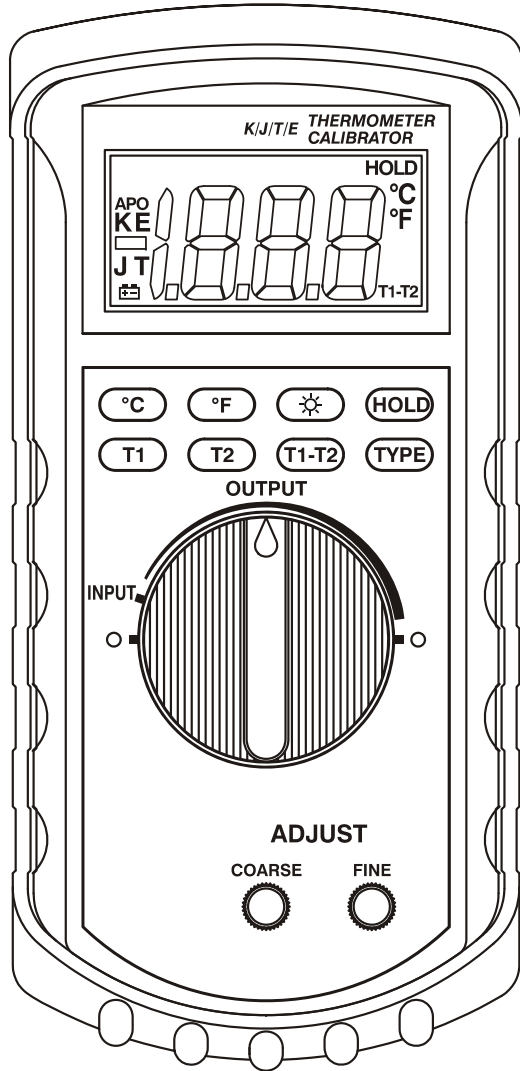


OPERATING INSTRUCTIONS

TECPEL CL 326

DIGITAL THERMOMETER



INTRODUCTION

This instrument is a 3½ digit, compact-sized portable digital thermometer designed to use external K/J/T/E type thermocouples as temperature sensor. Temperature indication follows Reference Temperature/Voltage Tables (N.I.S.T. Monograph 175 Revised to ITS-90) for K/J/T/E type thermocouples.

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 working voltages at the measurement surface over 24V AC or DC.

WARNING

To avoid damage or burns, do not make temperature measurement 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.

SPECIFICATIONS

ELECTRICAL

Temperature Scale: Celsius or Fahrenheit user-selectable.

Measurement Range:

Thermocouple	Range
K-TYPE (0.1°C)	-200°C to 1372°C, -328°F to 1999°F
J-TYPE (0.1°C)	-210°C to 1200°C, -346°F to 1999°F
T-TYPE (0.1°C)	-200°C to 400°C, -328°F to 752°F
E-TYPE (0.1°C)	-220°C to 1000°C, -364°F to 1832°F

Calibration Range:

-210°C to 1372°C, (-364°F to 1999°F)

Auto range:

0.1°C / 1°C, 0.1°F / 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.

- ±(0.1% rdg + 1°C) on -60°C to 1372°C
- ±(0.1% rdg + 2°C) on -60°C to -220°C
- ±(0.1% rdg + 2°F) on -76°F to 1999°F
- ±(0.1% rdg + 4°F) on -76°F to -364°F

ENVIRONMENTAL

Ambient Operating Ranges:

0°C to 50°C (32°F to 122°F) <80% R.H.

Storage Temperature:

-20°C to 60°C (-4°F to 140°F) <70% R.H.

GENERAL

Display:

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

Polarity:

Automatic, positive implied, negative polarity indication.

Overrange:

-OL is displayed.

Zero:

Automatic.

Reading Rate:

one time per second.

Low battery indication:

The "E" is displayed when the battery voltage drops below the operating level.

Measurement rate:

1 times/second.

Accuracy:

Stated accuracy at 23°C±5°C, <75% R.H.

Input Connector:

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

Battery Life:

100 hours typical with carbon zinc battery.

Auto power off:

The meter key switch inactive for more than 70 minutes.

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:

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

Maximum Differential Common Mode Voltage

(Maximum Voltage between T1 and T2 during measurement): 1volt.

Dimensions:

195mm(H) x 92mm(W) x 53mm(D).

Weight:

approx. 9 oz. (250g) including battery.

°C /°F Selecting the Temperature Scale

Readings is 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 or °F key.

"☼" Button

Press "☼" button to toggle on and off of backlight.

The backlight will switch-off automatically after 30 seconds.

HOLD Mode

Pressing the HOLD key to enter the Data Hold mode, the "HOLD" annunciator is displayed.

When HOLD mode is selected, the thermometer held the present readings and stops all further measurements.

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

K/J/T/E Input Thermocouple Type

The TYPE key switch the input circulating selects the K/J/T/E type thermocouple as input.

T1 T2/T1-T2 Input Selection

The input selection indicates which input is selected; T1 thermocouple, T2 thermocouple or the difference between the two thermocouples (T1-T2).

When the thermometer is turned on, it is set to the temperature input that was in use when the thermometer was last turned off.

Thermocouple Calibration

CAUTION

Must set the temperature input of this instrument to T1.

1. Set the temperature input of this instrument to T1.
2. Connect the proper thermocouple wire and miniature male SMP connector to the instrument output.
3. Connect the other end of the thermocouple wire to the instrument to be calibrated.
4. Using the range switch and the COARSE / FINE adjust knobs set the instrument to the output required as read on the LCD.

Other Type Thermocouple Calibration

(except K, J, T, E Type)


1. Connect the two proper thermocouple wires and miniature male SMP connector to the instrument output.
2. Connect the other end of one thermocouple wire to the instrument to be calibrated and other end of one thermocouple wire to the monitoring reference thermometer.
3. Using the range switch and the COARSE / FINE adjust knobs set the instrument to the output required as read on the indicating thermometer.

OPERATOR MAINTENANCE

WARNING

To avoid possible electrical shock, disconnect the thermocouple connectors from the thermometer before removing the cover.

Battery Replacement

1. Power is supplied by a 9 volt “transistor” battery. (NEDA 1604, IEC 6F22)
2. The “” appears on the LCD display when replacement is needed.
3. Remove the batteries from battery contacts.
4. When not use for long time remove battery.
5. Don't keep in place with high Temp. or high humidity.

Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.