

# Increased Safety Thermal-Ribbon™ RTDs

ATEX  II 2 G Ex e IIC Gb  
IECEX Ex e IIC

## 1. Description

The Thermal-Ribbon™ Resistance Temperature Detectors (RTDs), conforming to the requirements of Minco Design Definition B212716 are intended to be built into the stator slots of rotating electrical machines, or installed within protective locations or enclosures in other equipment, in types of protection Ex e II, Ex p II or Ex d II C.

Versions for 2-, 3- or 4-wire measurement circuits are available.

Operating temperature range: -50°C to +185°C

## 2. Electrical Data

Measuring current:  $\leq 10$  mA  
Power (under fault conditions):  $\leq 1,5$  W  
Test voltage dielectric strength test: 500 V r.m.s., duration 1 minute

## 3. Mounting Instructions

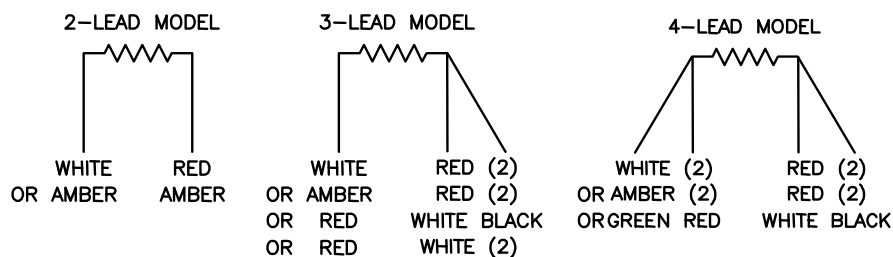
Type of protection Increased safety "e" for the Resistance Temperature Detectors is obtained by the construction of the measuring element and its fit in slots of the stator windings of rotating electrical machines, or within protective enclosures in other equipment, in type of protection increased safety "e" per EN 60079-7, flameproof enclosure "d" per EN 60079-10r pressurized apparatus "p" per EN 60079-2.

For type of protection increased safety "e", the Resistance Temperature Detector, mounted in the rotating electrical machine, must be subjected to the dielectric strength tests, required for the rotating electrical machine.

The temperature detector must be installed in such a way that it is protected against mechanical danger.

The leads of the Resistance Temperature Detector, for connection to the measuring circuit, must be connected to suitable Ex e terminals in a suitable Ex e enclosure.

## 4. Electrical Connections - RTD Connections



## 5. Attestation

### Attestation Of Conformity

Thermal-Ribbon™ Resistance Temperature Detectors (RTDs), Type:

All models conforming to the requirements of Design Definition B212716.

The products defined above conform to:

EN 60079-0: 2009 Explosive atmospheres - Part 0: Equipment - General requirements

EN 60079-7: 2007 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

IEC 60079-0: 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements

IEC 60079-7: 2006-07 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

Certificate LCIE 13 ATEX 3022 U

Certificate IECEx LCIE 13.0019 U

LCIE Bureau Veritas (0081)

33, avenue du Général Leclerc

92260 Fontenay-aux-Roses, FRANCE



09 January 2014

B.A. Larson, Senior Product Engineer

#### Minco Global Headquarters

7300 Commerce Lane  
Minneapolis, MN 55432 USA  
Tel: 1.763.571.3121  
Fax: 1.763.571.0927  
custserv@minco.com  
www.minco.com

#### Minco Europe

Usine et Service  
Commercial, Z.I.  
09310 Aston, France  
Tel: (33) 5 61 03 24 01  
Fax: (33) 5 61 03 24 09  
custserv.europe@minco.com

#### Minco Asia Pacific

Level 26, PSA Building  
460 Alexandra Road  
Singapore 119963  
Tel: (65) 6809 3081  
Fax: (65) 6809 3050  
custserv.ap@minco.com

ISO 9001:2008

AS9100:2009

© Minco 2016

SPI 00-0491 (Rev A)

ECO # N/A

IFS # 1889233



Flex Circuits  
Thermofoil™  
Heaters  
Sensors  
Instruments