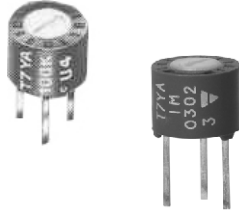


## Miniature Cermet Trimmers



The T7 trimmer is only 7 mm (0.275") in diameter and fits almost anywhere.

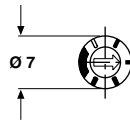
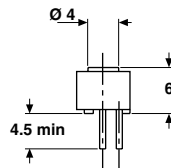
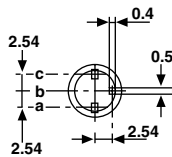
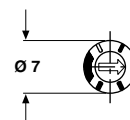
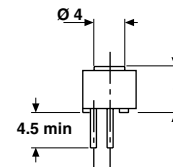
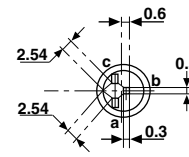
A dust sealed plastic case protecting a quality cermet track guarantees high performance and proven reliability. Adjustments are made easier by the clear scale readings. T7 is ideally suited to all industrial applications.

### FEATURES

- Industrial grade
- 0.5 Watt at 85 °C
- Test according to CECC 41100
- Low temperature coefficient (100 ppm/K typical)
- Wide resistance range (10 Ω to 2.2 MΩ)
- Easy to read scale

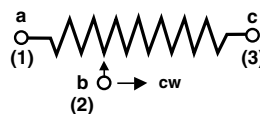


### DIMENSIONS in millimeters

**T7 YA**

**T7 YB**


Tolerances unless otherwise specified  $\pm 0.5$  mm

### 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	Standard	± 20 %
	On Request	± 10 %
Power Rating	Linear	0.5 W at 85 °C
	Logarithmic	not applicable
Temperature Coefficient		See Standard Resistance Element Data
Limiting Element Voltage (Linear Law)		250 V
Contact Resistance Variation		3 % or 3 Ω
End Resistance (Typical)		1 Ω
Dielectric Strength (RMS)		1000 V
Insulation Resistance		10 <sup>6</sup> MΩ

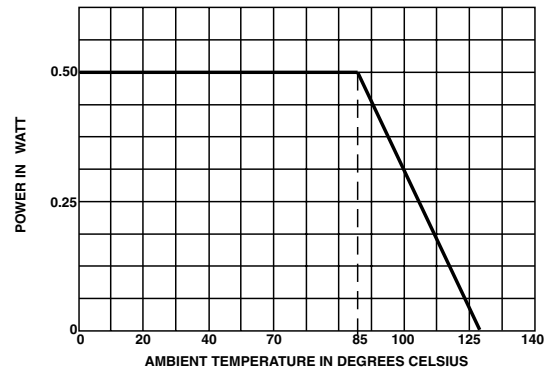
### MECHANICAL SPECIFICATIONS

Mechanical Travel	300° ± 5°
Operating Torque (max. Ncm)	2
End Stop Torque (max. Ncm)	4
Unit Weight (max. g)	0.5

### ENVIRONMENTAL SPECIFICATIONS

Temperature Range	- 55 °C to + 125 °C
Climatic Category	55/100/56
Sealing	IP64

### POWER RATING CHART



PERFORMANCE			
TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS	
		$\frac{\Delta RT}{RT}$ (%)	$\frac{\Delta R_{1-2}}{R_{1-2}}$ (%)
Load Life	1000 hours at rated power 90/30' - ambient temperature 70 °C	± 3 % Contact resistance variation: < 3 % Rn	± 4 %
Climatic Sequence	Phase A dry heat 100 °C Phase B damp heat Phase C cold - 55 °C Phase D damp heat 5 cycles	± 2 %	± 3 %
Long Term Damp Heat	56 days	± 2 % Dielectric strength: 1000 V RMS Insulation resistance: > 10 <sup>4</sup> MΩ	± 3 %
Rapid Temperature Change	5 cycles - 55 °C at + 125 °C	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 2 \%$
Shock	50 g 11 ms 3 successive shocks in 3 directions	± 0.5 %	± 1 %
Vibration	10 - 55 Hz 0.75 mm or 10 g during 6 hours	± 0.5 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1 \%$
Rotational Life	200 cycles	± 3 % Contact resistance variation: < 3 % Rn	



STANDARD RESISTANCE ELEMENT DATA				
STANDARD RESISTANCE VALUES	LINEAR LAW			TCR - 55 °C + 125 °C
	MAX. POWER AT 85 °C	MAX. WORKING VOLTAGE	MAX. WIPER CUR.	
Ω	W	V	mA	ppm/°C
10	0.5	2.2	224	0 + 200
22	↓	3.3	150	
47		4.8	103	
100		7.0	70	
220		10.5	47	
470		15.3	32	
1K		22.4	22	
2.2K		33.2	15	
4.7K		48.5	10	
10K		70.7	7	
22K		105	4.8	± 100
47K	153	3.2		
100K	0.5	224	2.2	
220K	0.28	250	1.1	
470K	0.13	250	1.53	
1M	0.06	250	0.25	
2.2M	0.028	250	0.11	

**MARKING**

- Printed:
- VISHAY trademark
  - series
  - YA or YB style
  - ohmic value (in Ω, kΩ, MΩ)
  - manufacturing date
  - marking of terminal: 3.

**SEALING**

T7 is sealed against dust (IP64).  
 For board cleaning, Vishay recommends testing before usage. Water immersion is forbidden. Ultrasonic may cause component damage or failure.

PACKAGING
- In bulk (box of 200 pieces), code BO200
- On request in Tube, code TU50

ORDERING INFORMATION					
T7 SERIES	YA STYLE	470 kΩ OHMIC VALUE	± 20 % TOLERANCE	BO200 PACKAGING	e2 LEAD FINISH
	YA - YB			BO200 On request: TU50	e2: SnAg alloy

SAP PART NUMBERING GUIDELINES													
T	7	Y	A	4	7	4	M	B	4	0	□	□	□
MODEL		STYLE		OHMIC VALUE			TOL	PACKAGING CODE			SPECIAL (IF APPLICABLE)		
See the end of this data book for conversion tables													



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