



## **GLASS WIRE WOUND SENSOR TYPE GX**

RTD Temperature Sensor

### SPECIFICATIONS

- **Temperature sensor**
- **Large temperature range**  
From -200°C to +400°C
- **No hysteresis**
- **High vibrations resistant**
- **Resistant to external forces and pressures**
- **Small dimensions**
- **High temperature stability**
- **Short response time**

One or two platinum bands layout are wounded on a glass tube and are protected from environment by a glass layer

## GLASS WIRE WOUND SENSOR TYPE GX

RTD Temperature Sensor

### FEATURES

- Nominal value: 100  $\Omega$  at 0°C  
Tolerance according to IEC 60751: class W 0.3, W 0.15 and W 0.1  
Temperature coefficient  $\alpha = 3850$  ppm/K  
Closer tolerances in restricted temperature range
- Connection wires: Platinum coated nickel
- The lead wires connection is pull up force resistant
- Housing advise: To be used preferably in dry environment
- Options: - Lead wires length  
- Extension cable

### APPLICATIONS

- Environments subject to high vibrations
- Cryogenics
- Accurate temperature measurement with high temperature gradient
- Limited mounting space required
- Food industry
- H.V.A.C.

### PERFORMANCE SPECIFICATIONS

| Type   | Designation | Reference  | Nominal reference<br>(Ohm at 0°C) | L WL D AL1 AL2 A<br>(Dimensions in mm) |      |                  |      |    |      | Self-heating in air<br>(K/mW) | Response time (s) |      |    |    |
|--|-------------|------------|-----------------------------------|--|------|------------------|------|----|------|-------------------------------|-------------------|------|----|----|
|  |             |            |                                   | Water<br>v = 0,4 m/s                   |      | Air<br>v = 1 m/s |      |    |      |                               |                   |      |    |    |
|  |             |            |                                   | t0,5                                   | t0,9 | t0,5             | t0,9 |    |      |                               |                   |      |    |    |
| <b>Tolerance Class W 0.3 = <math>\pm (0.3+0.005 \text{ Itl})</math> From -196°C to + 400°C</b>   |             |            |                                   |  |      |                  |      |    |      |                               |                   |      |    |    |
| 1Pt100   | GX 518      | 32 205 108 | 100                               | 5                                      | 3    | 1,8              | 10   | -  | 0,20 | 0,36                          | 0,14              | 0,35 | 8  | 30 |
| 1Pt100   | GX 1013     | 32 205 113 | 100                               | 10                                     | 6    | 1,3              | 10   | -  | 0,20 | 0,39                          | 0,4               | 1,30 | 4  | 12 |
| 1Pt100   | GX 1018     | 32 205 118 | 100                               | 10                                     | 6    | 1,8              | 10   | -  | 0,20 | 0,36                          | 0,14              | 0,35 | 8  | 30 |
| 1Pt100   | GX 1218     | 34 015 120 | 100                               | 12                                     | 3    | 1,8              | 6    | -  | 0,20 | 0,36                          | 0,14              | 0,35 | 8  | 30 |
| 1Pt100   | GX 1513     | SB0921     | 100                               | 15                                     | 6    | 1,3              | 10   | -  | 0,20 | 0,39                          | 0,4               | 1,3  | 4  | 12 |
| 2Pt100   | GX 1528     | 32 205 228 | 100                               | 15                                     | 7    | 2,8              | 10   | 12 | 0,25 | 0,20                          | 0,3               | 1,0  | 12 | 45 |
| <b>Tolerance Class W 0.15 = <math>\pm (0.15+0.002 \text{ Itl})</math> From -100°C to + 250°C</b> |             |            |                                   |  |      |                  |      |    |      |                               |                   |      |    |    |
| 1Pt100   | GX 518      | 32 205 074 | 100                               | 5                                      | 3    | 1,8              | 10   | -  | 0,20 | 0,36                          | 0,14              | 0,35 | 8  | 30 |
| 1Pt100   | GX 1013     | 32 205 458 | 100                               | 10                                     | 6    | 1,3              | 10   | -  | 0,20 | 0,39                          | 0,4               | 1,30 | 4  | 12 |
| 1Pt100   | GX 1218     | 34 015 121 | 100                               | 12                                     | 3    | 1,8              | 6    | -  | 0,20 | 0,36                          | 0,14              | 0,35 | 8  | 30 |
| 1Pt100   | GX 1513     | SB0920     | 100                               | 15                                     | 6    | 1,3              | 10   | -  | 0,20 | 0,39                          | 0,4               | 1,3  | 4  | 12 |
| 2Pt100   | GX 1528     | 32 205 241 | 100                               | 15                                     | 7    | 2,8              | 10   | 12 | 0,25 | 0,20                          | 0,3               | 1,0  | 12 | 45 |
| <b>Tolerance Class W 0.1 = <math>\pm (0.1+0.0017 \text{ Itl})</math> From 0°C to + 150°C</b>     |             |            |                                   |  |      |                  |      |    |      |                               |                   |      |    |    |
| 1Pt100   | GX 518      | 32 205 101 | 100                               | 5                                      | 3    | 1,8              | 10   | -  | 0,20 | 0,36                          | 0,14              | 0,35 | 8  | 30 |
| 1Pt100   | GX 1013     | 32 205 463 | 100                               | 10                                     | 6    | 1,3              | 10   | -  | 0,20 | 0,39                          | 0,4               | 1,3  | 4  | 12 |
| 1Pt100   | GX 1218     | 34 015 123 | 100                               | 12                                     | 3    | 1,8              | 6    | -  | 0,20 | 0,36                          | 0,14              | 0,35 | 8  | 30 |
| 1Pt100   | GX 1513     | SB0919     | 100                               | 15                                     | 6    | 1,3              | 10   | -  | 0,20 | 0,39                          | 0,4               | 1,3  | 4  | 12 |

