Non-Contact Thermometer

MEET ®
Technology

Model No.: MS-79(4)   (2 in 1)

Model No.: MS-79(4A)   (3 in 1)

Thank you for purchasing MEET Thermometer

1. Contents

- Thermometer
- Operating manual
- 'K' type temperature Ni-Cr and Ni-Si sensor, temperature range
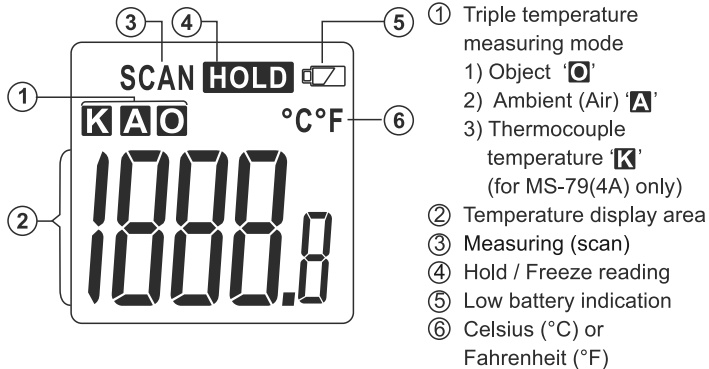 measureable -40°C ~ 250°C (-40°F ~ 482°F) to be provided
  (for MS-79(4A) only)

CE

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Model No.	MS-79(4)	MS-79(4A)
Reading / LED / Audible alarm indication when at object mode: a) ≤ - 20.0°C (- 4.0°F) ~ 0.0°C (32.0°F), display measured reading and white LED lights up with audible sound b) ≥ 0.1°C (32.2°F) ~ 29.9°C (85.8°F), display measured reading and white LED lights up c) ≥ 30.0°C (86.0°F) ~ 37.4°C (99.3°F), display measured reading and green LED lights up d) ≥ 37.5°C (99.5°F) ~ 43.0°C (109.4°F), display measured reading and red LED lights up with audible sound e) ≥ 43.1°C (109.6°F) ~ 98.9°C (210.0°F) display measured reading and white LED lights up f) > 99.0°C (210.2°F) ~ 115.0°C (239.0°F), display measured reading and red LED lights up with audible sound		
Over range display: a) < -20.1°C (-4.2°F) / <-50.0°C (-58.0°F) for 'K' type thermocouple display 'LO' b) > 115.0°C (239.0°F) / > 1000°C (1832°F) for 'K' type thermocouple display 'Hi'		
Low battery indication	< 7.0V	
Auto power off	10 secs	
Measuring distance from object 1~2.5cm	*	
Operating temperature (for object mode)	10.0°C (50.0°F) ~ 39.0°C (102.2°F)/ ≤ 80%RH; 70~106 Kpa	
LC display '- - -' when operating temperature is below 10.0°C (50.0°F) or over 39.0°C (102.2°F) when at object mode	*	
Storage temperature	-10.0°C (14.0°F) ~ 50.0°C (122.0°F)/ ≤ 80%RH; 70~106 Kpa	
Back light (selectable)	*	
Battery powered (Battery not included)	1 x 9V (6F22 / 6LR61 / 1604)	
Dimensions (LxWxD) mm	153x72x42	
Weight (approx.) grams	115 (without battery)	

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4. Explanation of symbols and units on the meter

SCAN HOLD

K A O °C °F

① Triple temperature
   measuring mode
   1) Object 'O'
   2) Ambient (Air) 'A'
   3) Thermocouple
      temperature 'K'
      (for MS-79(4A) only)
② Temperature display area
③ Measuring (scan)
④ Hold / Freeze reading
⑤ Low battery indication
⑥ Celsius (°C) or
   Fahrenheit (°F)

5. How to install or replace the battery

To open the battery cover press lock button ⑧ on both sides & slide the cover ⑥ down. Install a fresh 9V battery as the correct polarity. Also it is necessary to replace battery when low battery warning icon displays on the LCD, screen.
To avoid chemical leakage from the battery, remove the battery if you do not intend to use the unit in short time.
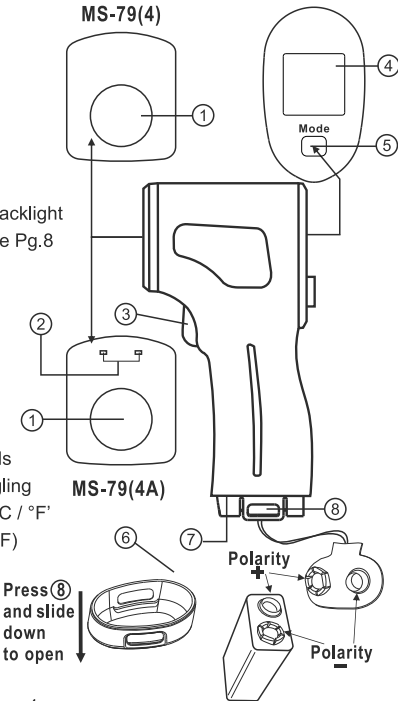
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2. Technical Specifications

