

## Features

- Designed for over-current protection in demanding applications e.g. line protection
  - Conformance to CCITT K20 (selected types)
  - Operation at high voltage and current levels
  - Excellent resistance stability
  - Resistance matching
  - Fail-safe operation
  - Operation under harsh environment conditions e.g. damp heat up to 185°F (85°C), 85% RH
  - Solid state
  - Range of termination materials
  - Compatible with all common PCB assembly techniques
  - Supplied on bandolier (tape and reel)
  - No heat treatment required after soldering
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## PTC Type YS

### Thermometrics High Performance Protection Devices

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



# Type YS Specifications

## Description

A range of high performance PTC thermistors designed primarily for protection of telecommunication systems and other demanding applications. Devices are available in unleaded, leaded and SMD formats.

## Options

- Non-standard resistances and tolerances
- Special current handling requirements
- Alternative termination configurations

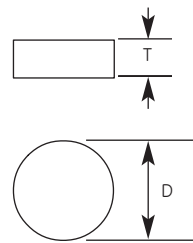


Fig 1

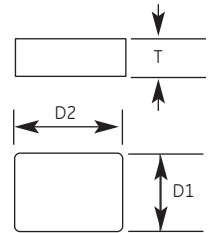


Fig 2

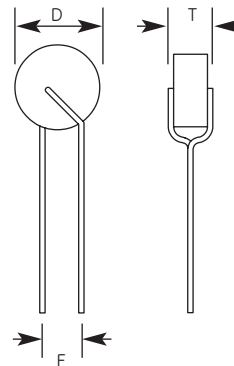


Fig 3

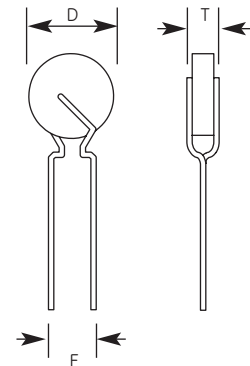


Fig 4

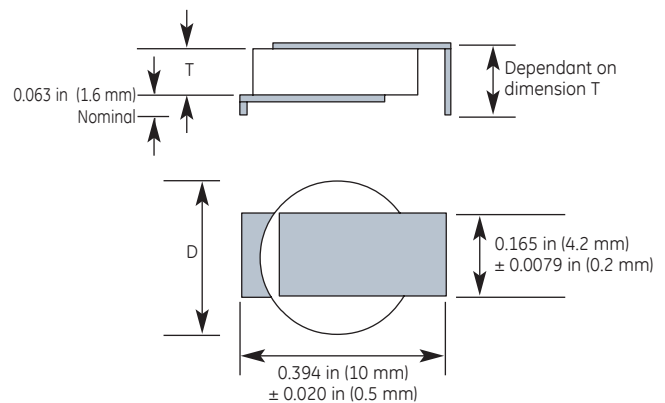


Fig 5

PTC Type YS Dimensions

# Type YS Specifications

## Wired Disc

| Code    | Fig | R <sub>25</sub> | R <sub>25</sub><br>Tolerance | R <sub>25</sub><br>Matching | V <sub>max</sub> | Non-Trip<br>Current  |      | Trip Current        |      | Trip Time 77°F (25°C) |                        | D max    | T max | F nom |
|---------|-----|-----------------|------------------------------|-----------------------------|------------------|----------------------|------|---------------------|------|-----------------------|------------------------|----------|-------|-------|
|         |     | Ω               |                              |                             | V rms            | I <sub>tr</sub> (mA) | T °C | I <sub>t</sub> (mA) | T °C | I initial (mA)        | t <sub>s</sub> max (s) | mm       | mm    | mm    |
| YS4245  | 1   | 10              | ±20%                         |                             | 250              | 160                  | 25   | 300                 | 25   | 1000                  | 3.5                    | 8.2      | 2.1   | -     |
| YS4295  | 1   | 10              | ±20%                         | 1Ω                          | 250              | 160                  | 25   | 300                 | 25   | 1000                  | 3.5                    | 8.2      | 2.1   | -     |
| YS3515  | 1   | 10              | ±20%                         | 0.5Ω                        | 265              | 100                  | 70   |                     |      |                       |                        | 8.5      | 2.45  | -     |
| YS4220  | 1   | 17.5            | ±14%                         | 0.5Ω                        | 250              | 120                  | 25   | 220                 | 25   | 1000                  | 1.1                    | 6.7      | 2.1   | -     |
| YS4247  | 1   | 20              | +10/-20%                     |                             | 250              | 115                  | 25   | 220                 | 25   | 1000                  | 2.2                    | 8.2      | 2.1   | -     |
| YS4296  | 1   | 20              | +10/-20%                     | 1Ω                          | 250              | 115                  | 25   | 220                 | 25   | 1000                  | 2.2                    | 8.2      | 2.1   | -     |
| YS4269  | 1   | 25              | ±20%                         |                             | 250              | 100                  | 25   | 200                 | 25   | 1000                  | 2                      | 8.2      | 2.1   | -     |
| YS3516  | 1   | 25              | ±20%                         | 1Ω                          | 265              | 70                   | 70   |                     |      |                       |                        | 8.5      | 2.45  | -     |
| YS2713  | 2   | 8.5             | ±17%                         | 0.4Ω                        | 250              | 150                  | 65   |                     |      | 450                   | 80                     | 7.4x11.4 | 2.8   | -     |
| YS3219  | 2   | 17.5            | ±2.5Ω                        | 2Ω                          | 250              | 150                  | 20   |                     |      | 1000                  | 5                      | 7.4x11.4 | 2.85  | -     |
| YS2544  | 3   | 14.7            | ±7%                          | 0.5Ω                        | 250              | 80                   | 70   |                     |      | 1000                  | 8                      | 10.9     | 8     | 5.00  |
| YS949   | 3   | 25              | ±20%                         | 2%                          | 245              | 65                   | 85   |                     |      | 650                   | 3.4                    | 5.4      | 2.6   | 5.08  |
| YS2827  | 3   | 25              | ±20%                         | 2%                          | 245              | 70                   | 70   | 170                 | 25   | 700                   | 8                      | 11       | 5     | 5.08  |
| YS3424  | 3   | 25              | ±20%                         | 2%                          | 600              | 70                   | 70   | 170                 | 25   |                       |                        | 8.5      | 4     | 5.00  |
