

TD-SC1

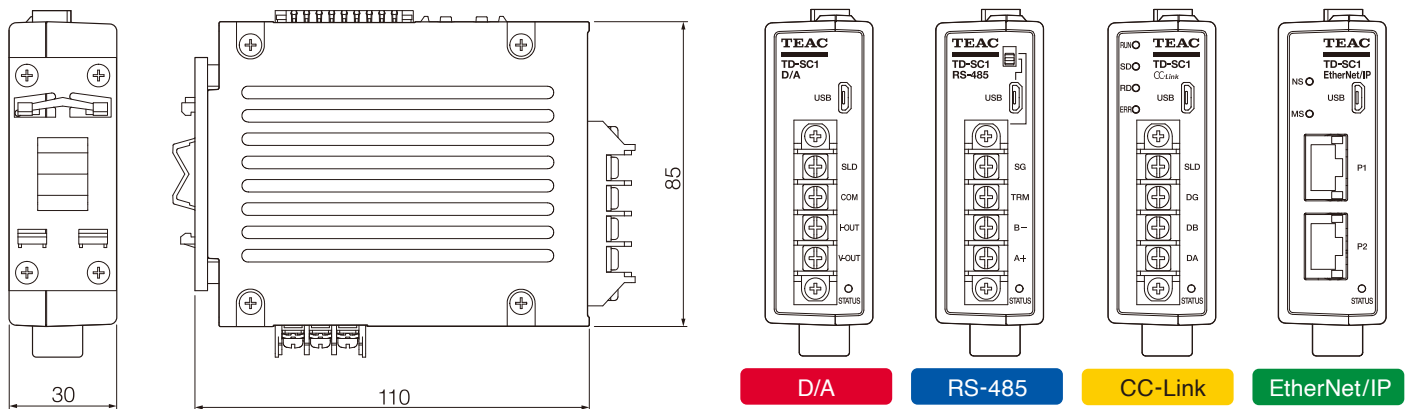
Specifications		
Bridge voltage		DC 10 V, 5 V±10% (30mA current maximum, can be used with remote sense)
Signal input range		±5.0mV/V
Equivalent Input /TEDS	Calibration range	0.05 mV/V – 5.0 mV/V
	Calibration precision	Within 0.1% F.S. (when using 1m standard TEAC Ø8, 6-core shielded cable with 350Ω impedance, 10V BV and 5mV/V setting)
Precision	Linearity	Within 0.01%F.S. +1 digit (when input is 5mV/V)
	Zero drift	Within 0.5μV/°C (Input conversion value)
	Gain drift	Within ±0.005%F.S/°C
A/D conversion		24-bit, 20000 times/second
Digital filter		Select 3, 10, 30, 100, 300, 1000 Hz(–6dB/oct) or none
Moving average		OFF / 2 to 2048, Set to the desired size
TEDS function		IEEE1451.4 class 2 mix mode interface / Reading, Rewriting, Restoring
Display		Status display by LED on the front of the main unit
Comparison function	Setting	High limit (HI), Low limit (LO)
	Setting Range	–99999 to 99999
Hold function		Sample, Peak, Bottom, Zone definition (Peak, Bottom)
External input/ output signals	Input	Hold, Digital zero, Clear (Photocoupler Insulation)
	Output	HI, OK, LO open collector output (isolated from main unit circuits using a photocoupler)
	USB Serial	Main unit setting by dedicated application
Output (D/A only)		Voltage: 0–±10V, Current: 4–20mA
Interface	TD-SC1(D/A)	SLD, V-OUT, I-OUT, COM
	TD-SC1(485)	A+, B– (isolated from main unit circuits using a photocoupler), TRM, SG
	TD-SC1(CCL)	DA, DB (isolated from main unit circuits using a photocoupler), DG, SLD
	TD-SC1(EIP)	10BASE-T/100BASE-TX
Power supply	DC	Ratings: 24V DC ±10%, 7W
Operating temperature range		0°C to 40°C
Storage temperature range		–20°C to 60°C
Operating humidity range		85% RH or less (without condensation)
Applicable standards		CE marking, FCC (Class A), UL61010-1, UKCA marking
External dimensions		Approximately 30mm × 85mm × 110mm (without protrusions)
Weight		About 210g
How to install		Support for 35mm wide top hat type rails (DIN rail mounting)
Included accessories		Input/output connector plug B2CF 3.50/18/180LR SN OR BX or equivalent part x 1, Micro USB-B cable x 1, Power input terminal bank cover (pre-installed on unit) x 1
Options		AC adapter (For use only in the U.S. and Japan, AC100V-240V)

