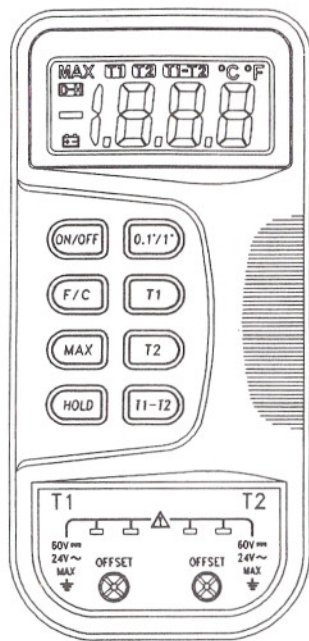


OPERATING INSTRUCTIONS

MODEL 307 DIGITAL THERMOMETER



INTRODUCTION

This instrument is a portable 3½ digit, compact-sized digital thermometer designed to use external K-type thermocouple as temperature sensor. Temperature indication follows National Bureau of Standards and IEC 584 temperature/voltage tables for K-type thermocouples. Two K-type thermocouples are supplied with the thermometer.

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 MICRO-WAVE 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 Δ symbol on the instrument indicates that the operator must refer to an explanation in this manual.

SPECIFICATIONS

ELECTRICAL

Measurement Range:

-50°C to 1300°C, (-58°F to 2000°F)

Resolution: 1°C or 1°F, 0.1°C or 0.1°F

Accuracy:

Accuracy is specified for operating temperatures over the range of 18°C to 28°C (64°F to 82°F), for 1 year, not including thermocouple error.

±2°C ----- -50°C to 0°C

±4°F ----- -58°F to 32°F

±(0.3% rdg+1°C) ----- 0°C to 1000°C

±(0.5% rdg+1°C) ----- 1000°C to 1300°C

±(0.3% rdg+2°F) ----- 32°F to 2000°F

Temperature Coefficient:

0.1 times the applicable accuracy specification per °C from 0°C to 18°C and 28°C to 50°C (32°F to 64°F and 82°F to 122°F).

Input Protection:

60V dc or 24V rms ac maximum input voltage on any combination of input pins.

Reading Rate: 2.5 times per second.

Input Connector:

Accepts standard miniature thermocouple connectors (flat blades spaced 7.9mm, center to center).

ENVIRONMENTAL

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)

GENERAL

Display:

3½ digit liquid crystal display (LCD) with maximum reading of 1999

Battery:

Standard 9V battery (NEDA 1604, IEC 6F22)

Battery Life:

200 hours typical with carbon zinc battery

Dimensions:

147 mm (H) x 70 mm (W) x 39 mm (D)

Weight: 7.6 oz (215g)

Supplied Probe:

4-foot type "K" thermocouple bead probe (teflon tape insulated). Maximum insulation temperature 260°C (500°F). Probe accuracy ±2.2°C or ±0.75% of reading (whichever is greater) from 0° to 800°C.