

### FEATURES

- High reliability
- Simple construction (only 3 component parts)
- Over-moulding manufacturing technique
- Plastic or metal clip versions available
- Various fixation means: clip type (inward/outward actuating), locating pins,...

### TYPICAL APPLICATIONS

Provides a low cost, highly reliable solution for all position sensing applications:

- Automotive seat position memory, central locking, headlamp position and rear-view mirror position sensors.

### MECHANICAL SPECIFICATIONS

Mechanical travel:

- NPL07.....7,25mm
- NPL08.....8mm
- NPL12.....12mm

Electrical travel: (see how to order)

Sliding force:  $\leq 2N$  @ 10mm/sec

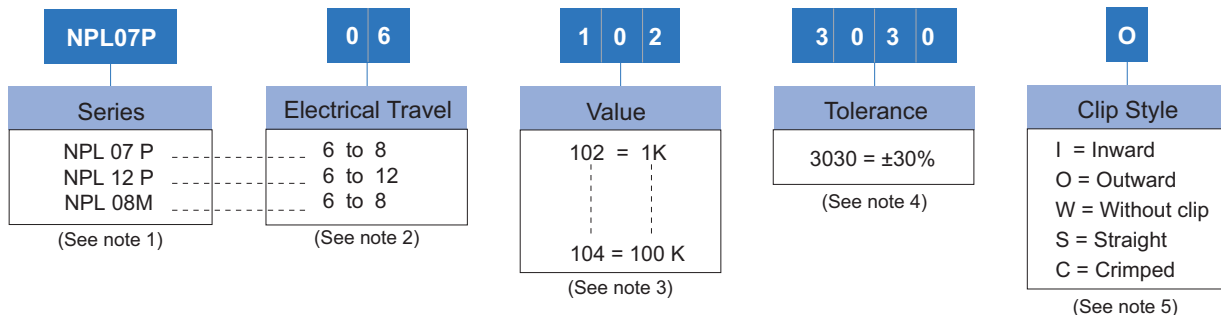
Stop strenght: 30N for 5 secs

### ELECTRICAL SPECIFICATIONS

Range of values:	1K to 100K ohms
Tolerance:	$\pm 30\%$
Max. voltage*:	50 VDC to 100 VDC
Power rating*:	0.20 W @ 50°C
Operating temperature:	-40°C to +105°C
Taper**:	Linear
Relative linearity**:	$\pm 2\%$
Mechanical Life:	50K cycles

\* Depending on model \*\* Others check availability

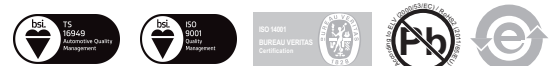
### HOW TO ORDER



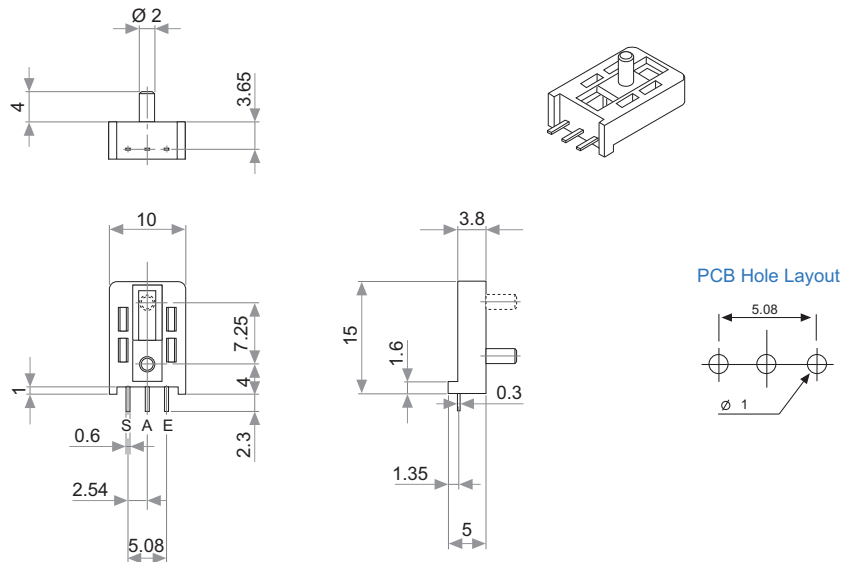
#### NOTES:

- (1) Suffixes: P = Plastic, M= Metal
- (2) Each NPL series has its own Electrical Travel range as shown.
- (3) Value Example: Code: 10 2  $\rightarrow$  1k $\Omega$   
 $\rightarrow$  Number of zeros  
 $\rightarrow$  First two digits of the value.
- (4) Non standard tolerance, check Example: +25% Code: 25 20  
 $\rightarrow$  negative tolerance  
 $\rightarrow$  positive tolerance
- (5) S and C options only available for NPL08M (metal version)  
 W option only available for NPL07P  
 I and O options only available for NPL12P

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).