Pin assignments (common parts)		
Terminal	Signal	Description
1	TEDS	TEDS memory signal
2	GND	TEDS memory signal ground
3	+EXC (A)	Excitation voltage +
4	+SENS (F)	Remote sense +
5	–SIG (B)	Input signal –
6	–EXC (C)	Excitation voltage –
7	–SENS (G)	Remote sense –
8	+SIG (D)	Input signal +
9	SHIELD (E)	FG
10	SHIELD (E)	FG
11	D/Z	Digital zero
12	HOLD	Hold start signals
13	CLEAR	Hold clear
14	Comparison judgment HI	High limit judgment output
15	Comparison judgment LO	Low limit judgment output
16	Comparison judgment OK	OK judgment output
17	Power supply for control input signal (+)	Input +24V
18	Power supply for control input signal (–)	Connect with 0V

AC Adapter (Option)



External drawings



Specifications and appearance are subject to change without notice. EtherNet/IP is a trademark of ODVA, Inc. SDHC Logo is a trademark of SD-3C, LLC. TEAC is a trademark of TEAC CORPORATION, registered in the U.S. and other countries. Other company names, product names and logos in this document are the trademarks or registered trademarks of their respective owners.

TEAC CORPORATION

1-47 Ochiai, Tama-shi, Tokyo
206-8530, Japan
Tel: +81-42-356-9154
E-mail: cs_ipd@teac.jp
Web: <https://datarecorder.teac.com/> (Data recorders)
<https://loadcell.teac.com/> (Load cells)



TEAC America, Inc.,
E-mail: datarecorder@teac.com

TEAC EUROPE GmbH.
E-mail: info@teac.eu

TEAC SALES & TRADING (ShenZhen) CO., LTD.
E-mail: teacservice3@teac.com.cn

TEAC

Load Cell Signal Conditioner

TD-SC1

D/A

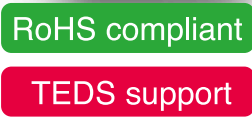
RS-485

CC-Link

EtherNet/IP™



Load cell signal conditioner,
which contributes to improved productivity
through IoT in production factories and
centralized management of pressure data.



High-Speed A/D Conversion
20000 times/second

Slim, Lightweight, Compact Body
30 x 85 x 110mm, 210g

Selectable network:
RS-485, CC-LINK, EtherNet/IP

<https://loadcell.teac.com/>

Overview

The TD-SC1 is a thin, lightweight signal conditioner for strain gauge transducers. This converts a minute signal from a transducer into information required for control and outputs it.

Model lineup



TD-SC1 (D/A)
Voltage and current output model



TD-SC1 (485)
RS-485 connection model
(TD-Format/Modbus RTU communication compatible)



