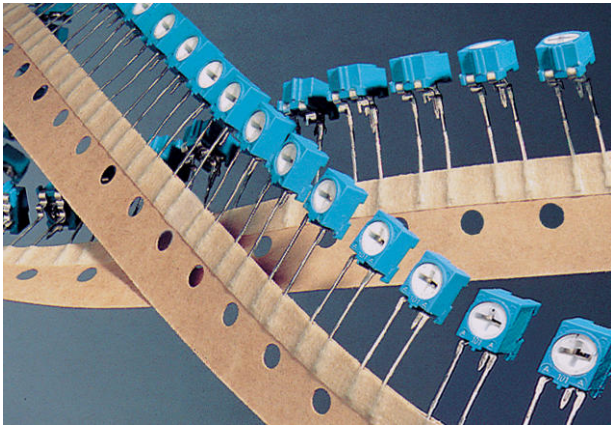


N-6 6 mm Carbon Potentiometer



FEATURES

- RoHS compliant materials
- Carbon resistive element
- Plastic substrate
- Over-moulding manufacturing technique
- SMD or through hole
- Embossed Tape (for SMD), Tape on reel, Ammopack 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
 - 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 upon request

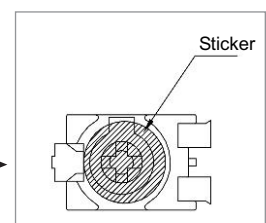
** Up to 85°C depending on application

HOW TO ORDER

Series	Mounting method	Terminal style	Packaging	Crimping	Value	RoHS reflowable
N 6	L	3 0	T 1	N	1 0 2	
	S = Stand up L = Lay down	25 = 2.5 mm. 30 = 3.0 mm. 50 = 5.0 mm. (See note 1)	T0 = Bulk T1 = Reel A = 20 T2 = Reel A = 21.5 T3 = Ammopack.. A = 20 T4 = Ammopack.. A = 21.5 T5 = Magazine T6 = Magazine.... Sealed for vacuum pickup T7 = Embossed Tape T8 = Embossed Tape...Sealed for vacuum pickup (See note 2)	S = SMD N = Not crimped C = Crimped (See note 3)	101 = 100 Ω 105 = 1M Ω (See note 4)	(See N6R datasheet at www.piher.net) (See note 5)

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



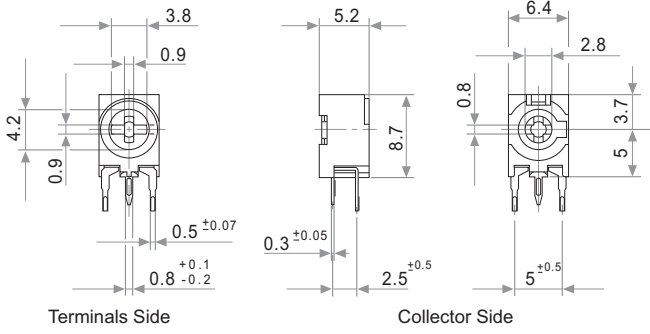
- (4) Value: Example: Code: 10 2 = 1 K
 Number of zeros
 First two digits of the value.

- (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)

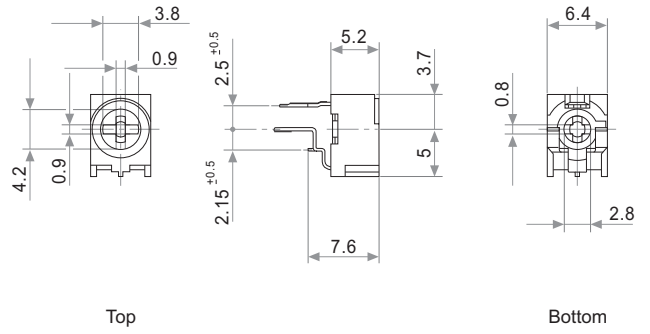
This project has been financially supported by the Spanish Technological Development Institute (CDTI).

