

KM340 DIGITAL THERMOMETER OPERATING INSTRUCTIONS

ENGLISH

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CALIBRATION
No. 0451

Comark Limited have an accredited NAMAS calibration laboratory for temperature measurement. NAMAS authorised certificates can be provided for any Comark, Kane-May or other temperature measurement instrument. Costs on application.

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OPERATING INSTRUCTIONS

1. INTRODUCTION

This instrument is a portable 3½ digit, compact-sized digital thermometer designed to use external type-K thermocouples as temperature sensors. It is compatible with the full range of Comark type-K thermocouple probes.

2. SAFETY INFORMATION

It is recommended that you read the safety and operation instructions before using the thermometer.



WARNING


TO AVOID ELECTRICAL SHOCK, DO NOT USE THIS INSTRUMENT WHEN VOLTAGES AT THE MEASUREMENT SURFACE EXCEED 24V AC OR 60V DC.

WARNING

TO AVOID DAMAGE OR BURNS, DO NOT MAKE TEMPERATURE MEASUREMENTS IN MICROWAVE OVENS.

CAUTION

Repeated sharp flexing can break the thermocouple leads. To prolong lead life, avoid sharp bends in the leads, especially near the connector.

The  symbol on the instrument indicates that the operator must refer to the warnings above.

3. OPERATING INSTRUCTIONS

Selecting the Temperature Scale

Readings are displayed in either degrees Celsius (°C) or degrees Fahrenheit (°F). When the thermometer is turned on, it is set to the temperature scale that was in use when the thermometer was last turned off. To change the temperature scale, press the °C/°F key.

Single-Thermocouple Temperature Measurement

The thermometer displays the temperature of the thermocouple that is connected to the selected input. Press the T2 key to display the temperature of the thermocouple connected to the T2 input. Press the T1 key to display the temperature of the thermocouple connected to the T1 input. The selection cursor indicates which input is selected.

Differential Temperature Measurement

Differential temperature measurement is selected by pressing the T1-T2 key. This causes the thermometer to display the temperature difference between the two thermocouples (the temperature of thermocouple T1 minus the temperature of thermocouple T2). The selection is indicated by the input selection cursor.

HOLD Mode

Pressing the HOLD key to enter the Data Hold mode, the "D-H" annunciator is displayed. When HOLD mode is selected, the thermometer holds the present reading and stops all further measurements.

Pressing the HOLD key again cancels HOLD mode, causing the thermometer to resume taking measurements.

MAX Mode

Press the MAX key to enter the MAX mode. The thermometer then records and updates the maximum value for that input. The MAX annunciator appears on the display. Press the MAX key again to exit the MAX recording mode.

In the MAX mode, press HOLD key to stop the recording, press HOLD again to resume recording.

4. OPERATOR MAINTENANCE

Battery Replacement

Power is supplied by a 9 volt, PP3 battery. The battery sign appears on the LCD display when a replacement is needed. To replace the battery, remove the three screws from the back of the instrument and lift off the front case. Exchange the battery in the protection tube located at the top of the rear cover. Replace the instrument front squarely with the rear cover and secure with the three screws.

SPECIFICATIONS

Temperature Scale	Celsius or Fahrenheit user-selectable
Measurement Range	-50°C to 1300°C, (-58°F to 1999°F)
Resolution	1°C or 1°F
Accuracy	Accuracy is specified for an operating temperature of 23°C (73°F), for 1 year, not including thermocouple error +2, -1°C -50°C to 0°C +4, -2°F -58°F to +32°F ±(0.2% rdg +1°C) 0°C to 1100°C +0, -0.7% rdg ±1°C +1100°C to +1300°C ±(0.2% rdg +2°F) +32°F to 1999°F
Temperature Coefficient including Cold Junction	±0.01% rdg ±0.04°C per °C change from +23°C
Reading Rate	2.5 times per second
Input Connector	Accepts standard miniature thermocouple connectors (flat blades spaced 7.92mm, centre to centre)
Use with two probes	To avoid measurement errors when using two probes, at least one should be isolated to avoid a continuous electrical circuit
Ambient Operating Range	0°C to 50°C (32°F to 122°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Relative Humidity	0% to 80% (0°C to 35°C) (32°F to 95°F) 0% to 70% (35°C to 50°C) (95°F to 122°F)
Display	3½ digit liquid crystal display (LCD) with maximum reading of 1999
Battery	Standard 9V PP3 battery (NEDA 1604, IEC 6F22)
Battery Life	200 hours typical with ALKALINE battery
Dimensions (Instrument)	147 mm (H) x 70 mm (W) x 39 mm (D)
Weight	Instrument 7.8 oz (220g), Protective Boot 4.7oz (133g)