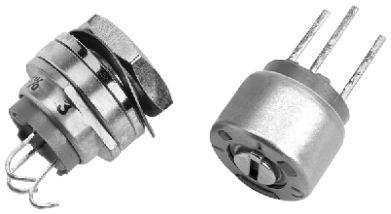
Fully Sealed Container Cermet Trimmers



Models P8PX and P8PY feature a TO-5 transistor type, rugged metal case housing.

The cermet track is printed to an alumina substrate allowing high dissipation and ensuring reliable performance under extreme environmental conditions.

Models P8PX and P8PY are qualified PC 39 and PC 19 respectively according to CECC 41 101-002 mod. A and B.

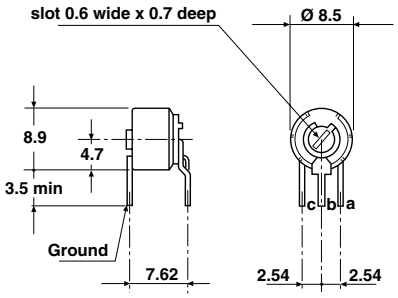
FEATURES

RoHS COMPLIANT

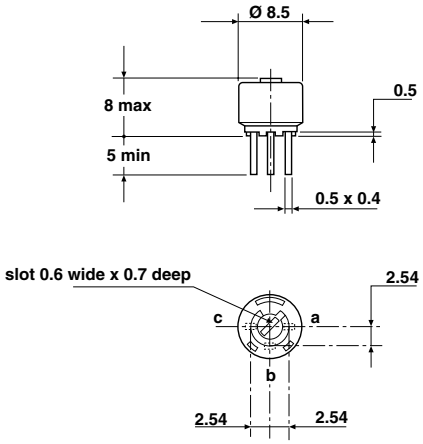
- Military and professional grade
- 1 Watt at 70 °C, P8PT
- 0.5 Watt at 70 °C, P8PX - P8PY
- CECC 41 101-002 (A, B)
- GAM T1
- Fully sealed
  P8P series are available in three mounting configurations:
  - P8PX, side adjust with pins } Outlets PCB
  - P8PY, top adjust with pins } mounting
  - P8PT, panel mount with solder lugs
- Multi-finger wiper contact in precious metal

DIMENSIONS in millimeters

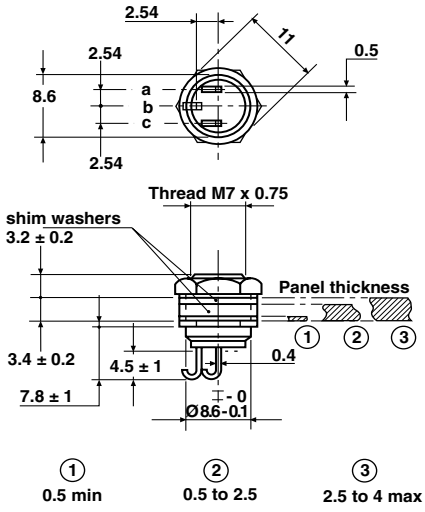
P8PX - (PC 39) B



P8PY - (PC 19) A



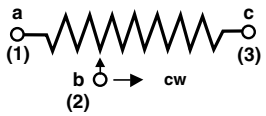
P8PT



• Tolerance unless otherwise specified: ± 0.5

Consult Vishay SFERNICE for panel sealed type

CIRCUIT DIAGRAM



ELECTRICAL SPECIFICATIONS		
Resistive Element		cermet
Electrical Travel		270° ± 15°
Resistance Range		10 Ω to 2.2 MΩ
Standard series E3		1 - 2.2 - 4.7 and on request 1 - 2 - 5
Tolerance	**Standard**	± 10 %
	On Request	± 5 %
Power Rating	**P8PX - P8PY**	0.5 W at 70 °C
	P8PT	1 W at 70 °C
Temperature Coefficient		See Standard Resistance Element Table
Limiting Element Voltage (Linear Law)		250 V
Contact Resistance Variation		2 % Rn or 1 Ω
End Resistance (Typical)		1 Ω
Dielectric Strength (RMS)		1000 V
Insulation Resistance (500 VDC)		1 GΩ

