DIGITAL THERMOMETER

INSTRUCT MANUAL

MODEL: 300

INTRODUCTION

This instrument is a digital thermometer for use with any K-type thermocouple as temperature sensor. Temperature indication follows IEC584 temperature/voltage tables for K-type thermocouples.

SPECIFICATIONS

ELECTRICAL
Measurement Range: -50 to 1300°C
-50 to 1999°F
Resolution: 0.1°C, 1°C, 0.1°F, 1°F
Maximum Voltage at Thermocouple Input: 60V DC, 24V AC
RF Field Derating: Strong RF fields can adversely affect measurement accuracy.
ENVIRONMENTAL
Ambient Operating Range: 0 to 50°C
32 to 122°F
Storage Temperature: -40 to 60°C
-40 to 140°F
Humidity: 0% to 90% (0 to 35°C)
0% to 70% (35 to 50°C)
Basic Accuracy: (23 ± 5°C Calibration)

Function	Range	Resolution	Accuracy:±(% of Reading+ Degrees)
°C	-50.0 to 199.9°C	0.1°C	0.2% ± 1°C
°F	-50.0 to 199.9°F	0.1°F	0.2% ± 1°F
°C	-50.0 to 1000°C	1°C	0.3% ± 2°C
°F	-50.0 to 1999°F	1°F	0.3% ± 2°F
°C	1000 to 1300°C	1°C	0.5% ± 2°C

NOTE
The basic accuracy specification does not include the error of the probe. Please refer to the probe accuracy specification for additional details.

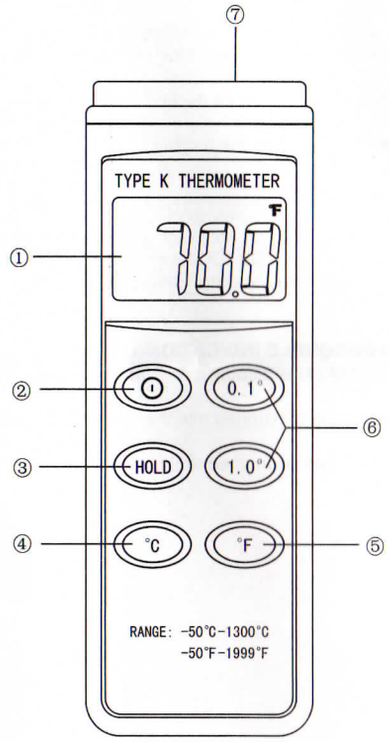
Temperature Coefficient:
0°C to 18°C (32°F to 64.4°F) and 28°C to 50°C (82.4°F to 122°F) ambient multiply the basic accuracy specification by 0.1 for each degree above 28°C (82.4°F) or below 18°C (64.4°F)

GENERAL

Battery: Standard 9V battery (NEDA 1604, 6F22, or 006P)
Battery life: 200 hours
Low Battery Indication: The ( ) is displayed when the battery voltage drops below the operating voltage.
Over Range Indication: Highest digit of (1) or (-1) is display.
Measurement Rate: 2.5 measurements per second.
Display: 3 $^{1}/_{2}$ digit liquid crystal display (LCD) with maximum reading of 1999.
Accessories: Battery, Instruction Manual

NAME OF PARTES AND POSITIONS

① LCD Display: 3 $^{1}/_{2}$ digits with a maximum reading of 1999 and indications of minus sign "-", Data Hold "H", "°C", "°F", low battery ( ) etc.
② ON/OFF Switch: The ON/OFF key turns the thermometer on or off.
③ HOLD: Pressing the HOLD key selects DATA HOLD mode, and "H" symbol indicate on the display. Pressing the HOLD key again cancels HOLD mode. Causing the thermometer to resume taking measurements.
④ °C: Pressing the °C key select degree Celsius (°C) scales on the display.
⑤ °F: Pressing the °F key select degree Fahrenheit (°F) scales on the display.
⑥ 0.1: Pressing the 0.1 key select 0.1 degree resolution. Range from –50.0°C to 199.9°C
1.0: Pressing the 1.0 key select 1 degree resolution. Range from –50.0°C to 1300°C or –50.0°F to 1999°F
⑦ Thermocouple Input Connector



TEMPERATURE MEASUREMENT

1. Turn on the thermometer.
2. Plug the thermocouple into the thermocouple input connector
3. Set the thermometer to desired function (°C or °F scale & 0.1 or 1.0 range)
4. Perform measurements by contacting the object being measured with the probe sensor.
5. Read the temperature on the display.

WARNING
To avoid electrical shock, do not use this instrument when voltages exceeding 24V AC or 60V DC are present. The probe tip is electrically connected to the output terminals.

OPEN THERMOCOUPLE INDICATION

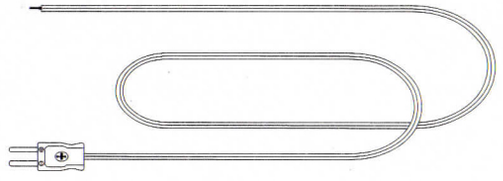
The highest digit of (1) is display if any of the following conditions occur:
1. If no thermocouple is plugged into the thermocouple input connector.
2. If the thermocouple connected to the input is broken or open-circuited.

OPTIONAL ACCESSORY

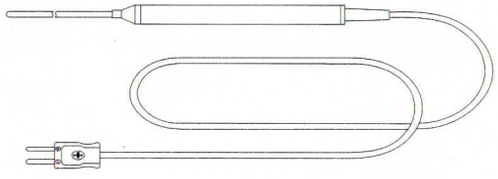
K (CA) type thermocouple.

Model	Range	Tolerances	Description
TP-K01 Bead probe	-50°C to 200°C -58°F to 392°F	±2.2°C or ± 0.75% (±3.6°F or ± 0.75%)	100cm Length, with Teflon tape insulation. Maximum insulating temperature: 260°C
TP-K02 Immersion probe	-50°C to 1000°C -58°F to 1832°F	±2.2°C or ± 0.75% (±3.6°F or ± 0.75%)	Φ3.2 × 150mm metal sheath 100cm Compensating wire
TP-K03 Surface probe	-50°C to 750°C -58°F to 1382°F	±2.2°C or ± 0.75% (±3.6°F or ± 0.75%)	100cm Compensating wire Φ12.5 × 94mm

TP-K01: Available for general condition, especially for complex and any place hard to reach.



TP-K02: Available for temperature measurement of liquid or gels.



TP-K03: Available for flat or curved surface measurement.