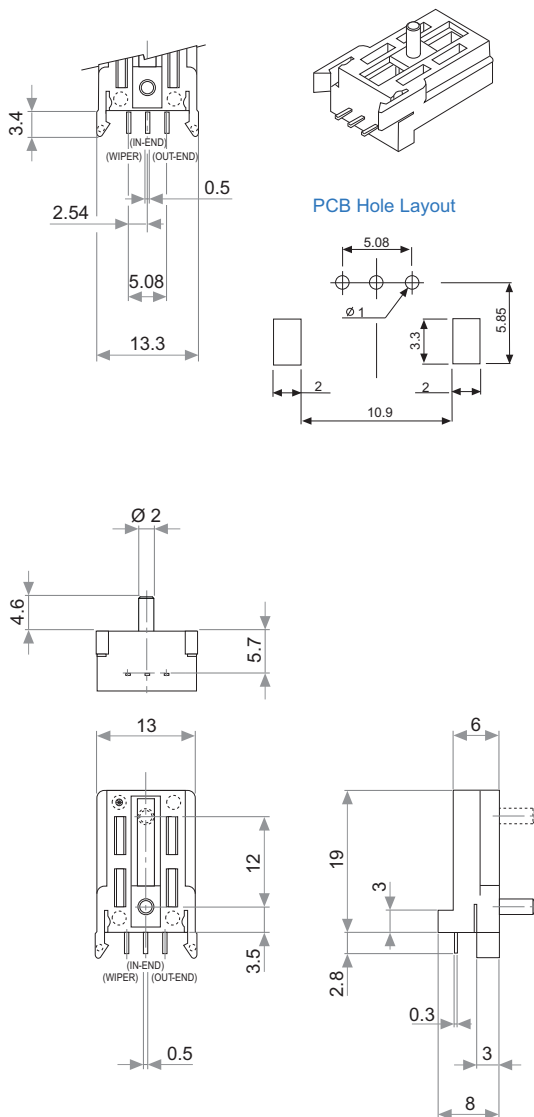


## PLASTIC VERSION NPL-07P

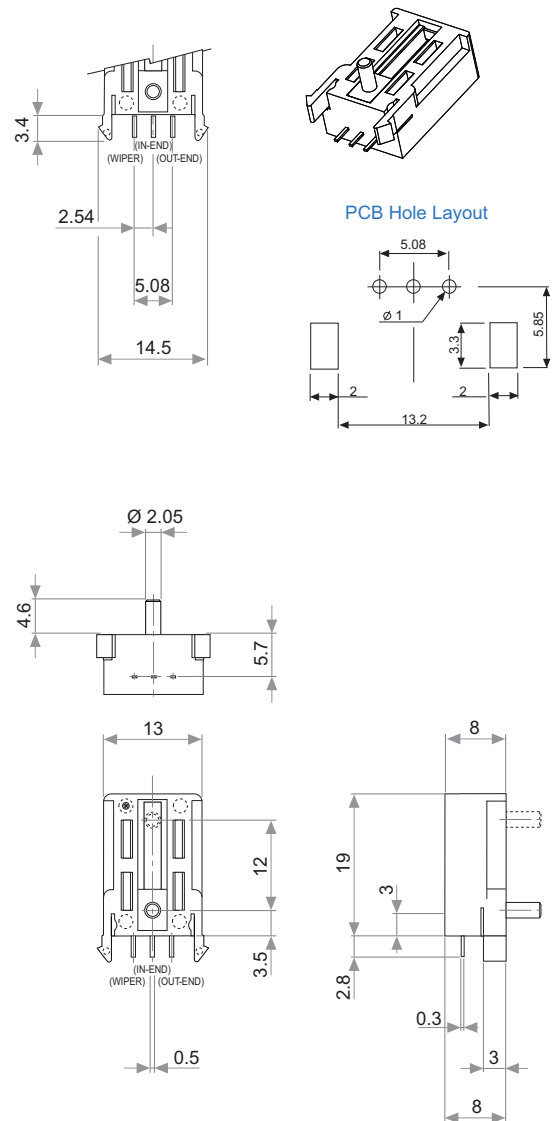


## PLASTIC VERSION NPL-12P

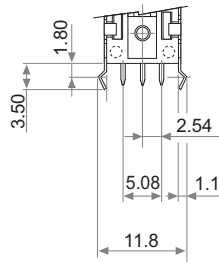
### INWARD FACING CLIPS



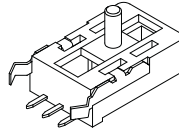
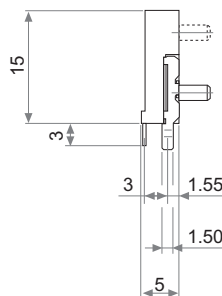
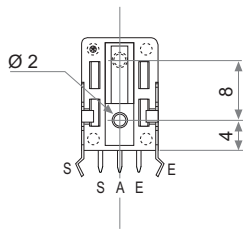
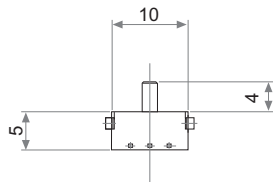
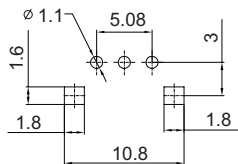
### OUTWARD FACING CLIPS



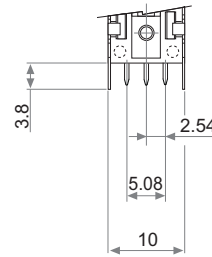
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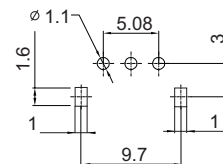
PCB Hole Layout



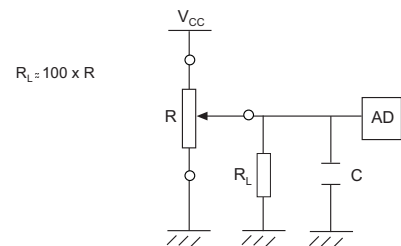
**STRAIGHT**



PCB Hole Layout



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



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