

## FEATURES

- Carbon resistive element.
- Dust proof enclosure.
- Polyester substrate.
- Also upon request:
  - Wiper positioned at 50% or fully clockwise.
  - Long life model for low cost control pot. applications
  - Low torque option
  - Supplied in magazines for automatic insertion.
  - Self extinguishable plastic UL 94V-0
  - Cut track option
  - Special Tapers
  - Mechanical detents

## MECHANICAL SPECIFICATIONS

- Mechanical rotation angle:  $265^\circ \pm 5^\circ$   
 $240^\circ \pm 5^\circ$  available under drawing (blue housing only)
- Electrical rotation angle:  $250^\circ \pm 20^\circ$
- Torque: 0.5 to 2.5 Ncm.  
(0.7 to 3.4 in-oz)
- Stop torque: > 10 Ncm. (> 14 in-oz)

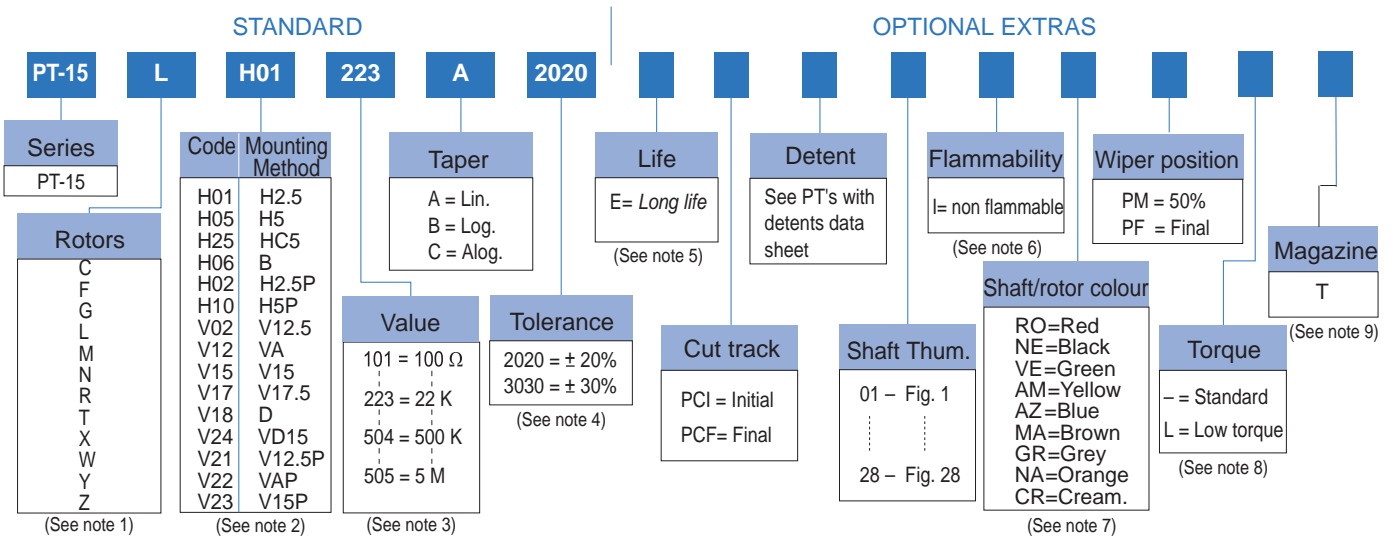
## ELECTRICAL SPECIFICATIONS

- Range of values (\*)  
 $100\Omega \leq R_n \leq 5\text{ M}$  (Decad. 1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)
- Tolerance (\*):  $100\Omega \leq R_n \leq 1\text{M}\Omega$  .....  $\pm 20\%$   
 $1\text{M}\Omega < R_n \leq 5\text{M}$  .....  $\pm 30\%$
- Max. Voltage: 250 VDC (lin) 125 VDC (no lin)
- Nominal Power  $50^\circ\text{C}$  ( $122^\circ\text{F}$ ) (see power rating curve)  
0.25 W (lin) 0.12 W (no lin)
- Taper (\*) (Log. & Alog. only  $R_n \geq 1\text{K}$ ) Lin ; Log; Alog.
- Residual resistance:  $\leq 5 \cdot 10^{-3} R_n$  ( $2\Omega$  min.)
- Equivalent Noise Resistance:  $\leq 3\% R_n$  ( $3\Omega$  min.)
- Operating temperature\*\*:  $-25^\circ\text{C} + 70^\circ\text{C}$  ( $-13^\circ\text{F} + 158^\circ\text{F}$ )