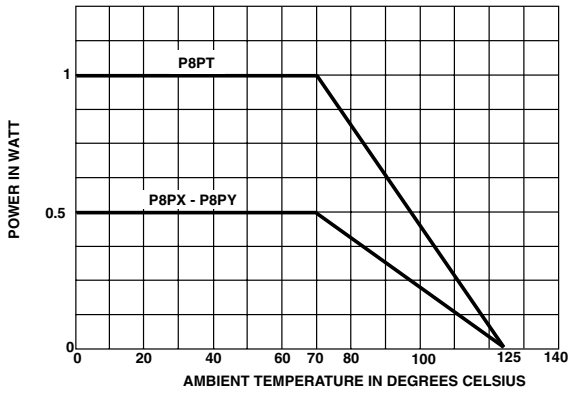
MECHANICAL SPECIFICATIONS

Mechanical Travel	300° ± 5°
Operating Torque (max. Ncm)	3
End Stop Torque (max. Ncm)	6
Unit Weight (max. g)	1... 3.1

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	- 55 °C to + 125 °C
Climatic Category	55/125/56
Sealing	fully sealed container IP67

POWER RATING CHART



PERFORMANCE

CECC 41100						TYPICAL VALUES AND DRIFTS	
TESTS	**CONDITIONS**	$\frac{\Delta RT}{RT}$ (%)	**REQUIREMENTS**	$\frac{\Delta R_{1-2}}{R_{1-2}}$ (%)		$\frac{\Delta RT}{RT}$ (%)	$\frac{\Delta R_{1-2}}{R_{1-2}}$ (%)
Climatic Sequence	Phase A dry heat 125 °C Phase B damp heat Phase C cold - 55 °C Phase D damp heat 5 cycles	± 2 %		± 3 %		± 0.5 %	± 1 %
Long Term Damp Heat	56 days 40 °C, 93 % RH	± 2 % Dielectric strength: 700 V Insulation resistance: > 100 MΩ		± 3 %		± 0.5 % Dielectric strength: 1000 V Insulation resistance: > 10^4 MΩ	± 1 %
Rotational Life	200 cycles	± 2 % Contact res. variat.: < 5 % Rn				± 1 % Contact res. variat.: < 2 % Rn	
Load Life	1000 h at rated power 90'/30' - ambient temp. 70 °C	± 2 % Contact res. variat.: < 5 % Rn		± 3 %		± 1 % Contact res. variat.: < 1 % Rn	± 2 %
Rapid Temperature Change	5 cycles - 55 °C to + 125 °C	± 1.5 %	$\frac{\Delta V_{1-2}}{V_{1-3}}$	≤ ± 1 %		± 0.2 %	$\frac{\Delta V_{1-2}}{V_{1-3}}$ ≤ ± 0.5 %
Shock	50 g at 11 m secs 3 successive shocks in 3 directions	± 1 %		± 2 %		± 0.1 %	± 0.5 %
Vibration	10 - 55 Hz 0.75 mm or 10 g during 6 hours	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}}$	≤ ± 2 %		± 0.2 %	$\frac{\Delta V_{1-2}}{V6}$ ≤ ± 0.5 %

STANDARD RESISTANCE ELEMENT DATA

STANDARD RESISTANCE VALUES	P8PX - P8PY			P8PT			TCR - 55 °C + 125 °C
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH WIPER	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH WIPER	
Ω	W	V	mA	W	V	mA	ppm/°C
10	0.5	2.2	224	1	3.16	316	0 + 200
22		3.3	150		4.69	213	
47		4.8	103		6.86	146	
100		7	70		10.0	100	± 100
220		10.5	47		14.8	67	
470		15.3	32		21.7	46	
1K		22.4	22		31.6	32	
2.2K		33.2	15		46.9	21	
4.7K		48.5	10		68.6	15	
10K		7.7	7		100.0	10.0	
22K		105	4.8		148	6.7	
47K		153	3.2	1	217	4.6	
100K	0.5	224	2.2	0.63	250	2.5	
220K	0.28	250	1.1	0.28	250	1.1	
470K	0.13	250	1.53	0.13	250	0.5	
1M	0.06	250	0.25	0.06	250	0.3	
2.2M	0.028	250	0.11	0.03	250	0.1	

MARKING

Printed :
- VISHAY trademark
- NF type if applicable
- series
- style
- ohmic value (in Ω , kΩ, MΩ)
- tolerance (in %)
- manufacturing date
- marking of terminal: 3

PACKAGING

- Plastic box of 50 pieces for P8PX and P8PY
- Plastic box of 24 pieces for P8PT

ORDERING INFORMATION

P8	PY	10 kΩ	± 10 %	BL50	e2
MODEL	STYLE	OHMIC VALUE	TOLERANCE	PACKAGING	LEAD FINISH
				P8PX and P8PY: BL50 P8PT: BL24	e2: SnAg alloy

SAP PART NUMBERING GUIDELINES

P	8	P	Y	1	0	3	K	B	2	5			
MODEL		STYLE		OHMIC VALUE			TOL	PACKAGING CODE			SPECIAL (IF APPLICABLE)		

See the end of this data book for conversion tables

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