Specifications		
Model No.	**MS-79(4)**	**MS-79(4A)**
Dual temperature measurement mode a) Object b) Ambient (Air)	*	
Triple temperature measurement mode a) Object b) Ambient (Air) c) Thermocouple ('K' type)		*
Object temperature measurement	-20.0°C (-4.0°F) ~ 115.0°C (239.0°F)	
Accuracy (@ 23.0°C, ± 2°C): a) - 20.0°C (- 4.0°F) ~ 29.0°C (84.2°F) / 37.0°C (98.6°F) ~ 115.0°C (239.0°F), ± 2.0°C (± 3.6°F) b) 34.0°C (93.2°F) ~ 42.0°C (107.6°F), ± 0.2°C (± 0.4°F) c) 30.0°C (86.6°F) ~ 33.9°C (93.0°F) / 42.1°C (107.8°F) ~ 43.0°C (109.4°F), ± 0.3°C (± 0.6°F) d) 29.1°C (84.4°F) ~ 36.9°C (98.4°F), ± 4.0°C (± 7.2°F)	*	*
Ambient temperature measurement	-20.0°C (-4.0°F) ~ 85.0°C (185.0°F)	
Accuracy: a) - 20.0°C (- 4.0°F) ~ 49.9°C (121.8°F), ± 1.5°C (± 2.7°F) b) 50.0°C (122.0°F) ~ 85.0°C (185.0°F), ± 2.0°C (± 3.6°F)	*	*
Measureable temperature from thermocouple		-50°C ~ 1000°C (-58°F ~ 1832°F)
'K' type temperature Ni-Cr and Ni-Si sensor, temperature range measureable -40°C ~ 250°C (-40°F ~ 482°F) to be provided		*
Accuracy: a) - 40.0°C (- 40.0°F) ~ 0.0°C (32.0°F), ± (3% ± 5°C / 9.0 °F) b) 1.0°C (33.8°F) ~ 250.0°C (482.0°F), ± (2% ± 2°C / 3.6 °F)		*

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3. Descriptions

① Sensor
② 'K' type thermocouple input
   (for MS-79(4A) only)
③ a) Trigger / Power ON
   b) Press once to change
      the unit (°C / °F) or ON / OFF backlight
      (after entering setting mode) See Pg.8
      for detailed procedure
④ LCD display
⑤ Mode button
   a) Toggling this button for
      object / ambient (air) or
      thermocouple ('K' type)
      (for MS-79(4A) only) reading
   b) Press and hold for three seconds
      to enter setting mode. After toggling
      this button to select 'Unit' unit '°C / °F'
      ⟶ 'bL' back light 'I /0' (ON / OFF)
   c) Press and hold this button
      for 3 secs. to exit setting mode
⑥ Battery cover
⑦ Battery compartment
⑧ Battery cover lock button

MS-79(4)

MS-79(4A)

Press⑧
and slide
down
to open

Polarity +

Polarity −

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6. Safety instructions

The meter has been designed for safe use, but must read, understand and follow operating instructions and Safety Rules in this manual before using the product.

Warning

A Warning identifies conditions and actions that pose hazards to the user. To avoid electrical shock or personal injury, follow these guidelines.
- Do not use the thermometer if it operates abnormally.
- Do not submerge it in water.
- Do not leave the thermometer on or near objects of high temperature.
- Do not operate the thermometer around explosive gas, vapor or dust.

7. Care and Handling

- Keep the meter dry. If it gets wet, dry it immediately.
- Use and store the meter in normal temperature. Temperature extremes can shorten the life of the electronic parts and distort or melt plastic parts.
- Handle the meter gently and carefully. Dropping it can damage the electronic parts or the case.
- Keep the meter clean. Wipe the case occasionally with a damp cloth. Do not use chemicals. cleaning solvents, or detergents.
- Only use fresh batteries of the recommended size and type. Remove old or weak batteries so they do not leak and damage the thermometer.
- If the meter is to be stored for a long period of time the batteries should be removed to prevent damage to the thermometer.
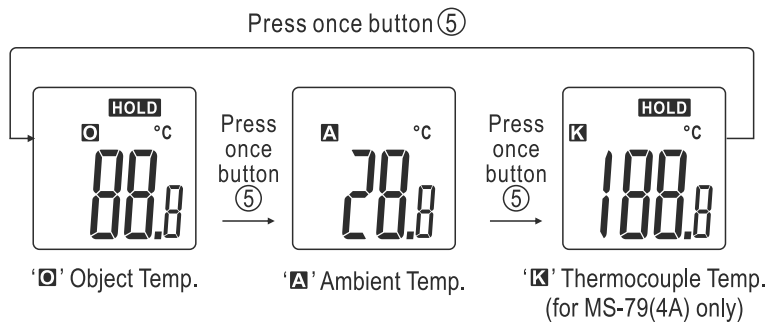
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8. How to use the press button

A) Trigger / Power ON button ③

Press once the trigger button ③ to turn on the unit.
Press and hold the trigger button to enter measuring mode, an icon
' **SCAN** ' and with the measuring reading will display on screen.
Release the trigger button, the symbol ' HOLD ' will appear on the
screen, the measured reading is frozen.

