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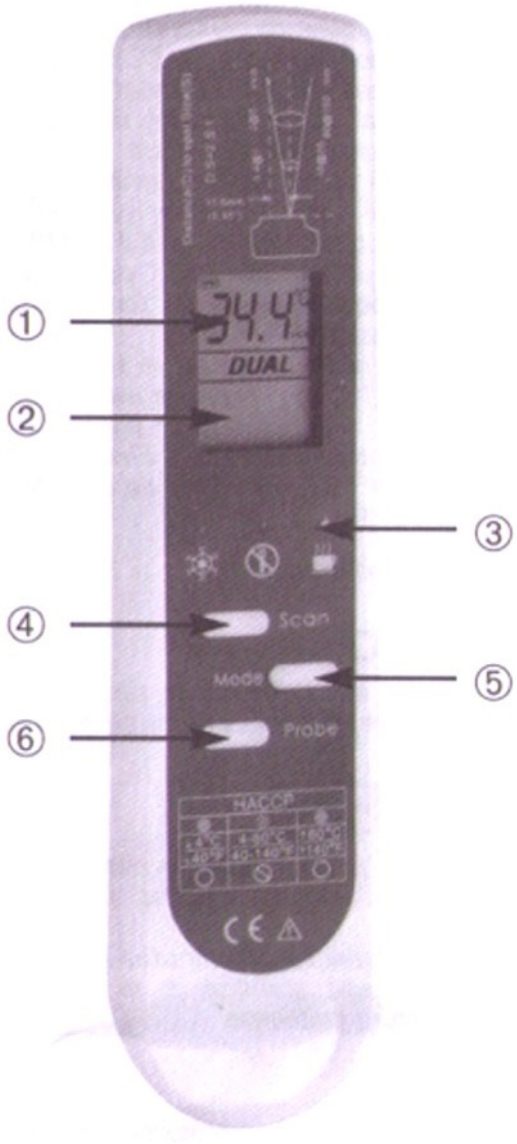
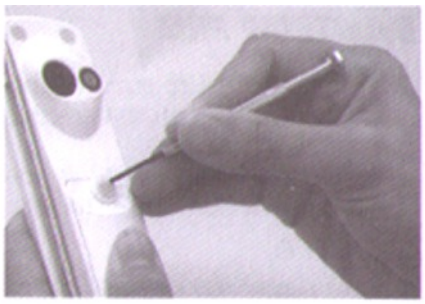
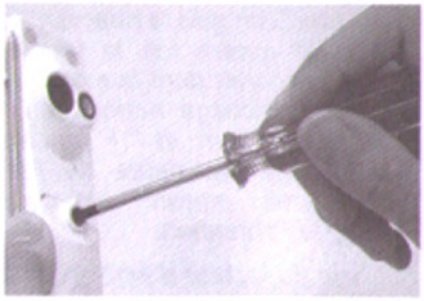
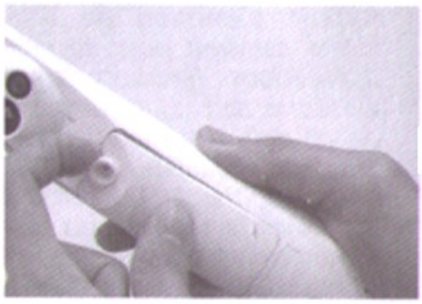
Manual
PCE-IR-100

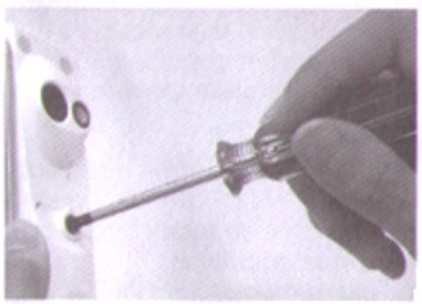


① *Messwert Infrarot*
Infrared reading
Valeur mesurée infrarouge
② *Messwert Einstichfühler*
Insertion probe reading
Valeur mesurée sonde
③ *HACCP LED Kontrollleuchte*
HACCP check LED
HACCP LED lampe pilote
④ *SCAN-Taste (Infrarot)*
SCAN button (infrared)
Touche SCAN (infrarouge)
⑤ *MODE-Taste*
MODE button
Touche MODE
⑥ *PROBE-Taste (Einstichfühler)*
PROBE button (insertion probe)
Touche PROBE (sonde)









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Introduction:

The thermometer **is a non-contact infrared thermometer, also with Probe thermometer.** You can select only one Mode at the same time but can change the Mode at will. Please remember to keep away from baby and children and don't use it for safety related applications.

Special Features:

- Food Code Zone Display
- Water Proof (IP65)

Non-contact Infrared Thermometer function (IRT Mode):

- The white light will automatically turn on while the Scan button is pressed.
- Distance:Spot (FOV) = 2.5:1
- Emissivity = 0.1~1 Step.01
- Wave Length = 8µm-14µm
- Simply aim the thermometer at the measure target with "Infrared Lens" and press Scan (infrared) key to display the surface temperature with a 'Hold' wording. The distance to target ratio is 2.5:1 therefore the thermometer should be positioned as close to the target as possible.
  While scanning, the newest temperature will be updated on the LCD and the measurement will continue as long as the Scan (infrared) key is pressed. When the Scan (infrared) key is released, icon "Hold" will appear on the display and the last measurement will remain visible for 15 sec. before the display goes blank.

