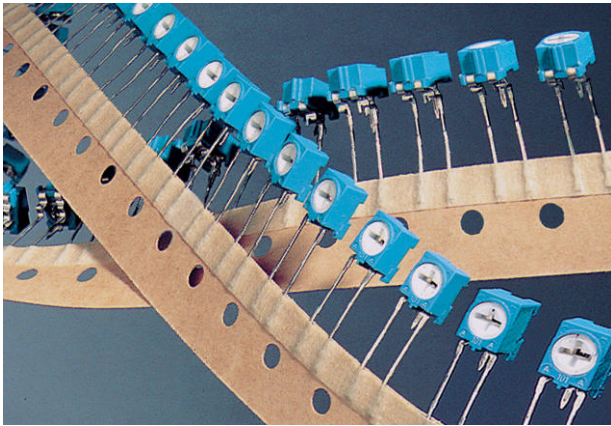


N-6 6 mm Carbon Potentiometer



FEATURES

- RoHS compliant materials.
- Carbon resistive element.
- Plastic substrate.
- Over-moulding manufacturing technique.
- SMD or through hole.
- Embossed Tape (for SMD), Tape on reel, Ammpack and Magazine packaging for automatic insertion and bulk for manual assembly.
- Wiper positioned at 50%.
- Both sides cross slot easy adjustment.
- Accidental rotor movement protected.
- Traceability insured through date code marking.
- Assembly method: stand up and lay down.

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)

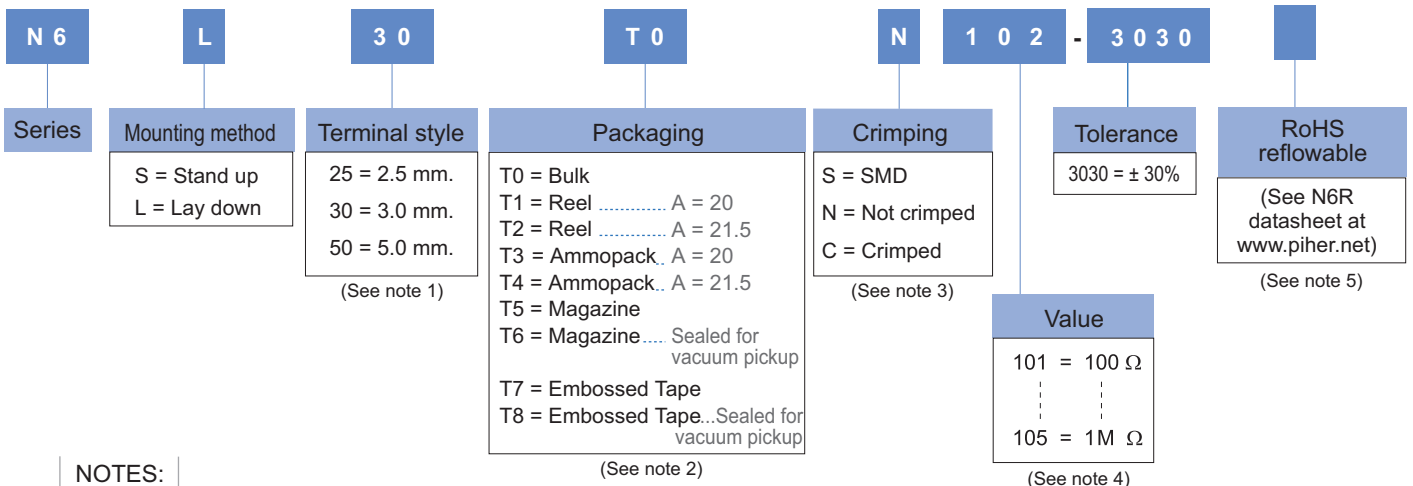
ELECTRICAL SPECIFICATIONS

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

* Others check availability

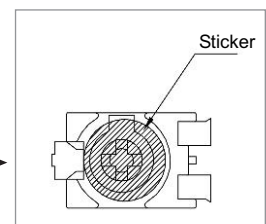
** Up to 85°C depending on application

HOW TO ORDER



NOTES:

