

TEAC**Instructions for Use****Load cell for spot welding pressure control****TC-WLD(T)-G****Compression Load Cell****Introduction**

Thank you for purchasing the TC-WLD(T)-G load cell. Please read this document completely before using this load cell to achieve its best performance and ensure safe and proper operation.

Included accessories

If anything is missing or damaged, contact the retailer where you purchased the product.

- Test report × 1
- Instructions for Use (this document) × 1
- Extension cable × 1

- Company names and product names in this document are the trademarks or registered trademarks of their respective owners.

IMPORTANT SAFETY INSTRUCTIONS**⚠ WARNING****Before use**

The construction of this model is not isolated. People could receive electric shocks and load cells, indicators and other

equipment could malfunction if current from welding flows to this device during measurement.

Thoroughly verify that welding current will not flow to this device during measurement before use.

If something abnormal occurs

In the unlikely event that the product produces smoke, a strange smell or noise, for example, continuing to use it in this abnormal state could cause fire or electric shock. After cutting off the power, confirm that smoke is no longer being produced. Then, request repair from the retailer where you purchased the product.

Do not open the cover.

Never remove the cover from this unit. Doing so could cause electric shock. Request inspection and repair from the retailer where you purchased the product. Do not alter this unit. Doing so could cause fire or electric shock.

Do not put foreign objects or water, for example, into the unit.

Do not place a container that holds water, for example, on top of this unit. Liquid overflowing or entering the unit could cause fire or electric shock.

Do not use the unit with any power supply voltage other than that specified.

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⚠ CAUTION**Unsuitable placement locations**

Do not place the unit in the following types of locations.

- Near a power line
- Locations where strong magnetic fields exist or magnetic fields could occur
- Where static electricity or noise, (for example, from a relay) is generated
- Locations subject to temperatures exceeding the specified temperature and humidity ranges
- Locations subject to direct vibration or shock
- Locations subject to radiant heat from heat sources
- Locations exposed to dirt and dust

- Locations subject to severe temperature changes
- Locations that could freeze
- Locations where liquid, for example, could enter the unit as well as locations with high humidity where condensation could occur
- Locations where it might be exposed to smoke or steam, such as near a kitchen table or humidifier
- Unstable locations, including unsteady stands and tilted places
- Location that are very humid or dusty
- Locations that are exposed to direct sunlight

When not using the unit for a long time

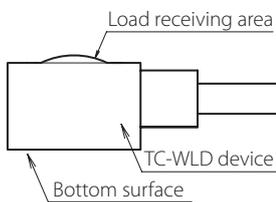
For safety, cut the power supply when not using this unit for a long time.

Do not operate a damaged unit.**Precautions for use**

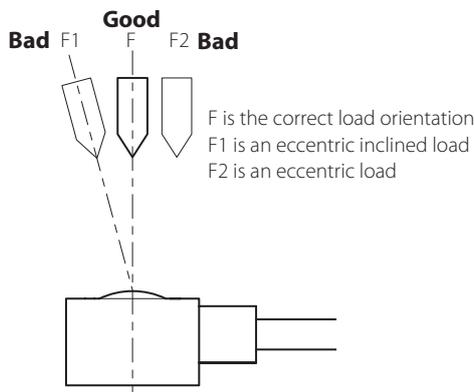
- This unit is not built to be water or splash resistant, and it cannot be used in conditions when the relative humidity is high. Moreover, use in atmospheres with corrosive gases should be avoided.
- Be careful to prevent water, oil and other substances from getting on the unit.
- Since this is different from ordinary installed load cells, be careful to avoid damage, including deformation around the sensor, which could result from being dropped during transport or use, for example.
- Avoid use in conditions where condensation could occur.
- Connect cores to the load cell after discharging (eliminating) static electricity from your body.
- If the surrounding temperature changes suddenly, the values output by this device could become unstable, making accurate measurement impossible. (This could occur, for example, in a location blown by warm or cold air.)
- Conduct load calibrations periodically.

Using the load cell

- Conduct measurements with the entire bottom surface of the device in contact with the surface below it. Damage could occur due to impact loads and eccentric loads, for example, if measurement is conducted in a detached state. For placement during measurement, adjust the height and orientation using the handle. See "Precautions when placing loads on the unit" for details.
- Use the included cable to correctly connect an indicator, for example. Refer to "Electrical connection of load cell with built-in TEDS" for how to connect them.