TD-SC1 (CCL)
Industrial network CC-Link model

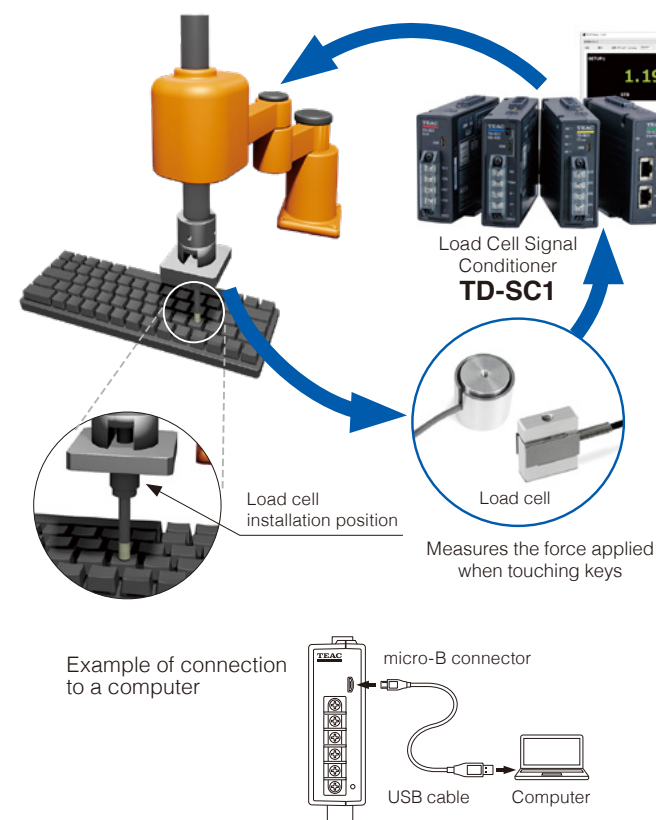


TD-SC1 (E/IP)
Industrial network EtherNet/IP™ model

IoT is rapidly advancing in production factories and there is nowadays a demand for improved productivity through centralized management. The TD-SC1 series load cell signal conditioner, which comes equipped with a variety of standard functions yet is low-priced, meets these needs.

System configuration example

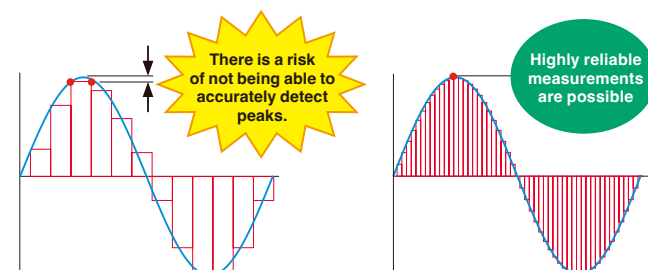
Force control allows for the application of a constant force regardless of variations in the measurement target.



Features

1 High-speed processing: 20000 times/second

High-speed CPU with 20000 times/second sampling. Sudden load changes can be detected, enabling highly accurate control.



2 Lightweight and compact

The slim and lightweight design minimizes installation space, contributing to space-saving systems and equipment.



30(W)×85(H)×110(D)mm
210g



DIN rail mounting compatible

3 Intelligent calibration function

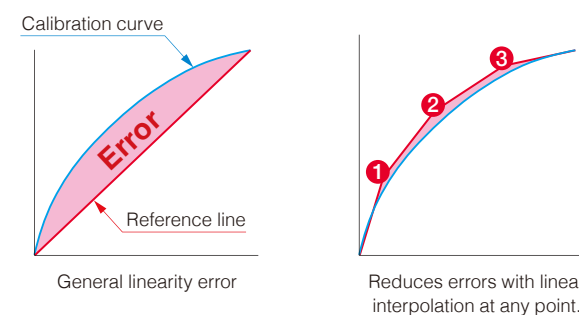
3-1 TEDS function (Plug and Play)

TEDS support enables automatic sensitivity calibration. Simply connect the device and the load cell sensor information is automatically read and configured. This helps reduce the need for cumbersome calibration procedures and management.

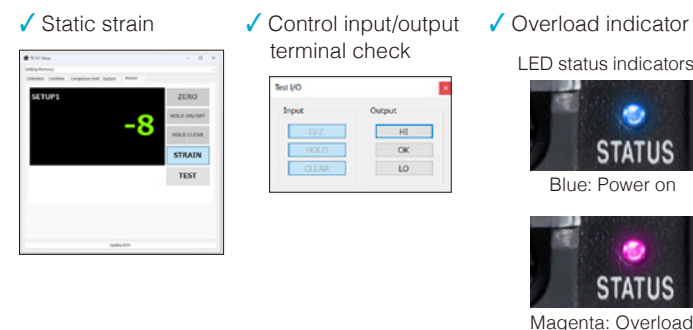


3-2 Linearization calibration function

Increasing the number of calibration points improves the linearity of the force measurement.



4 Diagnostic functions (Software or LED)



5 Filter function

Equipped with a low-pass filter and a moving average filter that are effective in reducing noise. In addition, by utilizing an auto digital filter that suppresses fluctuations in the readings, stable data can be obtained.

6 Control input and output terminals

It is equipped with inputs and outputs essential for OK/NG judgment and control, such as indication value hold, digital zero signal input, and high/low limit judgment output.

7 Sensor input logic setting function

Allows you to artificially reverse the sensor input (positive/negative) without swapping the wiring.

