Single Element Stator Winding RTDs

Overview

Flat, laminated “stick” RTDs fit in slots between stator windings to monitor temperature rise and prevent overheating. The National Electrical Manufacturers Association (NEMA) recognizes embedded detectors as a standard protection for motor and generator insulation. Unlike on-off devices, RTDs provide continuous sensing for earlier warning without unnecessary tripouts.

The sensing elements of stator RTDs extend through most of the body length to provide an average temperature reading. This eliminates the danger of a point-type sensor missing a localized hot spot. Six sensors are recommended for each motor, two per phase. Locate sensors near the hottest point of the windings for best performance.

Minco stator RTDs meet the specifications of ANSI C50.10-1990, general requirements for synchronous motors.

Custom designs

Minco designs and builds custom models for many applications. We offer unmatched capabilities because we control all steps of the production from element to finished product. Examples of special options include:

- Thermocouple elements
- Thermistor elements (PTC or NTC)
- Dual sensors with different elements (for example, one copper and one platinum element)
- Ex rated sensors for equipment in hazardous areas.
- Electrically conductive coating
- Special leadwire or cable

Specifications

**Temperature limit:**
- Class F: 155°C (311°F)
- Class H: 180°C (356°F).

**Body material:**
- Class F: Epoxy glass
- Class H: High temperature epoxy glass.

**Dielectric strength:** 3200 VRMS at 60 Hz, tested between the leads and external flat body surface for 1 to 5 seconds.