MOUNTING METHOD

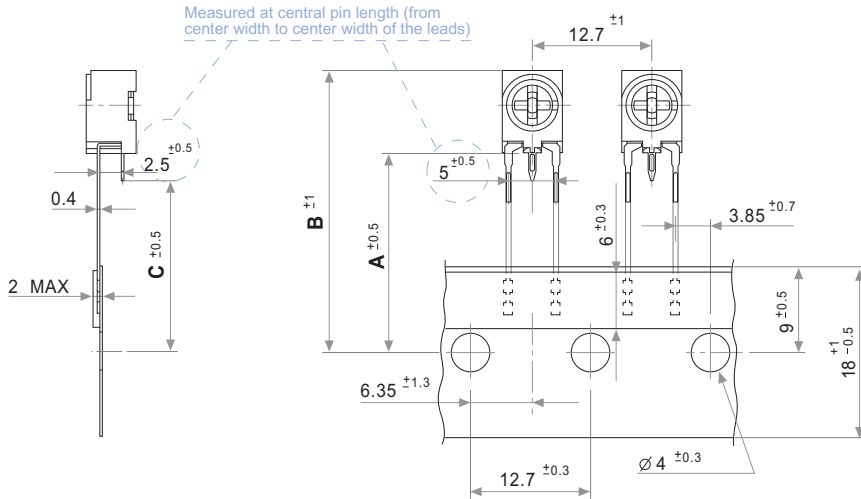
Type S



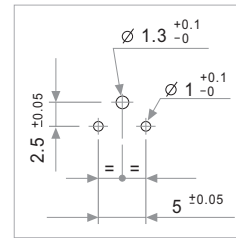
Type L



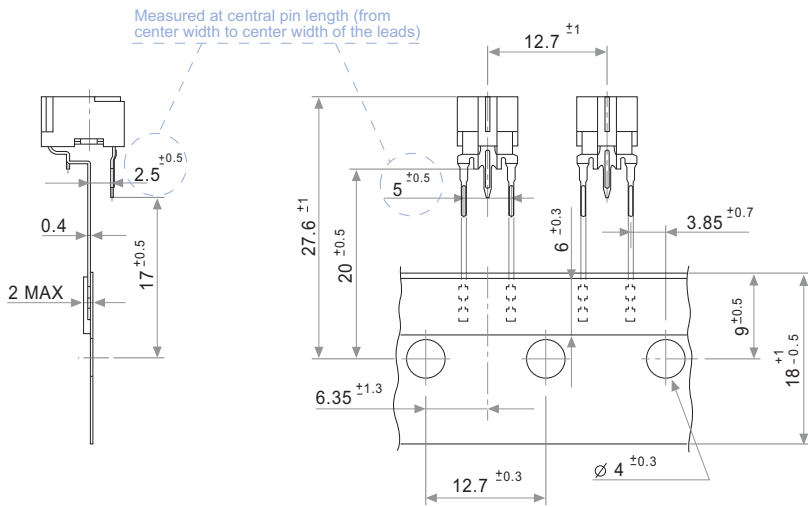
TAPE



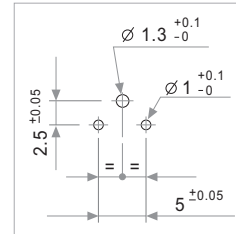
PCB Hole Layout



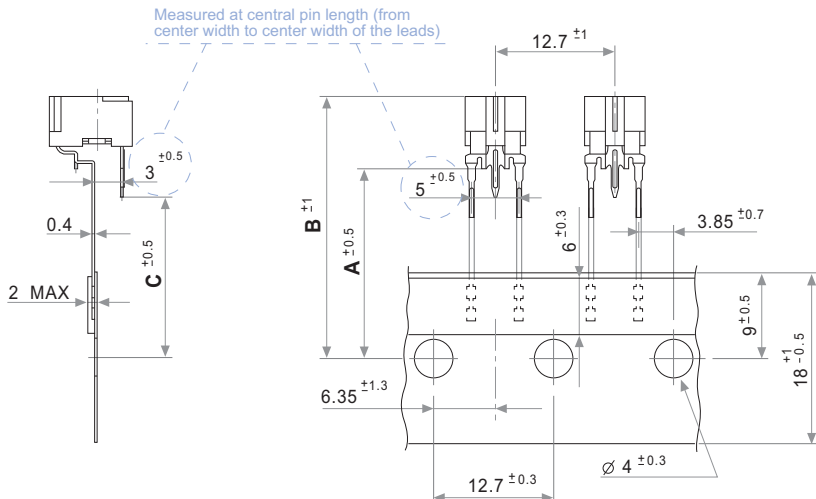
MODEL	A	B	C
N-6 S 25 T1 / T3	20	28.7	17
N-6 S 25 T2 / T4	21.5	30.2	18.5