- (1) - Type "N-6 S" is only available with terminal style "25".
- Terminal style "50" is only available with bulk packing "T0", "T1", "T3", "T5", "T6", "T7", "T8"
- (2) - Delivery for "T2" and "T4" only available in: N-6 S 25 and N-6 L 30
- "T5", "T6", "T7" and "T8" only available in SMD.
- "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)
- (3) - Crimped terminals are only available in bulk packing "T0".
- Type "S" is only available in N-6 L 50 T0, N-6 L 50 T5, N-6 L 50 T6, N-6 L 50 T7, N-6 L 50 T8



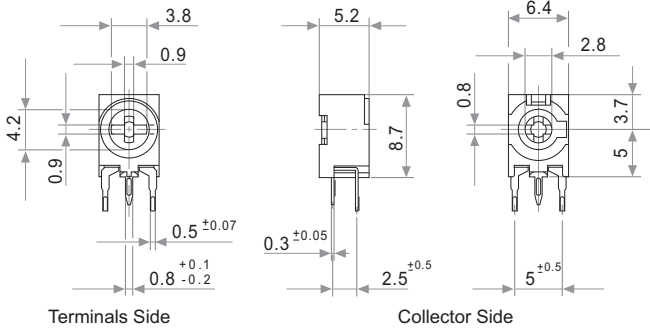
- (4) Value: Example: Code: 10 2 = 1 K
 Number of zeros
 First two digits of the value.

- (5) - Option R: black housing & rotor colour. Range of values: $250\Omega \leq R_n \leq 500K\Omega$ (see separate datasheet "N6R" at www.piher.net)

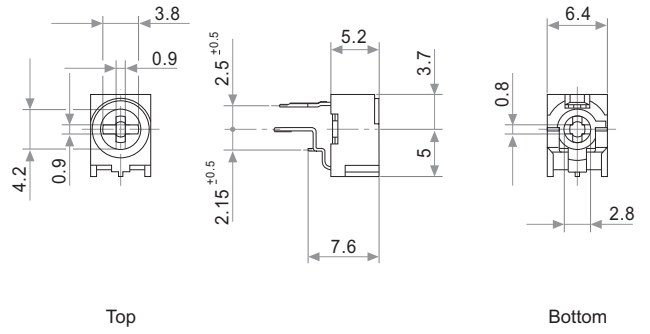
This project has been financially supported by the Spanish Technological Development Institute (CDTI).

