

### FEATURES

- Specifically designed for leadfree reflow soldering processes (excellent performance)
- 10k cycles mechanical life.
- Dust proof enclosure.
- Carbon resistive element.
- Self extinguishable plastic UL 94V-0.
- 10mm version available (PS-10)
- Also upon request:
  - Wiper positioned at 50% or fully clockwise.
  - Mechanical detents
  - Centering pins

### MECHANICAL SPECIFICATIONS

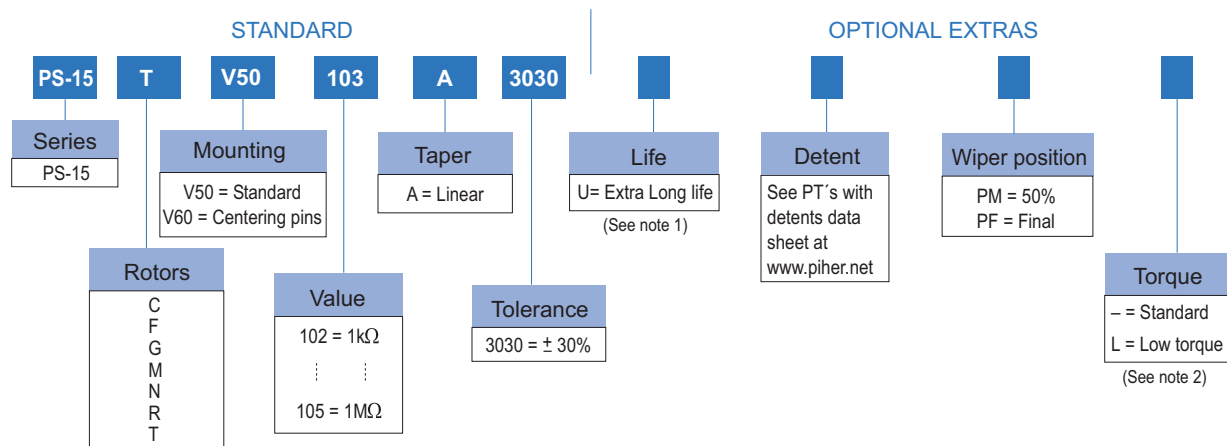
- Mechanical life: 10k cycles
- Mechanical rotation angle:  $265^{\circ} \pm 5^{\circ}$
- Electrical rotation angle:  $240^{\circ} \pm 20^{\circ}$
- Torque: 0.5 to 2.5 Ncm. (0.7 to 3.4 in-oz)
- Stop torque: > 10 Ncm. (>14 in-oz)

### ELECTRICAL SPECIFICATIONS

- Value (\*):  $1k\Omega$  to  $1M\Omega$
- Tolerance (\*):  $\pm 30\%$
- Taper (\*): Linear
- Nominal Power: 0.25W @  $50^{\circ}C$  ( $122^{\circ}F$ )
- Operating temperature:  $-40^{\circ}C$  +  $85^{\circ}C$
- Residual resistance:  $\leq 0.5\%$  Rn
- Equivalent Noise Resistance:  $\leq 3\%$  Rn

\* Others upon request

### HOW TO ORDER



#### NOTES:

- (1) Extra long life: 100k cycles (to be studied case by case)
- (2) Low Torque:  $\leq 1.5Ncm$ . No detent option available for low torque models

Shafts are not available mounted to the potentiometer and should be ordered separately

## HOW TO ORDER CUSTOM DRAWING

PS-15 TV50 + DRAWING NUMBER (Max. 16 digits)

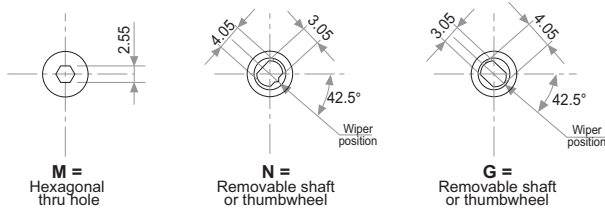
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.

