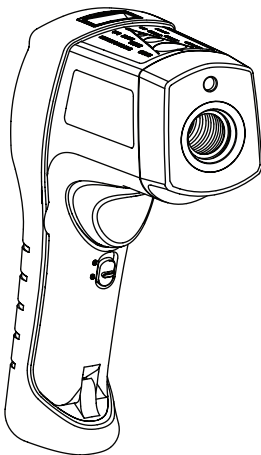


FLUKE®

561 Infrared Thermometer Quick Reference Guide



Features

The Thermometer includes:

- Single-spot Laser Sighting
- Backlit Display
- Current Temperature Plus MIN, MAX, DIF Temperature Displays
- Easy Emissivity Selector
- Type-K Thermocouple
- Two AA Batteries
- Users Manual on CD



Operating the Thermometer

To measure temperature, pull and hold trigger. Release the trigger to hold a temperature reading. The thermometer turns off when no activity is detected for seven seconds.

Safety Information

Warning

A Warning identifies conditions and actions that pose hazards to the user. To avoid electrical shock or personal injury, follow these guidelines:

-  Do not point laser directly at eye or indirectly off reflective surfaces.
- Before using the Thermometer inspect the case. Do not use the Thermometer if it appears damaged. Look for cracks or missing plastic.
- Replace the batteries as soon as the battery indicator () appears.
- Do not use the Thermometer if it operates abnormally. Protection may be impaired. When in doubt, have the Thermometer serviced.
- Do not operate the Thermometer around explosive gas, vapor, or dust.
- Do not connect the optional external probe to live electrical circuits.
- To avoid a burn hazard, remember that highly reflective objects will often result in lower than actual temperature measurements.
- Do not use in a manner not specified by this guide or users manual or the protection supplied by the equipment may be impaired.

Caution

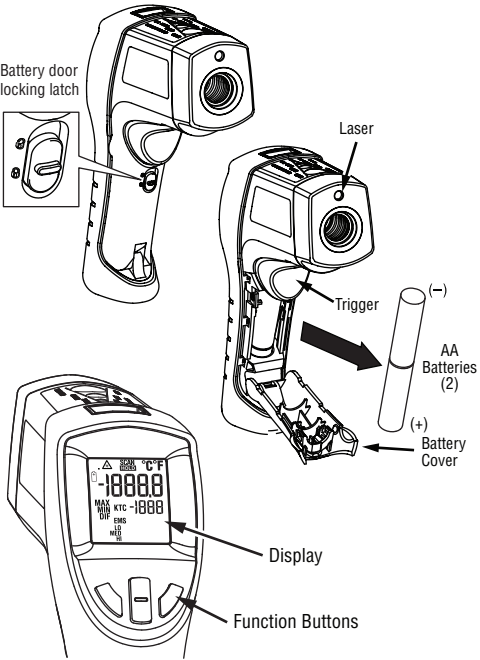
To avoid damaging the thermometer or the equipment under test protect them from the following:

- EMF (electro-magnetic fields) from arc welders, induction heaters, etc.
- Static electricity.
- Thermal shock (caused by large or abrupt ambient temperature changes- allow 30 minutes for the Thermometer to stabilize before use).
- Do not leave the Thermometer on or near objects of high temperature.

Symbols

Symbol	Explanation
	Risk of danger. Important information. See Manual.
	Warning. Laser.
	Conforms to requirements of European Union and European Free Trade Association (EFTA)
	Do not dispose of this product as unsorted municipal waste. Contact Fluke or a qualified recycler for disposal.
	Battery
 沪制01120009号	Chinese manufacturing mark for products manufactured in the Peoples Republic of China (PRC)

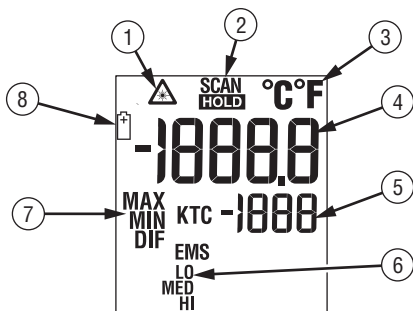
Battery Replacemant



Thermometer Buttons

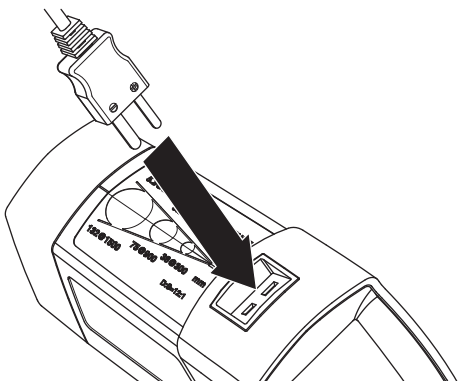
Button	Description
	Press and then press to toggle between the MIN, MAX, and DIF options.
	The button is used to show the MIN, MAX, and DIF functions in the secondary display, whichever was pressed most recently.
	Selects the emissivity setting. You can toggle between LO (0.3), MED (0.7), or HI (0.95) using . You may need to adjust emissivity for shiny metallic objects.