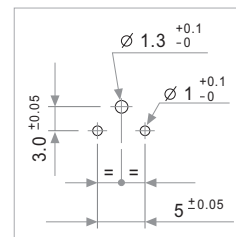
PCB Hole Layout



N-6 L 25 T1 / T3

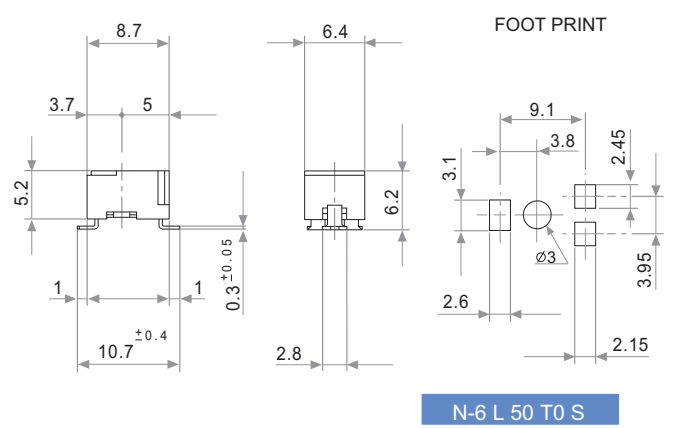
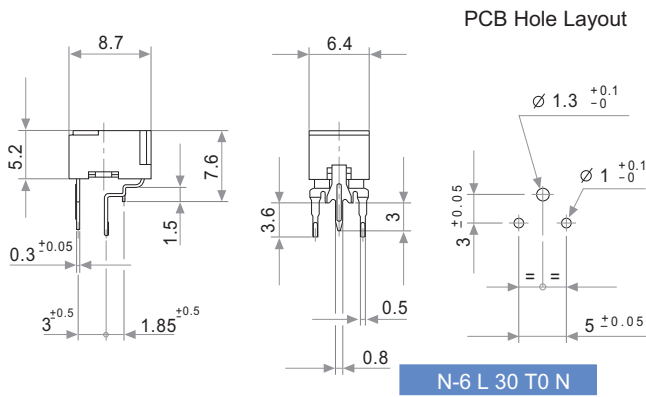
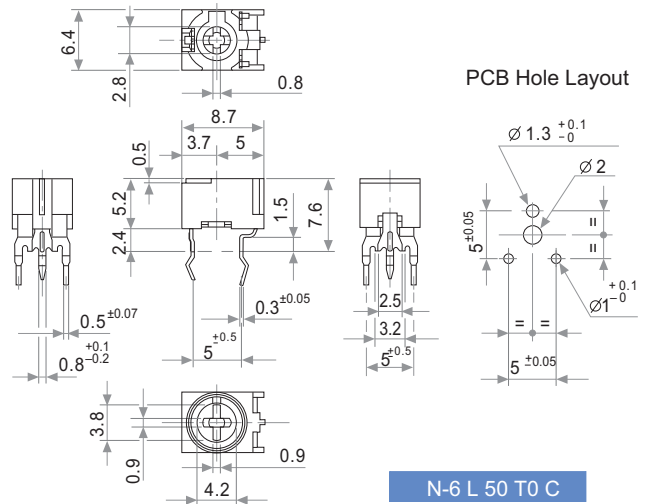
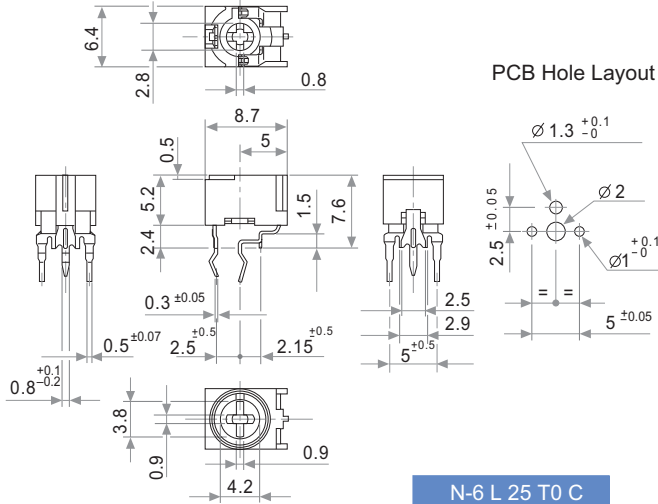


