Specifications

Specifications		
Input Signal Range		Strain gauge type transducer ±3.2mV/V
Bridge Voltage		DC 10V or 2.5V ±10% (Max Current: 30mA, remote sense can be used)
Calibration	Range	0.3 to 3.2mV/V
	Accuracy	0.1%F.S. (Sensitivity 0.5mV/V or more)
	Method	Actual load calibration, Equivalent load calibration, TEDS calibration
	Zero Balancing Range	±2.0mV/V
Accuracy	Non-linearity	0.01%F.S. + 1Digit (@ 1mV/V input)
	Zero drift	0.5μV/deg C (Input equivalent value)
	Gain drift	±0.005% F.S./ deg C
Analog to Digital Converting Rate		4000 times/sec, 20000 times/sec (when hold mode selected),
		24 bits A/D converter
D/A output		Voltage Output 0±1 to 10V 1V step or Current Output 4 to 20 mA 4000 Hz
TEDS Function		IEEE1451.4 Class2 Mix mode interface
Display	Display Unit	2.4 inch. TFT color LCD
	Display Range	-99999 to 99999
	Display Times	Select 4, 6, 10, 20 times/sec
	Display Mode	Select Normal, Bar meter, Large Indicator Value, Static Strain, Graph
	Resolutions	1/99999
	Language	Japanese / English
Hold function (20000 times/ sec)		Sample, Peak, Bottom, Peak to Peak, Peak and Bottom, Average
		*Zone Definition Available except Sample Hold
Comparison function	4 signals	High-High Limit(HH), High Limit(HI), Low Limit(LO), Low-Low Limit(LL)
	Range	-99999 to 99999
	Mode	Select Always, Stable, Hold, No Compare
	Compare Speed	4000 times / second
Digital Filter		Low Pass Filter / Select 3(-6db/oct), 10, 30, 100, 300, 1000 Hz (-12db/oct), None
		Moving Average (16/32/64/128/256/512/1024/2048)
Digital Zero	Digital Zero	Set to Zero on specified point
	Zero Tracking	Suppressing to Zero by specifying time duration and level range
Other Functions		HH, LL enable/disable, Set near Zero, Motion Detect, Digital Offset,
		Minimum Scale, Calibration Value Lock, Setting Lock, Static Strain Mode,
		Comp. Output Control, Comp. Output Pattern, Key Lock, Hysteresis,
		Select Data Output, D/A Converter, Remote Sense
Control I/O (isolated from main unit circuits using a photo coupler)	Input Signal	Hold, Digital Zero, Judge, Clear, setting memory selection 1 or 2
	Signal Type	Contact or Open Collector
	Output Signal	S1(HH), S2(HI), S3(LO), S4(LL), OK(OK)
	Signal Type	Open Collector Output
Power		AC100V 12W AC adapter (Included as a standard accessory)
Environment	Operating Temp.	0 to 40 deg C
	Storage Temp.	-20 to 60 deg C
	Operating Humidity	85%RH (No condensation)
Dimension (WxHxD)		96W x 52.5H x 131.7D [mm] (without protrusions)
Weight		About 300 g
Applicable Standard	Safety	CE marking, UL61010-1
	EMC	VCCI(Class A), EN61326 (Class A),
Manual		Japanese, English, Chinese
		(These can be downloaded from http://loadcell.jp/en/)

Included accessories

- Panel attachment fixtures (already attached to unit) 2 pcs.
- DIN rail attachment adapter 1 pc.
- Input and output connector plugs B2L 3.50/08/180F SN BK BX 1 pc. B2L 3.50/16/180F SN BK BX 1 pc.
- Micro screw driver (flat-blade) 1 pc.
- Operation manual(A5) 1 pc.
- AC adapter 1 pc.

