



**P8S**  $\begin{matrix} \diagup X \\ \diagdown Y \\ \diagdown T \end{matrix}$

# fully sealed container cermet trimmer – industrial grade

1 W at 70°C  
P8ST  
0,5 W at 70°C  
P8SX - PSPY  
NF C/UTE 83-251  
MIL-R-22097  
LNZ

Featuring a high quality cermet resistive track, the P8S-series trimmers feature:

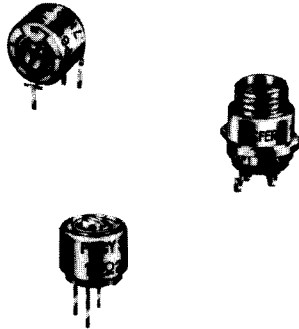
- **HIGH STABILITY**
- **LOW TEMPERATURE COEFFICIENT**
- **WIDE RESISTANCE RANGE (10  $\Omega$  to 2,2 M $\Omega$ )**

Three versions are available :

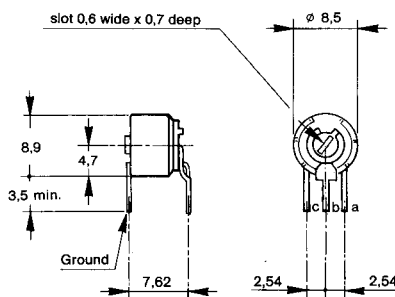
- P8SX, with shaft parallel to the PC board plane
  - P8SY, with shaft perpendicular to the PC board plane
  - P8ST, for front panel mounting.
- } outlets for PCB mounting

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

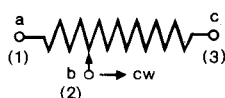
For more stringent requirements the P8P series is recommended.



**P8SX**



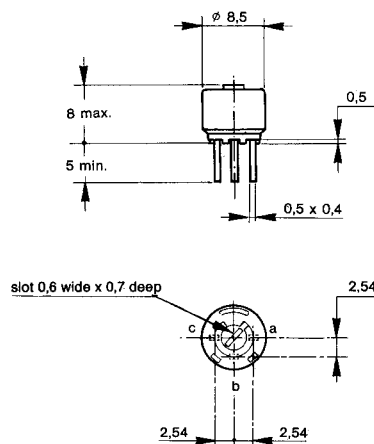
**CIRCUIT DIAGRAM**



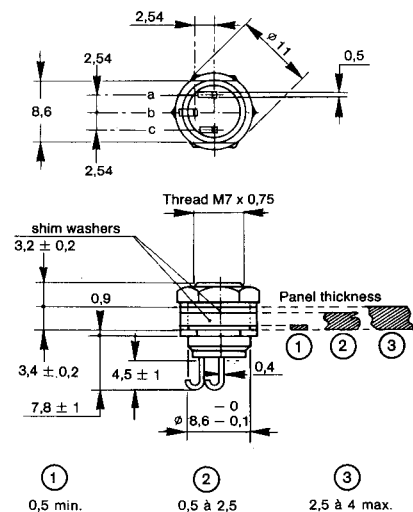
Dimensions in mm.

Tolerance unless otherwise specified:  $\pm 0,5$ .

**P8SY**



**P8ST**



Consult Sfernice for panel sealed type

## SPECIFICATIONS

### MECHANICAL

MECHANICAL TRAVEL...	300° $\pm 5^\circ$
OPERATING TORQUE (max. Ncm)...	3
END STOP TORQUE (max. Ncm)...	6
UNIT WEIGHT (max. g.)...	1... 3,1

### ENVIRONMENTAL

TEMPERATURE RANGE...	-55°C + 125°C
CLIMATIC CATEGORY...	55 / 125 / 56
SEALING...	fully sealed container IP67

