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**FLUKE®**

# **62 MAX/62 MAX +**

Infrared Thermometer

**Users Manual**

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### ***Introduction***

The Fluke 62 MAX and 62 MAX + Infrared Thermometers (the Product) can determine the surface temperature by measuring the amount of infrared energy radiated by the target's surface. Note that the Japanese models indicate Celsius only.

#### **Warning**

**Read all safety information before you use the Product.**

## **Safety Information**

A **Warning** identifies conditions and procedures that are dangerous to the user. A **Caution** identifies conditions and procedures that can cause damage to the Product or the equipment under test.

Table 1 tells you about symbols used on the Product and in this manual.

### **Warning**

To prevent eye damage and personal injury:

- Read all safety Information before you use the Product.
- Do not use the Product if it operates incorrectly.
- Use the Product only as specified, or the protection supplied by the Product can be compromised.
- Before you use the Product, inspect the case. Do not use the Product if it appears damaged. Look for cracks or missing plastic.

***Infrared Thermometer***  
***Safety Information***

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- See emissivity information for actual temperatures. Reflective objects result in lower than actual temperature measurements. These objects pose a burn hazard.
- Do not look directly into the laser with optical tools (for example, binoculars, telescopes, microscopes). Optical tools can focus the laser and be dangerous to the eye.
- Do not look into the laser. Do not point laser directly at persons or animals or indirectly off reflective surfaces.
- Replace the batteries when the low battery indicator shows to prevent incorrect measurements.
- Do not use the Product around explosive gas, vapor, or in damp or wet environments.
- Use the Product only as specified or hazardous laser radiation exposure can occur.

**Table 1. Symbols**

| Symbol                                                                              | Meaning                                            | Symbol                                                                              | Meaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Risk of danger. Important information. See Manual. |  | This product complies with the WEEE Directive (2002/96/EC) marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste.<br>Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information. |

***Infrared Thermometer***  
***Safety Information***

**Table 1. Symbols (cont.)**

| Symbol                                                                                             | Meaning                                   | Symbol                                                                            | Meaning                                    |
|----------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------|
|                   | Warning. Laser.                           |  | Conforms to European Union directives.     |
|                   | Battery                                   |  | Conforms to relevant Australian standards. |
| <br>沪制01120009号 | Conforms to China Metrology Certification |                                                                                   |                                            |



## **Maintenance**

### **Caution**

To avoid damage to the Product, do not leave the thermometer on or near objects of high temperature.

#### **How to Change the Battery**

To install or change the AA IEC LR06 battery, open the battery compartment and replace the battery as shown in Figure 16.

#### **How to Clean the Product**

Use soap and water on a damp sponge or soft cloth to clean the Product case. Carefully wipe the surface with a moist cotton swab. The swab may be moistened with water. See Figure 17.

**Infrared Thermometer  
Specifications**

**Specifications**

|                                                                               | <b>62 MAX</b>                                                                                                                                                                                                                                                                                              | <b>62 MAX +</b>                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature Range                                                             | -30 °C to 500 °C<br>(-22 °F to 932 °F)                                                                                                                                                                                                                                                                     | -30 °C to 650 °C<br>(-22 °F to 1202 °F)                                                                                                                                                                                                                                                              |
| Accuracy<br>(Calibration geometry with<br>ambient temperature 23 °C<br>±2 °C) | $\geq 0$ °C: $\pm 1.5$ °C or $\pm 1.5$ % of<br>reading, whichever is<br>greater<br>$\geq 32$ °F: $\pm 3$ °F or $\pm 1.5$ % of<br>reading, whichever is<br>greater<br>$\geq -10$ °C to $< 0$ °C: $\pm 2$ °C<br>$(\geq 14$ °F to $< 32$ °F: $\pm 4$ °F)<br>$< -10$ °C: $\pm 3$ °C<br>$(< 14$ °F: $\pm 6$ °F) | $\geq 0$ °C: $\pm 1$ °C or $\pm 1$ % of<br>reading, whichever is<br>greater ( $\geq 32$ °F: $\pm 2$ °F or<br>$\pm 1$ % of reading, whichever<br>is greater)<br>$\geq -10$ °C to $< 0$ °C: $\pm 2$ °C<br>$(\geq 14$ °F to $< 32$ °F: $\pm 4$ °F)<br>$< -10$ °C: $\pm 3$ °C<br>$(< 14$ °F: $\pm 6$ °F) |
| Response Time (95 %)                                                          | <500 ms (95 % of reading)                                                                                                                                                                                                                                                                                  | <300 ms (95 % of reading)                                                                                                                                                                                                                                                                            |
| Spectral Response                                                             | 8 to 14 microns                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                      |
| Emissivity                                                                    | 0.10 to 1.00                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                      |
| Temperature Coefficient                                                       | $\pm 0.1$ °C/°C or $\pm 0.1$ %/°C of reading (whichever is greater)                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                      |

