COMPLIANT

## Vishay Sfernice



## 3/8" Square Panel Potentiometer Miniature - Cermet - Fully Sealed

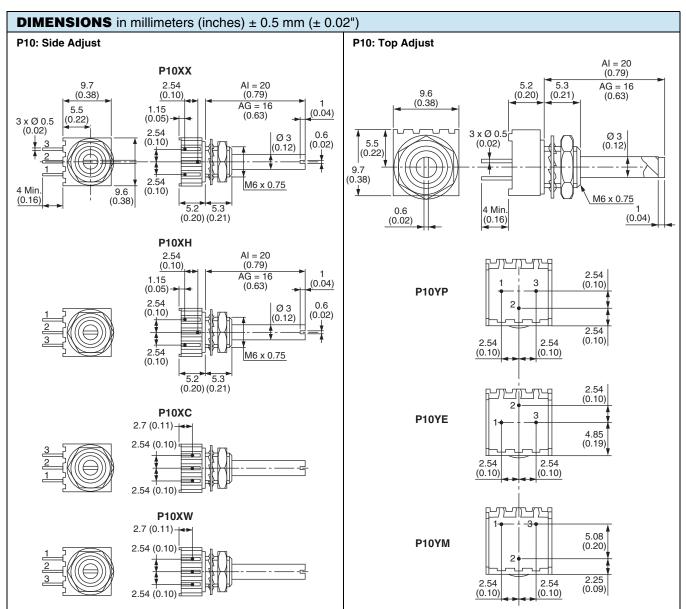


P10 panel potentiometer combines the very good setting stability offered by Vishay Sfernice trimmers (due to their proprietary multifinger wiper), with a mechanical life of 10 000 cycles.

It is an ideal choice to set and control parameters such as temperature, time, volume levels, etc.

#### **FEATURES**

- Industrial grade
- 0.5 W at 70 °C
- Cermet element
- Miniature compact
- Plastic housing and shaft
- Fully sealed
- 7 standard pin styles
- Test according to CECC 41000 or IEC 60393-1
- 10 000 cycles rotational life
- Compliant to RoHS Directive 2002/95/EC



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For technical questions, contact: sfer@vishay.com

www.vishay.com

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#### 3/8" Square Panel Potentiometer Miniature - Cermet - Fully Sealed



<b>ELECTRICAL SPECIFICATIONS</b>							
Resistive Element			Ce	ermet			
Electrical Travel		250° ± 15°					
Standard Resistance Values			100 Ω	to 2 MΩ			
Tolerance		10 % - 5 % on request					
	Linear						
Taper		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
Power Rating	0.5 W a	t 70 °C	POWER IN W	0 20 40 60708 AMBIENT TEMPEI	80 100 120 140 RATURE IN °C		
Circuit Diagram		$ \begin{array}{c} \overset{a}{\circ} \longrightarrow & & \overset{c}{\circ} \\ (1) & \overset{b}{\circ} \longrightarrow & cw \\ (2) & & & & & \\ \end{array} $					
		Standard Resistance Values	Max. Power at 70 °C	Max. Working Voltage	Max. Cur. Through Wiper		
		W	W	V	mA		
		100	0.5	7.0	70		
		200	0.5	10.0	50		
		500	0.5	15.8 22.4	32		
		1K 2K	0.5 0.5	31.8	22 16		
Standard Resistance Element Data		5K	0.5	50.0	10		
		10K	0.5	70.7	7.0		
		20K	0.5	100	5.0		
		50K	0.5	158	3.2		
		100K	0.5	224	2.2		
		200K	0.28	250	1.3		
		500K	0.13	250	0.5		
		1M 2M	0.06 0.028	250 250	0.25 0.13		
Townsystems Costfinions (Trusteen)		<u> </u>	-				
Temperature Coefficient (Typical)				ppm/°C			
Contact Resistance Variation (Typical)				ln or 2 Ω			
End Resistance (Typical)				1 Ω			
Dielectric Strength (RMS) Insulation Resistance (300 V <sub>DC</sub> )				000 V <sup>6</sup> ΜΩ			
			10	D M O			



