## Vishay Spectrol

# 3/8" Square (10 mm) Multi-Turn Cermet Trimmer



#### **FEATURES**

Industrial grade

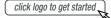


• 0.5 W at 70 °C

COMPLIANT

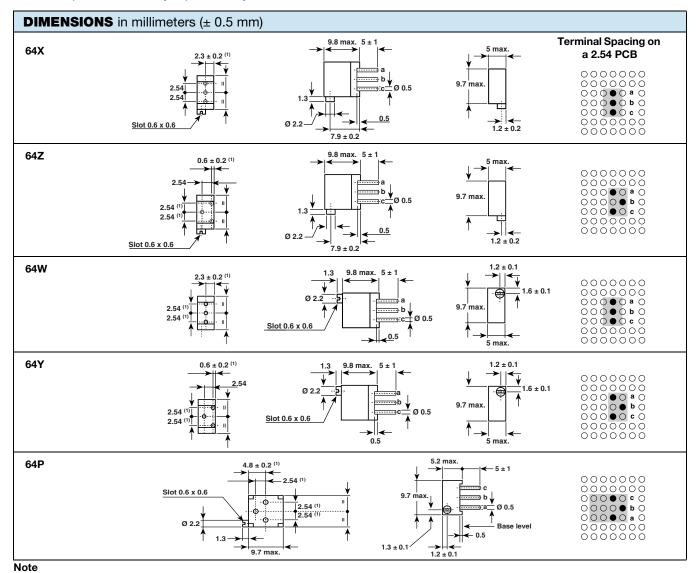
- Tests according to CECC 41000 or IEC 60393-1
- Contact resistance variation < 2 %
- Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>

#### **DESIGN SUPPORT TOOLS**





The Model 64 is a small size trimmer - 3/8" x 3/8" x 3/16" - answering PC board mounting requirements. Five versions are available which differ by the position of the control screw in relation to the PC board plane and by the spacing of the terminals. Excellent operational stability is provided by the use of a cermet element.



Revision: 26-Jan-18 Document Number: 57028



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#### (1) To be measured at base level

ELECTRICAL SPECIFICA	ATIONS			
Resistive element		Cermet		
Electrical travel		21 turns ± 2		
Resistance range		10 $\Omega$ to 2.2 M $\Omega$		
Standard series E3		1 - 2 - 2.5 - 5		
Tolerance	Standard	10 %		
Tolerance	On request	5 %		
linear		0.5 W at +70 °C		
Power rating		0.5  N H G H H H H H H H H H H H H H H H H H		
Circuit diagram		$ \begin{array}{ccc} a & & & c \\ & & & \\ (1) & & b & \rightarrow & cw \\ & & & (2) \end{array} $		
Temperature coefficient				
Limiting element voltage (linear law) 250 V		250 V		
Contact resistance variation		2 % Rn or 2 $\Omega$		
End resistance (typical)		1 Ω		
Dielectric strength (RMS)		1000 V		
Insulation resistance (500 V <sub>DC</sub> )		$10^6\mathrm{M}\Omega$		

MECHANICAL SPECIFICATIONS		
Mechanical travel	23 turns ± 5	
Operating torque (max. Ncm)	1.5	
End stop torque	Clutch action	
Net weight	Approx. 0.82 g	
Wiper (actual travel)	Positioned at approx. 50 %	
Terminals	Pure Sn (code e3)	

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



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STANDARD RESISTANCE ELEMENT DATA				
STANDARD	LINEAR LAW			TYPICAL
RESISTANCE VALUES	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CURRENT THROUGH WIPER	TCR -55 °C +125 °C
Ω	W	V	mA	ppm/°C
10 20 50 100 200 250 500 1K 2K 2.5K 5K 10K 20K 25K 50K 100K 200K 250K 500K	0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	2.2 3.2 5 7.1 10 11.2 15.8 22.4 31.6 35.4 50 70.7 100 112 158 224 250 250 250 250	224 158 100 71 50 45 32 22 16 14 10 7.1 5 4.5 3.2 2.2 1.3 1 0.5 0.25 0.13	± 100

PERFORMANCES				
TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS		
	CONDITIONS	$\Delta R_{T}/R_{T}$ (%)	$\Delta R_{1-2}/R_{1-2}$ (%)	
Load life	1000 h at rated power 90'/30' - ambient temp. 70 °C	± 1 % Contact res. variation: < 1 % Rn	± 2 %	
Climatic sequence	Phase A dry heat 125 °C - 30 % Pr Phase B damp heat Phase C cold -55 °C Phase D damp heat 5 cycles	± 0.5 %	± 1 %	
Long term damp heat	56 days 40 °C, 93 % RH	$\pm~0.5~\%$ Dielectric strength: 1000 $V_{RMS}$ Insulation resistance: $>10^4~\text{M}\Omega$	± 1 %	
Rapid temperature change	5 cycles -55 °C to +125 °C	± 0.5 %	$\Delta V_{1-2}/\Delta V_{1-3} \le \pm 1 \%$	
Shock	50 g at 11 ms 3 successive shocks in 3 directions	± 0.1 %	± 0.2 %	
Vibration	10 Hz to 55 Hz 0.75 mm or 10 g during 6 h	± 0.1 %	$\Delta V_{1-2}/\Delta V_{1-3} \le \pm \ 0.2 \%$	
Rotational life	200 cycles	± 4 % Contact res. variation: < 1 % Rn	-	

#### Note

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

### **MARKING**

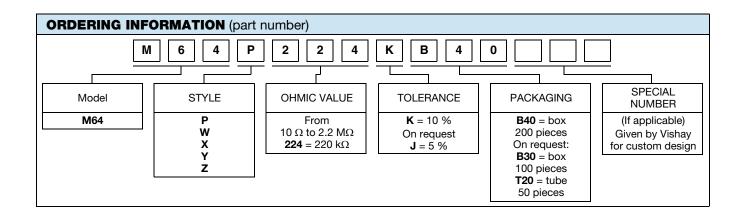
- Vishay trademark
- Model
- Style
- Ohmic value (in  $\Omega$ ,  $k\Omega$ ,  $M\Omega$ )
- Tolerance (in %)
- Manufacturing date
- Marking of terminal 3

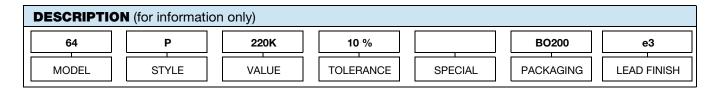


## www.vishay.com Vishay Spectrol

#### **PACKAGING**

- In box of 200 pieces code B40 (BO200) On request:
- In box of 100 pieces code B30 (BO100)
- In tube of 50 pieces code T20 (TU50)





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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