## STANDARD OPTIONS

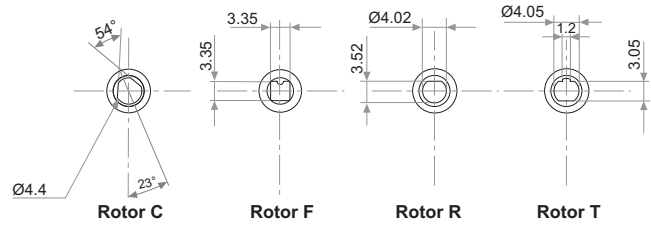
Mechanical Life.....	10k
Detents .....	None
Rotor colour .....	Dark grey
Housing colour .....	Dark grey
Wiper position .....	Initial
Torque .....	Standard

## ROTORS (collector side view)

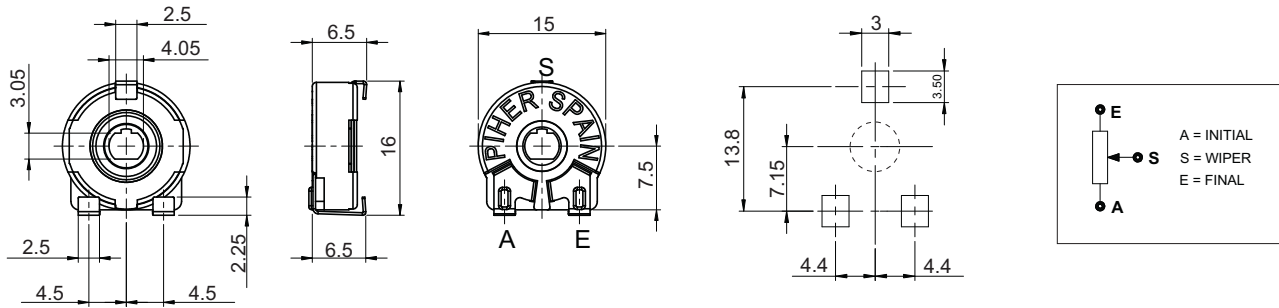
Wipers positioned at initial



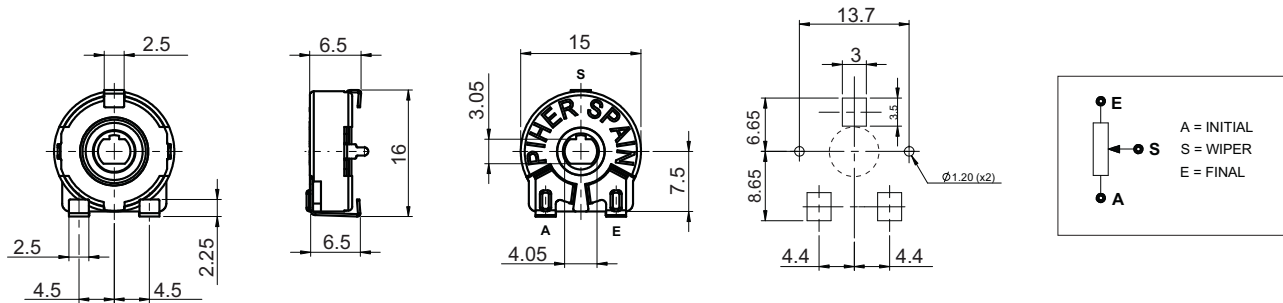
Wipers positioned at 50%



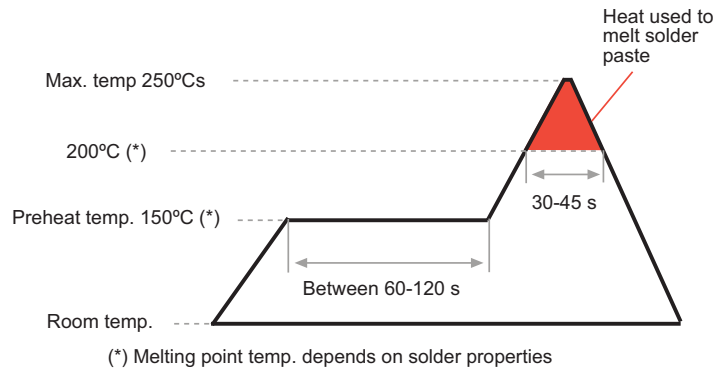
## DIMENSIONS



## DIMENSIONS (V60 version - with centering pins)



## RECOMMENDED REFLOW PROFILE



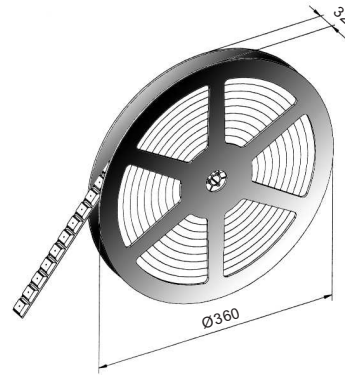
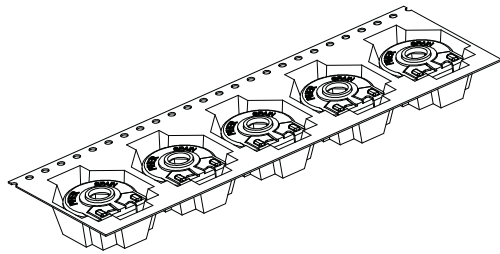
**TESTS**

**TYPICAL VARIATIONS**

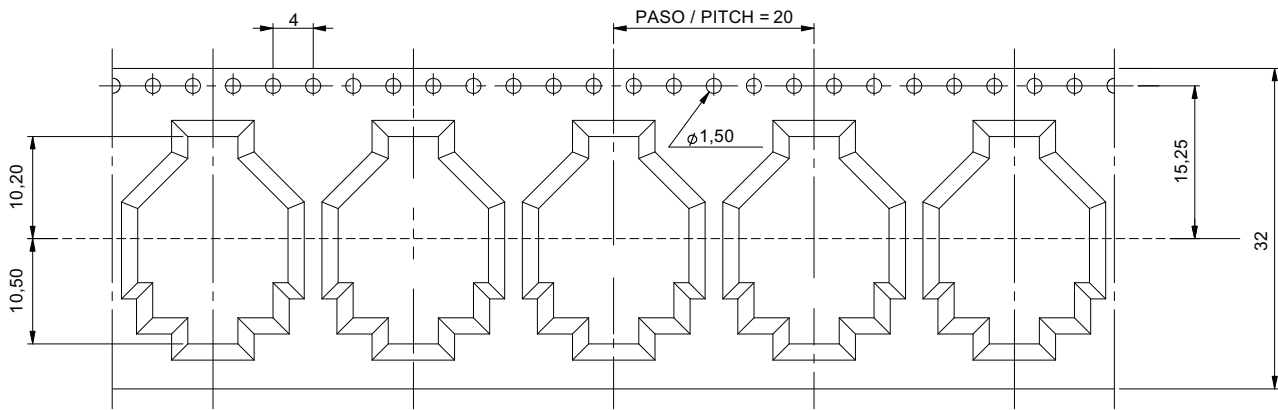
ELECTRICAL LIFE	1k h. @ 50°C; 0.25 W	±10 %
MECHANICAL LIFE	10k @ 10 CPM ...15 CPM	±10 %
TEMPERATURE COEFFICIENT	-40°C; +85°C	±1000 ppm
