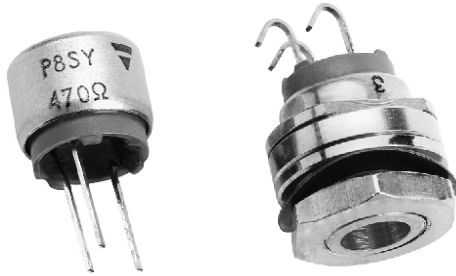


8.5 mm Diameter Fully Sealed Container Cermet Trimmer



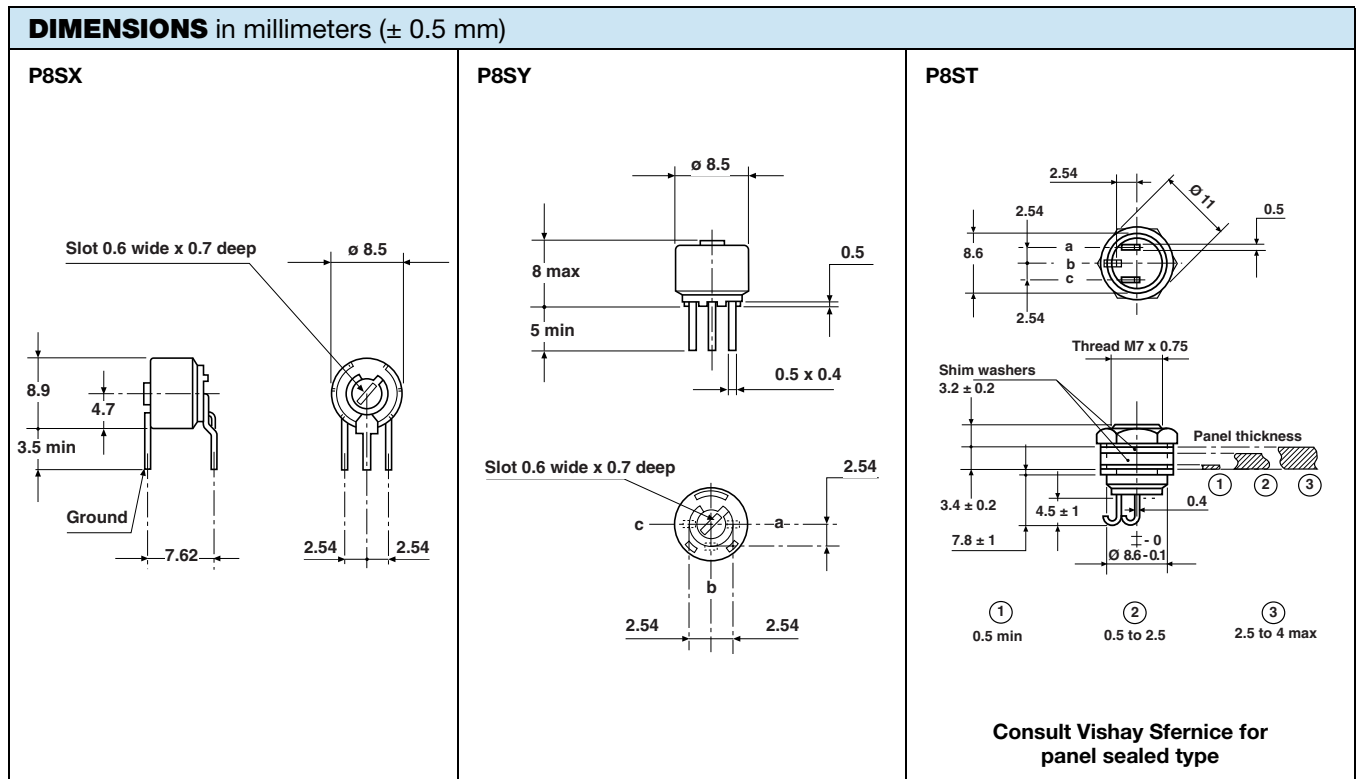
FEATURES

- Industrial grade
- High quality cermet resistive track:
 - 1 W at 70 °C, P8ST
 - 0.5 W at 70 °C, P8SX and P8SY
- Test according to CECC 41000 or IEC 60393-1
- Wide resistance range (10 Ω to 2.2 MΩ)
- Compliant to RoHS Directive 2002/95/EC


RoHS
COMPLIANT

The P8S series trimmers are well adapted for all industrial applications as their maximum resistance contact variation is within 3 % of R_n and as they are fully sealed.

For more stringent requirements the P8P series is recommended.