### ELECTRICAL

RESISTIVE ELEMENT...	cermet
ELECTRICAL TRAVEL...	270° $\pm 15^\circ$
RESISTANCE RANGE...	10 $\Omega$ ... 2,2 M $\Omega$
Standard series E3 (1 - 2,2 - 4,7)	
on request series 1 - 2 - 5	
TOLERANCE standard...	$\pm 10\%$
on request...	$\pm 5\%$
POWER RATING linear...	0,5 W at 70°C
P8ST...	1 W at 70°C
TYPICAL TEMP. COEFFICIENT (for $R_n \geq 100 \Omega$ )...	70 ppm/°C
LIMITING ELEMENT VOLTAGE (linear law)...	250 V
CONTACT RESISTANCE VARIATION ...	3 % $R_n$ or 3 $\Omega$
END RESISTANCE (typical)...	1 $\Omega$
DIELECTRIC STRENGTH (RMS)...	1000 V
INSULATION RESISTANCE (500 V DC)...	10 <sup>6</sup> M $\Omega$

**PERFORMANCES**

Table 1

TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS	
		$\frac{\Delta R_T}{R_T}$ (%)	$\frac{\Delta R_{1-2}}{R_{1-2}}$ (%)
LOAD LIFE	1000 hours at rated power 90/30' - ambient temperature 70°C	± 2% Contact resistance 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	± 1 % Dielectric strength : 1000 V RMS Insulation resistance : > 10 <sup>4</sup> MΩ	± 2 %
RAPID TEMPERATURE CHANGE	5 cycles -55°C at +125°C	± 0,5 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1\%$
SHOCKS	50 g 11 ms 3 successive shocks in 3 directions	± 0,2 %	± 0,5%
VIBRATIONS	10 - 55 Hz 0,75 mm or 10 g during 6 hours	± 0,2 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 0,5\%$
ROTATIONAL LIFE	200 cycles	± 3 % Contact resistance variation : < ±3% Rn	

**STANDARD RESISTANCE ELEMENT DATA**

Table 2

Standard resistance values	LINEAR LAW			T.C. -55°C +125°C
	Max. power at 70°C	Max. working voltage	Max. cur. through element	
Ω	W	V	mA	ppm/°C
10 22 47	0,5	2,2 3,3 4,8	224 150 103	0 +200
100 220 470 1 k 2,2 k 4,7 k 10 k 22 k 47 k 100 k 220 k 470 k 1 M 2,2 M	0,5 0,28 0,13 0,06 0,028	7 10,5 15,3 22,4 33,2 48,5 70,7 105 153 224 250 250 250 250	70 47 32 22 15 10 7 4,8 3,2 2,2 1,1 1,53 0,25 0,11	±100

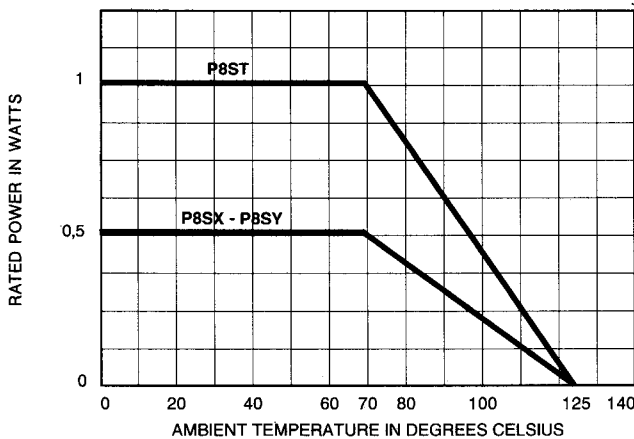
**MARKING**

Printed:

- SFERNICE trademark
- series and grade of quality
- style
- ohmic value (in Ω, kΩ, MΩ)
- tolerance (in %)
- manufacturing date
- marking of terminal: 3.

**POWER RATING CHART**

Fig. 2



**PACKAGING**

- Plastic box of 100 pieces for P8SX and P8SY.
- Plastic box of 24 pieces for P8ST.

**ORDERING PROCEDURE**

