OPERATING INSTRUCTIONS
HH501AJK
DIGITAL THERMOMETER

Press & Hold for 2 seconds
HOLD Temperature offset adjust
TYPE Disable Automatic Power-Off

THERMOCOUPLE RANGE
K-TYPE -100°C to 1372°C
(CHROMEL–ALUMEL) -150°F to 1999°F
J-TYPE -100°C to 1200°C
(IRON–CONSTANTAN) -150°F to 1999°F

According to temperature standard ITS-90
Accuracy: (18°C to 28°C ambient)
±(0.1% rdg + 1°C) on -100°C to 1372°C
±(0.1% rdg + 2°F) on -150°F to 1999°F
The accuracy specification does not include thermocouple probe accuracy.
INTRODUCTION
This instrument is a portable 3½ digit, compact-sized digital thermometer designed to use external K-type and J-type thermocouple as temperature sensor. It also has an advantage that offset of the sensor could be adjusted at environment temperature.

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 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:
- K-Type: -100°C to 1372°C, -150°F to 2502°F
- J-Type: -100°C to 1200°C, -150°F to 2192°F
Resolution: 0.1°F (Auto-Ranging)
Accuracy:
- Accuracy is specified for operating temperatures over the range of 0°C to 18°C (32°F to 64°F), for 1 year, not including thermocouple error.
- ±(0.1% rdg + 1°C) on °C
- ±(0.1% rdg + 2°F) on °F
Temperature Coefficients:
- 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.
Reading Rate:
- 2.5 times per second.
Input Connector:
- Accepts standard miniature thermocouple connectors (flat blades spaced 7.9mm, center to center).
(Smp-m type)

PACKING LIST
1. HH501AJK handheld thermometer with protective boot.
2. Teflon insulated beaded wire thermocouple.
3. 9 volt battery.

ENVIRONMENTAL
Ambient Operating Range:
- 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 maximum reading of 1999. Overload: "-OL-" is displayed.
Battery:
- Standard 9V battery (NEDA 1604, IEC 6F22 005P)
Auto Power Off:
- Approximately 30 minutes
Dimensions:
- 192mm(H) x 91mm(W) x 52.5mm(D)
Weight:
- 365g
Supplied Thermocouple:
- 4 feet type "K" thermocouple bead wire (teflon tape insulated). Maximum insulation temperature 200°C (392°F). Wire accuracy ±2.2°C @mp type male connect.
OPERATING INSTRUCTIONS

Power Button
Press the " " button to turn on or off thermometer.

°F 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" button.

* Button (Display Back-Light)
Pressing the "*" button to trigger on the Back-Light.
Pressing the "*" button again to make the Back-Light lighter and press "*" button once more to cancel the Back-Light function.
Back-Light on → lighter → Back-Light off

HOLD Button
Press the "HOLD" button to enter the Data Hold mode. The "H" annunciator is displayed at the higher-center of display.

When HOLD mode is selected, the thermometer holds the present readings and stops all further measurements.
Press the "HOLD" button again cancels HOLD mode, causing thermometer to resume taking measurements.

TYPE Button (APO)
Press "TYPE" button to select the type of °F, thermocouple "K" or "J".

Press and hold down "APO" button for 2 seconds to trigger on or off APO mode, and then APO will appear or disappear on the display.

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

When APO is enabled, power is automatically turn off if no operation for a period of time (approx. 30 minutes)

PROCEDURE OF CALIBRATION
1. It will not enter into calibration procedure at LOWBAT condition.
2. Make COM & ADJ pin short and then turn on the meter.

3. Take off the short pin when the calibration is complete then temperature measurement is workable.

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 6P22)
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.
MIN MAX Button (ENTER)

Press "MIN MAX" button to enter the MIN MAX recording mode. (displays the Maximum reading, Minimum reading, "MAX-MIN" reading stored in record mode).

Press "MIN MAX" button to cycle through the MAX, MIN, MAX-MIN. In this mode, press "HOLD" button to stop the recording of reading, all values are frozen, press again to restart recording.

To prevent accidental loss of MAX, MIN and MAX-MIN, in this mode can only be cancelled by pressing and holding down the "MIN MAX" button for 2 seconds to exit and erased recorded reading.

ADJUST THERMOCOUPLE OFFSET

1. Insert the bead wire into a known temperature (T) until the display equal to known temperature (T).
   - ex: Room temperature at 25°C
   - Ice point at 0°C
   - Boiling water at 100°C

2. Press "↑" or "↓" to add or subtract the value.

3. It can be adjusted 0±3°C.

4. Press "ENTER" button to confirm.