



FEATURES

- 10K cycles mechanical life version available
- Endless rotation upon request
- RoHS compliant materials ready
- Carbon resistive element
- Plastic substrate
- Over-moulding manufacturing technique
- SMD mounting
- RoHS reflow soldering capable
- Wiper positioned at 50%
- Both sides cross slot easy adjustment
- Accidental rotor movement protected
- Traceability insured through date code marking
- IP54 protection according to IEC 60529

MECHANICAL SPECIFICATIONS

- Mechanical rotation angle: $280^\circ \pm 10^\circ$
- Electrical rotation angle: $245^\circ \pm 25^\circ$
- Torque: 0.2 to 3 Ncm. (0.28 to 4.2 in-oz)
- Stop torque: > 7.5 Ncm. (10.5 in-oz)
- Mechanical life*: up to 10K cycles

* depending on application

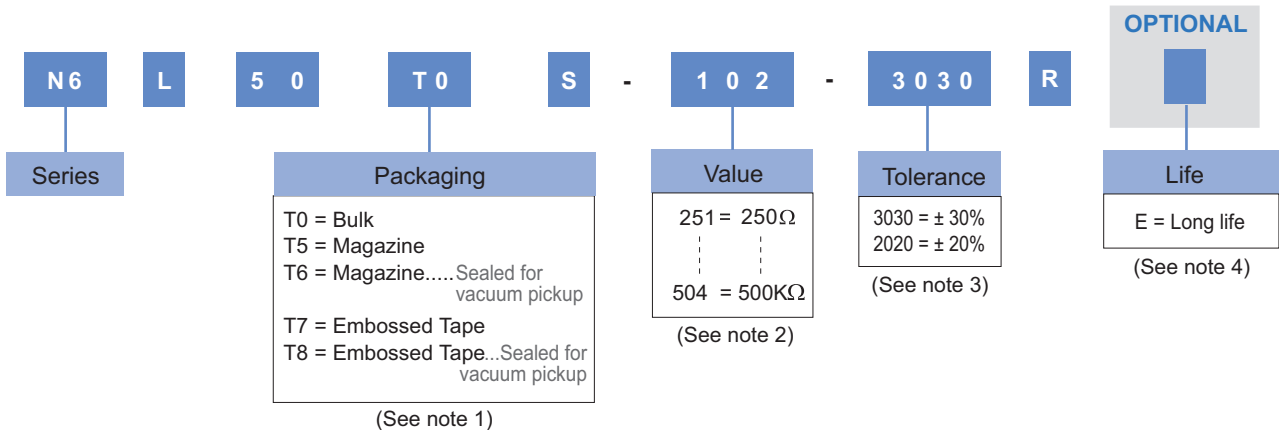
ELECTRICAL SPECIFICATIONS

- Range of values*
- "E" version: $1K\Omega \leq R_n \leq 500K\Omega$ (1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)
- Std version: $250\Omega \leq R_n \leq 500K\Omega$ (1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)
- Tolerance: $250\Omega \leq R_n \leq 500K\Omega$ $\pm 30\%$
- Max. Voltage: 100 VDC
- Nominal Power 50°C (122°F) (see power rating curve): 0.1W
- Taper: linear
- End resistance: $\leq 2\% R_n$ (10 Ω min.)
- Equivalent noise resistance: $\leq 5\%$
- Operating temperature**: $-25^\circ\text{C} + 70^\circ\text{C}$ ($-13^\circ\text{F} + 158^\circ\text{F}$)

* Others: check availability.

** Up to 85°C depending on application.

HOW TO ORDER



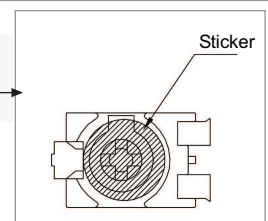
NOTES:

(1) - "T7", "T8" Embossed Tape 750 Units per Reel. Diameter: 330 mm, aprox. thickness: 30 mm.
 - "T6" and "T8" are sealed for vacuum pickup (sticker at the bottom side)

(2) Value: Example: Code: 10 2 = 1 K
 Number of zeros
 First two digits of the value.

