

| Specifications | | |
|--|---|--|
| Input Signal Range | Strain gauge type transducer $\pm 3.2\text{mV/V}$ | |
| Bridge Voltage | DC 10V or 2.5V $\pm 10\%$ (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 | $\pm 2.0\text{mV/V}$ | |
| Accuracy | Non-linearity | 0.01%F.S. + 1Digit (@ 1mV/V input) |
| | Zero drift | 0.5 $\mu\text{V/deg C}$ (Input equivalent value) |
| | Gain drift | $\pm 0.005\%$ 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 \pm 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 |
| Hold function (20000 times/ sec) | Language | Japanese / English |
| | 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 |
| Digital Filter | Compare Speed | 4000 times / second |
| | Low Pass Filter / Select 3(-6db/oct), 10, 30, 100, 300, 1000 Hz (-12db/oct), None | |
| Digital Zero | Moving Average (16/32/64/128/256/512/1024/2048) | |
| | Digital Zero | Set to Zero on specified point |
| Other Functions | Zero Tracking | Suppressing to Zero by specifying time duration and level range |
| | 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) |
| Power | Signal Type | Open Collector Output |
| | 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 | Safety | CE marking, UL61010-1 |
| | EMC | VCCI(Class A), EN61326 (Class A), Japanese, English, Chinese |
| Manual | (These can be downloaded from http://loadcell.jp/en/) | |

Included accessories

- Panel attachment fixtures
- Micro screw driver (flat-blade) 1 pc.
- DIN rail attachment adapter 1 pc.
- Operation manual(A5) 1 pc.
- AC 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.



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)



TD-700T case

* For details, please contact TEAC sales or distributors

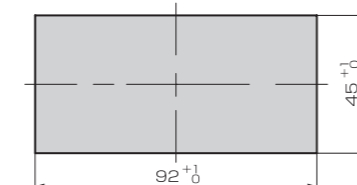


Rear panel of case (One input)

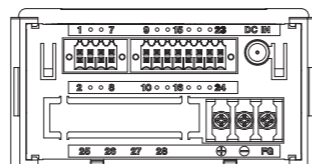
Pin Assignment

| 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 |

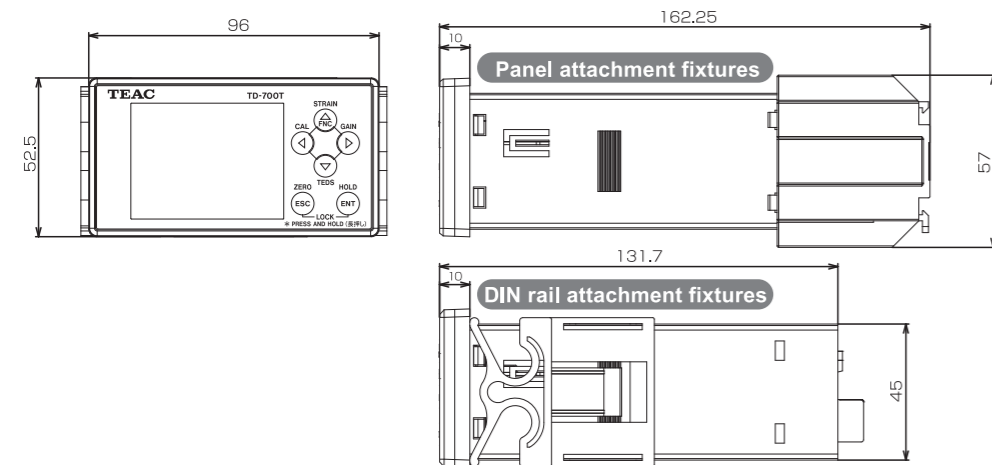
Panel cutout dimensions



Suggested board thickness is 0.8 to 5 mm.



External Drawing



<http://loadcell.jp/en/>

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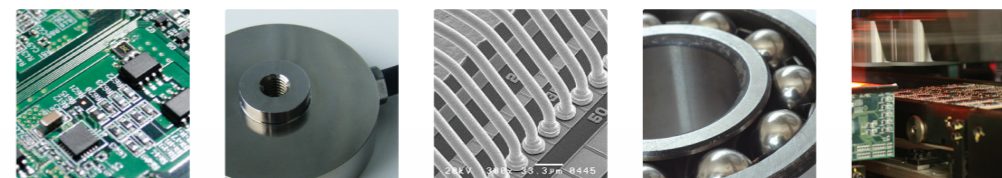
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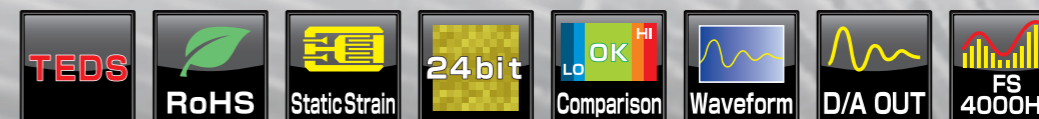
TEAC

