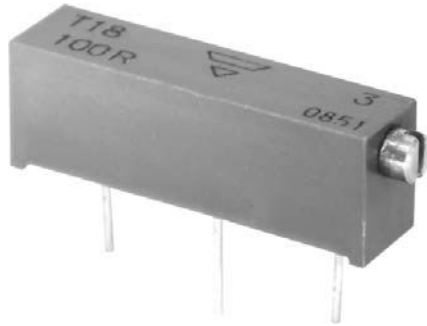


## 3/4" Rectangular Multi-Turn Cermet Trimmer



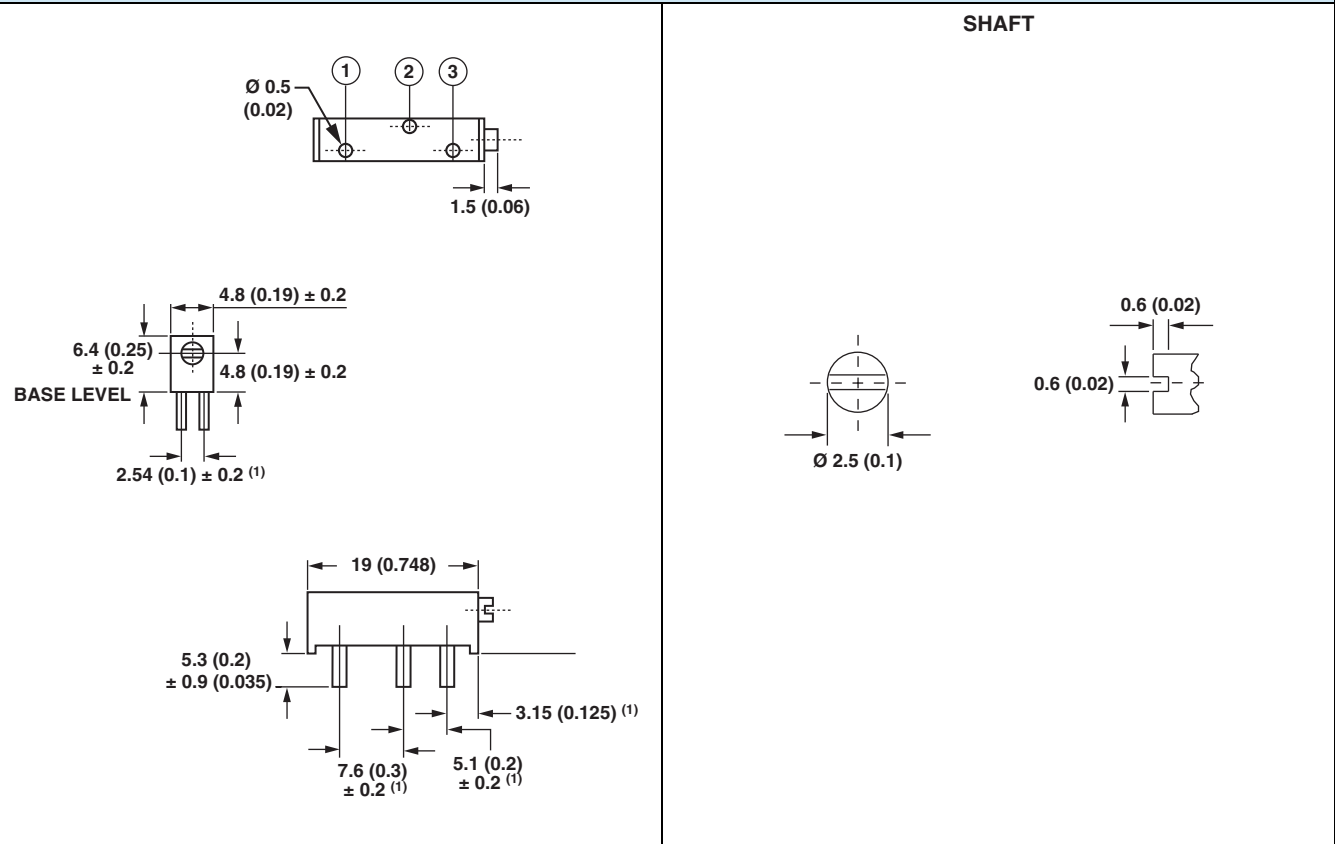
### FEATURES

- 0.75 W at 70 °C
- Wide ohmic range (10 Ω to 5 MΩ)
- 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 (± 0.5 mm)



**Note**

(1) To be measured at base level

| <b>ELECTRICAL SPECIFICATIONS</b>             |                                       |
|----------------------------------------------|---------------------------------------|
| 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 %                   |
| 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.       |

| <b>MECHANICAL SPECIFICATIONS</b> |                            |
|----------------------------------|----------------------------|
| 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                |

| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                     |
|-------------------------------------|---------------------|
| 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 RESISTANCE VALUES       | LINEAR LAW          |                      |                 | TYPICAL TCR<br>- 55 °C<br>+ 125 °C |
|                                  | MAX. POWER AT 70 °C | MAX. WORKING VOLTAGE | MAX. WIPER 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                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Vishay trademark</li> <li>• Vishay part number or model and ohmic value (in Ω, kΩ, MΩ)</li> <li>• Manufacturing date</li> <li>• Marking of terminal 3</li> </ul> |

| PACKAGING                                                                                |
|------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• In tube of 25 pieces code T10 (TU25)</li> </ul> |



| 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 %  |   | 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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