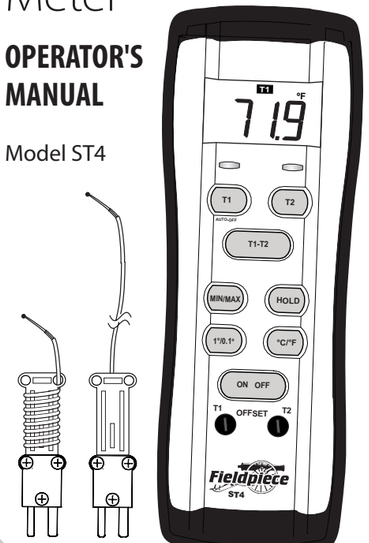
Fieldpiece

Dual Temperature Meter

OPERATOR'S MANUAL

Model ST4



Quick Start

1. Install the 9V battery.
2. Press **ON OFF** for 1 second to power ON the ST4.
3. Plug thermocouples into the top.
4. Press **T1**, **T2**, or **T1-T2** to select thermocouple display mode.
5. Read temperature on display.

Certifications

CE EN61326-1, CE-EMC

RCM

WEEE

RoHS Compliant

Description

The ST4 Dual Temp Digital Thermometer is ruggedized for field use and simple to use. The rubber boot protects against drop impacts and is comfortable to hold.

Plug in 2 Type K thermocouples and see the calculated difference in real time. Each thermocouple jack has its own offset pot for accurate calibration. Strap a thermocouple to a pipe using the included velcro straps. Use the ST4 in the included clear case for added protection and easy viewing with magnet.

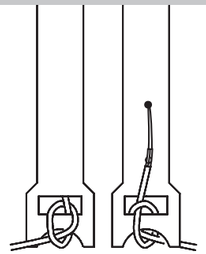
WARNING

To avoid electrical shock, **do not** use this instrument when voltages at the measurement surface exceed 24VAC or 60VDC.

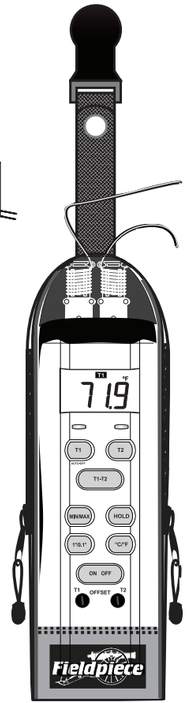
To avoid electrical shock, disconnect thermocouples from the ST4 before opening case or battery cover.

To avoid damage or burns, **do not** take temperature measurements in microwave ovens.

When testing hot temperatures, the thermocouple and velcro may become hot. **Do not** handle the thermocouple or the velcro when hot.



Velcro Pipe Stabilizing Straps



ST4 Hanging in Case

Controls

T1	Select T1 to display.
T2	Select T2 to display.
T1-T2	Select real time T1-T2 to display.
MIN/MAX	Display minimum or maximum captured measurement. Press and hold to clear.
HOLD	Hold measurement.
1°/0.1°	Select resolution: 1° or 0.1°
°C/°F	Select temperature scale: °C or °F
ON OFF	Power ON or power OFF.
T1	Adjust calibration offset of T1 Type K jack.
T2	Adjust calibration offset of T2 Type K jack.

Indicators

	LED shines Red when a required thermocouple for selected display mode is not connected.
HOLD	Displaying held measurement.
MAX	Displaying maximum captured measurement.
MIN	Displaying minimum captured measurement.
T1	Displaying T1 thermocouple.
T2	Displaying T2 thermocouple.
T1-T2	Displaying T1-T2 in real time.
°F	Temperature set to Fahrenheit.
°C	Temperature set to Celsius.
+ -	Battery needs to be replaced.

Maintenance

CLEANING: Clean the exterior with a damp cloth. Do not use detergents or solvents.

BATTERIES: The 9V battery must be replaced when the low battery icon is displayed. Pull off the rubber boot, unscrew the battery cover, and replace the old battery.

FIELD CALIBRATION: Calibration should be performed regularly for the highest accuracy. When you calibrate the ST4, you're calibrating that jack (T1 or T2) to the specific thermocouple. If you change thermocouples, calibrate it to that jack.

1. Stabilize distilled ice water.
2. Immerse the bead of the T1 thermocouple.
3. Select **T1**.
4. Use the T1 calibration pot to dial in 32.0°F.
5. Repeat for T2.

FIXING A BROKEN WIRE: Due to frequent bending, a thermocouple wire may break or come loose near the plug. To repair, cut and strip the thermocouple wire near the plug. The red wire is the (-) wire and is connected to the wider prong. The yellow wire is the (+) wire and is connected to the thinner prong. Loosen the screws on the plug and wrap the conductors around the appropriate screws and tighten. Finally, position the plugs into the tab and screw the tab back together.

Specifications

Specifications good in ambient conditions of 73°F ±9°F (23°C ±5°C), <70% RH
Sensor type: Type K thermocouples (nickel chromium/nickel aluminum)
Display: 3.5 digit LCD, 2000 count
Over range: "OL" or "-OL" is displayed
Range: Meter: -58 to 2000°F (-50 to 1300°C); Thermocouple: -58 to 400°F (-50 to 204°C)
Resolution: 0.1°
Accuracy:
±4°F @ -58 to 32°F
±(0.3%rdg +2°F) @ 32 to 1100°F
±(0.5%rdg +2°F) @ 1100 to 2000°F;
±2°C @ -50 to 0°C
±(0.3%rdg +1°C) @ 0 to 600°C
±(0.5%rdg +1°C) @ 600 to 1300°C
Accuracy after field calibration:
±1°F @ 30 to 120°F, ±0.6°C @ 0 to 50°C
Temperature coefficient: 0.1 x (specified accuracy) per °C (0 to 18°C, 28 to 50°C)
Measurement rate: 2.5 readings/second
Battery type: 9V, NEDA 1604, JIS 006P, IEC 6F22
Battery life: 200 hours typical alkaline.
is displayed when the battery needs to be replaced.
Operating environment: 32°F to 122°F (0°C to 50°C) at <70% RH
Storage temperature: -4°F to 140°F (-20°C to 60°C), 0 to 80% RH (with battery removed)

Limited Warranty

This product is warranted against defects in material and workmanship for one year from date of purchase from an authorized Fieldpiece dealer. Fieldpiece will replace or repair the defective unit, at its option, subject to verification of the defect.

This warranty does not apply to defects resulting from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the instrument.

Any implied warranties arising from the sale of a Fieldpiece product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. Fieldpiece shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim of such damage, expenses, or economic loss.

State and country laws vary. The above limitations or exclusions may not apply to you.

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Visit **www.fieldpiece.com/rma** for the latest information on how to obtain service.

For customers outside the U.S., warranty for products should be handled through local distributors.

Visit **www.fieldpiece-europe.com/store-locator**.

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