Digital Indicator for Force / Pressure / Torque Inputs TD-700T

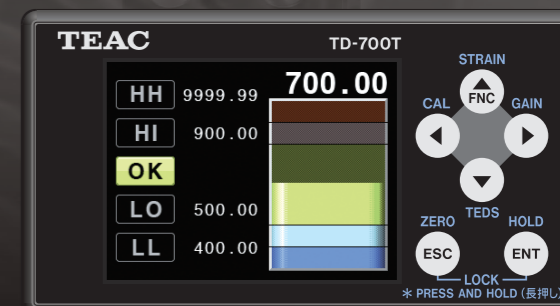
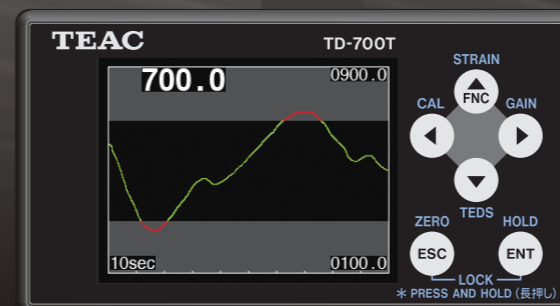
Optionally supports interfaces for easy connection with production lines and other systems: **CC-Link RS-485**



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



Actual size



<http://loadcell.jp/en/>

English manual and Chinese manual are available for download from TEAC Load-cell Products Web site



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.



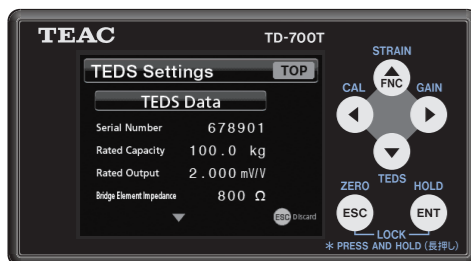
Feature

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.

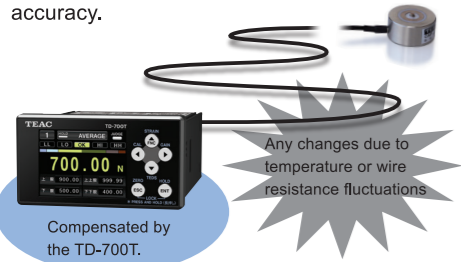
TEAC has various TEDS load cells for Plug-and-Play operation



▼ For more information <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.

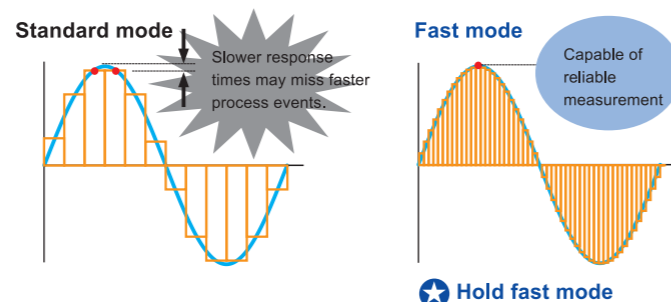


Any changes due to temperature or wire resistance fluctuations

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.



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.

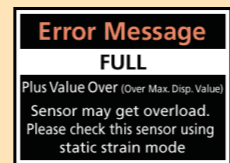
Static strain display

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)

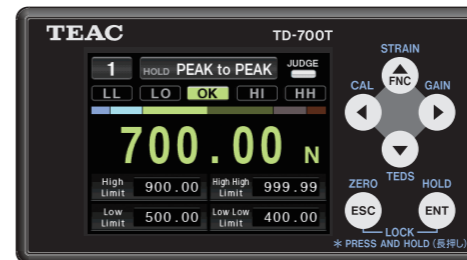
TD-700T can also be used as a signal conditioner.

4 patterns of memory function

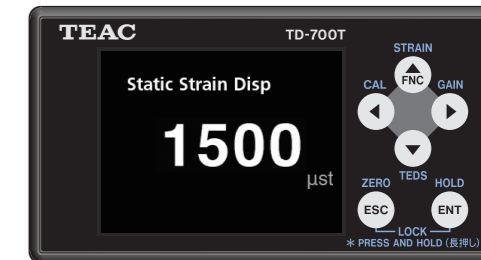
Settings for up to 4 holding modes can be saved. You can switch among those saved.

