



# BATTERY POWERED TEMPERATURE INDICATOR

## JB-40



### OVERVIEW

The ASHE Model JB-40 Digital Battery Powered Temperature Indicator is a compact, rugged and reliable indicating instrument which is self-contained and specifically designed for accurate temperature measurement applications, in areas without power availability.

The instrument is micro-controller based and operates on battery power, having provision for two AA battery cells in parallel configuration. The Indicator accepts either a standard J or K type Thermocouple sensor at its input terminals and displays the actual temperature value calibrated in the desired units, on a linear scale. The process value is displayed on a 3-1/2 Digit seven-segment LCD digital display module.

The instrument can be calibrated on any scale range from -1999 to +1999 units. The two thermocouples are factory calibrated for a range of 0-750°C (1382°F) for J type thermocouple and 0-1000 °C (1832 °F) for K type thermocouple.

The Temperature Indicator is specifically designed to operate on minimal power consumption and provided temperature readings for extensive period on battery power alone. While the micro-controller is continuously sampling the input signal, it refreshes the display at ten-second intervals with the updated internal readings.

A Power-On switch is provided to switch off the instrument when not in use, thereby saving battery life. Further, the temperature reading is available in both, Celsius and Fahrenheit units. A switch is provided for selecting the desired unit.

The JB-40 Indicator is therefore an ideal signal unit substitute to conventional analog indicators because of its inherent accuracy in process measurement, besides other superior characteristics such as extremely low power consumption, immunity to Shocks, Dust, Ambient temperatures, Humidity and Corrosive atmospheres. Its main advantage is that it operates on minimal power, providing several months of uninterrupted indication of the measured temperature.

Further, the instrument is manufactured using selected high-grade components which guarantee its reliability and long operational life. The unit also has no moving parts, which greatly enhances its versatility.

### SPECIFICATIONS

<b>Model</b>	JB-40
<b>Type</b>	Micro-controller based Digital Battery-powered temperature Indicator
<b>Input Signal</b>	Thermocouple sensor
<b>Thermocouple type</b>	J (Fe-Ko element) K (Cr-Al element)
<b>Indication</b>	3-1/2 digit seven-segment LCD display
<b>Display Height</b>	12.5 mm (1/2")
<b>Range</b>	-1999 to +1999
<b>Calibrated Scale</b>	K-type Thermocouple (0 to 750 °C / 0-1382 °F) J-type Thermocouple (0 to 1000 °C / 0-1882 °F) Single-point factory calibration
<b>Over-Range Indication</b>	E?? [indicating "Error"]
<b>Power Supply</b>	One or two battery, type AA.
<b>Switch Selections</b>	Power (On / Off) Temperature units (°C / °F)
<b>Cold Junction compn.</b>	Provided
<b>Response Time</b>	Typically 75 mS
<b>Display Update Time</b>	10 Seconds
<b>Linearization</b>	Provided for both TC types, eight-point
<b>Resolution</b>	1 degree C/F
<b>Dimensions</b>	66 mm diameter x 30 mm thickness
<b>Execution</b>	Open execution
<b>Ambient Temperature</b>	-20 to +70 °C

### FEATURES

- Microcontroller based ultra low power consumption design
- Battery powered with standard AA batteries.
- J and K type Thermocouples
- Power switch for battery saving
- Update every 10 seconds for power saving
- Conversion between Degrees Centigrade & Fahrenheit
- High accuracy and 8-point linearity to Thermocouples
- 3-½ digit LCD display
- Very low power consumption
- Rugged, industrial grade ABS enclosure
- Compact and rugged execution
- Panel / Field / Hazardous-area installation in IP65 execution
- Available in several dimensions
- Proven record of several thousand installations
- Lifetime warranty on design and workmanship