**Precautions when placing loads on the unit**

- Make sure the load is perpendicular to the surface to which this unit is attached.
- Apply the load so that it is centered on the center of the unit. If the load is not centered (eccentric load), twisting, for example, and measurement errors could occur. This could even result in damage.

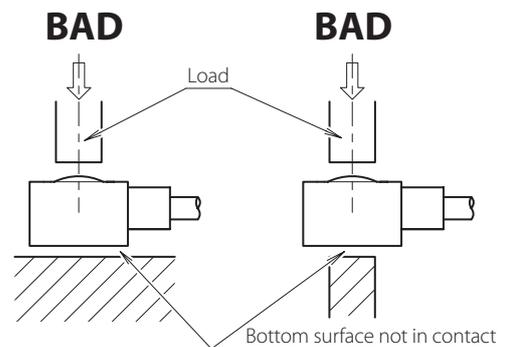
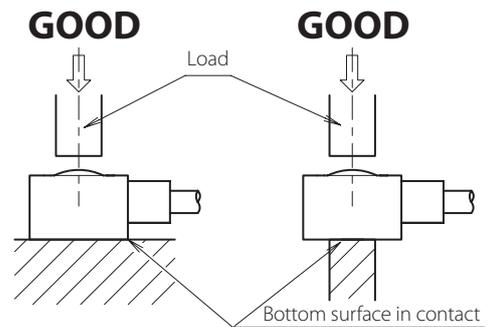


- Be careful to avoid turning and twisting from lateral loads. This could cause troubles like those described in the previous item.
- Be careful to avoid applying loads that exceed the rated capacity. In particular, use caution when there are vibrations because loads that exceed the rated capacity could occur due to sympathetic vibrations, for example.
- If the load receiving area (spherical surface) is contacted by something that is at a different temperature and the load is increased, the values output by this device could become unstable, making accurate measurement impossible.

In such a case, wait until the temperature difference

ceases to exist before measuring.

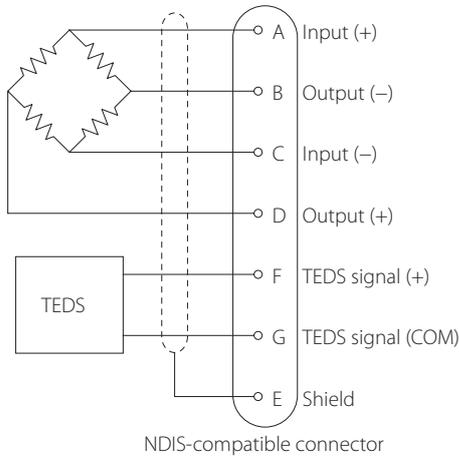
- When applying loads, have the bottom of the device contacting the installation surface.



Electrical connection of load cell with built-in TEDS

- Connect as shown in the illustration below. Incorrect connections could result in inability to balance and in errors occurring in the output voltage when loads are applied.
- Connect cores to the load cell after discharging (eliminating) static electricity from your body.

Connector attached



- This unit has a built-in TEDS function. The F and G pins in the connector are wired for TEDS.
- This unit does not support remote sensing. Since products that support remote sensing use the same cables and connector pins as TEDS, be careful not to try mistakenly to use these pins for remote sensing. See the operation manuals of indicators and strain amps that support remote sensing for how to connect sensors with those units.

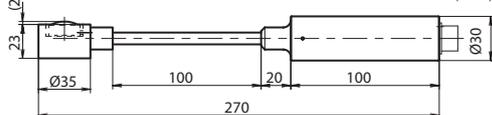
Specifications

Rated capacity: 10 kN, 20 kN
 Safe overload rating: 120% R.C.
 Rated output: 1 mV/V \pm 50% (10 kN)
 1.5 mV/V \pm 50% (20 kN)
 Linearity: 1% R.O. (10 kN)
 2% R.O. (20 kN)
 Hysteresis: 1% R.O.
 Repeatability: 1% R.O.
 Zero balance: \pm 10% R.O.
 Safe excitation voltage: 7 V
 Input terminal resistance: 350 \pm 5%
 Output terminal resistance: 350 \pm 5%
 Insulation resistance: 1000 M Ω
 Compensated temperature range: 0 to 50°C
 Permissible temperature range: -10 to 60°C
 Temperature effect on zero balance: 0.5% R.O./10°C
 Temperature effect on output: 0.5% R.C./10°C
 Connector: receptacle in device
 (PRC03-21A10-7F)
 Included cable: \varnothing 6mm, 6-core shielded, 1m, 7P-7P
 Environmental compliance: RoHS (10 substances)
 Other: built-in TEDS

