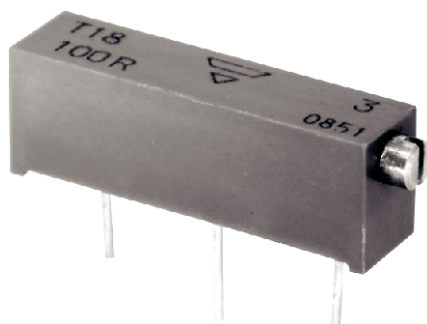


## 3/4" Rectangular Multi-Turn Cermet Trimmer



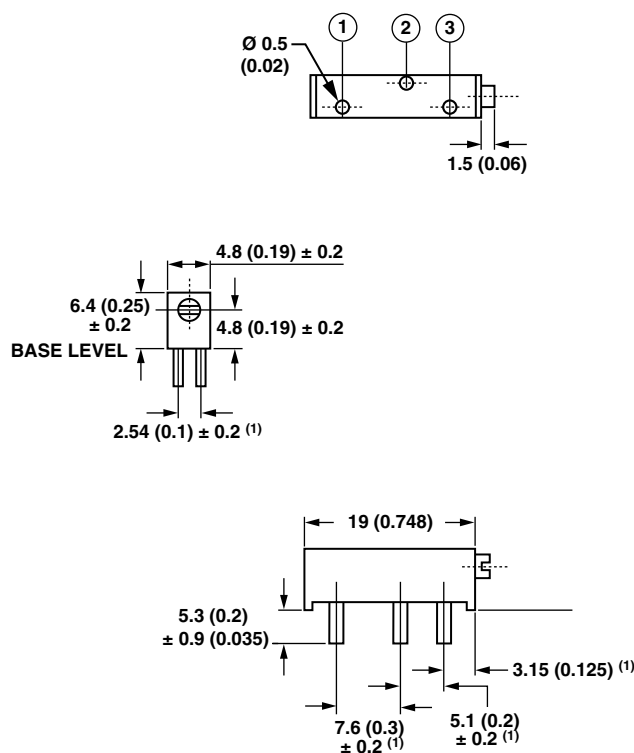
### FEATURES

- 0.75 W at 70 °C
- Wide ohmic range (10  $\Omega$  to 5 M $\Omega$ )
- Multi-finger wiper for better CRV
- Tests according to CECC 41000 or IEC 60393-1
- Industrial grade
- Compliant to RoHS Directive 2002/95/EC

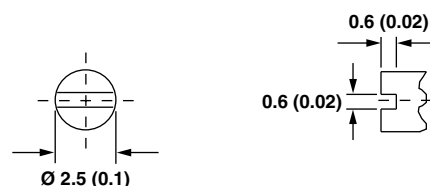


**RoHS**  
COMPLIANT

### DIMENSIONS in millimeters ( $\pm 0.5$ mm)



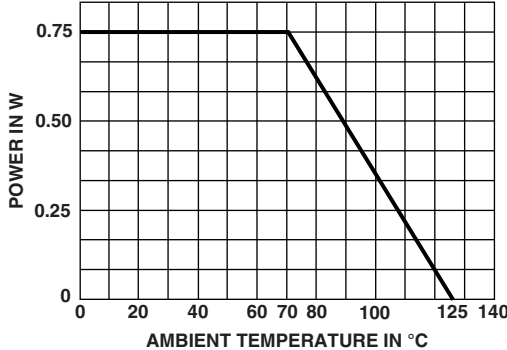
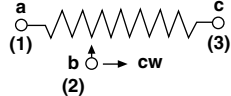
### SHAFT



### Note

<sup>(1)</sup> To be measured at base level

**ELECTRICAL SPECIFICATIONS**

|  |   |
|--|---|
| Resistive element                            | Cermet  |
| Electrical travel                            | 15 turns $\pm$ 1  |
| Resistance range                             | 10 $\Omega$ to 5 M $\Omega$   |
| Standard series E3                           | 1 - 2.2 - 4.7 and 1 - 2 - 5   |
| Tolerance                                    | Standard $\pm$ 10 %   |
|  | On request $\pm$ 5 %  |
| Power rating                                 | Linear<br>0.75 W at + 70 °C<br> |
| Circuit diagram                              |                                |
| Temperature coefficient                      | See Standard Resistance Element table   |
| Limiting element voltage (linear law)        | 400 V   |
| Contact resistance variation                 | 1 % R <sub>n</sub> or 1 $\Omega$ max.   |
| End resistance                               | 1 % or 2 $\Omega$   |
| Dielectric strength (RMS)                    | 1000 V  |
| Insulation resistance (500 V <sub>DC</sub> ) | 10 <sup>3</sup> M $\Omega$ min.   |

**MECHANICAL SPECIFICATIONS**

|                             |                            |
|-----------------------------|----------------------------|
| Mechanical travel           | 18 turns $\pm$ 5           |
| Operating torque (max. Ncm) | 3.5                        |
| End stop torque             | Clutch action              |
| Net weight (max. g)         | 1.2                        |
| Wiper (actual travel)       | Positioned at approx. 50 % |
| Terminals                   | e3: Pure Sn                |