MOUNTING METHOD

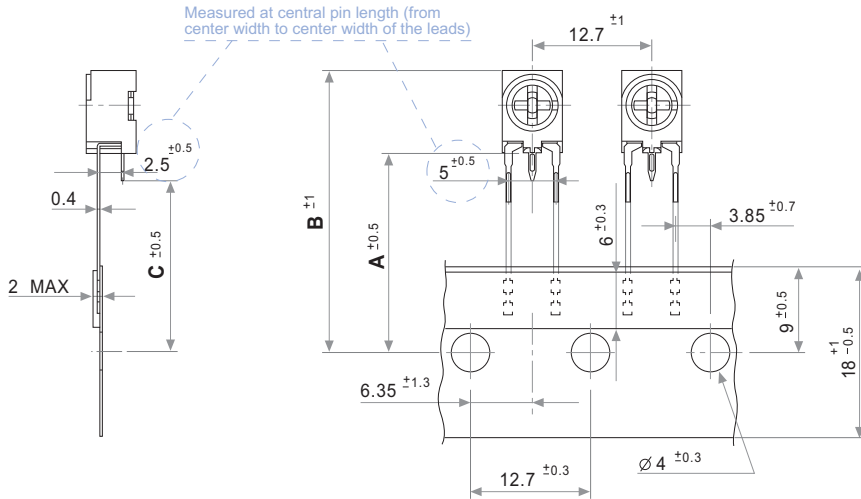
Type S



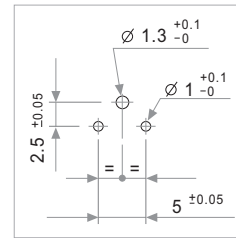
Type L



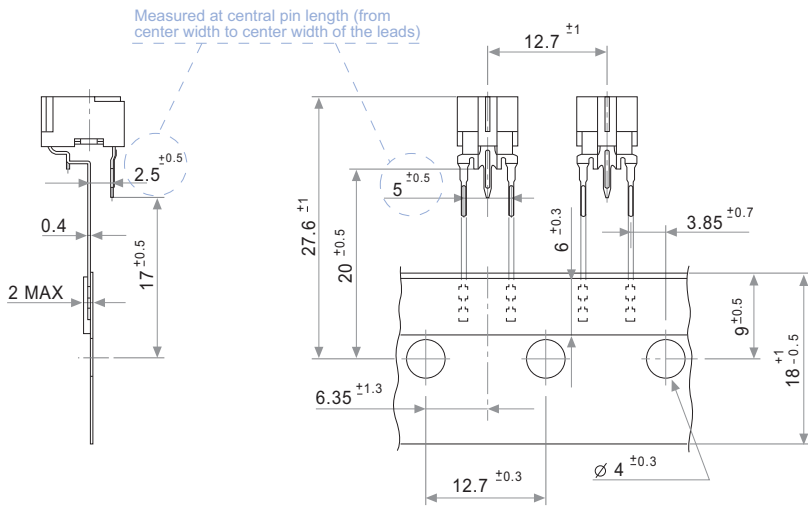
TAPE



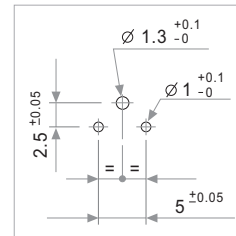
PCB Hole Layout



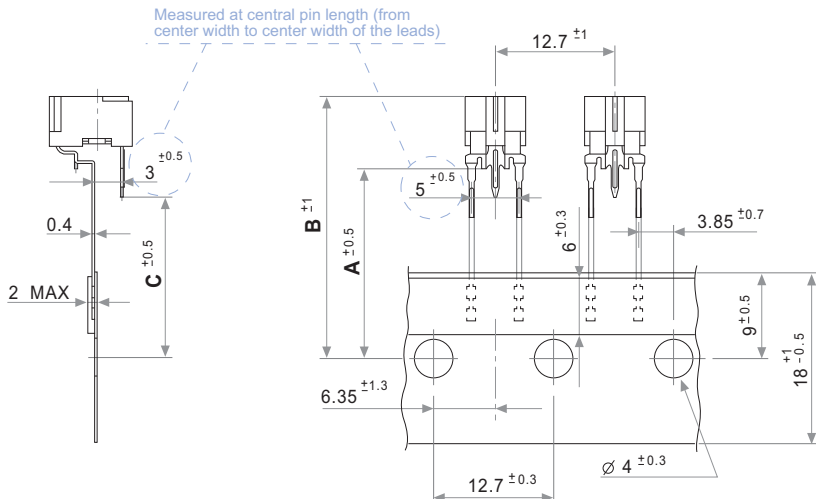
MODEL	A	B	C
N-6 S 25 T1 / T3	20	28.7	17
N-6 S 25 T2 / T4	21.5	30.2	18.5



