ADVANCED INDUSTRIAL SYSTEMS, INC.

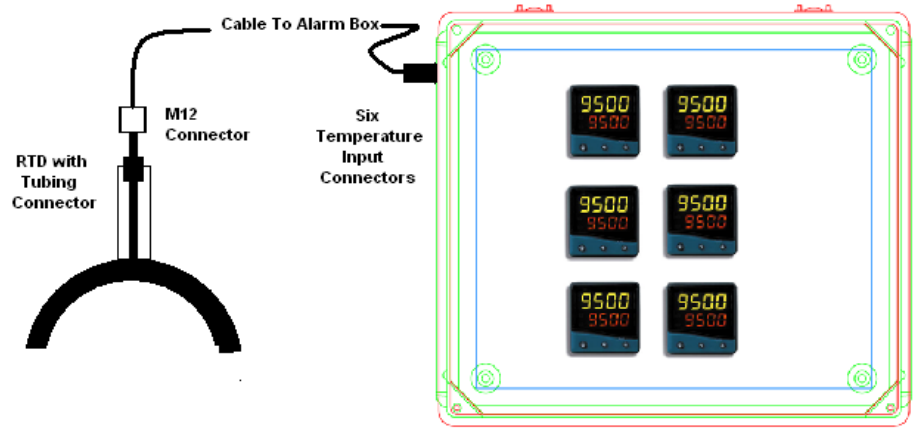
This product is obsolete. Please see App Note 809 HMI Bearing Temperature Alarm Monitor

Applications Note 808

Bearing Temperature Alarm/Monitor

A Bearing Alarm Temperature Monitoring System is used to prevent catastrophic failure and damage to rotating machinery due to bearing over-temperature. He idea is to catch and correct an overheating condition before it does permanent damage to the race, bearing or shaft.

This applications note describes a system for six temperatures. Other numbers of bearings are easily done. The system monitors the bearing temperatures and displays and alarms their values. It consists of a Temperature Sensor for each bearing and a related temperature monitor/alarm mounted in a fiberglass enclosure. The enclosure and sensor are connected by an M12 connector cable for quick assembly.



Each Temperature Monitor/Alarm has two outputs available inside the box, as well as a front panel display. When the temperature alarm is reached the front panel display lights an alarm light and opens a dry contact. The dry contact will stay open as long as the alarm condition exists.

The Temperature Monitor/Alarm also provides a 4 – 20 mA output for use by the PLC. The 4 – 20 mA output is scaled to a temperature of 0 – 200°F. This value may be altered in the field as required. An optional Modbus output is also available.

As delivered the main alarm is set to 140°F. This value may also be changed in the field. Press the ★ key then use the up and down arrows to adjust the temperature. Release the ★ key when operation is complete.

Power:

Power of 100 – 240 VAC 50 – 60 Hz is required. A terminal strip is provided for power input.

Cable Installation:

When installing the cable, make sure that the sensor end mates with the sensor (the two ends are different). Try to avoid proximity to high power devices and electrical supply lines whenever possible.

Sensor Installation:

The RTD is provided with an adjustable fitting. There is also an adapter supplied for the well (3/8" NPT to 1/4" NPT). The adapter should be installed prior to installation of the Sensor and fitting.

Add a small amount of Silicon oil to the well. This improves thermal conduction to the Temperature Sensor. Insert the Sensor into the well with the fitting still loose. Tighten the fitting into the well **(Do not tighten the nut on the sensor rod!)** Gently push the sensor into the well until it stops. Back the sensor our approximately 1/8" and tighten the sensor rod nut.

Attach the cable to the sensor.

If you have not already done so, attach the cable at the alarm box. Power the system up and note the temperature reading. It should be the temperature of the bearing.

For additional information contact: David@AdvIndSys.com .

Additional Applications Notes and Tables are available at www.AdvIndSys.com/ApplicationsNotes.htm .

Field Code Changed

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