PCB Hole Layout

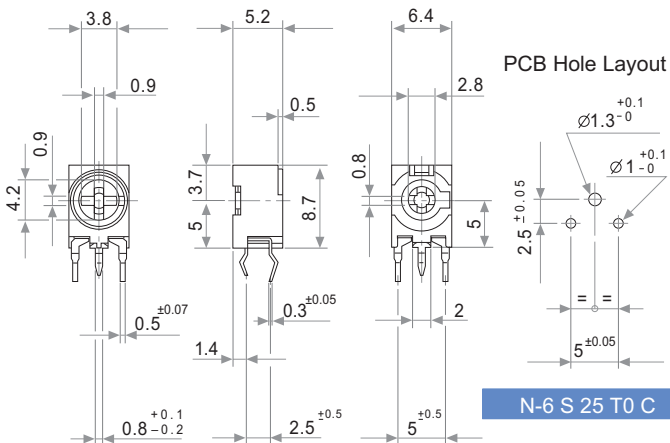


MODEL	A	B	C
N-6 L 30 T1 / T3	20	27.6	17
N-6 L 30 T2 / T4	21.5	29.1	18.5

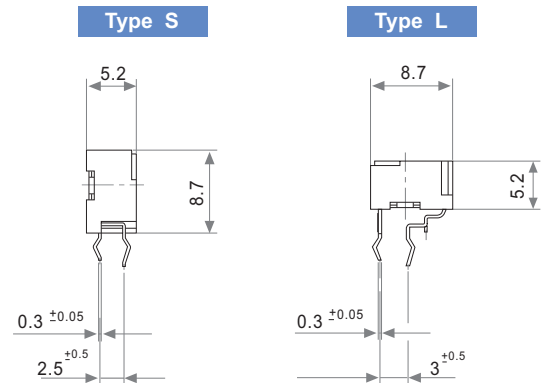
BULK TYPE L



BULK TYPE S



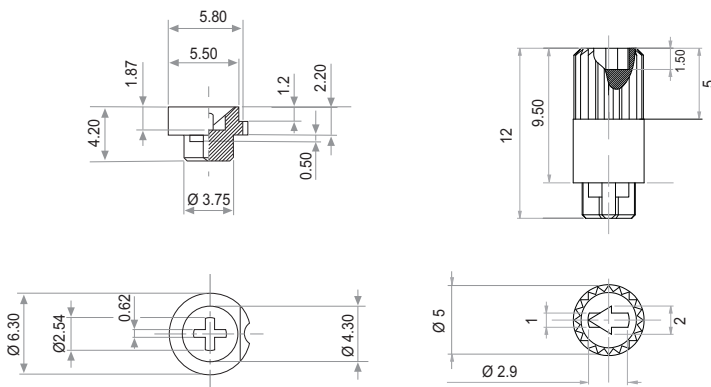
CRIMPING DETAIL "C"



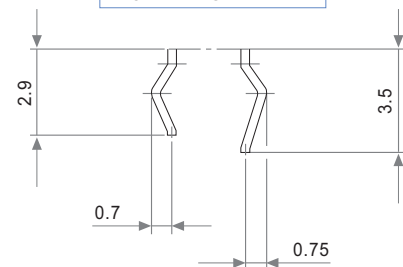
KNOB Ref.: 5680

SHAFT Ref.: 6133

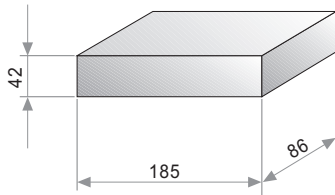
Please order both Knob and Shaft separately. If you wish to use your own custom plastic shaft/knob/actuator please contact Piher for advice about compatible materials.