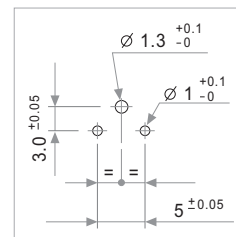
PCB Hole Layout



N-6 L 25 T1 / T3

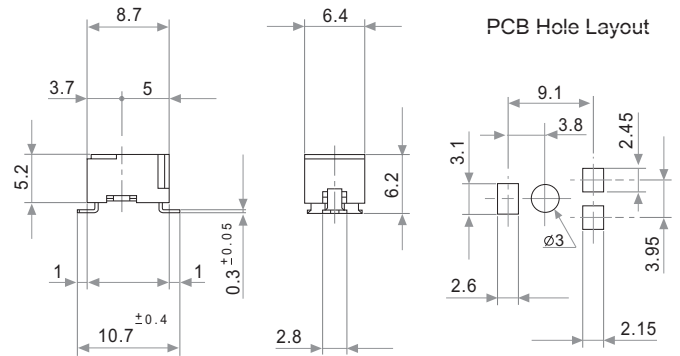
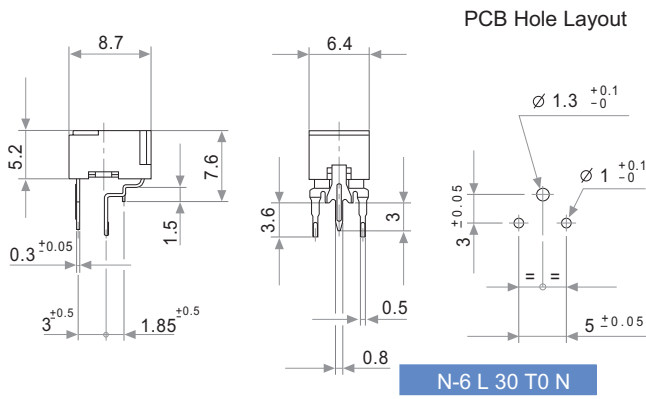
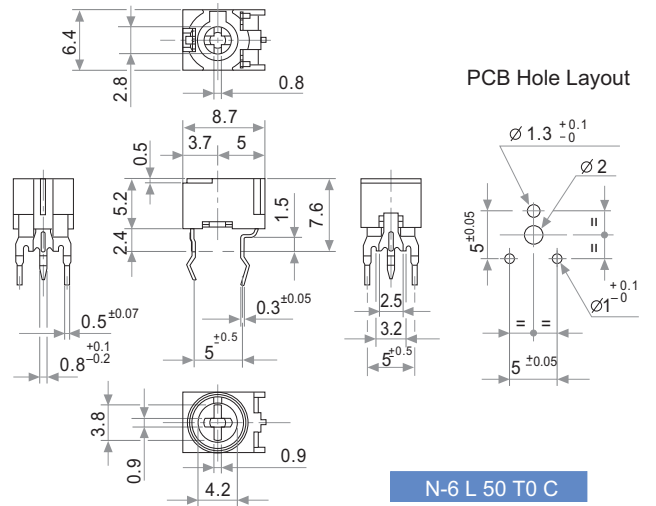
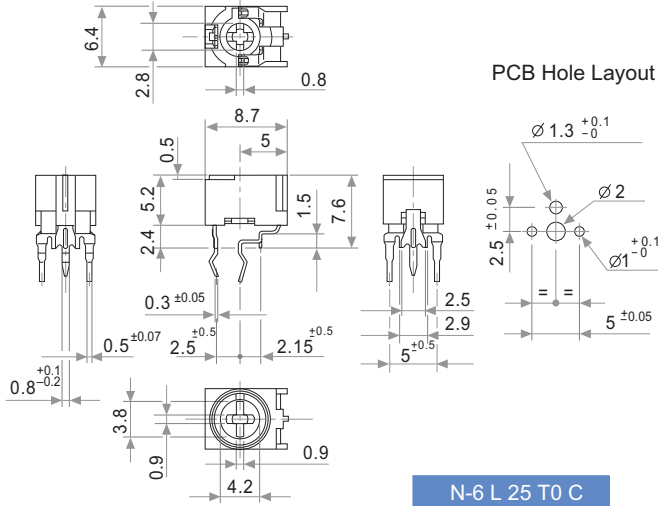