Thermometer display



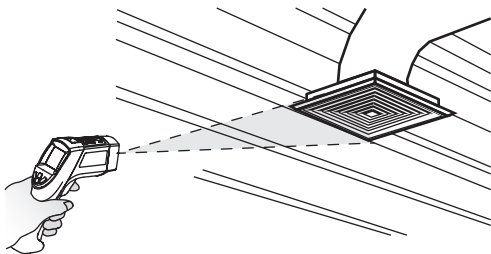
- 1 Laser "On" symbol
- 2 SCAN or HOLD
- 3 °C/°F symbol (Celsius/Fahrenheit)
- 4 Primary temperature display
- 5 Secondary temperature display
- 6 Emissivity LO, MED, HI
- 7 Temperature values for the MIN, MAX, DIF, KTC. KTC indicates the thermocouple temperature.
- 8 Low Battery symbol. Appears when the battery charge is < 25%

Connecting the Temperature Probe

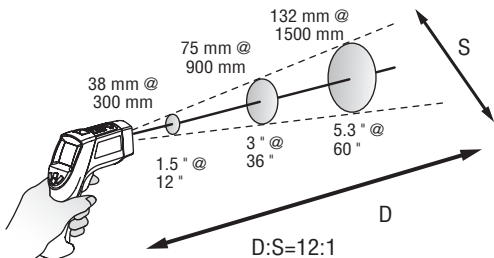


With probe inserted, the 561 stays on for 10 minutes (with laser off) after trigger is released.

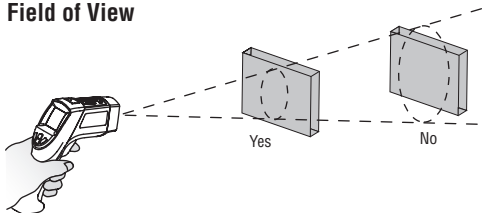
Locating a Hot and Cold Spot



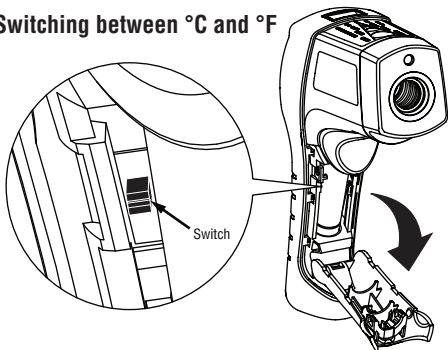
Distance and Spot Size



Field of View



Switching between °C and °F



Specifications

Infrared

Measurement Range.....	-40 °C to 550 °C (-40 °F to 1022 °F)
Spectral Range.....	8 to 14 microns
Accuracy.....	$\pm 1\%$ or $\pm 1\text{ °C}$ (2 °F); $< 0\text{ °C}$ (32 °F), $\pm 1\text{ °C}$ (2 °F) $\pm 0.1^\circ/1^\circ$ (Assumes ambient operating temperature of 23 to 25 °C (73 to 77 °F))
Repeatability.....	$\pm 0.5\%$ of reading or $\pm 1\text{ °C}$ (2 °F)
Display Resolution.....	0.1 °C (0.1 °F)
Secondary Display Information	Maximum, Minimum, Differential, KTC
Response Time (95 %).....	500 ms
Distance to Spot (D:S).....	12:1
Emissivity Adjustment.....	Three settings: low (0.3), medium (0.7), high (0.95)

Contact Probe Input

Input Temperature Range.....	-40 °C to 550 °C (-40 °F to 1022 °F)
Input Accuracy.....	Input accuracy $\pm 1.1\text{ °C}$ ($\pm 2\text{ °F}$)
Display Resolution.....	1 °C (1 °F)

Laser

Sighting.....	Single point laser
Power.....	Class 2 (II) operation; Output $< 1\text{ mW}$, wavelength 630 to 670 nm

Wrap Thermocouple Probe (model-specific)

Type.....	Type K with miniconnector and Velcro strap, ASTM E230-03 Standard Tolerance
Measurement Range.....	0 °C to 100 °C (32 °F to 212 °F)
Accuracy.....	$\pm 2.2\text{ °C}$ (4.0 °F)
Total Length.....	505 mm (20 in) cable terminated with Type K thermocouple inside a 495 mm (19.5 in) nylon Velcro cuff

Bead Thermocouple Probe (model-specific)

Type.....	Type K with miniconnector
Measurement Range.....	-40 °C to 260 °C (-40 °F to 500 °F)
Accuracy.....	$\pm 1.1\text{ °C}$ (2.0 °F) from 0 °C to 260 °C (32 °F to 500 °F). Typically within 1.1 °C (2.0 °F) from -40 °C to 0 °C (-40 °F to 32 °F)
Cable Length.....	1 m (40 in) terminated with Type K thermocouple beads

Electrical

Power Supply.....	2 AA Batteries (alkaline or NiCD)
Power Consumption.....	At least 12 hours battery life

Physical

Weight.....	0.322 kg (0.7099 lb)
Size.....	17.69 cm (6.965 in) x 16.36 cm (6.441 in) x 5.18 cm (2.039 in)

Environmental

Operating Temperature Range	0 °C to 50 °C (32 °F to 120 °F)
Relative Humidity.....	0 to 90 %, noncondensing up to 30 °C (86 °F)
Storage Temperature.....	-20 °C to 65 °C (-4 °F to 150 °F)
Optional Accessories.....	Soft Case