

# SKF Infrared Thermometer

## CMSS 3000-SL

*Heavy duty, long range, dual laser sighted non-contact infrared thermometer*

There are many uses for this handheld non-contact, infrared thermometer. Rugged and easy to use – just aim, pull the trigger and read the temperature in less than a second. Measures surface temperatures of hot, hazardous, moving or hard-to-reach objects safely without contact.

### Features

- Dual point laser sighting
- Adjustable emissivity
- 50:1 distance to spot ratio
- Temperature range:  $-60$  to  $+1\,000\text{ }^{\circ}\text{C}$  ( $-75$  to  $+1\,800\text{ }^{\circ}\text{F}$ )
- Exceptional battery life
- High and low alarm
- MAX, MIN, DIF, AVG temperature displays
- Amber back-light LCD display
- High intensity white LED flashlight
- Heavy duty magnet in base of handle
- Hard case

### Description

The non-contact thermometer senses the thermal energy radiated from an object with an infrared detector. When pointed at an object, the infrared detector collects energy producing a signal that the microprocessor translates as a reading on the backlit display. As the trigger is squeezed, the object temperature is continuously measured by the infrared detector. This allows for fast and accurate real-time readings.

This instrument features an extended temperature range  $-60$  to  $+1\,000\text{ }^{\circ}\text{C}$  ( $-75$  to  $+1\,800\text{ }^{\circ}\text{F}$ ); dual laser sighting; bright large amber back-light LCD display; Maximum, Minimum, Difference (MAX-MIN) and "Lock" function for continuous temperature scanning; programmable High and Low audible alarms; selectable temperature units ( $^{\circ}\text{C}$  or  $^{\circ}\text{F}$ ); low battery indicator, and adjustable emissivity for more accurate temperature measurements.

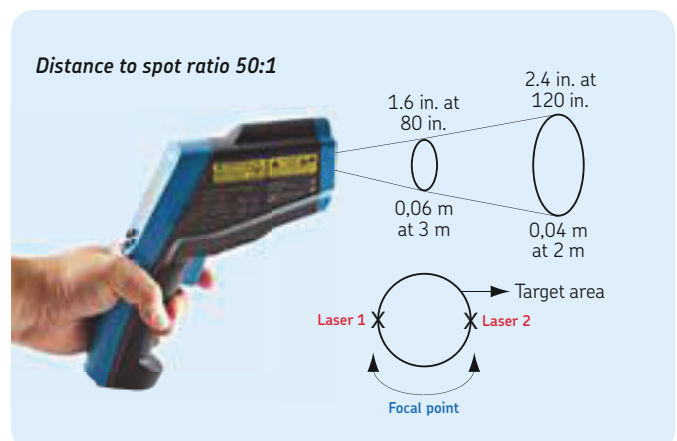


### Dual laser sighting and distance to spot ratio

Dual lasers provides easy aiming and defines the target area. The target area is highlighted at all distances with two laser dot markers. Laser 1 indicates one point of the measurement spot on one side of the target area to be measured and Laser 2 indicates the location of the diametrically opposed point on the other side of the measurement spot. At the focal point, where the spot size is the smallest, the dots line up vertically, rotating as the SKF Infrared Thermometer is moved closer or further from the target.

### Emissivity

Emissivity is a term used to describe the energy-emitting characteristics of materials. Most organic materials and painted or oxidized surfaces have an emissivity of 0,95. Inaccurate readings can result from measuring shiny or polished metal surfaces. To compensate for this, adjust the unit's emissivity reading, or cover the surface to be measured with masking tape or flat black paint ( $< 150\text{ }^{\circ}\text{C} / 300\text{ }^{\circ}\text{F}$ ). Allow time for the tape or paint to reach the same temperature as the material underneath it. Measure the temperature of the tape or painted surface.



## Hard case

A water resistant, dust-proof case which holds the unit (and magnetic stand) and measures 330 × 197 × 66 mm (13.00 × 7.75 × 2.60 in.) is included.

## Specification

- Measurement range: -60 to +1 000 °C (-75 to +1 800 °F)
- Operating range: 0 to 50 °C (30 to 120 °F)
- Accuracy (T<sub>object</sub> = 15 to 35 °C (60 to 95 °F), T<sub>ambient</sub> = 25 °C (75 °F)): ±1 °C (±2 °F)
- Accuracy (T<sub>object</sub> = 35 to 1 000 °C (90 to 1 800 °F); T<sub>ambient</sub> = 25 °C, ±3 °C (75 °F, ±5 °F)): ±2% of reading or +2 °C (+4 °F), whichever is greater
- Update frequency: 1,4 Hz
- Wave length response: 8 to 14 µm
- Emissivity range: 0,95 default – adjustable 0,1 to 1 step 0,01
- Relative humidity: 5 to 95% non-condensing
- Resolution, from -9,9 to +199,9 °C (14.2 to 391.8 °F): 0,1 °C (0.2 °F)
- Response time (90%): < 1 sec
- Distance spot ratio: 50:1
- Dimensions:
  - Height: 203,3 mm (7.90 in.)
  - Width: 197,0 mm (7.71 in.)
  - Depth: 47,0 mm (1.85 in.)
- Weight: 386,1 g (13.62 oz.) including batteries
- Power: Two AAA batteries (included)
- Battery life: Typical 180 hours, minimum 140 hours continuous use (Alkaline, without laser and back light)

- Modes: Maximum, Minimum, Average, Difference (MAX-MIN), Lock (allows for continuous temperature scan)

### Note:

Under an electromagnetic field of 3 V/m from 90 to 360 MHz the maximum error is ±10 °C (±18 °F).

National Institute of Standards and Technology (NIST), traceable factory calibration available.

## Ordering information

- SKF non-contact Infrared Thermometer, including quick start guide in standard languages (English, French, German, Portuguese, Spanish and Swedish), two AAA batteries, hard carrying case and magnetic stand [CMSS 3000-SL]
- DOC-CAL CERT CMSS 3000, NIST Certificate of Calibration Accuracy (Watlow-Gordon XACT-CAL)



## LCD display



## Optional kits that includes the SKF Infrared Thermometer, CMSS 3000-SL

- SKF Basic Condition Monitoring kit [CMAK 400-ML]
  - SKF Machine Condition Advisor [CMAS 100-SL]
    - Extension kit, 100 mV/g accelerometer with coiled integral cable and magnet [CMAC 112-K]
  - SKF Infrared Thermometer [CMSS 3000-SL]
  - SKF Inspector Ultrasonic Probe [CMIN 400]
- SKF Bearing Assessment kit [CMAK 300-SL]
  - SKF Machine Condition Advisor [CMAS 100-SL]
  - SKF Infrared Thermometer [CMSS 3000-SL]
  - SKF OilCheck [THEH1]