| YS3854  | 3   | 30              | ±20%                         | 0.8Ω                        | 250              | 60                   | 85   |                     |      | 620                   | 1.7                    | 7        | 4.3   | 5.00  |
| YS3419  | 3   | 35              | ±20%                         | 0.8Ω                        | 245              | 60                   | 85   |                     |      | 620                   | 1.7                    | 7        | 4.3   | 5.00  |
| YS2880  | 3   | 35              | ±20%                         | 3Ω                          | 600              | 70                   | 70   | 350                 | 0    | 1000                  | 5                      | 8        | 5.5   | 5.08  |
| YS3418  | 3   | 35              | ±20%                         |                             | 425              | 70                   | 70   | 350                 | 0    | 1000                  | 5                      | 8        | 4.2   | 5.08  |
| YS2132  | 4   | 10              | ±20%                         | 1Ω                          | 245              | 140                  | 55   |                     |      | 350                   | 180                    | 11       | 4     | 5.08  |
| YS956   | 4   | 15              | +17/-13%                     | 2%                          | 245              | 92                   | 85   |                     |      | 400                   | 44                     | 9.5      | 6     | 5.08  |
| YS936   | 4   | 16              | ±20%                         |                             | 245              | 140                  | 55   |                     |      |                       |                        | 11       | 4     | 5.08  |
| YS2716  | 4   | 20              | ±20%                         | 1Ω                          | 245              | 150                  | 70   | 300                 | 10   |                       |                        | 11       | 6     | 5.08  |
| YS2909  | 4   | 25              | ±15%                         | 1Ω                          | 245              | 70                   | 70   | 220                 | 25   | 220                   | 60                     | 8.2      | 3.8   | 5.08  |
| YS2715  | 4   | 33              | ±20%                         | 1Ω                          | 245              | 75                   | 70   | 150                 | 10   |                       |                        | 7.5      | 6     | 5.08  |
| YS3962  | 4   | 40              | ±15%                         | 1Ω                          | 245              | 70                   | 70   |                     |      |                       |                        | 8.2      | 3.8   | 5.08  |
| YS850   | 4   | 70              | +10/-15%                     |                             | 245              | 60                   | 70   |                     |      | 200                   | 60                     | 6.4      | 2.6   | 5.08  |
| YS896   | 4   | 70              | +10/-15%                     | 3Ω                          | 245              | 60                   | 70   |                     |      | 200                   | 60                     | 5.4      | 2.6   | 5.08  |
| YSM3980 | 5   | 10              | ±15%                         | 2%                          | 265              | 173                  | 25   | 257                 | 25   |                       |                        | 8.35     | 2.4   | -     |
| YSM3981 | 5   | 12              | ±15%                         | 2%                          | 265              | 158                  | 25   | 235                 | 25   |                       |                        | 8.35     | 2.4   | -     |
| YSM3982 | 5   | 15              | ±15%                         | 2%                          | 265              | 141                  | 25   | 210                 | 25   |                       |                        | 8        | 2     | -     |
| YSM3018 | 5   | 18              | ±2Ω                          |                             | 245              | 140                  | 40   |                     |      | 5000                  | 0.42                   | 8        | 1.6   | -     |
| YSM3068 | 5   | 18              | ±2Ω                          | 0.8Ω                        | 300              | 108                  | 70   | 300                 | 0    | 1000                  | 1.5                    | 8        | 1.6   | -     |
| YSM3983 | 5   | 20              | ±15%                         | 2%                          | 265              | 122                  | 25   | 182                 | 25   |                       |                        | 8        | 1.6   | -     |

The above table illustrates the typical range of specifications currently available. All these types have been designed to meet unique customer requirements. To discuss your specific application, please contact your local Thermometrics sales office.

|                  |                                  |
|------------------|----------------------------------|
| R <sub>25</sub>  | Resistance at 77°F (25°C)        |
| V <sub>max</sub> | Maximum operating voltage        |
| I <sub>max</sub> | Nominal trip current             |
| I <sub>nt</sub>  | Maximum current without tripping |
| I <sub>t</sub>   | Minimum trip current             |
| I <sub>mo</sub>  | Maximum overload current         |



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920-340A

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