B) Mode button '☐' ⑤

1) Select between two or three (for MS-79(4A) only) temperature
   measuring modes

Press once button ⑤

'◨' Object Temp.　　'△' Ambient Temp.　　'Ҝ' Thermocouple Temp.
(for MS-79(4A) only)

2) Setting mode for temperature unit or back light

☞ Press button ⑤ and hold for 3 secs. to enter setting mode.

Press once button ⑤

Press once button ③
to change °C/ °F
(Unit change
°C / °F)

Press once button ③
to change 'I' / '0' (ON / OFF)
(Backlight ON / OFF)

☞ Press button ⑤ and hold for 3 secs. to exit setting mode.

9. Start measurement

A) Object Temperature:

1) Hold the thermometer's handle and point it towards the surface from
   the distance 1~2.5cm being measured.
2) The thermometer turns ON when you press the trigger.
   The thermometer turns OFF when no activity is detected for 10 seconds
   (with Lock Off).
3) To find a hot or cold spot, aim the thermometer outside the target area.
   Then slowly scan across the area with an up and down and side to side
   motion until you locate the hot or cold spot.

Notes:

a) The readings are inaccurate if you measure a target with a shiny or
   metallic surface.
b) The unit can not measure full transparent surfaces, such as glass.
c) Stem, dust, smoke or other particles can prevent accurate
   measurement by obstructing the unit optics.
d) Field of view
   Make sure that the target is larger than the spot size.

B) Ambient (Air) Temperature:

1) The thermometer turns on when you press the trigger button③.
2) Press mode '☐' button ⑤, symbol '△' and temperature reading
   appear on the screen.
3) Press the trigger button③, the unit turns ON and the current ambient
   temperature reading will appear on the screen.

C) Thermocouple ('K' type) (for MS-79(4A) only)

⚠ To avoid electrical shock or personal injury, do not connect the
optional external probe to live electrical circuits.

1) Connect the probe to the input ② on the unit with proper +/- polarity
   (indicated).
2) Press the trigger button ③, the unit turns 'ON'. Then press mode
   '☐' button⑤, 'Ҝ' symbol and temperature value appear on the
   LCD.
3) Use the temperature probe to measure the target, the reading is
   current temperature after the display is stable.

Note: When moving from temperature / humidity extreme to another,
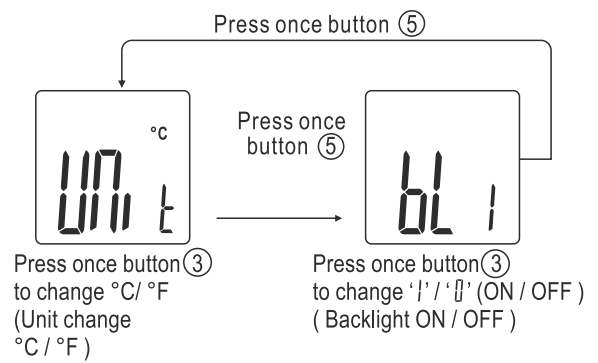allow time for the meter to stabilize.

NOTES:

1) "K" type thermocouple probe (Ni-Cr and Ni-Si) is only applicable for
   the measurement of temperature range -40°C(°F) to 250°C (482°F)
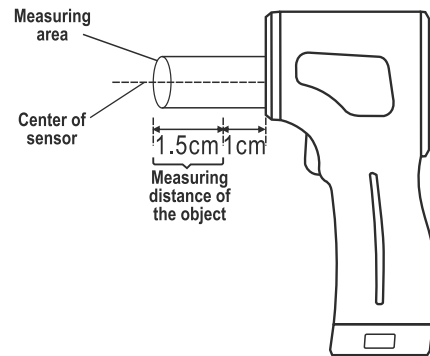2) Error does not include Type 'K' thermocouple error

10. Trouble Shooting

**By purchasing the meter, you have acquired a product which has
been designed to the state of the art and is operationally reliable.
Nevertheless, problems or faults may occur. For this reason,
the following is a description of how you can eliminate possible
malfunctions yourself.**

⚠ **Always adhere to the safety instructions!**

Error	Possible cause
The meter does not function.	Are the batteries dead? Check the status.
No measuring value change.	Is the wrong measuring function active?
Reading on display hangs up.	Release the trigger to 'OFF' position and then starts again after 3 secs..
Fatal error or undefined reading.	Release the trigger to 'OFF' position and then starts again after 3 secs..

⚠ **Repairs other than those described above should only be carried
out by an authorized specialist.**