MODE Selection:

MIN → MAX → LOCK → °C/ °F → EMIS

MINIMUM / MAXIMUM mode:

- The thermometer will display the minimum or maximum reading during the measurement period only until the Mode key is pressed.
- To utilize the minimum mode, please press Scan (infrared) key → Mode key → Scan (infrared) key. And keep pressing Scan (infrared) key for measurement.
- To utilize the maximum mode, please press Scan (infrared) key → Mode key twice → Scan (infrared) key. And keep pressing Scan (infrared) key for measurement.

LOCK mode:

- The lock mode is particularly useful for continuous monitoring of temperatures. The thermometer will continuously display the temperature for up to 60 minutes or until the Scan

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(infrared) key button is pressed.

- To utilize the lock mode, please press Scan (infrared) key → Mode key three times → Scan (infrared) key.

°C or °F mode:

- To change the '°C' or '°F' mode, please press Scan (infrared) key → Mode key four times → Scan (infrared) key.
- Same steps can be taken when switch ing from °F to °C.

Emissivity:

- The infrared thermometer is supplied with a default emissivity of 0.95. The emissivity can be changed from 0.10 (10E) to 1 (100E). Changes should only be carried out by experienced personnel. For information relating to the emissivity of specific materials, please contact the nearest retailer.
- To change the emissivity, please Scan (infrared) key → Mode key five times → Scan (infrared) key for each 0.01 (1E) adjustment → Mode key.

⚠ **Note:** Non-contact infrared thermometers are not recommended for use in measuring the temperature of shiny or polished metals.

Contact Thermocouple Probe function (COT Mode):

- Attach the thermometer at the measure target with "Probe" and press Probe key to continuously display the temperature for up to 4 minutes. After that the device will automatically shut off to extend the battery life. Press Probe key will interrupt the scanning to display the last temperature with a 'Hold' wording. To reenter scanning just press Probe key again.

⚠ Do not twist the probe and rotate the probe in wrong direction.

⚠ Over stress on probe may cause break.

⚠ After measure high temp, the probe may remain HOT for a while.

⚠ Probe is dangerous for human when the probe is in an open position. Remember to hold the probe back when not in use.

⚠ The probe of contact thermometer may be damaged if exceeding the specification of measurement temperature range.

HACCP check:

- The "HACCP CHECK" feature is incorporated in our thermometer temperature to graphically indicate critical temperature zone. The icons " ❄ ⚠ ☕ "and LED indicators located above the display indicate a food product stays in a safe or unsafe

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HACCP " Danger Zone" temperature. The green and red LED light will always be lit before power off.

- A green LED appears with icon " ❄ " indicates a safe cool or frozen condition below 4°C(40°F) or appears with icon " ♨ " indicates a safe holding temperature above 60°C(140°F).
- When temperature is between 4°C and 60°C, the red LED with icon " ⚠ " will appear and indicate that the temperature is fallen within the HACCP "Danger Zone" from 4°C to 60°C (40~140°F).

LCD error Messages:

.Hi. .Lo.

'Hi' or 'Lo' is displayed when the temperature being measured is outside of the range of the instrument, 'Hi' when higher than +220°C (428°F) and 'Lo' when lower than -33°C (-27 °F).

.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 0°C (32°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.

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.

Batteries:

The thermometer incorporates visual low battery indication as follows:

Battery OK
→ Measurements are possible

Battery Low
→ Battery needs to be replaced, measurements are still possible

Battery Exhausted
→ Measurements are not possible

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⚠ When the 'Low Battery' icon indicates the battery is low, the battery should be replaced immediately. It is important to turn the instrument off before replacing the battery otherwise the thermometer may malfunction.

⚠ Please do not dispose of old electronic devices and empty batteries in household waste. Keep away from children.

Battery change (Fig. 1-6):

1. Please pick the rubber gasket on the battery cover by using small, pointed screwdriver with the "X" shaped, then release the screw on the battery cover.
2. Open the battery cover.
3. Replace the new battery.
   (Power Supply: AAA 2pcs, 1.5V)
4. First, close the bottom side and push the battery cover in.
5. Use the same way as point 1 to close the battery cover and stuff the screw hole with the rubber gasket.

⚠ **Since the thermometer is waterproof, please make sure the battery cover is tight for the thermometer and also with the rubber gasket.**

Specifications:

Infrared Scan function (IRT Mode):

Measuring range:
-33~220°C (-27~428°F)

Accuracy:

-33~0:+/-(1°C+0.1/degree)
0~ 65: +/-1°C
65~200:+/-1.5% of reading

Thermocouple Probe (K type, Grounded) (COT Mode):

Measuring range:
-55~330°C (-67 to +626 °F)

Accuracy:
below -5 :±1°C
-5~ 65 : ±0.5°C
above 65 :±1% of reading

Resolution:

(-9.9~199.9°C)	0.2°C/0.5°F
Operating Range:	0~50°C (32~122°F)
Dimension:	22.18x38x190.09mm
Weight:	100 g
Battery Life:	40 hrs

⚠ **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.

In this direction will find a vision of the measurement technique:
http://www.industrial-needs.com/measuring-instruments.htm

NOTE: "This instrument doesn’t have ATEX protection, so it should not be used in potentially explosive atmospheres (powder, flammable gases)."