BLUE PETER Series®

Stator Winding RTDs and Thermocouples

FEATURES

- Proprietary NEW Corona Resistant RTD element design
- Extensive product offering
- High Quality
- Meets ANSI C50.10-1990 specifications
- Class H and Class F
- Available through major distributors
- Short catalog number on each sensor body
- Color coded for different sensor types

APPLICATIONS

- Electric Motors
- Generators

DESCRIPTION

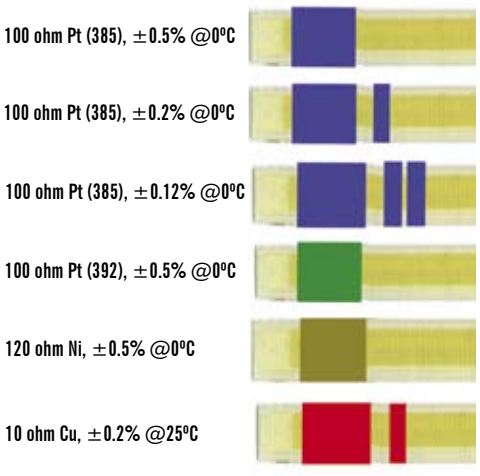
Embedded temperature monitoring of motors and generators is a long time industry accepted practice, allowing for continuous assessment of equipment condition. The embedded method of monitoring utilizes specially designed Resistance Temperature Detectors (RTDs) and Thermocouples (T/Cs) placed outside the major insulation as specified in ANSI C50-10-1990, Section 5.2.

BLUE PETER Series® temperature sensors are designed specifically to accurately sense and respond to the temperatures of the windings in motors and generators. This allows constant monitoring to assure equipment operation within design limits.

The sensing element of **BLUE PETER Series®** RTDs extends through most of the body length. The sensor design allows for averaging the measurement process over a greater portion of the slot length. This eliminates the problems related to spot sensitive sensors that can be misleading when 'hot spots' are present. Regardless of body length, the area being monitored is always maximized.

Innovation in Sensor Identification

Color Coding: BLUE PETER Series® temperature RTD sensors are color coded. This minimizes any chance of mixing two different sensor types in the same motor or generator.



Shorter Catalog Numbers: BLUE PETER Series® catalog numbers are printed on each sensor body. The numbering system is a concise eleven digits. Catalog number length and format is compatible with most popular stockroom inventory software systems…the catalog numbers fit nicely on the ID labels for your stockroom bins.

Also see: **www.bluepeterseries.com**

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PRODUCT SELECTION GUIDE

Select SENSOR TYPE (NOTE: Temperature Limits: Class H is 180°C, Class F is 155°C)

A = Class H, Pt 100 RTD (385), ±0.5% @ 0°C
B = Class H, Pt 100 RTD (385), ±0.2% @ 0°C
C = Class H, Pt 100 RTD (385), ±0.12% @ 0°C
D = Class H, Pt 100 RTD (392), ±0.5% @ 0°C
E = Class H, Cu 10 RTD ±0.2% @ 25°C,
F = Class H, Ni 120 RTD ±0.5% @ 0°C
G = Class F, Pt 100 RTD (385), ±0.5% @ 0°C
H = Class F, Pt 100 RTD (385), ±0.2% @ 0°C
J = Class F, Pt 100 RTD (385), ±0.12% @ 0°C
K = Class F, Pt 100 RTD (392), ±0.5% @ 0°C
L = Class F, Cu 10 RTD ±0.2% @ 25°C
M = Class F, Ni 120 RTD ±0.5% @ 0°C
N = Class H, "J" Thermocouple
P = Class H, "K" Thermocouple
Q = Class H, "T" Thermocouple
R = Class H, "E" Thermocouple
S = Class F, "J" Thermocouple
T = Class F, "K" Thermocouple
U = Class F, "T" Thermocouple
V = Class F, "E" Thermocouple

Dual Element Stator Sensors are also available

Specify Body LENGTH in Inches using 3-digits (i.e. 6.5" = 065, 25" = 250)

Select Body WIDTH

A = 0.219" /5.56mm
B = 0.260" /6.60mm
C = 0.305" /7.75mm
D = 0.315" /8.00mm
E = 0.344" /8.74mm
F = 0.406" /10.31mm
G = 0.455" /11.56mm
H = 0.500" /12.7mm
J = 0.563" /14.3mm
K = 0.656" /16.7mm
L = 0.750" /19.05mm
M = 0.875" /22.22mm
N = 1.000" /25.4mm

Select Body THICKNESS (NOTE: Largest Lead Wire shown below each selection)

A = 0.030"/0.76mm (30AWG)
B = 0.050"/1.3mm (26AWG)
C = 0.078"/2.0mm (22AWG)
D = 0.125"/3.175mm (18AWG)

Select Code for number of Leadwires

A = 2 wires
B = 3 wires
C = 4 wires

Specify Lead Wire LENGTH in Inches using 3-digits (i.e.36"=036, 120"=120)

Select Lead Wire Size & Insulation Material [1]Excluding Insulation

18 AWG (0.040"Diam[1])	**A** = with PTFE Insulation
20 AWG (0.032"Diam[1])	**C** = with PTFE Insulation
21 AWG (0.028"Diam[1])	**D** = with PTFE Insulation
22 AWG (0.025"Diam[1])	**E** = with PTFE Insulation
24 AWG (0.020"Diam[1])	**G** = with PTFE Insulation
26 AWG (0.016"Diam[1])	**J** = with PTFE Insulation
28 AWG (0.013"Diam[1])	**K** = with PTFE Insulation
30 AWG (0.010"Diam[1])	**L** = with PTFE Insulation

A 120 C A B 024 L

Example

Example: Class H Pt 100 RTD (385), ±0.5% @ 0°C, 3 wire, 12"L x 0.305"W x 0.030"T, with 24" 30AWG Lead Wire with PTFE Insulation

Contact us if you need a size that you do not see.

PROPRIETARY DESIGN MINIMIZES CORONA RELATED FAILURES

RTD elements used in **BLUE PETER Series®** **have a proprietary design. All are produced utilizing a patented 'Drawing Technique'.** Metal element wire (Platinum, Nickel or Copper) is meticulously placed on an element substrate. All changes in wire direction are gently curved. There are no sharp element **wire points** caused by zigzag element wire layout methods. This means there are no points that can be receptive to Corona and other sources of high frequency currents... which are often encountered in VSD related applications or where power quality is not always pristine.

BLUE PETER *A flag with a blue background and white square in the center, hoisted as a signal that the ship is about to sail. Peter is a corruption of the French partir (leave or notice of departure). The flag is hoisted to give notice to the town that any person having a money-claim may make it before the ship starts, and that all about to sail are to come on board.*