COMPLIANT



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Vishay Sfernice

# 3/4" Rectangular Multi-Turn Cermet Trimmer



#### **FEATURES**

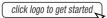
• 0.75 W at 70 °C



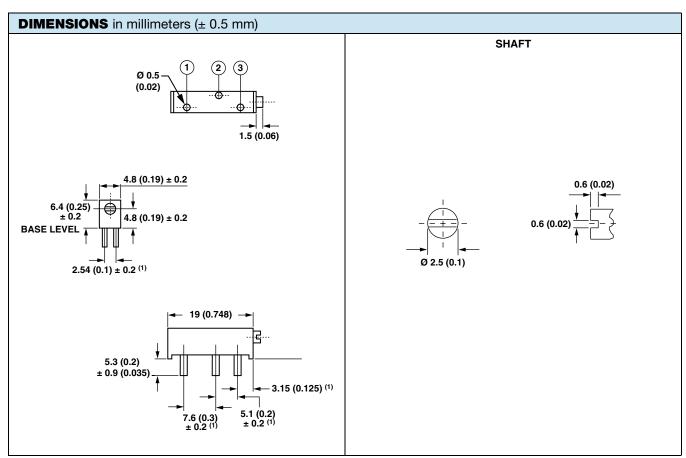
• Wide ohmic range (10  $\Omega$  to 5  $\text{M}\Omega)$ 

- Multi-finger wiper for better CRV
- Tests according to CECC 41000 or IEC 60393-1
- · Industrial grade
- Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>

### **DESIGN SUPPORT TOOLS**







Note

(1) To be measured at base level

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Resistive element	Cermet		
Electrical travel	15 turns ± 1		
Resistance range	10 $\Omega$ to 5 M $\Omega$		
Standard series E3	1 - 2.2 - 4.7 and 1 - 2 - 5		
Tolerance Stand	ard ± 10 %		
Lin	0.75 W at +70 °C		
Power rating	0.75  N 0.50  0.25  0 20 40 60 70 80 100 125 140  AMBIENT TEMPERATURE IN °C		
Circuit diagram	$ \begin{array}{c} \stackrel{a}{\circ} \longrightarrow & \stackrel{c}{\circ} \longrightarrow & \stackrel{c}{\circ} \\ \stackrel{(1)}{\circ} \longrightarrow & \stackrel{c}{\circ} \longrightarrow & \stackrel{c}{\circ} \\ \stackrel{(2)}{\circ} \longrightarrow & \stackrel{c}{\circ} \longrightarrow \longrightarrow & \stackrel{c}{\circ} \longrightarrow \longrightarrow & \stackrel{c}{\circ} \longrightarrow \longrightarrow$		
Temperature coefficient	See Standard Resistance Element table		
Limiting element voltage (linear law)	400 V		
Contact resistance variation	1 % Rn or 1 Ω max.		
End resistance	1 % or 2 Ω		
Dielectric strength (RMS)	1000 V		
Insulation resistance (500 V <sub>DC</sub> )	$10^3\mathrm{M}\Omega$ min.		

MECHANICAL SPECIFICATIONS			
Mechanical travel	18 turns ± 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 55/125/4		
Sealing	Fully sealed - IP67	

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PERFORMANCES					
TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS			
		$\Delta R_{T}/R_{T}$ (%)	∆V <sub>1-2</sub> /V <sub>1-3</sub> (%)	OTHER	
Load life	1000 h at rated power 90'/30' - ambient temp. 70 °C	± 4 %	-	-	
Damp heat steady state	4 days	± 3 %	-	Dielectric strength: 1000 $V_{RMS}$ Insulation resistance: > 20 $M\Omega$	
Rapid temp. change	5 cycles -55 °C to +125 °C	± 0.5 %	± 2 %	-	
Shock	50 g at 11 ms 3 successive shocks in 3 directions	± 2 %	± 2 %	-	
Vibration	10 Hz to 55 Hz 0.75 mm or 10 g during 6 h	± 2 %	± 2 %	-	
Rotational life	200 cycles	± (3 % + 1 Ω)	-	Contact res. variation: < 1 % Rn	

#### Note

· Nothing stated herein shall be construed as a guarantee of quality or durability

STANDARD RESISTANCE ELEMENT DATA					
STANDARD		TYPICAL			
RESISTANCE VALUES	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. WIPER CURRENT	TCR -55 °C to +125 °C	
Ω	W	٧	mA	ppm/°C	
10	0.75	2.74	274		
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	. 100	
10K	0.75	86.6	8.7	± 100	
22K	0.75	128	5.8		
47K	0.75	188	4		
100K	0.75	274	2.7		
220K	0.75	400	1.8		
470K	0.34	400	0.85		
1M	0.16	400	0.4		
2.2M	0.07	400	0.18		
4.7M	0.03	400	0.09		

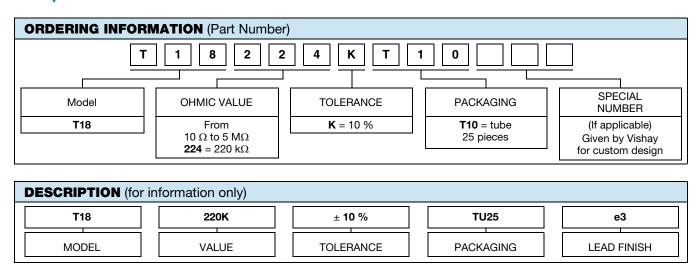
### **MARKING**

- Vishay trademark
- Vishay part number or model and ohmic value (in  $\Omega$ ,  $k\Omega$ ,  $M\Omega$ )
- Manufacturing date
- Marking of terminal 3

### **PACKAGING**

• In tube of 25 pieces code T10 (TU25)

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RELATED DOCUMENTS			
APPLICATION NOTES			
Potentiometers and Trimmers	www.vishay.com/doc?51001		
Guidelines for Vishay Sfernice Resistive and Inductive Components	www.vishay.com/doc?52029		



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