

# 1/4" Square Single-Turn Cermet Sealed Trimmer



## FEATURES

- Industrial grade
- Fully sealed
- Miniature package
- Rotor designed for automatic machine adjust interface
- Withstands harsh environments and immersion cleaning process
- Tests according to CECC 41000 or IEC 60393-1
- Compliant to RoHS Directive 2002/95/EC


**RoHS**  
COMPLIANT

| DIMENSIONS in millimeters ( $\pm 0.25$ mm)   |                     |                     |
|--|---------------------|---------------------|
| <p><b>Common dimensions</b><br/>Top adjust<br/>T73Y</p> <p>Cruciform slot <math>\text{Ø } 3</math><br/>long 2.77, wide 0.64 - deep 0.89</p>  | <p><b>T73YP</b></p> | <p><b>T73YE</b></p> |
|  | <p><b>T73YU</b></p> | <p><b>T73YB</b></p> |
| <p><b>Common dimensions</b><br/>Side adjust<br/>T73X</p> <p>Cruciform slot <math>\text{Ø } 3</math><br/>long 2.77, wide 0.64 - deep 0.89</p> | <p><b>T73XX</b></p> | <p><b>T73XH</b></p> |
|  | <p><b>T73XW</b></p> | <p><b>T73XF</b></p> |

| <b>ELECTRICAL SPECIFICATIONS</b>             |  |
|--|--|
| Resistive element                            | Cermet   |
| Electrical travel                            | 240° nominal   |
| Resistance range                             | 10 Ω to 2 MΩ   |
| Standard series                              | 1 - 2 - 5  |
| Tolerance standard                           | 10 %   |
| Power rating                                 | linear<br>0.5 W at + 70 °C<br>                                   |
| Circuit diagram                              |  |
| Temperature coefficient                      | ± 100 ppm/°C   |
| Limiting element voltage                     | 300 V  |
| Contact resistance variation                 | 1 % R <sub>n</sub> or 3 Ω max. whichever is greater              |
| Absolute minimum resistance                  | 1 % R <sub>n</sub> or 2 Ω max. whichever is greater              |
| Adjustability                                | ± 0.05 % voltage<br>± 0.15 % resistance                          |
| Resolution                                   | infinite   |
| Insulation resistance (500 V <sub>DC</sub> ) | 10 <sup>3</sup> MΩ minimum                                       |
| Dielectric strength                          | 900 V <sub>AC</sub> sea level<br>350 V <sub>AC</sub> 80 000 feet |

| <b>MECHANICAL SPECIFICATIONS</b> |                   |
|----------------------------------|-------------------|
| Mechanical travel                | 270°              |
| Operating torque (max. Ncm)      | 2.1               |
| End stop torque (max. Ncm)       | 4.9               |
| Unit weight (max. g)             | 0.6               |
| Terminals                        | Pure Sn (code e3) |

| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                     |
|-------------------------------------|---------------------|
| Temperature range                   | - 55 °C to + 125 °C |
| Climatic category                   | 55/100/56           |
| Sealing                             | Fully sealed - IP67 |



| PERFORMANCES    |                              |                           |   |
|-----------------|------------------------------|---------------------------|---|
| TESTS           | CONDITIONS                   | TYPICAL VALUES AND DRIFTS |   |
| Load life       | 1000 h - 0.5 W at + 70 °C    | $\Delta R_T/R_T$ (%)      | CRV < 3 $\Omega$ or 3 %<br>whichever is greater |
|                 |                              | 3 %                       |   |
| Shock           | 100 g                        | $\pm 1$ %                 | $\Delta V/V \leq \pm 1$ %                       |
| Vibration       | 30 g                         | $\pm 1$ %                 | $\Delta V/V \leq \pm 1$ %                       |
| Humidity        | MIL-STD202 method 103 - 96 h | $\pm 2$ %                 | i.R. 10 M $\Omega$                              |
| Rotational life | 200 cycles                   | $\pm 4$ %                 | CRV < 3 $\Omega$ or 3 %<br>whichever is greater |

| STANDARD RESISTANCE ELEMENT DATA |                     |                      |                    |  |
|----------------------------------|---------------------|----------------------|--------------------|--|
| STANDARD RESISTANCE VALUES       | LINEAR LAW          |                      |                    | TYPICAL TCR<br>- 55 °C<br>+ 125 °C<br>ppm/°C |
|                                  | MAX. POWER AT 70 °C | MAX. WORKING VOLTAGE | MAX. WIPER CURRENT |  |
| $\Omega$                         | W                   | V                    | mA                 |  |
| 10                               | 0.50                | 2.2                  | 224                | ± 100  |
| 20                               | 0.50                | 3.2                  | 160                |  |
| 50                               | 0.50                | 5.0                  | 100                |  |
| 100                              | 0.50                | 7.1                  | 70                 |  |
| 200                              | 0.50                | 10.0                 | 50                 |  |
| 500                              | 0.50                | 15.8                 | 32                 |  |
| 1K                               | 0.50                | 22.4                 | 22                 |  |
| 2K                               | 0.50                | 31.6                 | 16                 |  |
| 5K                               | 0.50                | 50                   | 10                 |  |
| 10K                              | 0.50                | 70.7                 | 7.1                |  |
| 20K                              | 0.50                | 100                  | 5.0                |  |
| 50K                              | 0.50                | 158.1                | 3.2                |  |
| 100K                             | 0.50                | 223.6                | 2.2                |  |
| 200K                             | 0.45                | 300                  | 1.5                |  |
| 500K                             | 0.18                | 300                  | 0.60               |  |
| 1M                               | 0.09                | 300                  | 0.30               |  |
| 2M                               | 0.05                | 300                  | 0.15               |  |

| MARKING   |
|---|
| <ul style="list-style-type: none"> <li>• Vishay trademark</li> <li>• Resistance code</li> <li>• Terminal numbers</li> <li>• Date code</li> <li>• Model</li> </ul> |

| PACKAGING   |
|---|
| <ul style="list-style-type: none"> <li>• In tube of 50 pieces code T20 (TU50)</li> <li>• On request: Tape and reel for style YU, code R32 (TR750) and style XW code R15 (TR1000)</li> </ul> |



| ORDERING INFORMATION (Part Number) |  |   |   |  |   |   |  |   |   |   |   |   |  |  |  |
|------------------------------------|--|---|---|--|---|---|--|---|---|---|---|---|--|--|--|
| T                                  | 7  | 3 | Y | P  | 5 | 0 | 4  | K | T   | 2 | 0 |   |  |  |  |
| MODEL                              | STYLE  |   |   | OHMIC VALUE                                  |   |   | TOLERANCE                                    |   | PACKAGING   |   |   | SPECIAL NUMBER  |  |  |  |
| T73                                | XF<br>XH<br>XW<br>XX<br>YB<br>YE<br>YM<br>YP<br>YU |   |   | From<br>10 Ω to 2.2 MΩ<br><b>103</b> = 10 kΩ |   |   | <b>K</b> = 10 %<br>on request <b>J</b> = 5 % |   | <b>T20</b> = Tube<br>50 pieces<br>On request:<br>R15 = reel 1000<br>pieces for style XW<br>R32 = Reel 750 for<br>style YU |   |   | (If applicable)<br>Given by<br>Vishay<br>for custom<br>design |  |  |  |

| DESCRIPTION (for information only) |       |       |           |           |             |
|------------------------------------|-------|-------|-----------|-----------|-------------|
| T73                                | YP    | 500K  | 10 %      | TU        | e3          |
| MODEL                              | STYLE | VALUE | TOLERANCE | PACKAGING | LEAD FINISH |



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