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	P8SX, P8SY	0.5 W at 70 °C											
	P8ST	1 W at 70 °C											
Power rating chart	<p>The chart shows the power rating in Watts versus ambient temperature in degrees Celsius. The P8ST series maintains a power rating of 1.0 W up to 70 °C, while the P8SX-P8SY series maintains 0.5 W up to 70 °C. Both series show a linear decrease in power rating as temperature increases beyond 70 °C, reaching 0 W at 125 °C.</p> <table border="1"> <caption>Power Rating Data from Chart</caption> <thead> <tr> <th>Ambient Temperature (°C)</th> <th>P8ST Power (W)</th> <th>P8SX-P8SY Power (W)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1.0</td> <td>0.5</td> </tr> <tr> <td>70</td> <td>1.0</td> <td>0.5</td> </tr> <tr> <td>125</td> <td>0.0</td> <td>0.0</td> </tr> </tbody> </table>	Ambient Temperature (°C)	P8ST Power (W)	P8SX-P8SY Power (W)	0	1.0	0.5	70	1.0	0.5	125	0.0	0.0
Ambient Temperature (°C)	P8ST Power (W)	P8SX-P8SY Power (W)											
0	1.0	0.5											
70	1.0	0.5											
125	0.0	0.0											
Circuit diagram	<p>The circuit diagram shows a zigzag line representing the resistive element. Terminal 'a' is labeled (1) and terminal 'c' is labeled (3). Terminal 'b' is labeled (2) and is shown as a wiper contact with an arrow pointing clockwise (cw).</p>												
Temperature coefficient	See Standard Resistance Element Table												
Limiting element voltage (linear law)	250 V												
Contact resistance variation	3 % R _n or 3 Ω												
End resistance (typical)	1 Ω												
Dielectric strength (RMS)	1000 V												
Insulation resistance (500 V _{DC})	1 GΩ												

MECHANICAL SPECIFICATIONS		
Mechanical travel	300° ± 5°	
Operating torque (max. Ncm)	3	
End stop torque (max. Ncm)	6	
Unit weight (max. g)	P8SX, P8SY	1.1
	P8ST	3.6
Terminals	SnAg alloy (code e2)	

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



8.5 mm Diameter Fully Sealed Container
Cermet Trimmer

Vishay Sfernice

PERFORMANCES			
TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS	
		$\Delta R_T/R_T$ (%)	$\Delta R_{1-2}/R_{1-2}$ (%)
Load life	1000 h at rated power 90'/30' - ambient temperature 70 °C	± 2 % Contact res. variation: < 3 % Rn	± 3 %
Climatic sequence	Phase A dry heat 100 °C 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	± 1 % Dielectric strength: 1000 V _{RMS} Insulation resistance: > 10 ⁴ MΩ	± 2 %
Rapid temperature change	5 cycles - 55 °C to + 125 °C	± 0.5 %	$\Delta V_{1-2}/\Delta V_{1-3}$ ≤ ± 1 %
Shock	50 g at 11 ms 3 successive shocks in 3 directions	± 0.2 %	± 0.5 %
Vibration	10 Hz to 55 Hz 0.75 mm or 10 g during 6 h	± 0.2 %	$\Delta V_{1-2}/\Delta V_{1-3}$ ≤ ± 0.5 %
Rotational life	200 cycles	± 3 % Contact res. variation: < 3 % Rn	

STANDARD RESISTANCE ELEMENT DATA							
STANDARD RESISTANCE VALUES	P8SX, P8SY			P8ST			TYPICAL TCR - 55 °C to + 125 °C
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CURRENT THROUGH WIPER	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CURRENT THROUGH WIPER	
Ω	W	V	mA	W	V	mA	ppm/°C
10	0.5	2.2	224	1	3.16	316	± 100
22	0.5	3.3	150	1	4.69	213	
47	0.5	4.8	103	1	6.86	146	
100	0.5	7.0	70	1	10.0	100	
220	0.5	10.5	47	1	14.8	67	
470	0.5	15.3	32	1	21.7	46	
1K	0.5	22.4	22	1	31.6	32	
2.2K	0.5	33.2	15	1	46.9	21	
4.7K	0.5	48.5	10	1	68.6	15	
10K	0.5	70.7	7.0	1	100	10	
22K	0.5	105	4.8	1	148	6.7	
47K	0.5	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	0.53	0.13	250	0.53	
1M	0.06	250	0.25	0.06	250	0.25	
2.2M	0.028	250	0.11	0.03	250	0.11	

MARKING

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

PACKAGING

- For P8SX, P8SY: In plastic box of 50 pieces, code B25 (BL50)
- For P8ST: In plastic box of 24 pieces, code B16 (BL24)

ORDERING INFORMATION (part number)

P	8	S	X	1	0	4	K	B	2	5				
MODEL	STYLE			OHMIC VALUE			TOLERANCE		PACKAGING CODE			SPECIAL NUMBER		
P8	ST SX SY			From 10 Ω to 2.2 $M\Omega$ 103 = 10K			K = 10 % On request: J = 5 %		Styles SX and SY: B25 = Box 50 pieces Style ST: B16 = Box 24 pieces			(If applicable) Given by Vishay for custom design		

PART NUMBER DESCRIPTION (for information only)

P8	S	X	100K	10 %		BL	e2
MODEL	STYLE	STYLE	VALUE	TOLERANCE	SPECIAL	PACKAGING	LEAD FINISH



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