Panel attachment fixtures

DIN rail attachment fixtures

Options*

Several options are available

- ■ TD-700T case
  CS-701 (For One Input)
  CS-703 (For Three Input)
- ■ CC-Link Interface TD-700T (CCL)
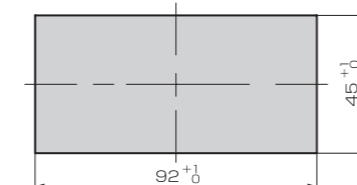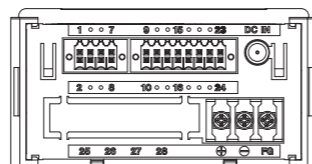- ■ RS-485 Interface TD-700T(485)

* For details, please contact TEAC sales or distributors

TD-700T case

Rear panel of case (One input)

Pin Assignment

PIN	ASSIGN	PIN	ASSIGN	PIN	ASSIGN
1	TEDS	9	V-OUT	17	SEL2
2	GND	10	I-OUT	18	COM
3	+EXC	11	COM	19	LL
4	-SIG	12	CLEAR	20	LO
5	-EXC	13	JUDGE	21	HH
6	+SIG	14	HOLD	22	HI
7	SHIELD	15	D/Z	23	OK
8	NC	16	SEL1	24	COM

External Drawing

96

52.5

162.25

10

Panel attachment fixtures

131.7

10

DIN rail attachment fixtures

45

57

Panel cutout dimensions

45^{+1}_{0}

92^{+1}_{0}

Suggested board thickness is 0.8 to 5 mm.

http://loadcell.jp/en/
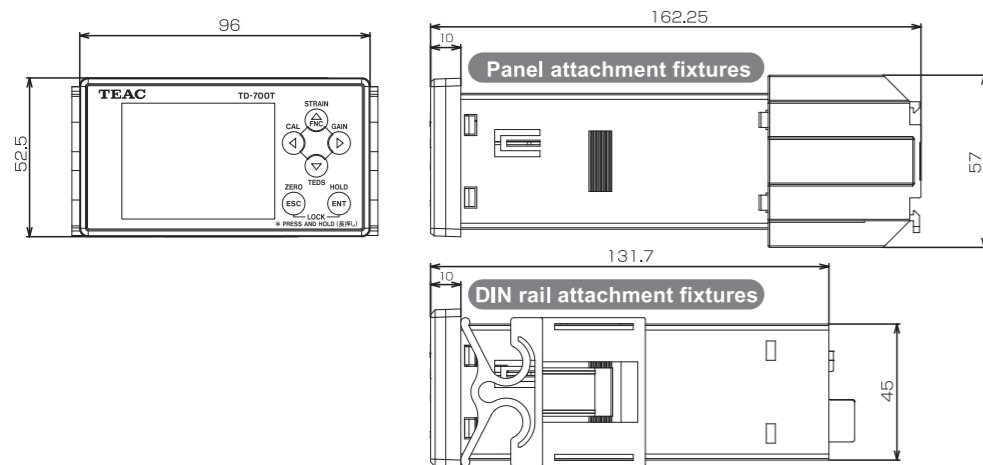
TEAC CORPORATION

TEAC AMERICA INC. http://www.teac.com/
1834 Gage Road, Montebello, California, 90640, U.S.A. +1-323-726-0303

TEAC EUROPE GmbH. https://teac.eu/en/
Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany +49-(0)611-7158-362

TEAC SALES & TRADING(Shenzhen) CO.,ITD.
Room 817,Block A, Hailrun Complex, 6021 Shennan Blvd.,Futian District,ShenZhen,China +86-755-8831-1561