**ENVIRONMENTAL SPECIFICATIONS**

|                   |                     |
|-------------------|---------------------|
| Temperature range | - 55 °C to + 125 °C |
| Climatic category | 55/125/56           |
| Sealing           | Fully sealed - IP67 |

| PERFORMANCES        |  |   |  |
|---------------------|--|---|--|
| TESTS               | CONDITIONS   | TYPICAL VALUES AND DRIFTS   |  |
|                     |  | $\Delta R_T/R_T$ (%)  | $\Delta R_{1-2}/R_{1-2}$ (%)                 |
| Load life           | 1000 h at rated power<br>90'/30' - ambient temp. 70 °C   | ± 4 %<br>Contact res. variation: < 3 % Rn   | -  |
| Climatic sequence   | Phase A dry heat 125 °C<br>Phase B damp heat<br>Phase C cold - 55 °C<br>Phase D damp heat 5 cycles | ± 0.5 %   | ± 1 %  |
| Long term damp heat | 56 days  | ± 3 %<br>Dielectric strength: 1000 V <sub>RMS</sub><br>Insulation resistance: > 20 MΩ | ± 1 %  |
| Rapid temp. change  | 5 cycles<br>- 55 °C to + 125 °C  | ± 0.5 %   | $\Delta V_{1-2}/\Delta V_{1-3} \leq \pm 2$ % |
| Shock               | 50 g at 11 ms<br>3 successive shocks<br>in 3 directions  | ± (2 % + 3 Ω)   | ± 2 %  |
| Vibration           | 10 Hz to 55 Hz<br>0.75 mm or 10 g<br>during 6 h  | ± 2 %   | $\Delta V_{1-2}/\Delta V_{1-3} \leq \pm 2$ % |
| Rotational life     | 200 cycles   | ± (3 % + 3 Ω)<br>Contact res. variation: < 2 % Rn                                     | -  |

| STANDARD RESISTANCE ELEMENT DATA |                           |                            |                       |                                       |
|----------------------------------|---------------------------|----------------------------|-----------------------|---------------------------------------|
| STANDARD<br>RESISTANCE<br>VALUES | LINEAR LAW                |                            |                       | TYPICAL<br>TCR<br>- 55 °C<br>+ 125 °C |
|                                  | MAX.<br>POWER<br>AT 70 °C | MAX.<br>WORKING<br>VOLTAGE | MAX.<br>WIPER<br>CUR. |                                       |
| Ω                                | W                         | V                          | mA                    | ppm/°C                                |
| 10                               | 0.75                      | 2.74                       | 274                   | ± 100                                 |
| 22                               | 0.75                      | 4.06                       | 185                   |                                       |
| 47                               | 0.75                      | 5.94                       | 126                   |                                       |
| 100                              | 0.75                      | 8.66                       | 87                    |                                       |
| 220                              | 0.75                      | 12.8                       | 58                    |                                       |
| 470                              | 0.75                      | 18.8                       | 40                    |                                       |
| 1K                               | 0.75                      | 27.4                       | 27                    |                                       |
| 2.2K                             | 0.75                      | 40.6                       | 18                    |                                       |
| 4.7K                             | 0.75                      | 59.4                       | 13                    |                                       |
| 10K                              | 0.75                      | 86.6                       | 8.7                   |                                       |
| 22K                              | 0.75                      | 128                        | 5.8                   |                                       |
| 47K                              | 0.75                      | 188                        | 4.0                   |                                       |
| 100K                             | 0.75                      | 274                        | 2.7                   |                                       |
| 220K                             | 0.75                      | 400                        | 1.8                   |                                       |
| 470K                             | 0.34                      | 400                        | 0.85                  |                                       |
| 1M                               | 0.16                      | 400                        | 0.40                  |                                       |
| 2.2M                             | 0.07                      | 400                        | 0.18                  |                                       |
| 4.7M                             | 0.03                      | 400                        | 0.09                  |                                       |

**MARKING**

- Vishay trademark
- Vishay part number or model and ohmic value (in Ω, kΩ, MΩ)
- Manufacturing date
- Marking of terminal 3

**PACKAGING**

- In tube of 25 pieces code T10 (TU25)



| ORDERING INFORMATION (Part Number) |   |                                      |   |   |                                |   |                         |   |   |  |  |
|------------------------------------|---|--------------------------------------|---|---|--------------------------------|---|-------------------------|---|---|--|--|
| T                                  | 1 | 8                                    | 2 | 2 | 4                              | K | T                       | 1 | 0   |  |  |
| Model                              |   | OHMIC VALUE                          |   |   | TOLERANCE                      |   | PACKAGING               |   | SPECIAL NUMBER  |  |  |
| T18                                |   | From<br>10 Ω to 5 MΩ<br>224 = 220 kΩ |   |   | K = 10 %<br>On request J = 5 % |   | T10 = Tube<br>25 pieces |   | (If applicable)<br>Given by Vishay<br>for custom design |  |  |

| DESCRIPTION (for information only) |       |           |           |             |
|------------------------------------|-------|-----------|-----------|-------------|
| T18                                | 220K  | ± 10 %    | TU25      | e3          |
| MODEL                              | VALUE | TOLERANCE | PACKAGING | LEAD FINISH |



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