## GLASS WIRE WOUND SENSOR TYPE GX

RTD Temperature Sensor

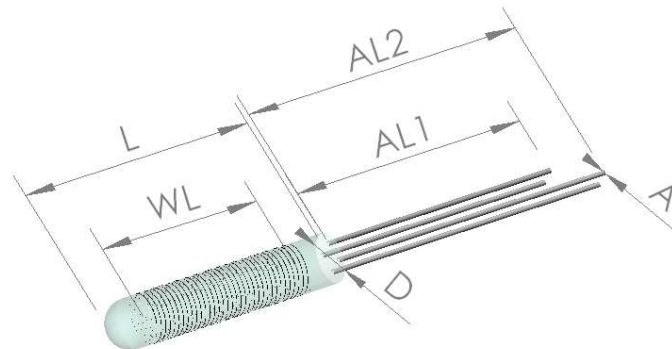
### VALUES FOR PT100

| °C   | Ohms   | Ohms/°C | °C  | Ohms   | Ohms/°C |
|------|--------|---------|-----|--------|---------|
| -200 | 18.52  | 0.432   | 150 | 157.33 | 0.374   |
| -150 | 39.72  | 0.417   | 200 | 175.86 | 0.368   |
| -100 | 60.26  | 0.405   | 250 | 194.10 | 0.362   |
| -50  | 80.31  | 0.397   | 300 | 212.05 | 0.356   |
| 0    | 100    | 0.391   | 350 | 229.72 | 0.350   |
| 50   | 119.40 | 0.385   | 400 | 247.09 | 0.345   |
| 100  | 138.51 | 0.379   |     |        |         |

### BLOCK DIAGRAM

#### DIMENSIONAL TOLERANCES:

|                              |               |
|------------------------------|---------------|
| L (length of body)           | = ± 1mm       |
| D (diameter of body)         | = +0,1;-0,3mm |
| AL (connection wire length)  | = ± 2mm       |
| A (connection wire diameter) | = ± 0,02 mm   |



### ORDERING INFORMATION

#### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
910 Turnpike Road  
Shrewsbury, MA 01545  
United States  
+1 508-842-0516  
+1 508-842-0342  
temperature.cs.amer@meas-spec.com

#### EUROPE

Measurement Specialties (Europe), Ltd.,  
a TE Connectivity Company  
48, rue de Frégy  
77610 Fontenay Trésigny  
France  
Tel: +33(0) 1 64 42 52 52  
Fax: +33(0) 1 64 42 63 17  
sales.ftny.fr@meas-spec.com

#### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
No. 24 Langshan Road  
Shenzhen High-Tech Park (North)  
Nanshan District, Shenzhen 518057  
China  
Tel: +86 755 3330 5088  
Fax: +86 755 3330 5099  
temperature.cs.asia@meas-spec.com

#### TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.