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*Users Manual*

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|                              |                                                              |                                                              |
|------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Optical Resolution           | 10:1<br>(calculated at 90 % energy)                          | 12:1<br>(calculated at 90 % energy)                          |
| Display Resolution           | 0.1 °C (0.2 °F)                                              |                                                              |
| Repeatability (% of reading) | ±0.8 % of reading or ±1.0 °C<br>(2 °F), whichever is greater | ±0.5 % of reading or ±0.5 °C<br>(1 °F), whichever is greater |
| Power                        | 1 AA IEC LR06 Battery                                        |                                                              |
| Battery Life                 | 10 hours with laser and<br>backlight on                      | 8 hours with laser and<br>backlight on                       |
| Weight                       | 255 g (8.99 oz)                                              |                                                              |
| Size                         | (175 x 85 x 75) mm (6.88 x 3.34 x 2.95) inches               |                                                              |
| Operating Temperature        | 0 °C to 50 °C (32 °F to 122 °F)                              |                                                              |
| Storage Temperature          | -20 °C to 60 °C (-4 °F to 140 °F), (without battery)         |                                                              |
| Operating Humidity           | 10 % to 90 % RH non-condensing @ 30 °C (86 °F)               |                                                              |
| Operating Altitude           | 2000 meters above mean sea level                             |                                                              |
| Storage Altitude             | 12,000 meters above mean sea level                           |                                                              |

***Infrared Thermometer***  
***Standards and Agency Approval***

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|                           |                                                                |
|---------------------------|----------------------------------------------------------------|
| Ingress Protection Rating | IP 54 per IEC 60529                                            |
| Drop Test                 | 3 meters                                                       |
| Vibration and Shock       | IEC 60068-2-6 2.5 g, 10 to 200 Hz, IEC 60068-2-27, 50 g, 11 ms |
| EMC                       | EN 61326-1:2006 EN 61326-2:2006                                |

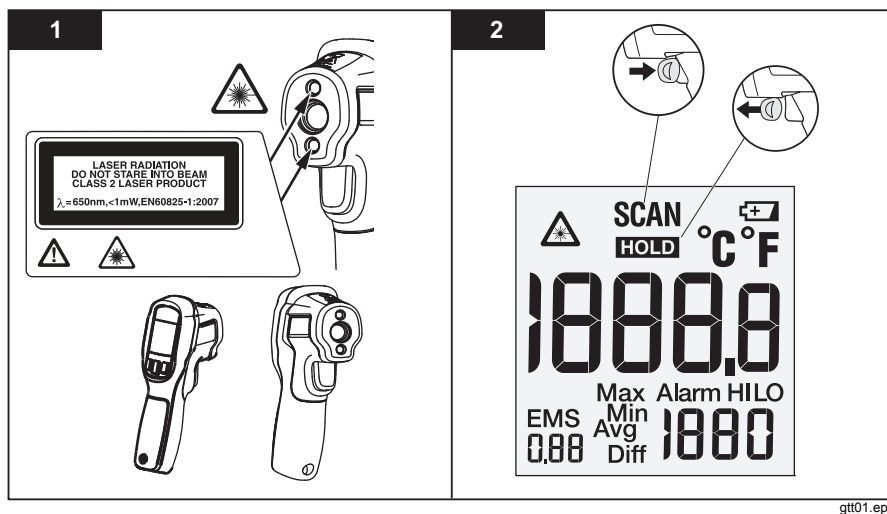
***Standards and Agency Approval***

Compliance ..... EN/IEC 61010-1  
Laser Safety ..... EN 60825-1 Class 2  
Implement Standard ..... Q/SXAV37