(3) Standard is 30%. For 20% and below tolerances, please check availability.

(4) Life: • Standard = 100 cycles • Long = 10K cycles



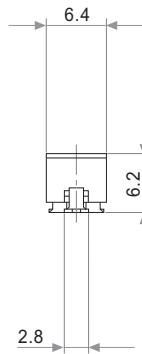
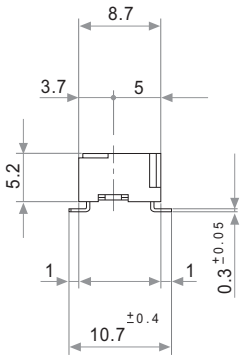
* Version with sticker on TOP side is available under request

NOTE: The information contained here should be used for reference purposes only.

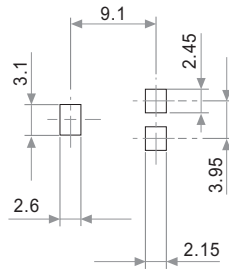
This project has been financially supported by the Spanish Technological Development Institute (CDTI).

DIMENSIONS

N-6 L 50 T0 S

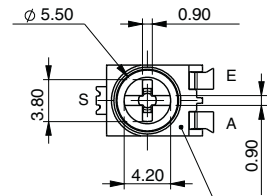


SOLDER PADS

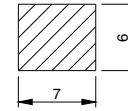


STICKER ON TOP

Special Version
100410-G



Sticker on this side

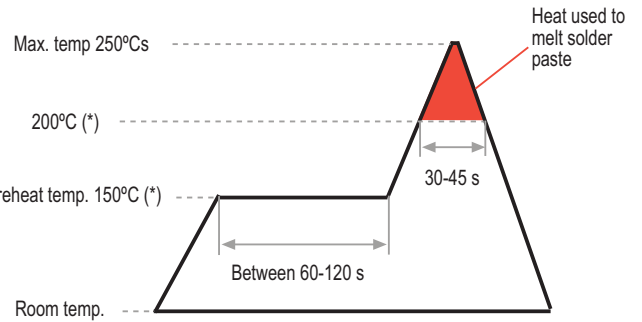
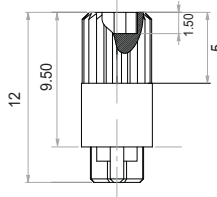
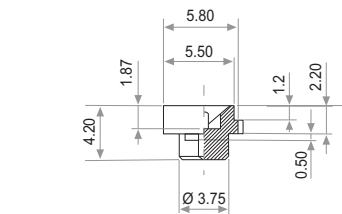


KNOB Ref.: 5680

SHAFT Ref.: 6133

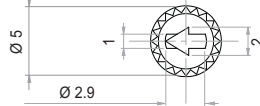
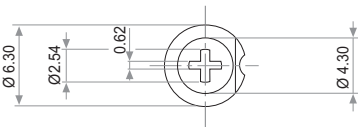
RoHS RECOMMENDED REFLOW PROFILE

Please order both Knob and Shaft separately. They should be inserted after the reflow process. If you wish to use your own custom plastic shaft/knob/actuator please contact Piher for advice about compatible materials.

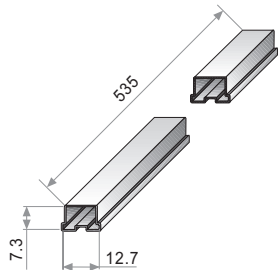


(*) Melting point temp. depends on solder properties

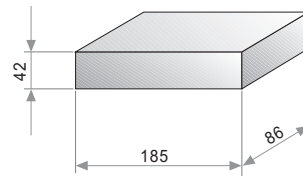
The recommended reflow profile is provided as a guideline. Optimal profile may differ due to oven type, assembly layout or other design or process variables. Customers should verify actual device performance in their specific application and reflow process. Please contact Piher if you require additional support.



