oscilloscope
RS232C Cable (3m)	CB-208	To connect to a PC having its own system
Digimatic cable (3m)	CB-308	To connect to a printer DP-1VA
Contact point cable (3m)	CB-808	To connect to external equipment such as PLC
Open end cable (3m)	CB-908	Output cable for loose wire 37 pin (Useful for connection with unique equipment.)
Cable with Terminal Block	CTB-A	To connect to external equipment such as PLC

[Related Products]

Replacement battery BP-308
Battery for replacement

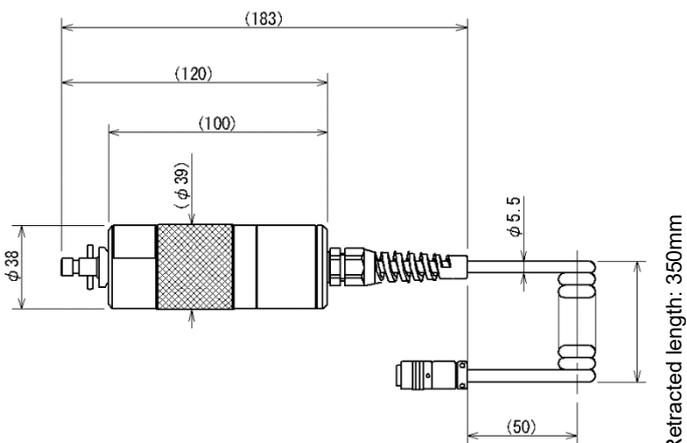

[Dimensions]

Indicator



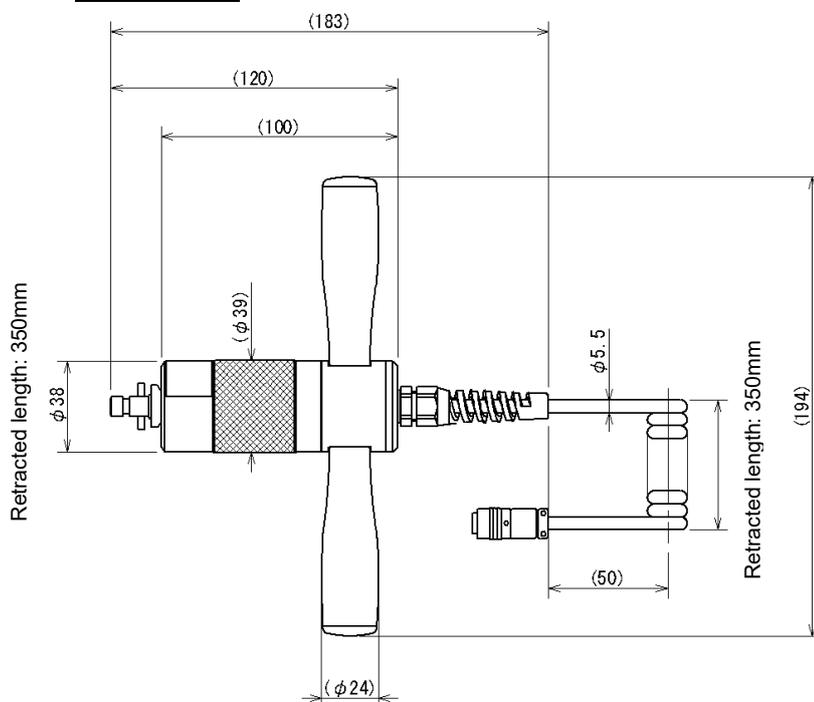
Unit: mm

Sensor: 0.5N, 2N and 5N



Retracted length: 350mm

Sensor: 10N



Retracted length: 350mm

Unit: mm

[Calibration Certificate]

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

[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.
- Some samples may not be suitable to measure with this product.

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