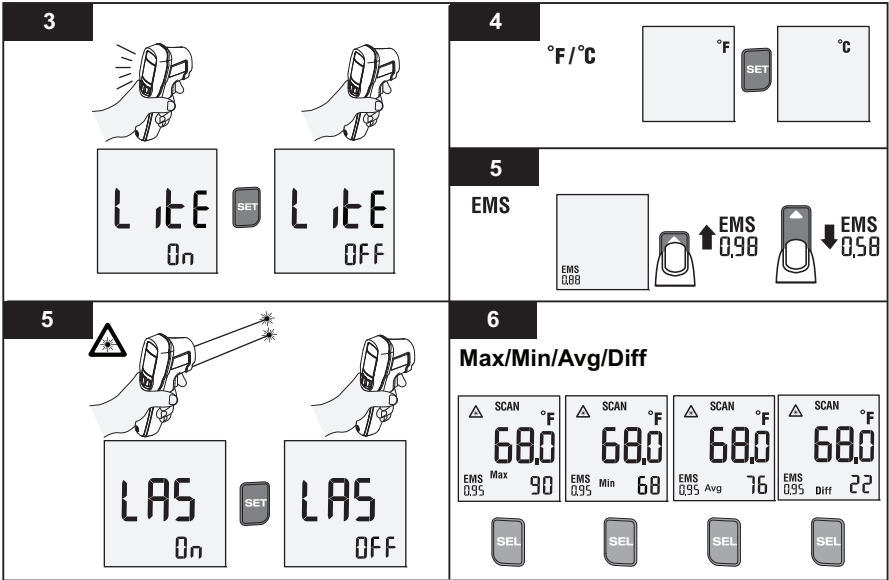
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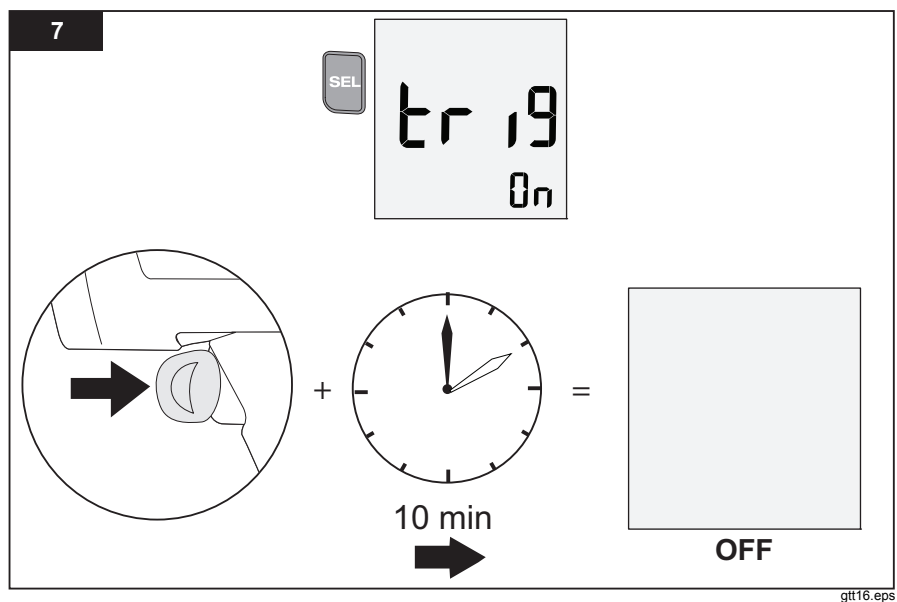
**The Product**



