Specifications

Bridge Voltage		10V DC, 2.5 V ±10% (30mA current maximum, remote sense can be used)
Signal input range		±3.2 mV/V
Equivalent input/TEDS	Calibration range	0.3 mV/V–3.2 mV/V
	Calibration precision	Within 0.1% F.S. (when using a 1m standard TEAC Φ8, 4-core shielded cable with 350Ω impedance, 10V BV and 0.5mV/V or greater setting)
Precision	Linearity	Within 0.01% F.S. + 1 digit (when input is 1 mV/V or greater)
	Zero drift	Within 0.5 μV/°C (input conversion value)
	Gain drift	Within ±0.005% F.S./°C
A/D conversion		24-bit, 4000 times per second, 20000 times per second (fast sampling mode)
Digital filter		Select 3 Hz (−6db/oct), 10, 30, 100, 300, 1000 Hz (−12 db/oct) or none
D/A output		4000 times per second, isolated output, ±1–±10V voltage output (set in 1V steps) and about 1/59000 resolution (when set to ±10V), or 4–20mA current output and about 1/43000 resolution
TEDS function		IEEE1451.4 class 2 mix mode interface
Display		320 x 240 color liquid crystal
Indicator value	Display range	−99999 – 99999
	Decimal point	Display position selectable
	Times displayed	Select 4, 6, 10 or 20 times/second
Displayed items	Calibration settings	Zero calibration/span calibration (TEDS calibration, actual load calibration, equivalent input calibration)
	Function settings	High limit, low limit, high high limit, low low limit, comparison mode, hysteresis, nearly zero, moving average, low pass filter, motion detect, zero tracking, static strain, digital zero, digital zero offset, zone definition, hold mode, key lock, minimum grid, display times, bridge voltage, digital zero limit, clear digital zero, comp. output pattern, comparison output control, select data output, D/A converter, remote sense
Hold functions		Sample hold, peak hold, bottom hold, peak to peak hold, peak and bottom hold, average hold, zone definition hold (peak, bottom, peak to peak, peak and bottom, average)
External input and output signals	Input	Hold, judge, clear, digital zero, setting memory selection 1, setting memory selection 2 (isolated from main unit circuits using a photocoupler)
	Output	HH, HI, OK, LO, LL open collector output (isolated from main unit circuits using a photocoupler)
	CC-Link*	DA, DB (isolated from main unit circuits using a photocoupler), DG, SLD
	RS-485**	A+, B− (isolated from main unit circuits using a photocoupler), TRM, FG
Power supply	DC power supply specifications	Ratings: DC 12–24 V, 9 W
Operating temperature range		0°C – 40°C
Storage temperature range		−20°C – 60°C
Operating humidity range		85% RH or less (without condensation)
Applicable standards		CE marking EN61326 (class A), UL61010-1
External dimensions (W × H × D)		Approximately 96 mm × 53 mm × 132 mm (without protrusions)
Weight		About 300 g

*Only with CC-Link option.
**Only with RS-485 option.
● Weight and dimensions are approximate.

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.

Panel attachment fixtures

DIN rail attachment fixtures

Options*

Several options are available

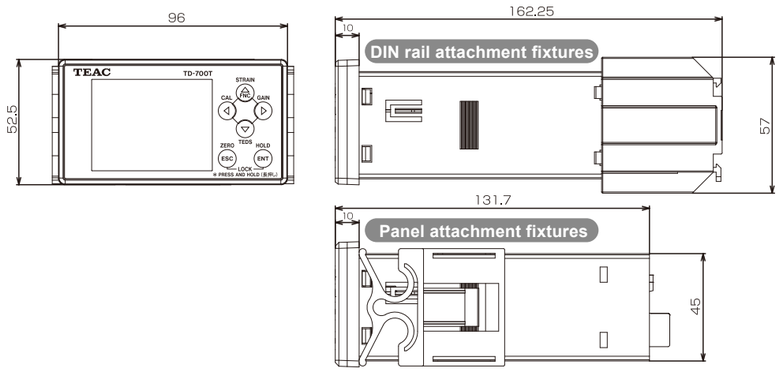
■ **CC-Link Interface TD-700T (CCL)**
■ **RS-485 Interface TD-700T(485)**

