

TCT402L Thermometer Operating Instructions

The thermometer is a non-contact infrared thermometer. Simply aim the thermometer at the target and press the 'Meas.' 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.

Mode Selection MIN → MAX → LOCK → °C/°F → EMIS

MINIMUM OR MAXIMUM MODE

To utilize the thermometer's minimum or maximum mode, firstly turn the instrument on by pressing the 'Meas.' button, then press the 'Mode' button once for minimum or twice for maximum function. The 'MIN' or 'MAX' icon will flash, then press the 'Meas.' button to confirm the minimum or maximum mode. Keep pressing the 'Meas.' button; the thermometer will display the minimum or maximum reading only.

LOCK MODE

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

°C OR °F MODE

To change the thermometer from °C to °F or from °F to °C, firstly turn the instrument on by pressing the 'Meas.' button, then press the 'Mode' button four times, the °C or °F symbol will flash, press the 'Meas.' key to change the scale.

EMISSIVITY

The infrared thermometer is supplied with a default emissivity of 0.95. The emissivity of the thermometer can be changed from 0.1 (10E) to 1 (100E). Changes should only be carried out by experienced personnel. To change the emissivity, firstly turn the instrument on by pressing the 'Meas.' button, then press the 'Mode' button five times for emissivity function. The 95E will flash on the LCD screen, then press the 'Meas.' 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.

LASER

Class II Laser: always enable.

⚠ CAUTION

1. WHEN DEVICE IS IN USE, DO NOT LOOK DIRECTLY INTO THE LASER BEAM—PERMANENT EYE DAMAGE MAY RESULT.
2. USE EXTREME CAUTION WHEN OPERATING THE LASER.
3. NEVER POINT THE DEVICE TOWARDS ANYONE'S EYES.
4. KEEP OUT OF REACH OF ALL CHILDREN.

LCD ERROR MESSAGES

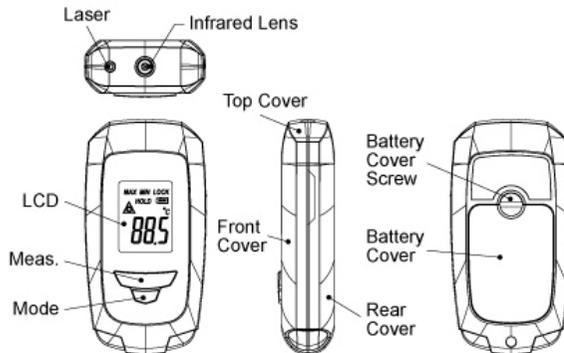
The thermometer incorporates visual diagnostic messages as follows:

「Er 2」 「Er 3」

'Er2' is displayed when the thermometer is exposed to rapid changes in the ambient temperature. 'Er3' is displayed when the ambient temperature exceeds -10°C (14°F) or +50°C (122°F). The thermometer should be allowed plenty of time (minimum 30 minutes) to stabilize to the working/room temperature.

「Er」

Error 5-9, for all other error messages it is necessary to reset the thermometer. To reset it, 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.



「Hi」 「Lo」

Hi or 'Lo' is displayed when the temperature being measured is outside of the measurement range.

BATTERIES

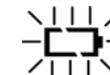
The thermometer incorporates visual low battery indication as follows:



'Battery OK': measurements are possible



'Battery Low': battery needs to be replaced, measurements are possible



'Battery Exhausted': measurements are not possible

BATTERY REPLACEMENT (Remember to power off the unit before replacing the battery.)

When the 'Low Battery' icon indicates the battery is low, the battery should be replaced immediately with AAA *2 batteries. Please note: It is important to turn the instrument off before replacing the battery otherwise the thermometer may malfunction.

⚠ A malfunction may occur if the power is on when the battery is replaced. If a malfunction occurs, restart the device. Keep the battery away from children.

STORAGE & CLEANING

The sensor lens is the most delicate part of the thermometer and 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 it, do not submerge any part of the thermometer. The thermometer should be stored at room temperature between -20 to +60°C (-4 to 140°F).

SPECIFICATION

Measurement Range	-50 to +350°C (-58 to +662°F)
Operating Range	-10 to +50°C (14 to +122°F)
Resolution (-9.9-199.9°C)	0.1°C/0.1°F, otherwise 1°C/1°F (switchable)
Response Time	1 second
Accuracy (Tamb=23±3°C)	Tobj=-50-0°C: ±(2+0.05t)°C, above 0°C: ±2% of reading or 2°C (4°F) whichever is greater
Distance:Spot	1:1
Emissivity Range	0.95 default – adjustable 0.1 to 1 step .01
Battery Life	Typ. 20 hrs continuous use
Power Supply	AAA x 2pcs
Display	LCD
Dimensions	100.04×22.65×52.09 mm (3.94×0.89×2.05 inch)
Weight	92 grams (3.24 oz) including batteries(AAA*2pcs)

EMC/RFI

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

GUARANTEE

The thermometer is guaranteed for a period of one year from the date of purchase against mechanical and electrical manufacturing defects. There are no user serviceable parts inside the instrument. Any attempted repair by unauthorized persons voids the warranty.

⚠ Avoid keeping the thermometer too close for long periods to objects that continuously generate high heat (like a hot plate), which can cause overheating of the thermometer.

ZyTemp

A new way to measure temperature

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