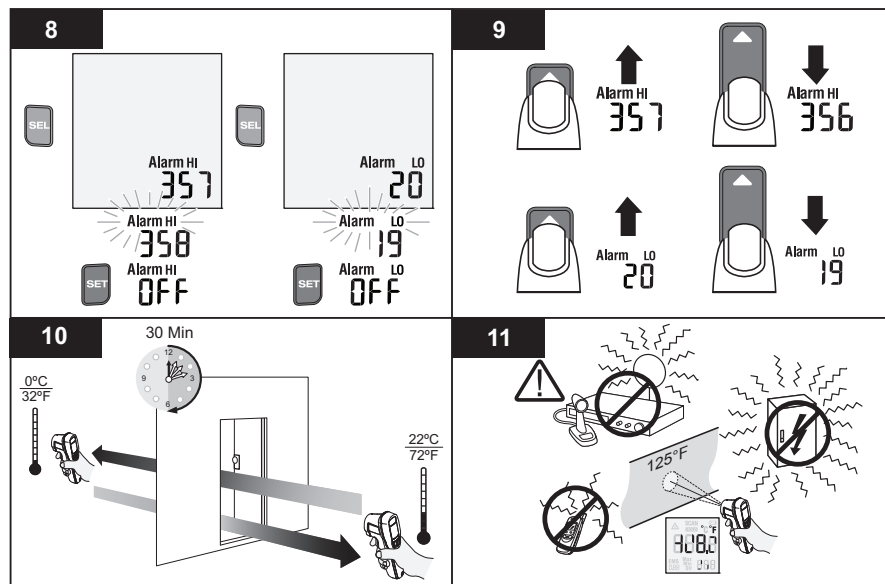
**Infrared Thermometer**  
*The Product*