* For details, please contact TEAC sales or distributors

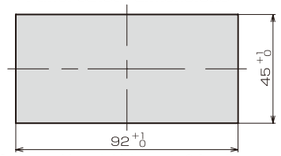
Pin Assignment

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

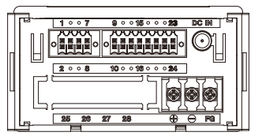
External Drawing



Panel cutout dimensions



Suggested board thickness is 0.8 to 5 mm.



https://loadcell.jp/en/

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Precaution : To ensure safe handling and operation, read the Instruction Manual before use.

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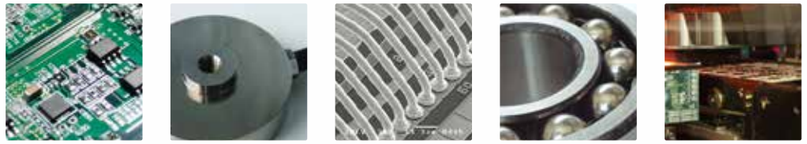
TEAC

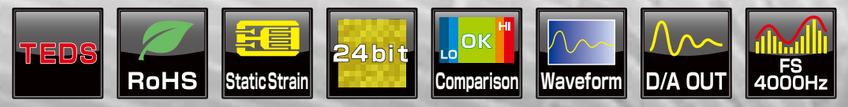
Digital Indicator
for Force / Pressure / Torque Inputs

TD-700T

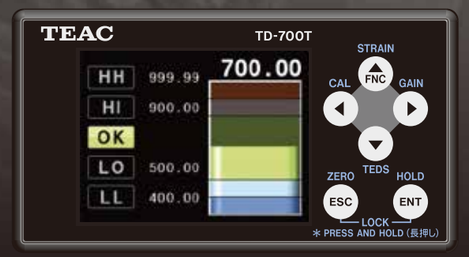
Optionally supports interfaces for easy connection with production lines and other systems; CC-Link RS-485



High-performance in compact design
Excellent cost performance
High speed processing at 4000 times / sec (20,000 times / sec at hold)



Actual size



WEB **https:// 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.

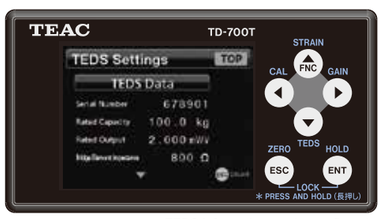
Feature

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.



TEDS information can be confirmed.

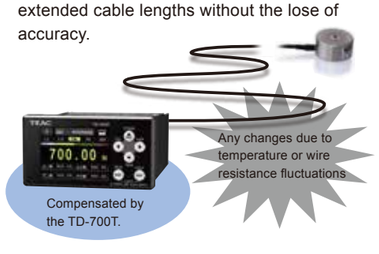
TEAC has various TEDS load cells for Plug-and-Play operation

▼ For more information

https://loadcell.jp/en/

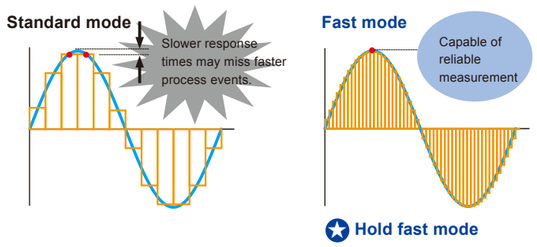
Remote Sense Function

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



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.



