



# Fluke 561 Infrared and Contact Thermometer

**IR thermometer with K-type thermocouple capability**

## Technical Data

### The multipurpose thermometer you need.

Lighten up your toolbox. The Fluke 561 combines the temperature measurement functions that industrial, electrical, and HVAC/R professionals need, all in one tool. It measures **both IR and contact temperature**, replacing several other test tools. It's fast, efficient, and easy to use, saving you valuable time and effort.

With the Fluke 561, you can take contact and ambient temperatures in the way that's best for you. Use the IR thermometer to measure hot, moving, electrically energized, and hard-to-reach objects instantly. Check motors, insulation, breakers, radiant heating, pipes, corroded connections, and wires. Plus, scan ducts, and other hard-to-reach objects from the floor—leave your ladder in the truck. You can use the Fluke 561's handy Velcro® pipe probe or, plug in any industry-standard, K-type mini-connector thermocouple probe you already own.



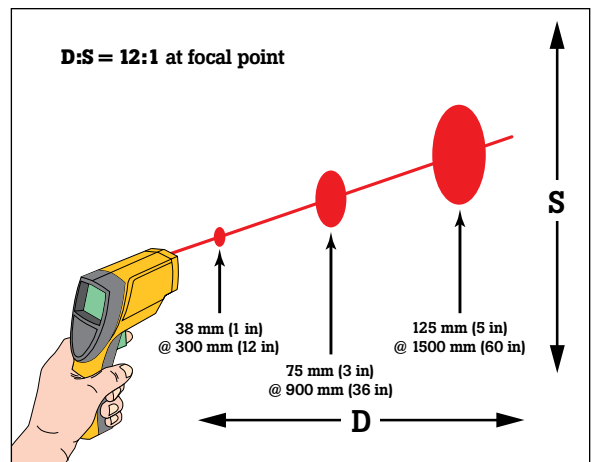
### Features include:

- IR thermometer for quick measurements up close, or at a distance, without a ladder
- Contact thermometry capability, compatible with all standard mini-connector K-type thermocouples, preserves your investment in thermocouples
- Velcro® pipe probe for super-heat and sub-cooling and other contact and ambient measurements
- Single-point laser sighting
- Temperature range of -40 °C to 550 °C (-40 °F to 1022 °F) covers most industrial and residential applications
- Easy emissivity adjustment for measuring pipes and other shiny materials more accurately

- Lightweight (just 12 ounces/340 grams) and portable
- Very easy to use
- Efficient—no need to shut down equipment when making IR measurements
- MIN, MAX, and DIF functions help you quickly identify problems
- Scan large areas or small objects quickly and efficiently

### Laser-guided sighting for IR measurements

When using the Fluke 561 in the IR mode, the single dot, laser sighting system guides measurements to the right target. The dot indicates the approximate center of the measurement area.



When measuring smaller objects, use the Fluke 561 within 6 ft. (1.75 m) of the intended target. The measured area increases with distance (the distance divided by 12, approximately).

**Product specifications**

	<b>Fluke 561</b>
Temperature range	-40 °C to 550 °C (-40 °F to 1022 °F)
Display resolution	0.1 °C (0.1 °F) of reading
D:S (Distance to spot size)	12:1
Easy emissivity selector	Adjustable with three settings: low (0.3), medium (0.7), high (0.95)
Display accuracy [Assumes ambient operating temperature of 23 °C (73 °F) to 25 °C (77 °F)]	± 1.0 % of reading or ± 1 °C (± 2 °F), whichever is greater; below 0 °C (32 °F), ± 1 °C (± 2 °F) ± 0.1°/1°
Response time	500 mSec (95 % of reading)
Repeatability	± 0.5 % of reading or ± 1 °C (± 2 °F), whichever is greater
Spectral response	8 µm to 14 µm
Laser sighting	Single-point laser
Laser shutoff	Laser turns off above ambient temperature of 40 °C (104 °F)
Laser power	Class 2 (II) operation; output <1 mW, wavelength 630 nm to 670 nm
Relative humidity	10 % to 90 % RH non-condensing, at < 30 °C (86 °F)
Power	2 AA batteries (alkaline or NiCD)
Battery life (alkaline)	12 hours
Display hold	7 seconds
Backlit display	Yes, LCD with dual temperatures (current and MAX/MIN/DIF/KTC), low battery, F/C indicator, and Scan/Hold options
Operating temperature	0 °C to 50 °C (32 °F to 120 °F)
Storage temperature	-20 °C to 65 °C (-25 °F to 150 °F)
MAX, MIN, DIF temperatures	Yes
Thermocouple type K mini-adaptor input	Yes, compatible with industry standard type K probes with mini-connector
Thermocouple type K Velcro® pipe probe	Yes, with a temperature range of 0 °C to 100 °C (32 °F to 212 °F) and accuracy of ± 2.2 °C (± 4 °F)
Warranty	Two-year