Dimensional drawings

TC-WLD(T)10KN/20KN-G

Dimensions in millimeters (mm)



- See external dimension illustration for details.
- Specifications and appearance are subject to change without notice.
- Weight and dimensions are approximate.
- Illustrations in this owner's manual might differ slightly from production models.

- The shield is not connected to the main body of this product. For this reason, if grounding is necessary because of external noise, for example, arrange to ground the shield of the included cable to a part other than the body of this unit.
- When conducting insulation resistance tests, limit them to connector pins A, B, C and D. Do not apply to pins F and G.

TEDS overview

TEDS (Transducer Electronic Data Sheet) is a memory chip that can electronically read and write sensor-specific data. The TEDS built into this unit has serial number, load cell rated output and manufacturer name data recorded on it. By connecting an indicator that supports TEDS, the TEDS data of the connected load cell will be automatically read and equivalent input calibration will be completed. (For details, read the operation manual of the connected indicator.) Refer to the connection diagrams in the "Electrical connection of load cell with built-in TEDS" section as well as the operation manual for the indicator being connected for procedures to make connections. TEAC indicators that support TEDS include the TD-01 Portable, TD-700, TD-260T, TD-275T, TD-280T and TD-9000T. For details, inquire at a shop that handles these products. If not using the TEDS function, do not connect the orange and green load cell cores.

Moreover, take measures to prevent the orange and green cores from touching other terminals. Data recorded in TEDS are tested values from calibration conducted at room temperature during inspection before shipping from our company. Load cell output will be affected by the environmental temperature where used, even when within the compensated temperature range established in the specifications. Although load cell output is calculated from the calibration value saved in TEDS, when the environmental temperature differs greatly from room temperature, the temperature

impacts increase on the zero point and the output. For this reason, consideration of the effect on output voltage is necessary. Output voltage changes will be within the specification range as long as the unit is used at temperatures within the specification range.

Handling after use

- When moving this unit while it is attached, take protective measures to prevent it from being shaken or subjected to excessive external forces.
- When storing it, keep it in a dry place where it will not be exposed to water or oil, for example.

Warranty explanation

- The warranty period for this device is one year from the date of purchase.
- Be aware that repairs will require payment in the following cases even during the warranty period.
 - 1) Malfunction or damage due to misuse
 - 2) Malfunction or damage caused by modifications or repairs conducted by any party other than our company or a service person designated by our company
 - 3) Malfunction or damage caused by dropping, transportation or similar handling after product delivery
 - 4) Malfunction or damage caused by fire, earthquake, water, lightning or other natural disaster
 - 5) Malfunction or damage caused by external factors, including power supplies and equipment environmental conditions, that deviate from the operation requirements of this product
 - 6) Malfunction or damage if the product was not purchased from our company or an agent designated by our company
- We offer paid service after the conclusion of the warranty period. For details, please contact the retailer where you purchased the unit.
- Be aware that our company will bear no responsibility for any secondary damages resulting from the operation of this device or related to data.
- Information is given about products in this manual only for the purpose of example and does not indicate any guarantees against infringements of third-party intellectual property rights and other rights related to them. TEAC Corporation will bear no responsibility for infringements on third-party intellectual property rights or their occurrence because of the use of these products.

Contact information

TEAC CORPORATION (Manufacturer)

147 Ochiai, Tama-shi, Tokyo 206-8530 Japan
 Phone: +81-042-356-9154

TEAC AMERICA, INC.

10410 Pioneer Blvd. Unit #1, Santa Fe Springs, California 90670, U.S.A.
 Phone: +1-323-726-0303

TEAC EUROPE GmbH. (EU Importer)

Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany
 Phone: +49-611-7158-349