THERMAL CYCLING	16 h. @ 90°C; 2h. @ -40°C	±5 %
DAMP HEAT	500 h. @ 40°C @ 95% HR	±10 %
VIBRATION (for each plane X,Y,Z)	2 h. @ 10 Hz. ... 55 Hz.	±2 %

**PACKAGING**

**Bulk:** 500pcs / per Box (80 x 85 x 185 mm.)



**EMBOSSED TAPE**  
400 Units per Reel



**SHAFTS**

Hollow model shafts

Solid model shafts

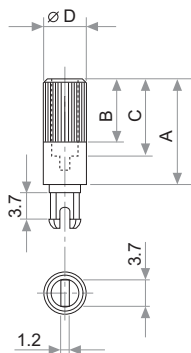


FIG.	A	B	C	D	Ref.
1	12	9	8	6	5272
2	19	9	15	6	5214
5	9.5	6.5	5.5	6	5208
9	35	9	31	6	5216
10	37.8	9	33.8	6	5218
11	35	25	15	6	5209
13	7.8	4.8	3.8	6	5265

A = Length (FRS)  
B = Knurling length  
C = Hollow depth  
D = Shaft diameter  
FRS = From rotor surface

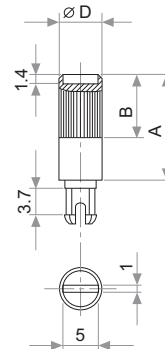


FIG.	A	B	D	Ref.
6	15	9	6	5219
7	16.8	9	6	5220
8	25.3	9	6	5207
12	46	5	6	5227

Slot (1 x 1.4) perpendicular to wiper position. Fig. 12 slot is in line with wiper position.

