



**RoHS2
compliant**



**RoHS reflow
soldering
capable**

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

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

ELECTRICAL SPECIFICATIONS

- Range of values*

"E" version: $1\text{K}\Omega \leq R_n \leq 500\text{K}\Omega$ (1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)

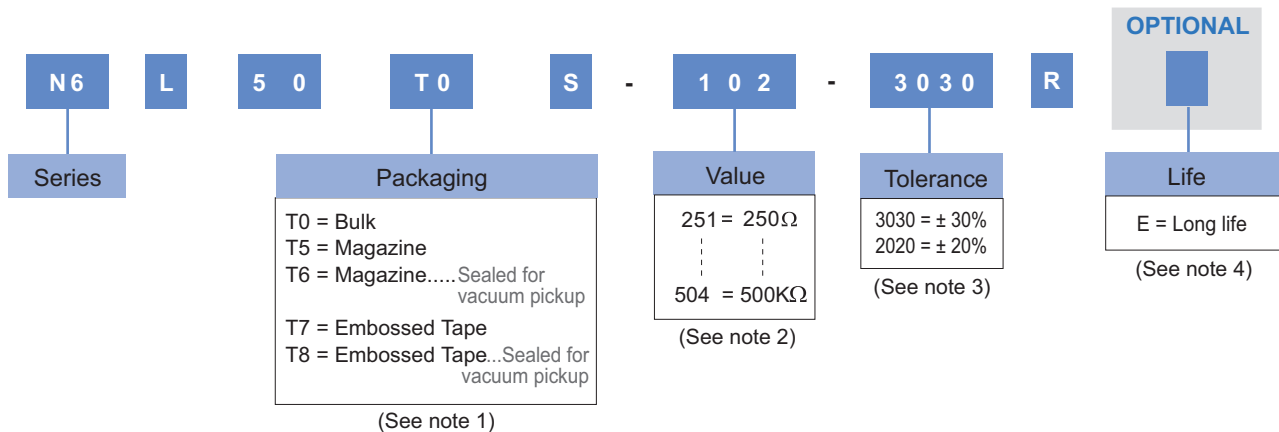
Std version: $250\ \Omega \leq R_n \leq 500K\ \Omega$ (1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)

- Tolerance: $250\ \Omega \leq R_n \leq 500\text{K}\Omega$ ----- $\pm 30\%$
- 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°C + 70°C (-13°F + 158°F)

* Others: check availability.

** Up to 85°C depending on application.

HOW TO ORDER



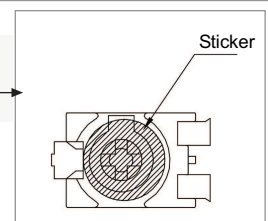
NOTES:

- (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: $\overline{10} \quad \overline{2} = 1 \text{ K}$
- 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



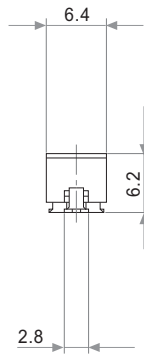
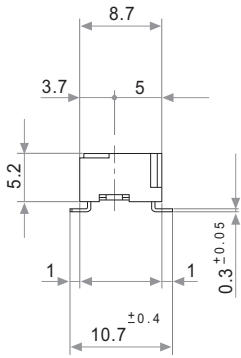
* Version with sticker on TOP side is available under request

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

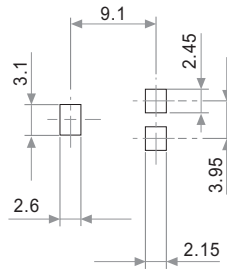
This project has been financially supported by the Spanish Technological Development Institute (CDTI).

DIMENSIONS

N-6 L 50 T0 S

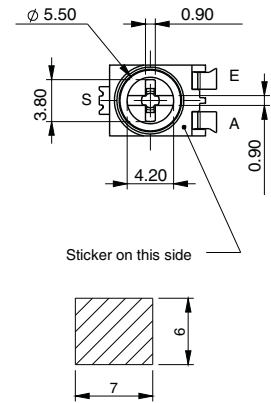


SOLDER PADS



STICKER ON TOP

Special Version
100410-G



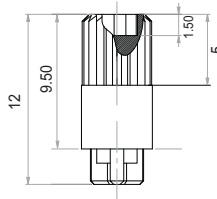
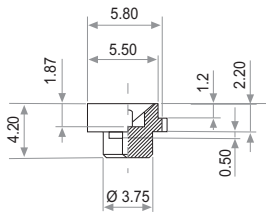
KNOB

Ref.: 5680

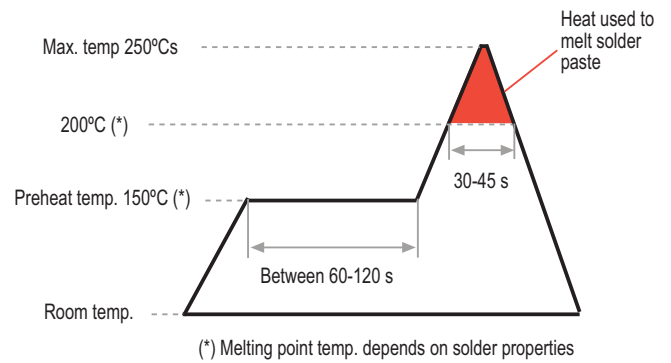
SHAFT

Ref.: 6133

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.