**Ordering information**  
Fluke-561 Infrared and Contact Thermometer

**Includes:** Infrared thermometer with contact thermometer capabilities, K-type thermocouple Velcro® pipe probe, hard carrying case, AA batteries, and users manual.



**Optional accessories**

<b>Model</b>	<b>Features</b>
80PK-1 Bead Probe	<ul style="list-style-type: none"> <li>• K-type thermocouple for general-purpose applications</li> <li>• Measurement range: -40 °C to 260 °C (-40 °F to 500 °F)</li> <li>• One-year warranty</li> </ul>
80PK-3A Surface Probe	<ul style="list-style-type: none"> <li>• K-type thermocouple for flat or curved surfaces such as plates and rollers</li> <li>• Measurement range: 0 °C to 260 °C (32 °F to 500 °F)</li> <li>• One-year warranty</li> </ul>
80PK-EXT Extension Wire Kits	<ul style="list-style-type: none"> <li>• Extending and repairing K-type thermocouple wires</li> <li>• Kit includes 3 meters of thermocouple wire and 1 pair of male/female mini-connectors</li> <li>• Maximum continuous exposure temperature: 260 °C (500 °F)</li> <li>• 80PK-EXT is compatible with K-type thermometers</li> <li>• One-year warranty</li> </ul>
80CK-M type K Male Mini-Connectors	<ul style="list-style-type: none"> <li>• Isothermal screw terminal for K wire</li> <li>• Suitable for up to 20 gauge thermocouple wire</li> <li>• Color-coded to industry standards (K-yellow)</li> <li>• Two per package</li> <li>• One-year warranty</li> </ul>
80PK-8 Pipe Clamp Temperature Probe	<ul style="list-style-type: none"> <li>• K-type thermocouple for fast temperature and superheat measurements of pipe surfaces</li> <li>• Durable ribbon sensor</li> <li>• Measurement range: -29 °C to 149 °C (-20 °F to 300 °F) for pipe diameters from 6.4 mm to 34.9 mm (0.25 in to 1.37 in)</li> <li>• One-year warranty</li> </ul>
80PK-22 SureGrip™ Immersion Temperature Probe	<ul style="list-style-type: none"> <li>• K-type thermocouple for use in liquids and gels</li> <li>• Measurement range: -40 °C to 1090 °C (-40 °F to 1994 °F)</li> <li>• One-year warranty</li> </ul>
80PK-24 SureGrip™ Air Temperature Probe	<ul style="list-style-type: none"> <li>• K-type thermocouple for use in air and non-caustic gas measurements</li> <li>• Bead protected by perforated baffle</li> <li>• Measurement range: -40 °C to 816 °C (-40 °F to 1501 °F)</li> <li>• One-year warranty</li> </ul>
80PK-25 SureGrip™ Piercing Temperature Probe	<ul style="list-style-type: none"> <li>• K-type thermocouple suitable for food industry, liquids, and gels</li> <li>• Measurement range: -40 °C to 350 °C (-40 °F to 662 °F)</li> <li>• One-year warranty</li> </ul>
80PK-26 SureGrip™ Tapered Temperature Probe	<ul style="list-style-type: none"> <li>• K-type thermocouple with tapered tip for use in air, non-caustic gas and surface applications</li> <li>• Measurement range: -40 °C to 816 °C (-40 °F to 1501 °F)</li> <li>• One-year warranty</li> </ul>
80PK-27 SureGrip™ Industrial Surface Temperature Probe	<ul style="list-style-type: none"> <li>• K-type thermocouple for surfaces in rugged environment</li> <li>• Durable ribbon sensor</li> <li>• Measurement range: -127 °C to 600 °C (-196 °F to 1112 °F)</li> <li>• One-year warranty</li> </ul>
H6 Infrared Thermometer Holster	<ul style="list-style-type: none"> <li>• Snap-on loop attaches to belt</li> <li>• Durable nylon holster</li> <li>• Velcro® closures provide quick access and secure storage</li> </ul>

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