

## Type TE Series

### Key Features

- Mullite Coated
- Up to 2500W Power Rating
- Corrugated Ribbon Element for Rapid Cooling
- 3x Overload for 5 Seconds
- Custom Terminations / Leads Available
- Flameproof Construction

### Applications

- Large Electrical and Production Machinery
- Load Test Simulation
- Motor Start/Stop Cycles
- Dynamic Braking
- Equipment Discharge



TE Connectivity is a leading supplier of standard and custom-designed power resistors for industrial, control and general- purpose applications.

The TE range of Mullite coated tubular ceramic core resistors have a corrugated ribbon element for rapid cooling effect to enable up to 2500W power handling capability. Designed for heavy duty machinery, electrical equipment, motor control etc. requiring stability and reliability.

### Test Method - Electrical

| Test Item              | Specification                      | Test Details                     |
|------------------------|------------------------------------|----------------------------------|
| Life (Moisture Load):  | 40°C 95% RH 1000 hour on-off cycle | $\Delta R \pm 3.0\%$             |
| Short Term Overload:   | 3 x rated wattage, 5 seconds       | -                                |
| Flammability:          | 16x rated power, 5 minutes         | No Flames                        |
| Insulation Resistance: | DC 500V                            | Over 100M $\Omega$               |
| Voltage Resistibility: | AC 2500V 1 minute                  | Free of damage or flying arc     |
| Resistor Strength:     | 200N, 30 seconds                   | Free of visible damage           |
| Terminal Strength:     | Ual: 45N, 30 seconds               | Free of visible damage           |
|                        |                                    | $R \leq \pm (1\%R + 0.05\Omega)$ |

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### Specifications- Electrical

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Resistance Range (Ohms) | See Resistance Range Chart below                  |
| Selection Series        | E12                                               |
| Tolerance               | +/-5%, +/-10% as per Resistance Range Chart below |

| Type  | Resistance Value | Tolerance |
|-------|------------------|-----------|
| 50W   | R10 – R99        | 10%       |
|       | 1R0 – 2K7        | 5%        |
| 60W   | R10 – R99        | 10%       |
|       | 1R0 – 2K7        | 5%        |
| 80W   | R10 – R99        | 10%       |
|       | 1R0 – 2K7        | 5%        |
| 100W  | 1R0 – 2K7        | 5%        |
| 120W  | 1R0 – 2K7        | 5%        |
| 150W  | 1R0 – 2K7        | 5%        |
| 200W  | 1R0 – 2K7        | 5%        |
| 300W  | 1R0 – 2K7        | 5%        |
| 400W  | 1R0 – 2K7        | 5%        |
| 500W  | 1R0 – 2K7        | 5%        |
| 600W  | 1R0 – 2K7        | 5%        |
| 750W  | 1R0 – 2K7        | 5%        |
| 1000W | 1R0 – 2K7        | 5%        |
| 1200W | 1R0 – 2K7        | 5%        |
| 1500W | 1R0 – 2K7        | 5%        |
| 2000W | 1R0 – 2K7        | 5%        |
| 2500W | 1R0 – 2K7        | 5%        |

### Characteristics - Environmental

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Temperature Coefficient of Resistance: | Within $\pm 440\text{ppm}/^{\circ}\text{C}$ |
| Rated Power Free Air:                  | 50 to 2500 Watts                            |
| Operating Temperature Range            | -25°C to +225°C                             |

### Derating Curve



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### Temperature Rise



### Dimensions



| Rated Power (W) | Dimensions |         |         |        |     |    |    |         |    |     |     |
|-----------------|------------|---------|---------|--------|-----|----|----|---------|----|-----|-----|
|                 | L1 (±2)    | L2 (±5) | L3 (±3) | D (±2) | B   | B1 | H  | H1 (±3) | N  | d   | O   |
| 50              | 102        | 124     | 146     | 28     | 6.5 | 28 | 28 | 61      | 10 | 4.5 | 1.2 |
| 60              | 102        | 124     | 146     | 28     | 6.5 | 28 | 28 | 61      | 10 | 4.5 | 1.2 |
| 80              | 152        | 174     | 196     | 28     | 6.5 | 28 | 28 | 61      | 10 | 4.5 | 1.2 |
| 100             | 182        | 204     | 226     | 28     | 6.5 | 28 | 28 | 61      | 10 | 4.5 | 1.2 |
| 120             | 182        | 204     | 226     | 28     | 6.5 | 28 | 28 | 61      | 10 | 4.5 | 1.2 |
| 150             | 195        | 217     | 239     | 40     | 8   | 40 | 41 | 81      | 12 | 5.5 | 2.0 |
| 200             | 195        | 217     | 239     | 40     | 8   | 40 | 41 | 81      | 12 | 5.5 | 2.0 |
| 300             | 282        | 304     | 326     | 40     | 8   | 40 | 41 | 81      | 12 | 5.5 | 2.0 |
| 400             | 282        | 304     | 326     | 40     | 8   | 40 | 41 | 81      | 12 | 5.5 | 2.0 |
| 500             | 316        | 338     | 360     | 50     | 8   | 50 | 45 | 101     | 16 | 6   | 2.0 |
| 600             | 345        | 367     | 389     | 40     | 8   | 40 | 41 | 81      | 12 | 5.5 | 2.0 |
| 750             | 316        | 338     | 360     | 50     | 8   | 50 | 45 | 101     | 16 | 6   | 2.0 |
| 1000            | 300        | 325     | 350     | 60     | 8.5 | 60 | 60 | 119     | 16 | 6   | 2.0 |
| 1200            | 415        | 440     | 465     | 60     | 8.5 | 60 | 60 | 119     | 16 | 6   | 2.0 |
| 1500            | 415        | 440     | 465     | 60     | 8.5 | 60 | 60 | 119     | 16 | 6   | 2.0 |
| 2000            | 510        | 535     | 560     | 60     | 8.5 | 60 | 60 | 119     | 16 | 6   | 2.0 |
| 2500            | 600        | 625     | 650     | 60     | 8.5 | 60 | 60 | 119     | 16 | 6   | 2.0 |

### How to Order

| TE                                  | 50                                                                     | B                                                  | 1K0                                                                                                                             | J                   |
|-------------------------------------|------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Common Part                         | Power Rating                                                           | Mounting                                           | Resistance Value                                                                                                                | Tolerance           |
| TE - High Power Wire Wound Resistor | 50 - 50 Watt<br>60 - 60 Watt<br>80 - 80 Watt<br>100 - 100 Watt<br>etc. | A - Without Bracket<br>B - With Bracket (Standard) | 1 ohm<br>(1000 milliohms)<br>1R0<br>10 ohm (10 ohms)<br>10R<br>100R ohms<br>(100 ohms)<br>100R<br>1k ohms<br>(1000 ohms)<br>1K0 | J - ±5%<br>K - ±10% |

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