PCB Hole Layout

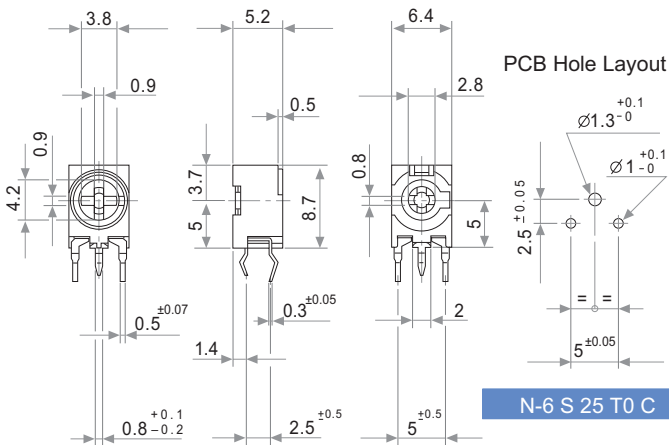


MODEL	A	B	C
N-6 L 30 T1 / T3	20	27.6	17
N-6 L 30 T2 / T4	21.5	29.1	18.5

BULK TYPE L



BULK TYPE S

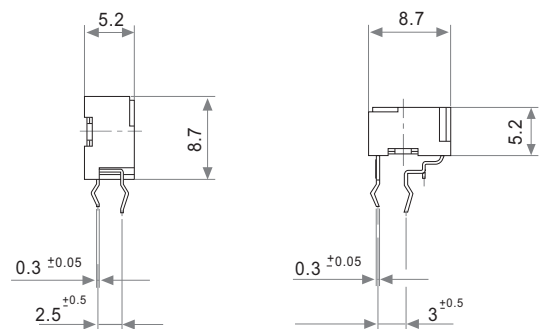


N-6 L 50 T0 S

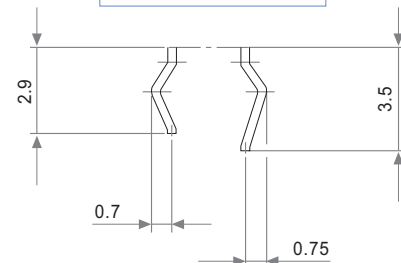
CRIMPING DETAIL "C"

Type S

Type L



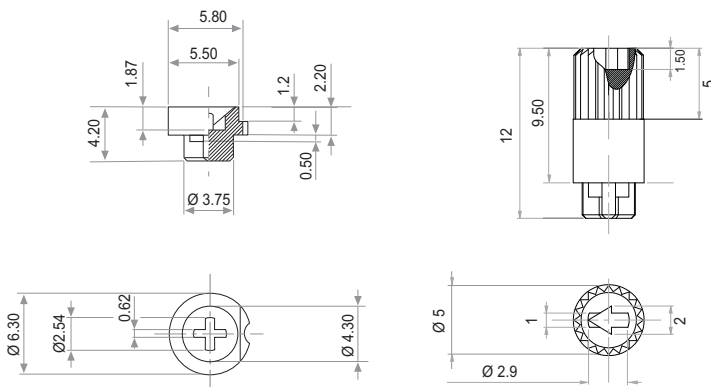
CRIMPING DETAIL



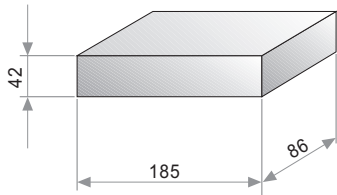
KNOB Ref.: 5680

SHAFT Ref.: 6133

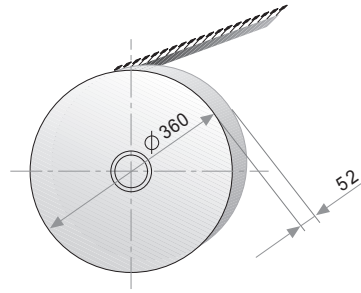
Please order both Knob and Shaft separately. If you wish to use your own custom plastic shaft/knob/actuator please contact Piher for advice about compatible materials.



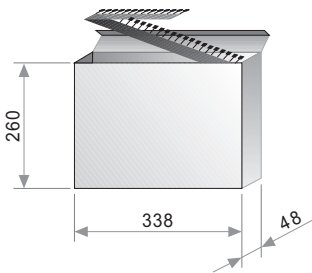
PACKAGING



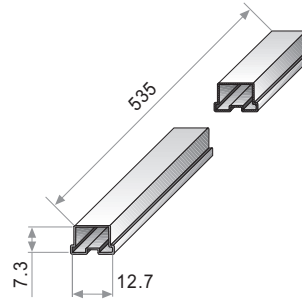
T0 BULK
500 Units per box.



