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Survey Supply

Nothing else measures up!

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TN1
Infrared Thermometer

Operating Instructions

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TN1 Thermometer Operating Instructions

The TN1 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.

Minimum or Maximum Mode

To utilise the TN1'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 TN1 will display the minimum or maximum reading only.

Lock Mode

The lock mode is particularly useful for continuous monitoring of temperatures. To utilise the TN1'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 TN1 will continuously display the temperature for up to 60 minutes or until the measurement button is pressed.

°C or °F Mode

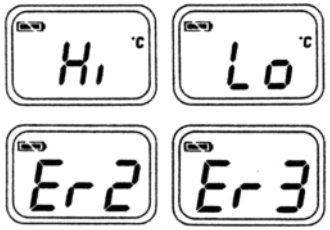
To change the TN1 from °C to °F or from °F to °C, firstly turn the instrument on by pressing the measurement button, then press the mode button four times, the '°C' or '°F' icon will flash, press the measurement button to change, then press the measurement button to confirm the mode.

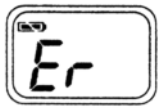
Emissivity

The TN1 infrared thermometer is supplied with a default emissivity of 0.95. The emissivity of the TN1 can be changed from 0.01 (1E) to 1 (100E). Changes should only be carried out by experienced personnel. To change the TN1'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 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.

LCD Error Messages

The TN1 incorporates visual diagnostic messages as follows:





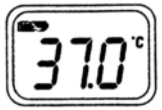
'Hi' or 'Lo' is displayed when the temperature being measured is outside of the range of the instrument, 'Hi' when higher than +110°C and 'Lo' when lower than -22°C.

'Er2' is displayed when the TN1 is exposed to rapid changes in the ambient temperature. 'Er3' is displayed when the ambient temperature of the TN1 exceeds -10 or +50°C. In both cases you should allow plenty of time (minimum 30 minutes) for the TN1 to stabilise to the working/room temperature (0 to +40°C).

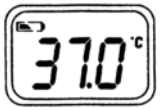
For all other error messages it is necessary to reset the TN1, turn the instrument off, remove the battery and wait for a minimum of one minute, reinsert the battery and turn on. If the error message remains please contact York Survey Supply Centre for further assistance.

Batteries

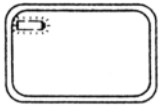
The TN1 incorporates visual low battery indication as follows:



'Battery OK' measurements are possible



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



'Battery Exhausted' measurements are not possible

Battery Replacement

When the 'Low Battery' icon indicates the battery is low, the battery should be replaced immediately with a CR2032 lithium cell. The battery is located under the twist cover at the rear of the TN1. Please note: It is important to turn the instrument off before replacing the battery otherwise the TN1 may malfunction.

Storage and Cleaning

The sensor lens is the most delicate part of the TN1. 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 TN1, do not submerge any part of the TN1. The TN1 should be stored at room temperature between +10 and +40°C.

EMC/RFI

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

Guarantee

The TN1 is guaranteed for a period of one year from date of purchase against mechanical and electrical manufacturing defects. There are no user serviceable parts inside the instrument. Any attempted repair by unauthorised persons voids the warranty.

TN1 Specification

Range: -22 to +110°C
Resolution: 0.1°C or °F (switchable)
Response Time: 1 second
Infrared Accuracy: ±2% of reading or ±2°C whichever is greater
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: CR2032
Display: Custom LCD
Dimensions: 18 x 37 x 68mm
Weight: 32 grams including battery