gtt14.eps



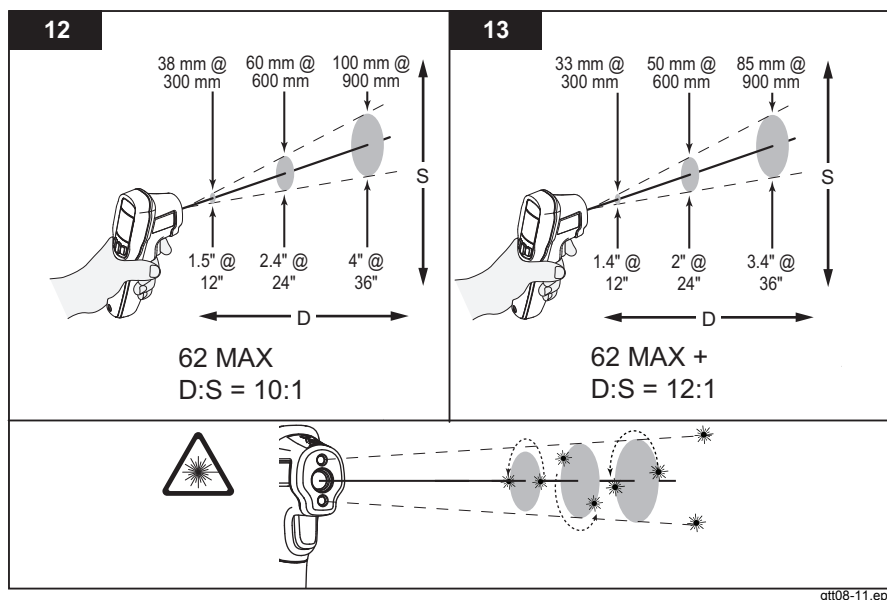
**Infrared Thermometer**  
The Product



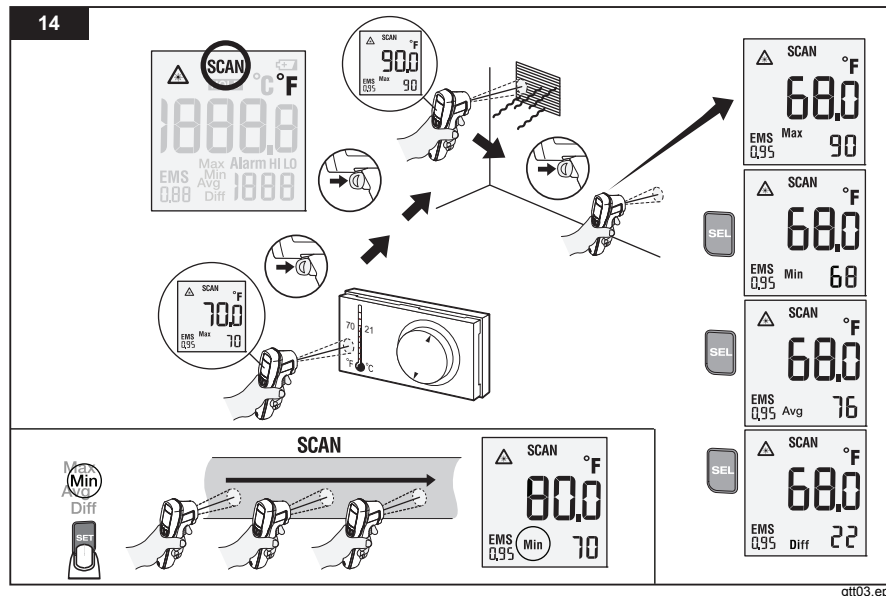
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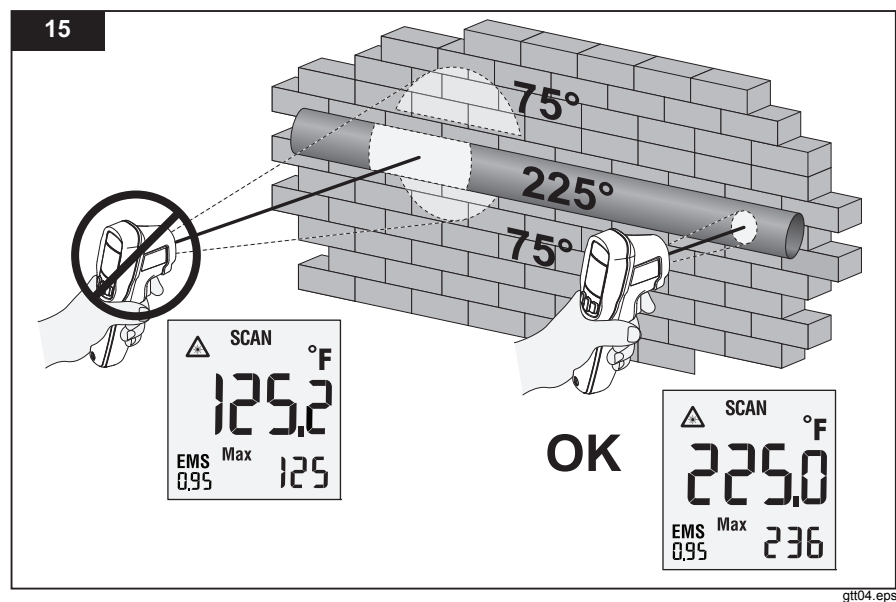


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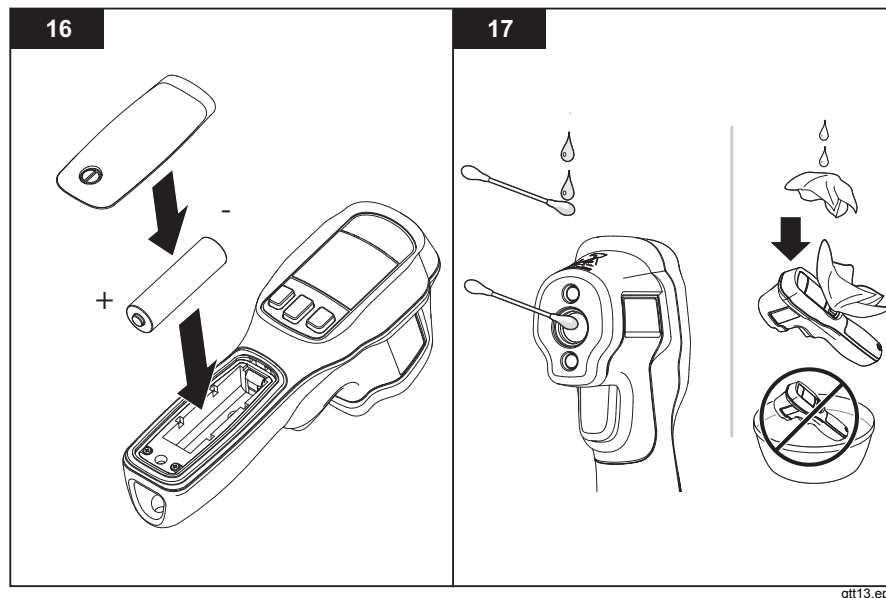


**Infrared Thermometer**  
The Product





**Infrared Thermometer**  
*The Product*



gtt13.eps