Increased Safety Stator Winding Temp. Sensors

Overview

Insert these thin, laminated RTDs in winding slots to detect high temperatures before insulation damage occurs. RTD temperature sensors continuously monitor conditions and provide the long term trend data that is necessary for making adjustments before unexpected alarms occur. These models are designed for use in hazardous areas, where there may be a presence of flammable gas under normal operating conditions. Strict construction guidelines prevent arcing. Certified as “increased safety” devices, these RTDs have component approval for Zone 1, Groups II A, II B, and II C.

- Pt100, Ni100, or U.S. curves
- CENELEC Ex e II certified
- Tested and certified by KEMA Quality B.V.
- EC-Type Examination Certificate KEMA 03ATEX2240 U
- Complies with European standards for electrical apparatus for potentially explosive atmospheres: ATEX Directive 94/9/EC
  - EN 60069-0: 2006, General requirements
  - EN 60079-7: 2007, Increased safety

Specifications

Temperature limit: -50 to 180°C (-58 to 356°F), class H

Body material: High temperature epoxy glass.

Leadwires: 2, 3, or 4 leads, stranded copper, AWG #22 (0.35 mm², with TFE or polyimide insulation).

Dielectric strength: 3,200 VRMS at 60 Hz, 1 mA maximum leakage current, tested momentarily (1–5 seconds), between the leads and external flat body surface.

Wire-wound or thin-film RTD element

Wire-wound RTDs, embedded in stator slots, are the most common method for measuring winding temperature in large motors. The wire-wound element extends through most of the body length and measures the average temperature of the winding.

Thin-film RTDs are identical, except for the size of the sensing element. Because the thin-film element is small, approximately 0.08” x 0.09” (2.0 mm x 2.3 mm), it senses the temperature in only one small spot of the winding. Thin-film elements are best suited for shorter length stator sensors.