GE
Sensing

Features

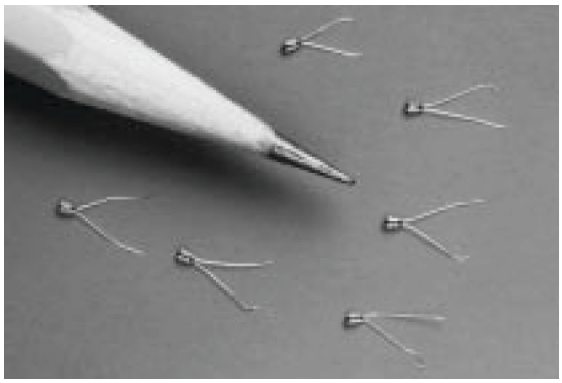
Type GC32
Large glass-encapsulated chip thermistors on fine diameter, plantinum alloy, lead-wires.

- Lower cost alternative to glass encapsulated bead thermistors
- Suitable for high volume, low cost temperature measurement, control or compensation applications
- Fast thermal response times
- Suitable for self-heated applications such as liquid level sensing or gas flow measurement
- Recommended for all applications where the customer will perform further assembly operations
- Normal operating/storage temperatures range from -112°F to 572°F (-80°C to 300°C)
- Unaffected by severe environmental exposures, including nuclear radiation
- Intermittent operation up to 842°F (450°C) is permissible, however, stability will be degraded.
- Improved beta tolerance with respect to glass encapsulated beads

NTC Type GC32

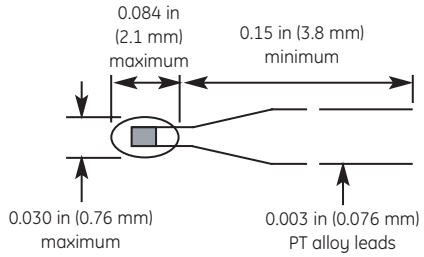
Thermometrics Glass Encapsulated Chip Thermistors

NTC Type GC32 is a Thermometrics product. Thermometrics has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.



GE
Sensing

Type GC32 Specifications



Type GC32 dimensions

Thermal and Electrical Properties

The following lists the thermal and electrical properties for all large, glass-encapsulated thermistors. All definitions and test methods per MIL-PRF-23648.

Body Dimensions
- Nominal diameter: 0.032 in (0.81 mm)
- Maximum diameter: 0.033 in (0.84 mm)
- Maximum length: 0.084 in (2.1 mm)

Lead-Wires
- Nominal diameter: 0.003 in (0.08 mm)
- Maximum lead length: 0.150 in (3.8 mm)
- Lead material: platinum alloy
- Available cuts: "K" adjacent only

Material System

Table A

Code Letter	R vs T Curve	25/125 Ratio	Nominal Resistance Range at 77°F (25°C) GC32
A	GC1	11.9	300 to 1000 Ω
A	GC2	14.7	1000 to 3000 Ω
A	GC3	21.1	3000 to 20,000 Ω
F	GC4	27.8	20 to 100 kΩ
H	GC5	28.2	100 to 200 kΩ
G	GC6	36.4	200 to 600 kΩ
D	GC7	42.3	600 to 1500 kΩ
D	GC8	50.2	1500 to 5000 kΩ

Thermal Time Constant
- Still air at 77°F (25°C): 4.5 second
- Plunge into water: 90 msec

Dissipation Constant
- Still air at 77°F (25°C): 0.28 mW/°C
- Still water at 77°F (25°C): 1.4 mW/°C

Power Rating (In Air)
- Maximum Power Rating: 0.035 W
- 100% Maximum Power To: 302°F (150°C)
- Derated to 0% at: 572°F (300°C)

Options
- Non-standard resistance tolerances
- Non-standard resistance values
- Reference temperature(s) other than 77°F (25°C)– specify
- Mounting in special housings or enclosures
- Welded or soldered extension leads. (Specify lead material, diameter, length, and insulation, if any.)
- Leads can be pre-tinned or treated for improved soldering
- Calibration (Specify temperature(s).)
- Interchangeable pairs or sets, R vs T curve matching (Specify temperature range(s) and tolerance(s).)
- Special aging and conditioning for high reliability applications

Ordering Information

The code number to be ordered may be specified as follows:

Code **Type**
GC — Glass encapsulated chip structure

Code **Diameter**
32 — 32 mils

Code **Lead Configuration**
K — Adjacent leads only

Code **Material System Code**
X — See table A for code number

Code **Power**
X — Zero-power resistance as 77°F (25°C) (see below for code number)

Code **Tolerance***
F 1
G 2
J 5
K 10
L 15
M 20
S Non-standard (consult factory)

GC - ___ - ___ - ___ - ___ - ___ - ___ **Typical model number**

Special tolerances are available upon request. Consult factory for special resistance tolerances, non-standard resistances and/or non-standard temperatures.

**The zero-power resistance at 77°F (25°C), expressed in Ω, is identified by a three digit code number. The first two digits represent significant figures, and the last digit specifies the number of zeros to follow. Example: 10k Ω= "103". The standard resistance values are from the 24-Value series decade as specified in Military Standard MS90178.*
1.0 / 1.1 / 1.2 / 1.3 / 1.5 / 1.6 / 1.8 / 2.0 / 2.2 / 2.4 / 2.7 / 3.0
3.3 / 3.6 / 3.9 / 4.3 / 4.7 / 5.1 / 5.6 / 6.2 / 6.8 / 7.5 / 8.2 / 9.1

920-310A

www.gesensing.com