



ST 400AD

SENSOR TESTER
 ANALOGUE + DIGITAL

SUPPLIED MATERIAL

- Sensor Tester
- User's manual
- Power adapter
- USB cable

USER'S MANUAL

Please read the manual carefully before using this product. This product should be applied by someone with a certain level of electrical knowledge. Please read and make sure that you understand how to operate the product before using it. Please keep this manual readily accessible for future references when needed.

WARNING

Please comply with the warnings indicated below:

- ⚠ Please do not exceed maximum rated voltage during usage in order to prevent tester malfunction or fire.
- ⚠ Please do not apply AC power supply to avoid breakage.
- ⚠ Please do not subject the product to high temperature to avoid scalding
- ⚠ The product contains a non removable Li-ion battery. For the delivery of the product, follow National and IATA regulations.

PRECAUTIONS

Comply with the warnings indicated below for they are important:

- Please do not use it in flammable or explosive environments.
- Please do not use it in environments with water, oil, chemicals or steams.
- Please do not disassemble, repair or alter this product.
- Please do not exceed the rated voltage and current.
- Please do not exceed the rated environment.
- Please observe electrical polarity when making connections.
- Please connect load correctly.
- Please avoid short-circuiting the load.
- Please do not operate it, if the housing is broken.
- When disposing of the tester, please treat it as an industrial waste.
- Please do not use it directly connected to a working machine

WARRANTY

Our products have been tested prior to shipping, however, if malfunction occurs, please contact our offices near you and present the failure in details so that we can provide the best solution to you.

Warranty Period

The warranty period is 1 year starting from the shipment date.

Scope of warranty

If malfunction is caused by the product within the warranty period, free service of repairing shall be offered. The cases listed below do not fall into the scope of warranty:

- Failure to comply with these operating instructions or breach of contracts with our company.
- Any malfunction that is caused by buyer's own device or software, instead of our product's defect
- Malfunction that is caused by modification, part replacement, repair or any other operation not previously authorized in writing by Datasensing S.r.l.
- Malfunction that is caused by unpredictable factors (such as change of science and technology) after the product is delivered from our company.
- Malfunction that is caused by natural disasters such as fire, earthquake and flood, or

abnormally shifting voltage during charging.

SPECIFICATIONS

Current Mode	0 ... 20 mA
Measurement accuracy	Measurement accuracy: $\leq 0.04\text{mA}$
Voltage mode	0 ... 10 V
Measurement accuracy	Measurement accuracy: $\leq 0.4\text{V}$
Sensor output type detection	NPN / PNP (automatic detect)
Output voltage	19 ... 24V
Output current for sensors	$\leq 160\text{mA}$
Battery capacity	4000 mAh ⁽¹⁾
Operating time	$\geq 10\text{h}$ (sensor: @50mA)
Charging time	$\leq 7\text{h}$
Operating temperature	-10°C ... +45°C
Weight	200g
Dimension	150x67x26 mm
Functions	Short circuit protection; Sleeping mode; Positive pulse
Other functions	Flashlight

⁽¹⁾ the product contains a non removable Li-ion battery. For the delivery of the product, follow the National and IATA regulations.

FUNCTIONS

Mode switching - Press the MODE button shortly to switch the tester in three modes: current (I), voltage (V), and switch (Ω). The result will be displayed on the screen.

Power display - When the tester is working normally, the power will be displayed in the upper right, and the grid number indicates the remaining power. When it flashes, it indicates that the battery is low and needs to be charged. When charging, the number of flashes indicates the progress of charging. When fully charged, the full battery symbol will flash.

Sleep mode - If the tester does not operate for more than 10 minutes, it automatically enters the sleep state, the 24V power supply and the screen will be turned off; press the MODE button or the TEACH-IN button, and the tester returns to the operable state.

Mute mode - Press and hold the TEACH-IN button for more than 6s, the buzzer will sound once, and the tester enters silent mode. Repeating this operation, the buzzer will sound twice to indicate that the Mute mode has been exited, and the tester will store the state, and will remain in the last state when it is turned on again.

Teach-in function - Press the TEACH-IN button, the TEACH-IN (red) terminal will output a high level voltage, and the voltage logic will match the brown terminal voltage. When the button is released, the TEACH-IN (red) terminal will output a low level voltage, and the LCD will display the current 'teach-in logic state'.

Flashlight function - Press and hold the MODE button for more than 2s, the light will light up, and the same operation can turn off the light.

Short circuit protection - Short circuit protection is entered when the tester output current is too high. When a short circuit is detected, the LCD will display 'SCP'. After the short circuit condition is removed, the tester needs to be restarted to return to the normal state.

Note:

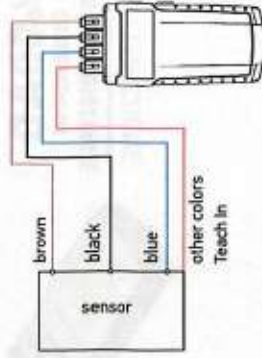
- Please make sure the power is off before connecting the cable.
- Please make sure the voltage fluctuations are within maximum rated range.
- When the power is on, please do not apply the device in the first 0.5 s.
- Please do not subject the device to dust, dirt or vapor.
- Please do not use the device while charging.

⚠ Do not use the device while charging.

OPERATING INSTRUCTIONS

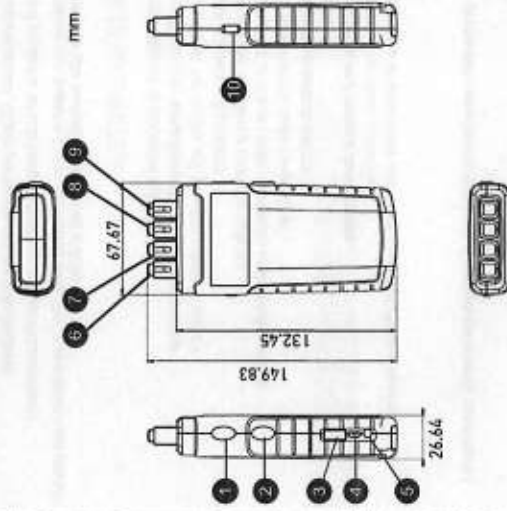
Follow the procedure below to operate the tester:

CONNECTIONS



1. Connect the sensor wires to the corresponding tester terminals and turn on the tester.
2. Select the corresponding measurement mode (voltage, current, digital).
3. Press the Teach-in button according to the teaching logic of the product.
4. The measurement results are displayed on the screen.

DIMENSIONS



1. MODE Button
2. TEACH-IN Button
3. USB OUT Connector
4. USB IN Connector
5. LED light
6. TEACH-IN Terminal
7. GND Terminal
8. INPUT Terminal
9. POWER Terminal
10. ON/OFF Button

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