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MECHANICAL SPECIFICATIONS						
Mechanical Travel	290° ± 5					
Operating Torque (Typical)	2 Ncm max.	2.83 ozinch max.				
End Stop Torque	7 Ncm max.	9.9 ozinch max.				
Tightening Torque of Mounting Nut	25 Ncm max.	2.2 lb-inch max.				
Unit Weight	1 g	3.5 10 <sup>-2</sup> oz.				
Terminals	e3: Pure Sn					
Shafts	Standard shaft 20 mm length (R or Al code) and 16 mm length (D or AG code) is measured from the mounting face to the free end of the shaft.  Vishay guarantee is lost if the customer modifies the shaft himself.					
Hardware	Nuts and washer are supplied seperately (not mounted on the potentiometer) in a small bag placed in the packaging.					

ENVIRONMENTAL SPECIFICATIONS			
Temperature Range	- 55 °C to 125 °C		
Climatic Category	55/100/56		
Sealing Fully sealed - Container IP67			

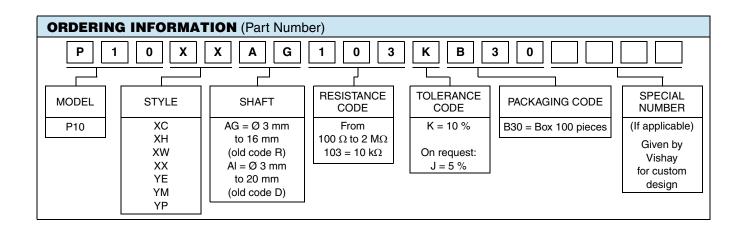
MARKING				
Vishay trademark	The ohmic value is indicated by a 3 figures code: The first two digits are significant figures, the third digit is the multiplier:			
Model	· ·			
Ohmic value code	Example: $101 = 100 \Omega$ $102 = 1000 \Omega$			
Tolerance code	$503 = 50\ 000\ \Omega$			
<ul> <li>Manufacturing date code</li> </ul>	The manufacturing date is indicated by a figures code. The first two digits are the year, the last two digits are the week.			
Marking of terminals 3				

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PERFORMANCES						
TEOTO		TYPICAL VALUES AND DRIFTS				
TESTS	CONDITIONS	$\Delta R_{\mathrm{T}}/R_{\mathrm{T}}$ (%)	ΔR <sub>1-2</sub> /R <sub>1-2</sub> (%)	OTHER		
Electrical Endurance	1000 h at rated power 90'/30' - ambient temp. 70 °C	± 1 %	± 2 %	Contact resistance variation: 1 %		
Climatic Sequence	Phase A dry heat 100 °C Phase B damp heat Phase C cold - 55 °C Phase D damp heat 5 cycles	±1%	± 2 %	-		
Damp Heat, Steady State	56 days 40 °C 93 % HR	± 1 %	± 2 %	Dielectric strength: 1000 $V_{RMS}$ Insulation resistance: > $10^4~M\Omega$		
Change of Temperature	5 cycles - 55 °C at 100 °C	± 1 %	-	$\Delta V_{1-2}/V_{1-3} \le \pm 2 \%$		
Mechanical Endurance	10 000 cycles	± 3 %	-	Contact resistance variation: $\leq$ 2 % R <sub>n</sub>		
Shock	50 g's at 11 ms 3 successive shocks in 3 directions		± 1 %	-		
Vibration	10 Hz to 55 Hz 0.75 mm or 10 g's during 6 h		-	$\Delta V_{1-2}/V_{1-3} < \pm 1 \%$		



PART NUMBER DESCRIPTION (for information only)							
P10	XX	AG	10K	10 %		BO100	e3
MODEL	STYLE	SHAFT	VALUE	TOLERANCE	SPECIAL	PACKAGING	LEAD (Pb)-FREE

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Vishay

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