



# User's Guide



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The information contained in this document is believed to be correct, but OMEGA Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

**WARNING:** These products are not designed for use in, and should not be used for, patient-connected applications.

## OS-SF Thermometer Operating Instructions

The OS-FS thermometer is a non-contact infrared thermometer. Simply aim the thermometer at the target and press the measurement button to display the surface temperature. The distance to target ratio is 1:1 therefore the thermometer should be positioned as close to the target as possible.

## °C OR °F MODE

To change the OS-SF from °C to °F or from °C to °F, first turn the instrument on by pressing the measurement button, then press the mode button four times, the °C or °F symbol will flash, press the measurement key to change to scale, then press the measurement button to confirm the mode.

## MINIMUM OR MAXIMUM MODE

To utilize the OS-SF's minimum or maximum mode, firstly turn the instrument on by pressing the measurement button, then press the mode button once for minimum or twice for maximum function. The MIN or MAX icon will flash, then press the measurement button to confirm the minimum or maximum mode. The OS-SF will display the minimum or maximum reading only.

## LOCK MODE

The lock mode is particularly useful for continuous monitoring of temperatures. To utilize the OS-SF's lock mode, firstly turn the instrument on by pressing the measurement button, then press the mode button three times for the lock mode function. The lock icon will flash, then press the measurement button to confirm the lock measurement mode. The OS-SF will continuously display the temperature for up to 60 minutes or until the measurement button is pressed.

## EMISSIVITY

The OS-SF infrared thermometer is supplied with a default emissivity of 0.95. The emissivity of the OS-SF can be changed from 0.01 (1E) to 1 (100E). Changes should only be carried out by experienced personnel. To change the OS-SF's emissivity firstly turn the instrument on by pressing the measurement button, then press the mode button five times for emissivity function.

The 95E Will flash on the LCD screen, then press the measurement button to adjust the emissivity value, press the mode

button again to exit the set up screen. For information relating to the emissivity of specific materials, please contact the nearest retailer. Note: non-contact infrared thermometers are not recommended for use in measuring the temperature of shiny or polished metals.

## LCD ERROR MESSAGES

The OS-SF incorporates visual diagnostic messages as follows: Hi or Lo is displayed when the temperature being measured is outside of the range of the instrument, Hi when higher than +110°C (230°F) and Lo when lower than -22°C (-8°F).



Er2 is displayed when the OS-SF is exposed to rapid changes in the ambient temperature. Er3 is displayed when the ambient temperature of the OS-SF exceeds -10 or +50°C (14 or 122°F). In both cases you should allow plenty of time (minimum 30 minutes) for the OS-SF to stabilize to the working/room temperature (0 to +40°C, 32 to 104°F).

For all other error messages it is necessary to reset the OS-SF. To reset the OS-SF, turn the instrument off remove the battery and wait for a minimum of one minute, reinsert the battery and turn on. If the error message remains please contact the Service Department for further assistance.

## BATTERIES

The OS-SF incorporates visual low battery indication as follows:



"Battery OK" measurements are possible

"Battery Low" battery needs to be replaced, measurements are possible

"Battery Exhausted" measurements are not possible

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#### BATTERY REPLACEMENT

When the "Low Battery" icon indicates the battery is low the battery should be replaced immediately with a HHF20-BATT lithium cell. The battery is located under the twist cover at the rear of the OS-SF. Please note: It is important to turn the instrument off before replacing the battery otherwise the OS-SF may malfunction.

 Dispose of used battery properly and keep away from children.

#### STORAGE & CLEANING

The sensor lens is the most delicate part of the OS-SF. The lens should be kept clean at all times, care should be taken when cleaning the lens using only a soft cloth or cotton swab with water or medical alcohol, allowing the lens to fully dry before using the OS-SF, do not submerge any part of the OS-SF. The OS-SF should be stored at room temperature between +10 to +40°C (50° to 104 °F).

#### SPECIFICATION

Range	-22 to +110°C (-8 to 230°F)
Resolution	0.1°C or °F (switchable)
Response Time	1 second
Infrared Accuracy	±2% of reading or ±2°C
Field of View	1:1 optics ratio
Emissivity	0.95 default - adjustable 0.01 to 1 emissivity
Battery Life	40 hours continuous use (auto power off after 15 seconds)
Battery	HHF20-BATT
Display	LCD
Dimensions	18 x 37 x 68 mm
Weight	32 grams including battery

#### EMC/RFI

Readings may be affected if the unit is operated within a radio frequency electromagnetic field strength of approximately 3 volts per meter, but the performance of the instrument will not be permanently affected.

#### WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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**liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.**

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/ DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

#### RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. **BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS).** The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit. **FOR WARRANTY RETURNS,** please have the following

information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED.
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

**FOR NON-WARRANTY REPAIRS,** consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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