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

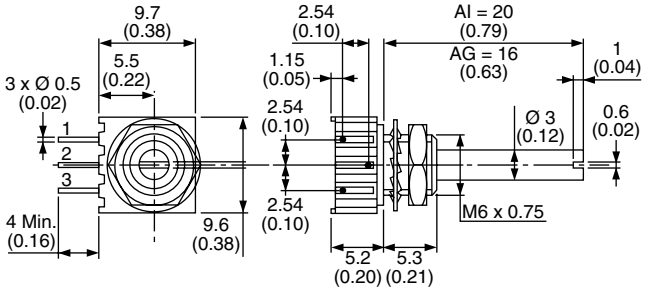
- Industrial Grade
- 0.5 W at 70 °C
- Miniature compact
- Plastic housing and shaft
- Fully sealed
- 7 standard pin styles
- 10 000 cycles rotational life
- RoHS compliant since date code 0452

RoHS COMPLIANT

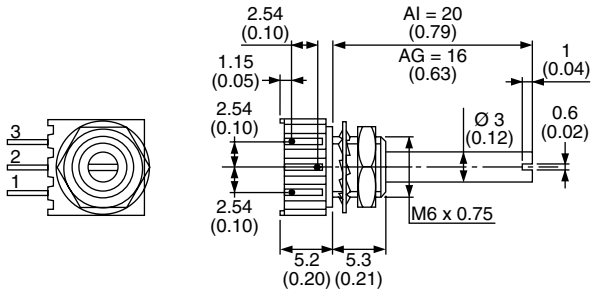
DIMENSIONS in millimeters (inches) (± 0.5 mm)