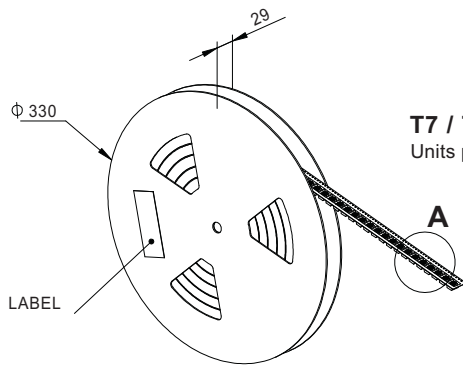
T1 / T2 TAPE ON REEL
Units per Reel according to type:
S: 1.000
L: 750



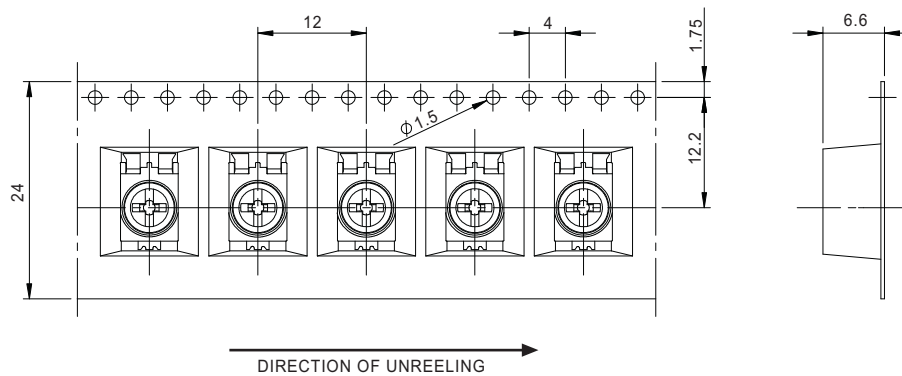
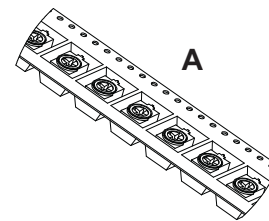
T3 / T4 AMMOPACK
Units per Box according to type.
S: 1.000
L: 750



T5 / T6 MAGAZINE
Units per magazine: 80



T7 / T8 EMBOSSED TAPE
Units per reel: 750

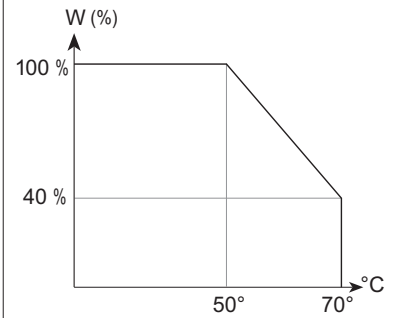


AVAILABLE COMBINATIONS	TAPE				MAGAZINE		EMB.	BULK	
	T1	T2	T3	T4	T5	T6	T7/T8	SMD	CRIMP
N-6 S 25	•	•	•	•					•
N-6 L 25	•		•						•
N-6 L 30	•	•	•	•					•
N-6 L 50	•		•		•	•	•	•	•

TESTS	TYPICAL VARIATIONS	POWER RATING CURVE
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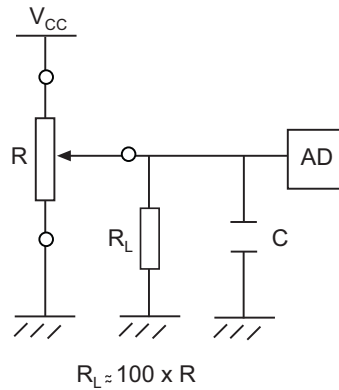
ELECTRICAL LIFE	1.000 h. @ 50°C: 0.1 W	±10 %
MECHANICAL LIFE (CYCLES)	100 @ 10 CPM ...15 CPM	±3 % (Rn < 1 MΩ)
TEMPERATURE COEFFICIENT	-25°C; +70°C	±300 ppm (1K ≤ Rn ≤ 100K)
THERMAL CYCLING	16 h. @ 85°C; 2h. @ -25°C	±5 %
DAMP HEAT	500 h. @ 40°C @ 95% HR	±5 %
VIBRATION (for each plane X,Y,Z)	2 h. @ 10 Hz. ... 55 Hz.	±2 %

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



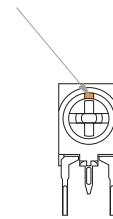
RECOMMENDED CONNECTIONS

Recommended connection scheme for Piher's position sensors (voltage divider)



POSITIONING

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



(example of 50% of the travel)

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