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

Analog voltage /current output (isolated)

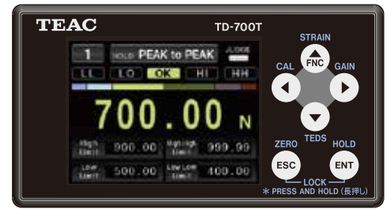
TD-700T can also be used as a signal conditioner.

4 patterns of memory function

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

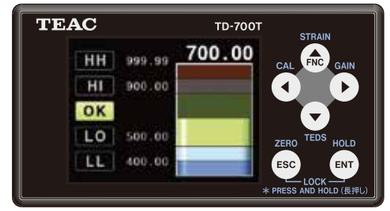
Examples of information on the display

Visual Alarm Modes



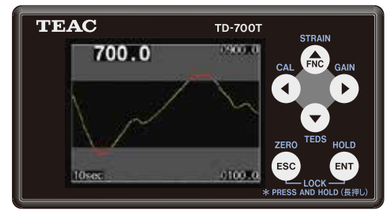
Static strain

Bar Graph



Numbers only

Actual Process Waveform



■ 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

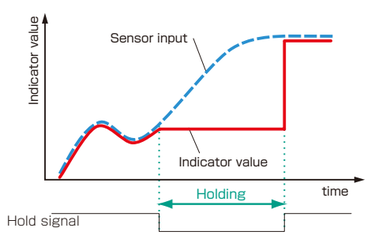
Variety of hold function with block setting

A variety of holding functions can be activated utilizing the front panel controls or external control signals.

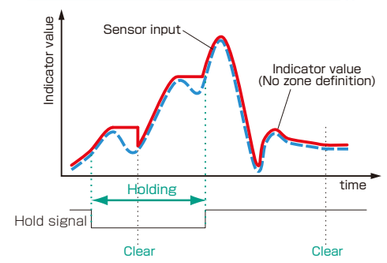
★ **Fast sampling mode (20000 times/sec) supported**

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

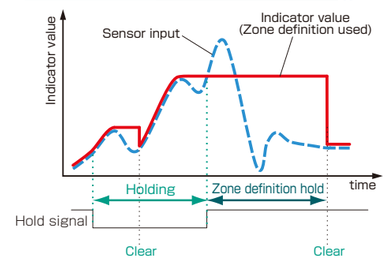
Sample hold



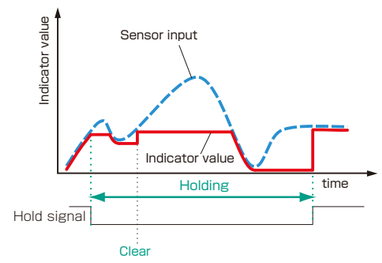
Peak hold **No zone definition** ★



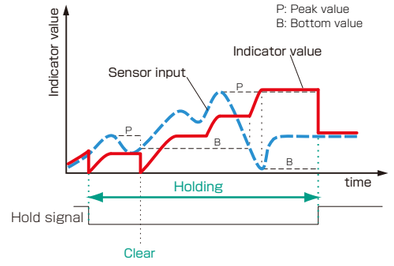
Peak hold **Zone definition used** ★



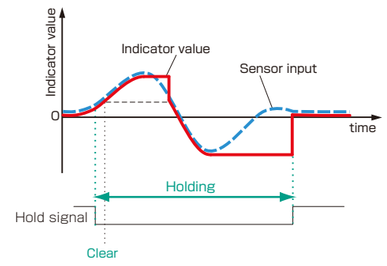
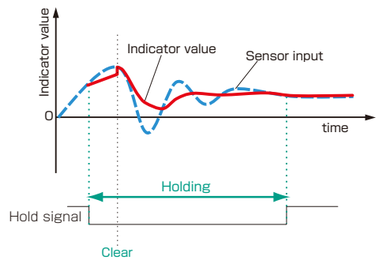
Bottom hold ★



Peak to peak hold ★



Peak and bottom hold ★



Average hold