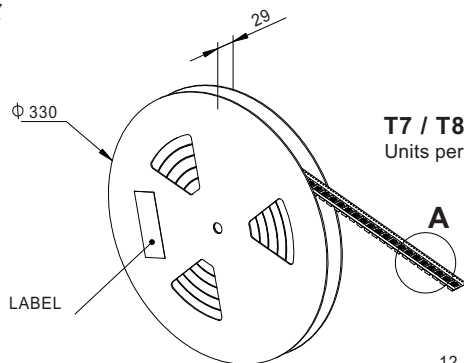
PACKAGING



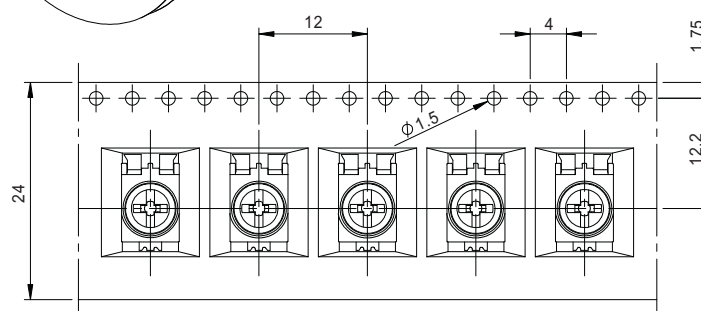
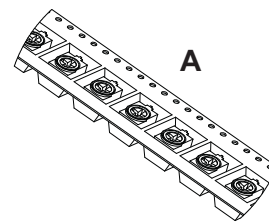
T5 / T6 MAGAZINE
Units per magazine: 80



T0 BULK
500 Units per box.



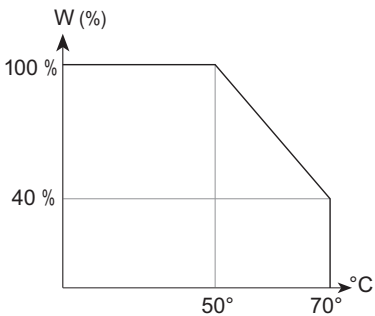
T7 / T8 EMBOSSED TAPE
Units per reel: 750



DIRECTION OF UNREELING

TESTS **TYPICAL VARIATIONS** **POWER RATING CURVE**

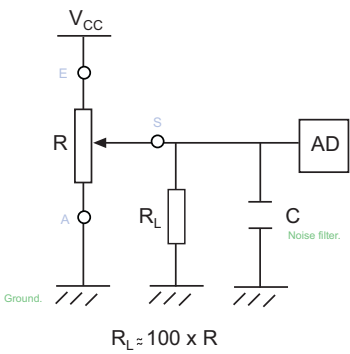
| | | |
|----------------------------------|--|---------------------------|
| ELECTRICAL LIFE | 1.000 h. @ 50°C: 0.1 W | ±10 % |
| MECHANICAL LIFE (CYCLES) | "E" version: 10K @ 30 CPM | ± 4 % (Rn < 1 M Ω) |
| | Std version: 100 @ 10 CPM ...15 CPM | ±3 % (Rn < 1 M Ω) |
| TEMPERATURE COEFFICIENT | -25°C; +70°C | ±300 ppm (1K ≤ Rn ≤ 100K) |
| THERMAL CYCLING | 16 h. @ 85°C; 2h. @ -25°C | ±5 % |
| DAMP HEAT | 500 h. @ 40°C @ 95% HR | ±5 % |
| VIBRATION (for each plane X,Y,Z) | 2 h. @ 10 Hz. ... 55 Hz. | ±2 % |



NOTE: Out of range values may not comply with these results.

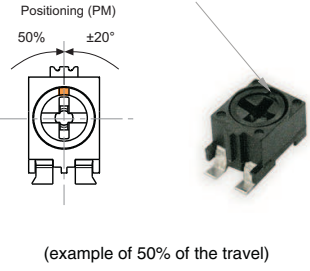
RECOMMENDED CONNECTIONS

Piher potentiometer's recommended connection circuit for a position sensor or control application. (voltage divider circuit electronic design).



POSITIONING

This mark in the rotor shows the wiper's position.



(example of 50% of the travel)

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