TEAC

Digital Indicator
for Force / Pressure / Torque Inputs
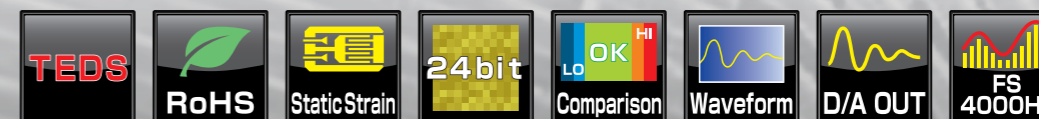
TD-700T
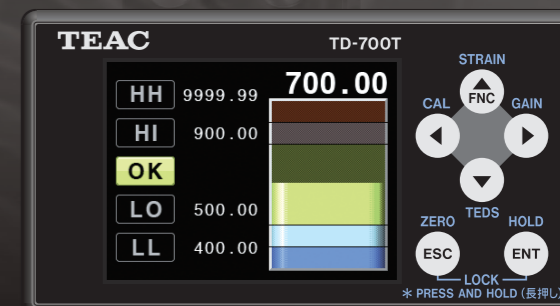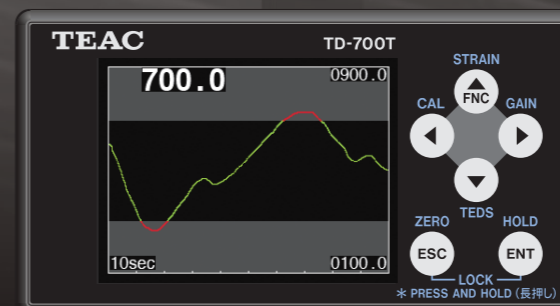
Optionally supports interfaces for easy connection with production lines and other systems: CC-Link RS-485
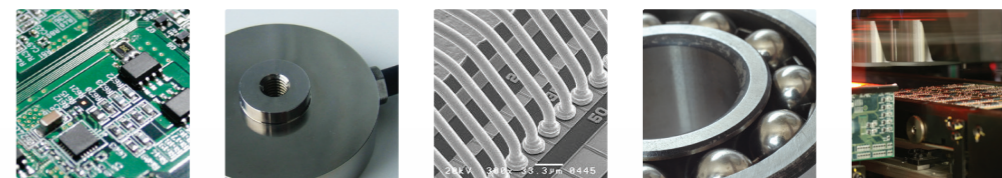
High-performance in compact design
Excellent cost performance
High speed processing at 4000 times / sec
(20,000 times / sec at hold)

TEDS · RoHS · Static Strain · 24bit · Comparison · Waveform · D/A OUT · FS 4000Hz

TD-700T

Actual size

WEB http:// loadcell.jp/en/
English manual and Chinese manual are available for download from TEAC Load-cell Products Web site

Clear Accurate Small Easy

TEAC's TD-700T was developed to measure and display load, pressure, and torque measurements accurately and graphically. The TD-700T brings features to a 1/8 DIN size indicator that are normally found in larger HMI displays.
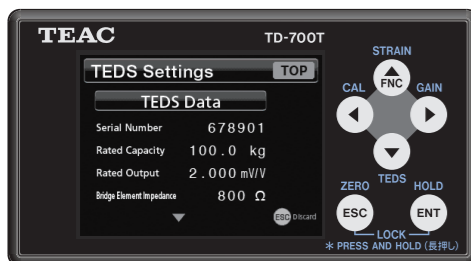
TEAC TD-700T
Calibration | TOP
Equivalent Input Calibration | Locked
Rated Output
0.700 mV/V
Rated Capacity
700 N·m
CAL FNC GAIN / STRAIN / ZERO TEDS HOLD
ENT Submit ESC Discard
LOCK — PRESS AND HOLD (長押し)

52.5mm
96mm

Feature

High-performance color graphic LCD screen

Vivid display gives immediate process status. Each alarm intuitively and independently advises process condition.

Plug-and-Play (TEDS)

The TD-700T Supports IEEE 1451.4 TEDS. By utilizing TEAC load cells, auto-calibration is performed which eliminates complicated calibration and prevent human error.

TEAC TD-700T
TEDS Settings | TOP
TEDS Data
Serial Number   678901
Rated Capacity   100.0 kg
Rated Output   2.000 mV/V
Bridge Element Impedance 800 Ω
CAL FNC GAIN / STRAIN / ZERO TEDS HOLD
ESC ENT
LOCK — PRESS AND HOLD (長押し)

TEDS information can be confirmed.

