

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

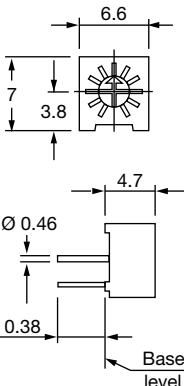
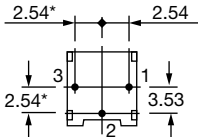
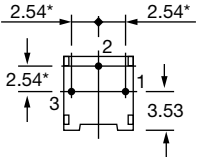
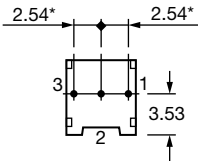
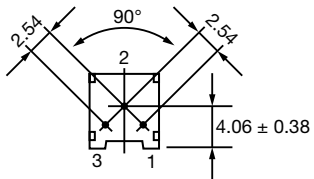
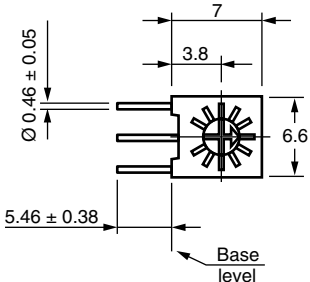
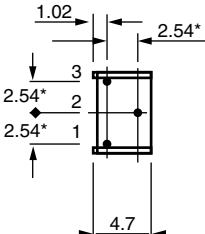
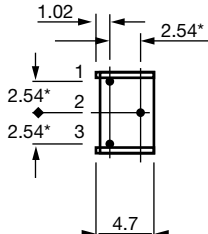
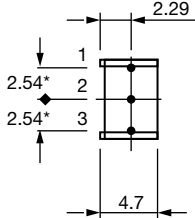
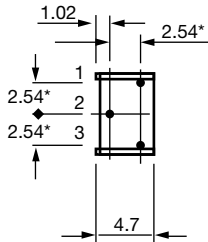


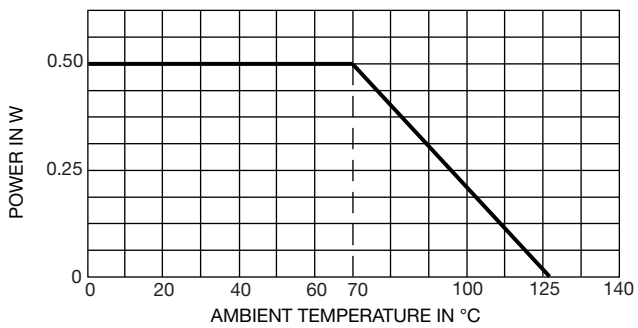
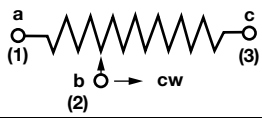
## FEATURES

- 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)                                                                                                                                                                                                 |                                                                                                     |                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Common dimensions</b><br><b>Top adjust</b><br><b>T73Y</b><br> <p>Cruciform slot <math>\varnothing 3</math><br/>long 2.77, wide 0.64 - deep 0.89</p>   | <b>T73YP</b><br>   | <b>T73YE</b><br>   |
|                                                                                                                                                                                                                                            | <b>T73YU</b><br> | <b>T73YB</b><br> |
| <b>Common dimensions</b><br><b>Side adjust</b><br><b>T73X</b><br> <p>Cruciform slot <math>\varnothing 3</math><br/>long 2.77, wide 0.64 - deep 0.89</p> | <b>T73XX</b><br> | <b>T73XH</b><br> |
|                                                                                                                                                                                                                                            | <b>T73XW</b><br> | <b>T73XF</b><br> |

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

| MECHANICAL SPECIFICATIONS   |                   |
|-----------------------------|-------------------|
| 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) |

| ENVIRONMENTAL SPECIFICATIONS |                     |
|------------------------------|---------------------|
| 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<br>RESISTANCE<br>VALUES | LINEAR LAW             |                         |                       | TYPICAL<br>TCR<br>- 55 °C<br>+ 125 °C |
|----------------------------------|------------------------|-------------------------|-----------------------|---------------------------------------|
|                                  | MAX. POWER<br>AT 70 °C | MAX. WORKING<br>VOLTAGE | MAX. WIPER<br>CURRENT |                                       |
| $\Omega$                         | W                      | V                       | mA                    | ppm/°C                                |
| 10                               | 0.50                   | 2.2                     | 224                   | $\pm 100$                             |
| 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**

- Vishay trademark
- Resistance code
- Terminal numbers
- Date code
- Model

**PACKAGING**

- In tube of 50 pieces code T20 (TU50)
- On request: Tape and reel for style YU, code R32 (TR750) and style XW code R15 (TR1000)



| 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 $\Omega$ to 2.2 M $\Omega$<br>103 = 10 k $\Omega$ |   |   | K = 10 %<br>on request J = 5 % |   | T20 = 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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