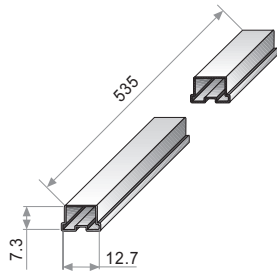


RoHS RECOMMENDED REFLOW PROFILE

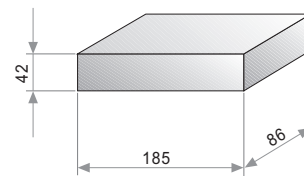


The recommended reflow profile is provided as a guideline. Optimal profile may differ due to oven type, assembly layout or other design or process variables. Customers should verify actual device performance in their specific application and reflow process. Please contact Piher if you require additional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

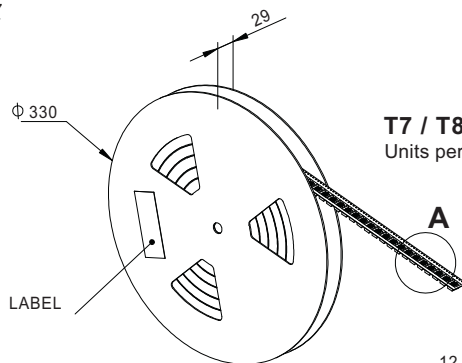
PACKAGING



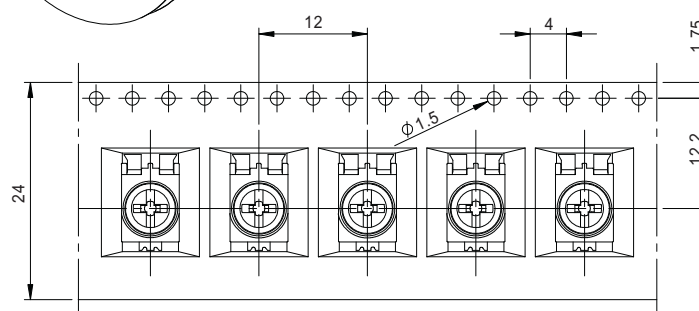
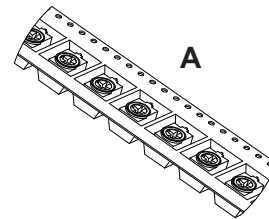
T5 / T6 MAGAZINE
Units per magazine: 80



T0 BULK
500 Units per box.



T7 / T8 EMBOSSED TAPE
Units per reel: 750



DIRECTION OF UNREELING

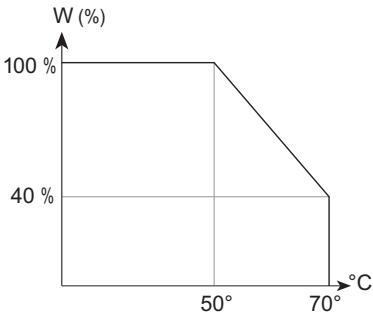
TESTS

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 %

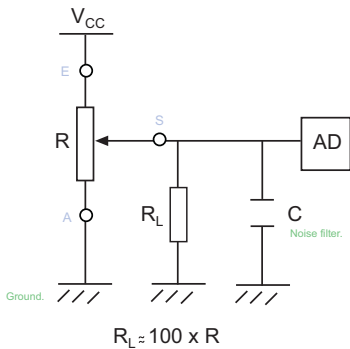
NOTE: Out of range values may not comply with these results.



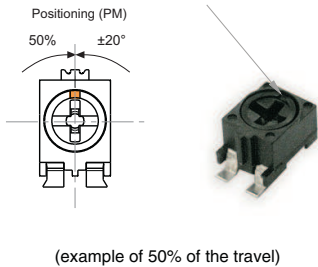
RECOMMENDED CONNECTIONS

POSITIONING

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



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



Disclaimer

The product information in this catalogue is for reference purposes. Please consult for the most up to date and accurate design information.

Piher Sensors & Controls S.A., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Piher"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product described herein.

Piher disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Piher's terms and conditions of sale, including but not limited to the warranty expressed therein, which apply to these products.

No licence, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Piher.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Piher products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Piher for any damages arising or resulting from such use or sale. Please contact authorised Piher personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Information contained in and/or attached to this catalogue may be subject to export control regulations of the European Community, USA, or other countries. Each recipient of this document is responsible to ensure that usage and/or transfer of any information contained in this document complies with all relevant export control regulations. If you are in any doubt about the export control restrictions that apply to this information, please contact the sender immediately. For any Piher Exports, Note: All products / technologies are EAR99 Classified commodities. Exports from the United States are in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited.



All Piher products can be adapted to meet customer's requirements.
Please always use the latest updated datasheets published at our website www.piher.net.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А