\* Others upon request

\*\* Up to  $85^\circ\text{C}$  depending on application

## HOW TO ORDER



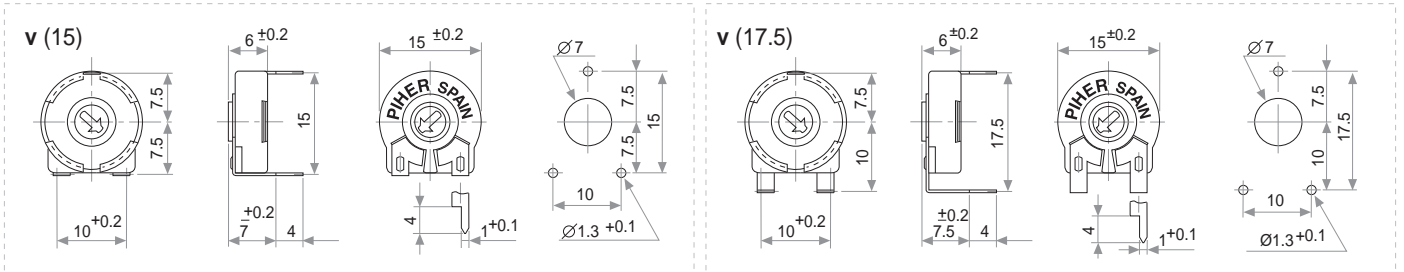
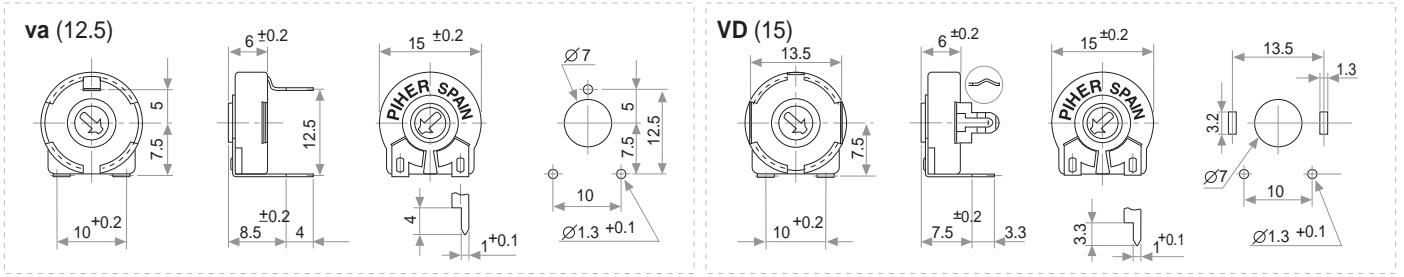
### NOTES:

- (1) "Z" adjustment only available on "H" versions. Standard colour for the "T" rotor: Orange
- (2) Terminal styles: "P" are crimped terminals
- (3) Value Example: Code: 10 1 100  $\Omega$   
 ↳ Num of zeros  
 ↳ First two digits of the value.
- (4) Non standard tolerance, upon request. Example: +7%      Code: 07 05  
 ↳ -5%      ↳ negative tolerance  
 ↳ positive tolerance
- (5) Life
  - Standard 500 cycles
  - Long life 10000 cycles
- (6) Non flammable: housing, rotor and shaft.
- (7) Colour shaft/rotor:
  - Potentiometer without shaft: only rotor
  - Potentiometer with shaft: only shaft
  - Cream colour only available in standard plastic
- (8) Low Torque:  $\leq 1.5\text{Ncm}$ . No detent option available for low torque models
- (9) Magazines (35 pcs/mag): available for VA (12.5), V (12.5), V (12.5P), V (15), V15 (P) and H models.  
For more information please contact your nearest Piher supplier.

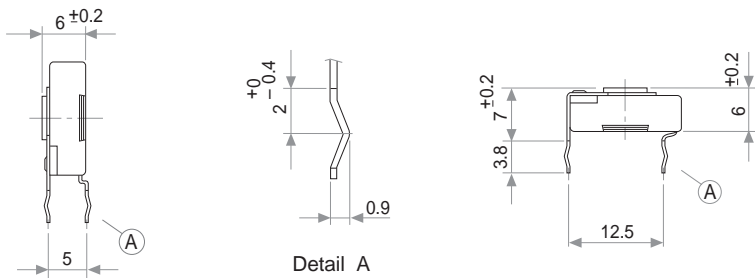
NOTE: The information contained here should be used for reference purposes only.



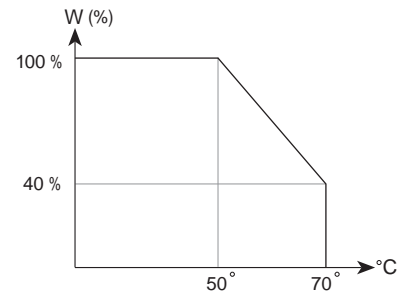
## HORIZONTAL MOUNT - VERTICAL ADJUST



## CRIMPED TERMINALS (DETAIL)

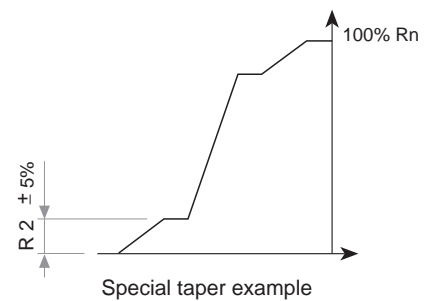
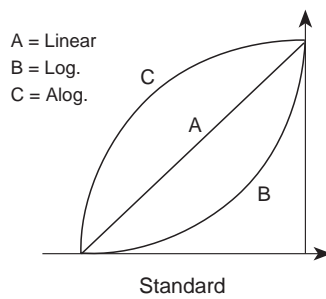


## POWER RATING CURVE



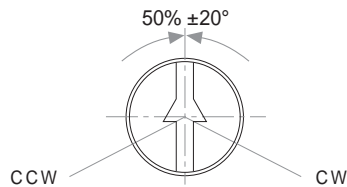
## TAPERS

NOTE: Please note terminals disposition when ordering non linear curves.