TEAC has various TEDS load cells for Plug-and-Play operation

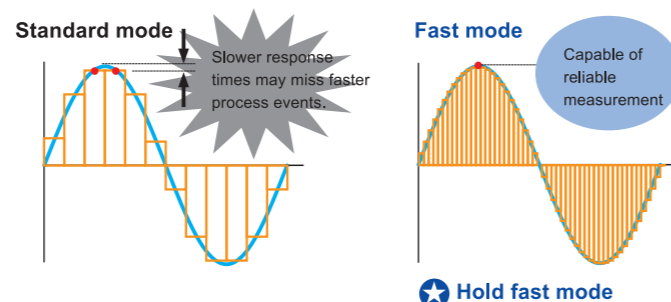▼ For more information
http://loadcell.jp/en/

Remote Sense Function

Compensates for possible voltage changes due to temperature fluctuations and/or extended cable lengths without the lose of accuracy.

Any changes due to temperature or wire resistance fluctuations
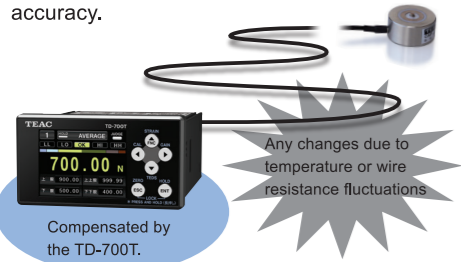
Compensated by the TD-700T.

4000 times / second (★ 20000 times / sec at hold) high-speed processing

Sampling and response times of 4000 per second. You can realize higher measurement accuracy and reliability with faster sampling of 20,000 cycles/s in Fast mode.

Standard mode
Slower response times may miss faster process events.

Fast mode
Capable of reliable measurement

★ Hold fast mode

Zero Position Bar Graph Settings

Zero position for the bar graph can be set automatically depending upon the application.

Positive & negative value sample hold

TD-700T can sample, hold and average both positive and negative values. It can be used in measurements using dual pole devices such as torque sensors.
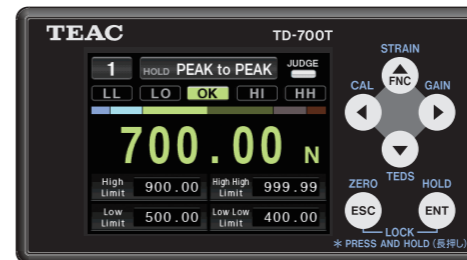
Comparison function

It is possible to set up to 4 values (HHI, HI,LO and LLO) to compare with the input signal. The definition of those values is programmable (i.e. 3 upper limits and 1 lower limit). This provides users with a wide variety of alarm applications, and helps avoid confusion and/or problems monitoring your process.
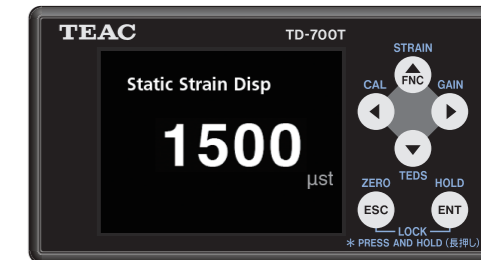
Static strain display

Allows the measure static strain. This function makes it easier to check load-cells for deterioration and plastic deformation.

User friendly warnings

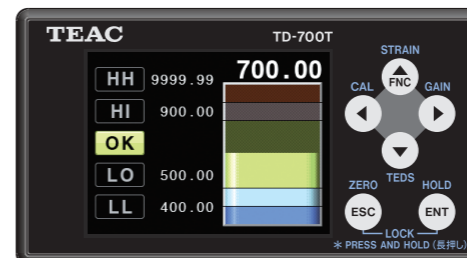TD-700T detects overloading, wrong connection, invalid parameters and improper adjustments and show warnings on the front LCD.