## SHAFTS

If you wish to use your own custom plastic shaft/knob/actuator please contact Piher for advice about compatible materials.

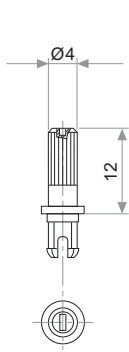


Fig. 3 / Ref. 5372

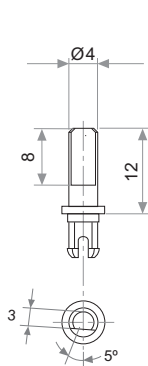


Fig. 15 / Ref. 5217

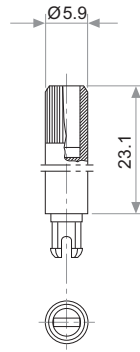


Fig. 17 / Ref. 5210

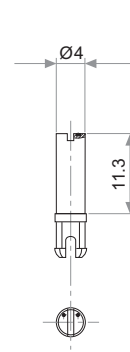


Fig. 18 / Ref. 5271

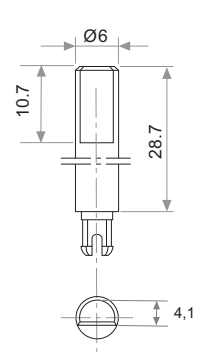


Fig. 19 / Ref. 6032\*

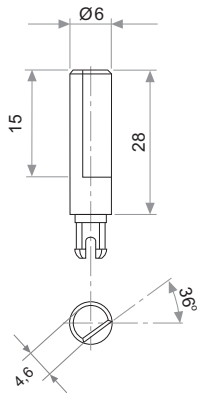


Fig. 20 / Ref. 5369\*

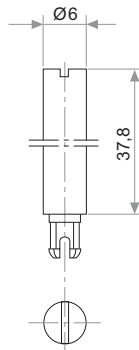


Fig. 21 / Ref. 6031\*

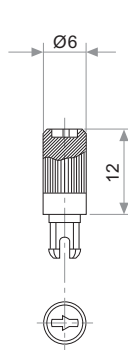


Fig. 22 / Ref. 6029

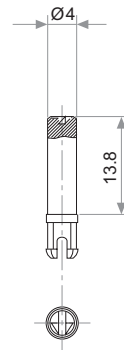


Fig. 23 / Ref. 6022

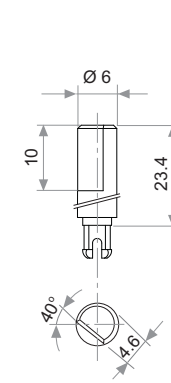


Fig. 29 / Ref. 6162

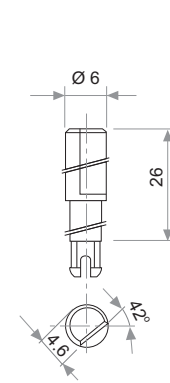


Fig. 25 / Ref. 6059

\* Not available in self extinguishable plastic

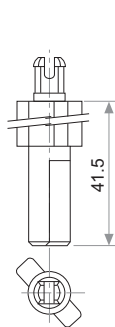


Fig. 27 / Ref. 5268\*

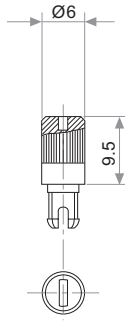


Fig. 28 / Ref. 6055

## THUMBWHEEL

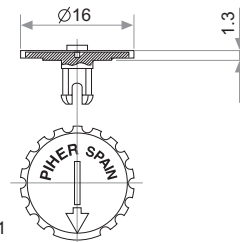


Fig. 4 / Ref. 5371

\* Not available in self extinguishable plastic

## RECOMMENDED CONNECTIONS

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

