



## 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

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### 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{ ltl})</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{ ltl})</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{ ltl})</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 |

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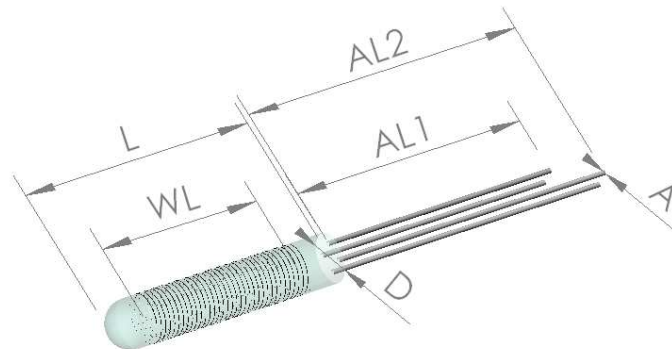
### VALUES FOR PT100

| °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

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