Example of Warning

Error Message
FULL
Plus Value Over (Over Max. Disp. Value)
Sensor may get overload. Please check this sensor using static strain mode

Analog voltage /current output (isolated)

TD-700T can also be used as a signal conditioner.

4 patterns of memory function

Settings for up to 4 holding modes can be saved. You can switch among those saved.

Examples of information on the display

Visual Alarm Modes

TEAC TD-700T
1 | HOLD PEAK to PEAK | JUDGE
LL LO OK HI HH
700.00 N
High Limit 900.00 High High Limit 999.99
Low Limit 500.00 Low Low Limit 400.00

Static strain

TEAC TD-700T
Static Strain Disp
1500 µst

Bar Graph

TEAC TD-700T
HH 9999.99 700.00
HI 900.00
OK
LO 500.00
LL 400.00

Numbers only

TEAC TD-700T
LL LO OK HI HH
700.00 N
High Limit 900.00 High High Limit 999.99
Low Limit 500.00 Low Low Limit 400.00
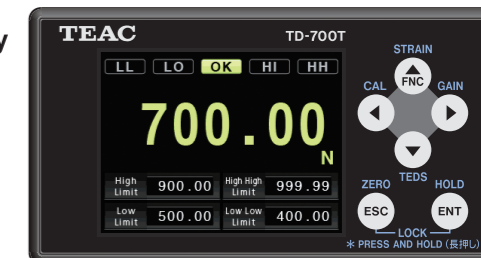
Actual Process Waveform

TEAC TD-700T
700.0   0900.0
10sec   0100.0
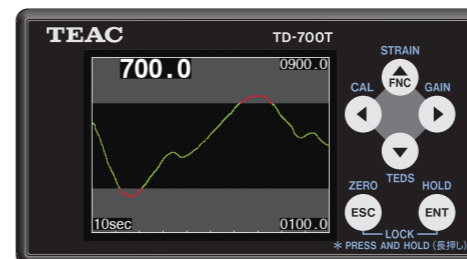
■ The fast 4Ks/S sampling rate shows the process levels vividly and in real time. The TD-700T shows what happens before, during and after any event. A variety of display modes is available to meet your purpose.

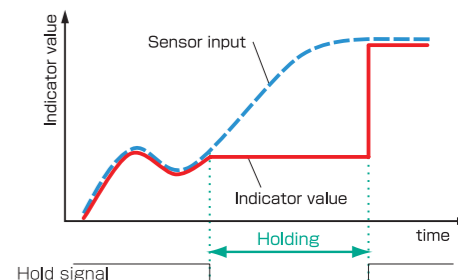## Example of hold functions

Variety of hold function with block setting

A variety of holding functions can be activated utilizing the front panel controls or external control signals.
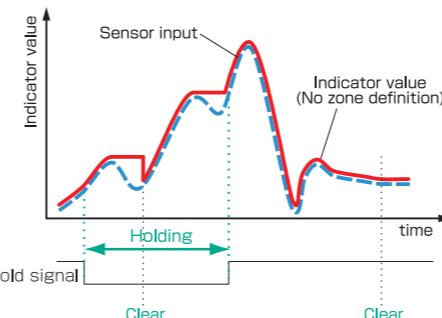
★ **Fast sampling mode (20000 times/sec) supported**

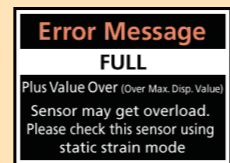| Hold functions	Zone definition
Sample hold	
Peak hold	○
Bottom hold	○
Peak-to-peak hold	○
Peak-and-bottom hold	○
Average hold	○

Sample hold

Peak hold — No zone definition ★

Peak hold — Zone definition used ★

Bottom hold ★

Peak to peak hold ★

P: Peak value
B: Bottom value

Peak and bottom hold ★

Average hold ★