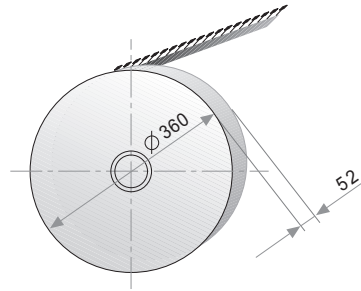
CRIMPING DETAIL



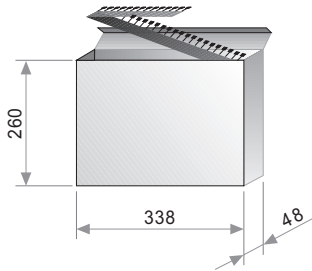
PACKAGING



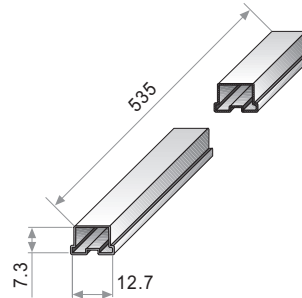
T0 BULK
500 Units per box.



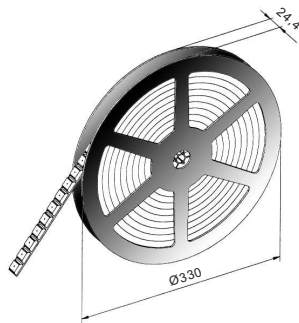
T1 / T2 TAPE ON REEL
Units per Reel according to type:
S: 1.000
L: 750



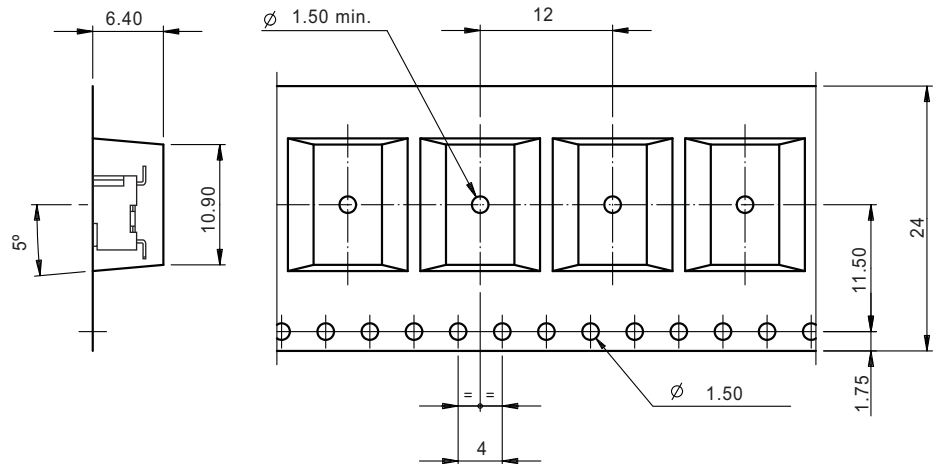
T3 / T4 AMMOPACK
Units per Box according to type.
S: 1.000
L: 750



T5 / T6 MAGAZINE
Units per magazine: 80



T7 / T8 EMBOSSED TAPE
Units per reel: 750



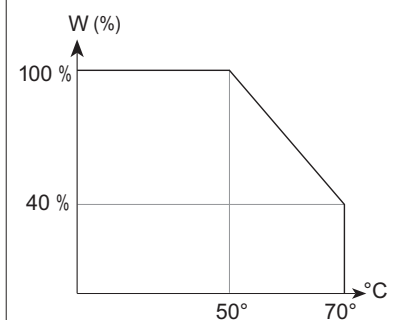
AVAILABLE COMBINATIONS	TAPE				MAGAZINE		EMB.	BULK	
	T1	T2	T3	T4	T5	T6	T7/T8	SMD	CRIMP
N-6 S 25	●	●	●	●					●
N-6 L 25	●		●						●
N-6 L 30	●	●	●	●					●
N-6 L 50	●		●		●	●	●	●	●

TESTS

TYPICAL VARIATIONS

POWER RATING CURVE

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.

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