Examples of information on the display

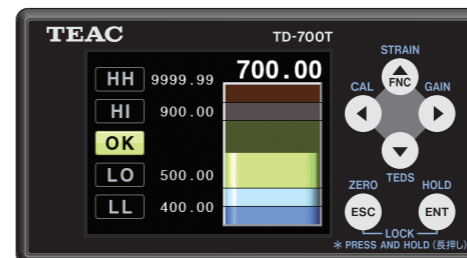
Visual Alarm Modes



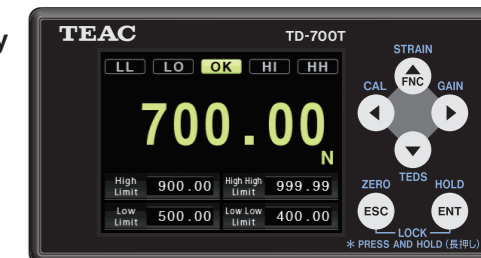
Static strain



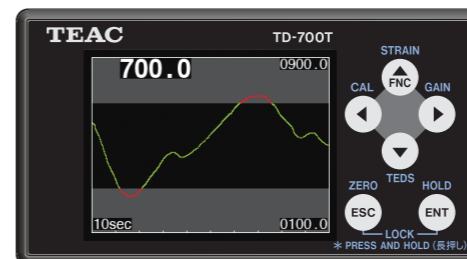
Bar Graph



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

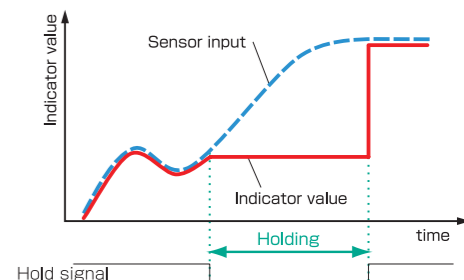
Variety of hold function with block setting

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

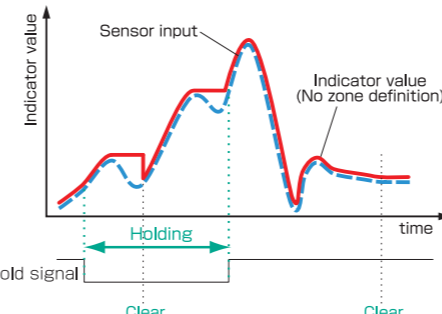
★ Fast sampling mode (20000 times/sec) supported

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

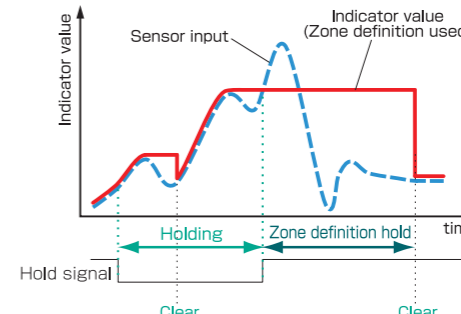
Sample hold



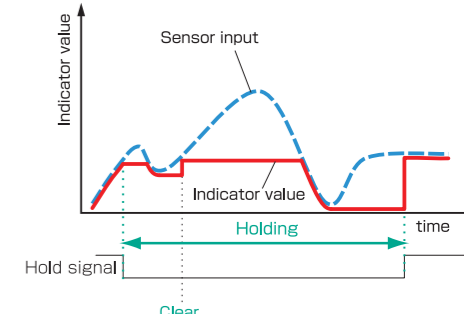
Peak hold No zone definition



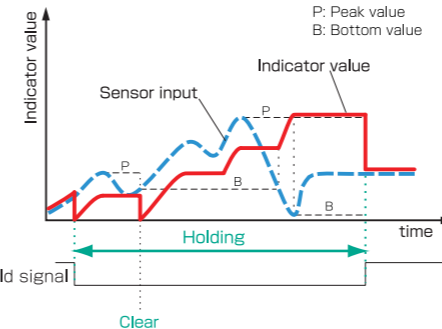
Peak hold Zone definition used



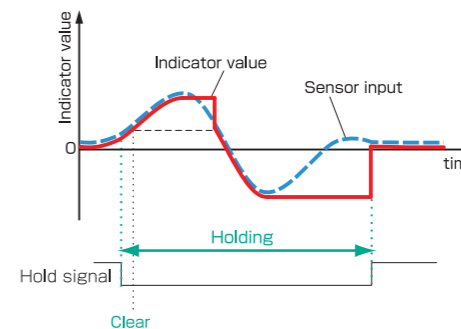
Bottom hold



Peak to peak hold



Peak and bottom hold



Average hold