8 Compliant with various standards

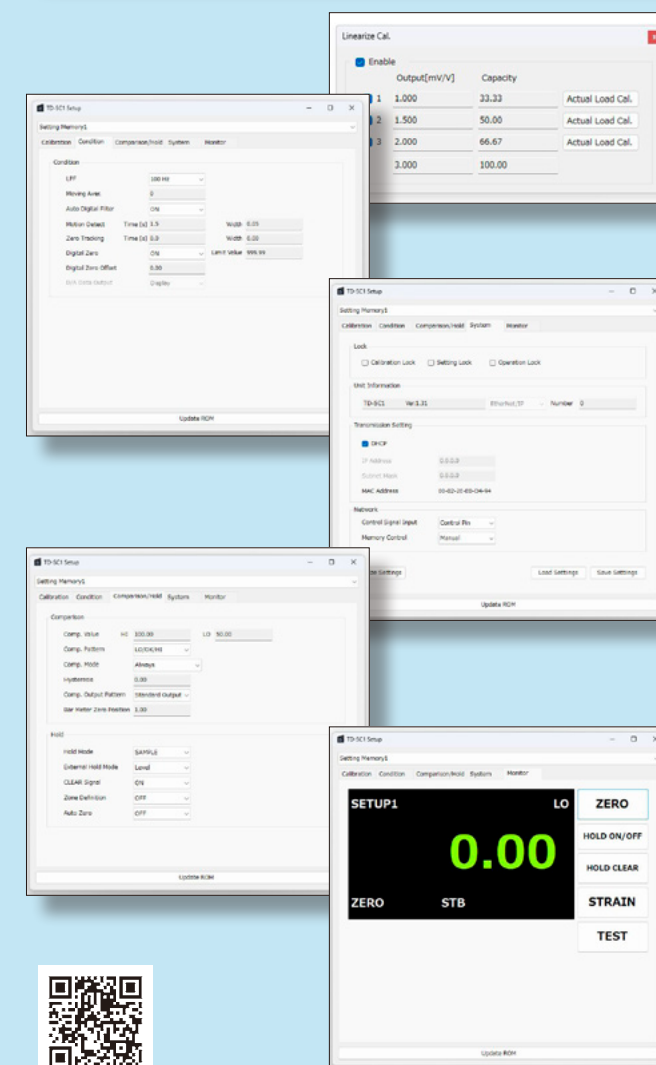
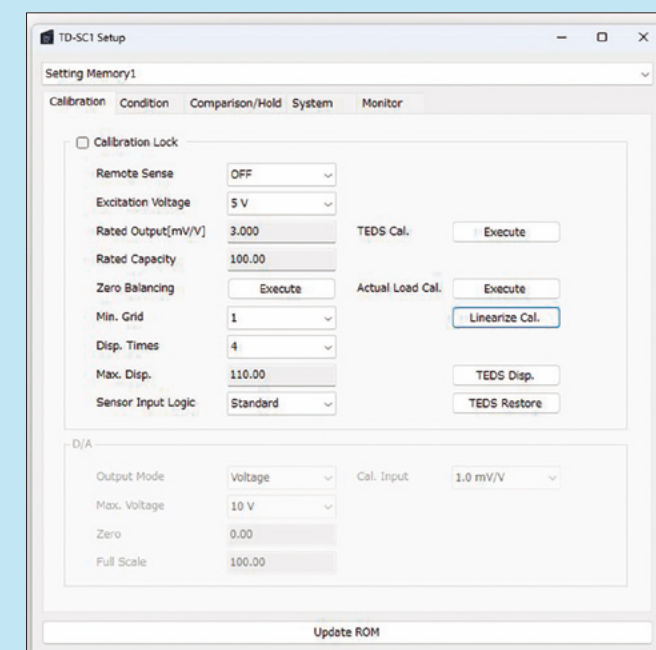


Compliant with European and American safety standards: CE marking, UL standard, and UKCA marking.

PC setup and monitoring software

This is a setup program designed for the TD-SC1. By connecting the TD-SC1 to a USB port, the following can be done for one TD-SC1 unit.

- ✓ Importing and exporting TD-SC1 setting values
- ✓ Loading and saving TD-SC1 setting value files
- ✓ Digitally displaying current TD-SC1 values



Please visit for more info.
<https://loadcell.teac.com/support/downloads/>