P10: Side Adjust

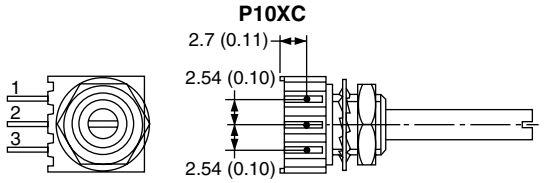
P10XX



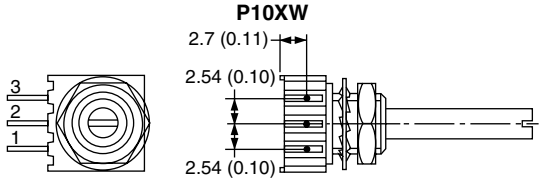
P10XH



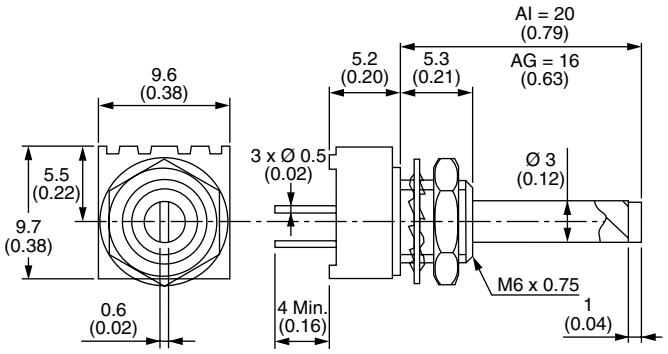
P10XC



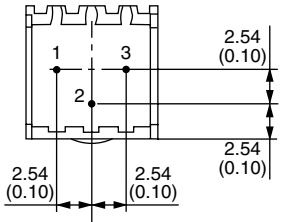
P10XW



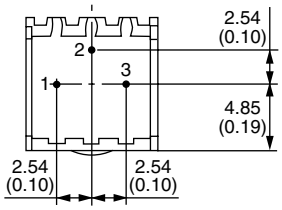
P10: Top Adjust



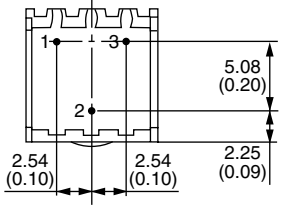
P10YP



P10YE



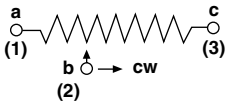
P10YM

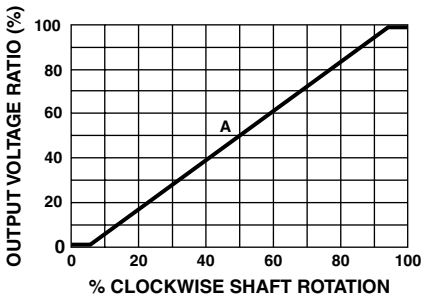


ELECTRICAL SPECIFICATIONS

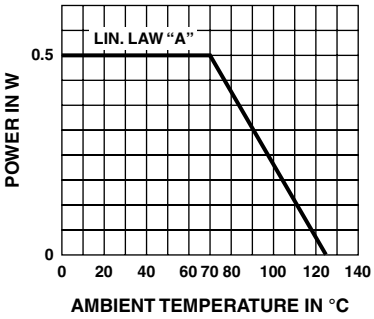
Resistive Element	CERMET
Electrical Travel	250° ± 15°
Standard Resistance Values	100 Ω to 2 MΩ
Tolerance	10 % - 5 % on request
Varation Law	Linear A

CIRCUIT DIAGRAM





Power Rating	0.5 W at 70 °C



Standard Resistance Element Data

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		10.0	50
500		15.8	32
1K		22.4	22
2K		31.8	16
5K		50.0	10
10K		70.7	7.0
20K		100	5.0
50K		158	3.2
100K	0.5	224	2.2
200K	0.28	250	1.3
500K	0.13	250	0.5
1M	0.06	250	0.25
2M	0.028	250	0.13

Temperature Coefficient (Typical)	± 150 ppm/°C
Contact Resistance Variation	1 % Rn or 2 Ω
End Resistance (Typical)	1 Ω
Dielectric Strength (RMS)	1000 V
Insulation Resistance (300 VDC)	10^6 MΩ

MECHANICAL SPECIFICATIONS		
Mechanical Travel	290° ± 5	
Operating Torque (Typical)	2 Ncm max.	2.83 oz.-inch max.
End Stop Torque	7 Ncm max.	9.9 oz.-inch max.
Tightening Torque of Mounting Nut	25 Ncm max.	2.2 lb-inch max.
Unit Weight	1 g	3.5 10^{-2} 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
- Model
- Ohmic Value code
- Tolerance code
- Manufacturing date code
- Marking of terminals 3

The ohmic value is indicated by a 3 figures code: the first two digits are significant figures, the third digit is the multiplier:

Example: 101 = 100 Ω
102 = 1000 Ω
503 = 50 000 Ω

The manufacturing date is indicated by a figures code. The first two digits are the year, the last two digits are the week.

PERFORMANCES

TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS		
		$\Delta R_T/R_T$ (%)	$\Delta R_{1\text{-}2}/R_{1\text{-}2}$ (%)	OTHER
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 %	-
Long Term Damp Heat	56 days 40 °C 93 % HR	± 1 %	± 2 %	Dielectric strength: 1000 V_{RMS} Insulation resistance > 10^4 MΩ
Rotational Life	10 000 cycles	± 3 %	-	Contact resistance variation ≤ 2 % R_n
Load Life	1000 h at rated power 90'/30' Ambient temperature 70 °C	± 1 %	± 2 %	Contact resistance variation 1 %
Rapid Temperature Change	5 cycles - 55 °C at 125 °C	± 1 %	-	$\Delta V_{1\text{-}2}/V_{1\text{-}3} \leq \pm 2$ %
Shock	50 g at 11 ms 3 successive shocks in 3 directions	± 0.5 %	± 1 %	-
Vibration	10 - 55 Hz 0.75 mm or 10 g during 6 h	± 0.5 %	-	$\Delta V_{1\text{-}2}/V_{1\text{-}3} < \pm 1$ %

SAP ORDERING INFORMATION (Part Number 18 digits)

P	1	0	X	X	A	G	1	0	3	K	B	3	0				

MODEL	STYLE	SHAFT	RESISTANCE CODE	TOLERANCE CODE	PACKAGING CODE	SPECIAL NUMBER
P10	XC XH XW XX YE YM YP	AG = Ø 3 - 16 mm (old code R) AI = Ø 3 - 20 mm (old code D)	From 100 Ω to 2 MΩ 103 = 10 kΩ	K = 10 % On request J = 5 %	B30 = Box 100 pieces	(if applicable) Given by VISHAY for custom design

PART NUMBER DESCRIPTION (for information only)

P10	XX	AG	10K	10 %		BO100	e3
MODEL	STYLE	SHAFT	VALUE	TOLERANCE	SPECIAL	PACKAGING	LEAD (Pb)-FREE

Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.