## OPTIONS

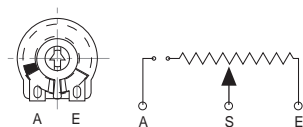
Positioning  
P.M.  
50% ±20°



Std. Position = CCW

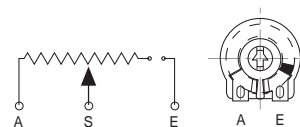
Cut Track

CCW on-off (A)



A = Initial  
S = Wiper  
E = Final

CW on-off (E)



## TESTS

## TYPICAL VARIATIONS

ELECTRICAL LIFE	1.000 h. @ 50°C; 0.25 W	±5 %
MECHANICAL LIFE (CYCLES)	500 @ 10 CPM ...15 CPM	±3 % (Rn < 1 M.Ω)
TEMPERATURE COEFFICIENT	-25°C; +70°C	±300 ppm (Rn <100 K)
THERMAL CYCLING	16 h. @ 85°C; 2h. @ 25°C	±2.5 %
DAMP HEAT	500 h. @ 40°C @ 95% HR	±5 %
VIBRATION (for each plane X,Y,Z)	2 h. @ 10 Hz. ... 55 Hz.	±2 %

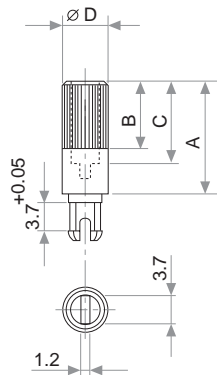
NOTE : Out of range values may not comply these results.

## PACKAGING

MODEL	PIECES / BOX
No thumbwheel / shaft	200 (40 x 85 x 185 mm.)
With thumbwheel / shaft up to 19 mm.	100 (40 x 85 x 185 mm.)
With shaft exceeding 19 mm.	50 (40 x 85 x 185 mm.)

## SHAFTS

### Hollow model shafts



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

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	15	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

### Solid model shafts

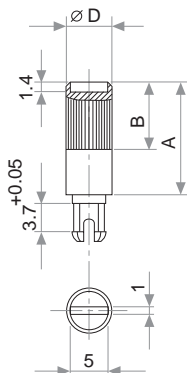


FIG.	A	B	D	Ref.
6	15	9	6	5219
7	16.8	9	6	5220
8	25.3	9	6	5207
12	46	5	6	5227

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

# SHAFTS

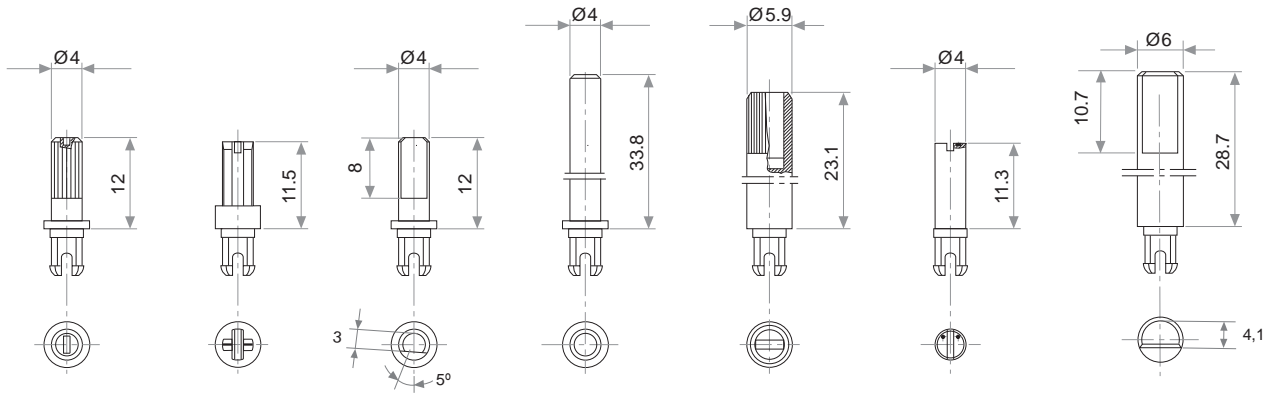


Fig. 3 / Ref. 5372    Fig. 14 / Ref. 5248    Fig. 15 / Ref. 5217    Fig. 16 / Ref. 5262\*    Fig. 17 / Ref. 5210    Fig. 18 / Ref. 5271    Fig. 19 / Ref. 6032\*

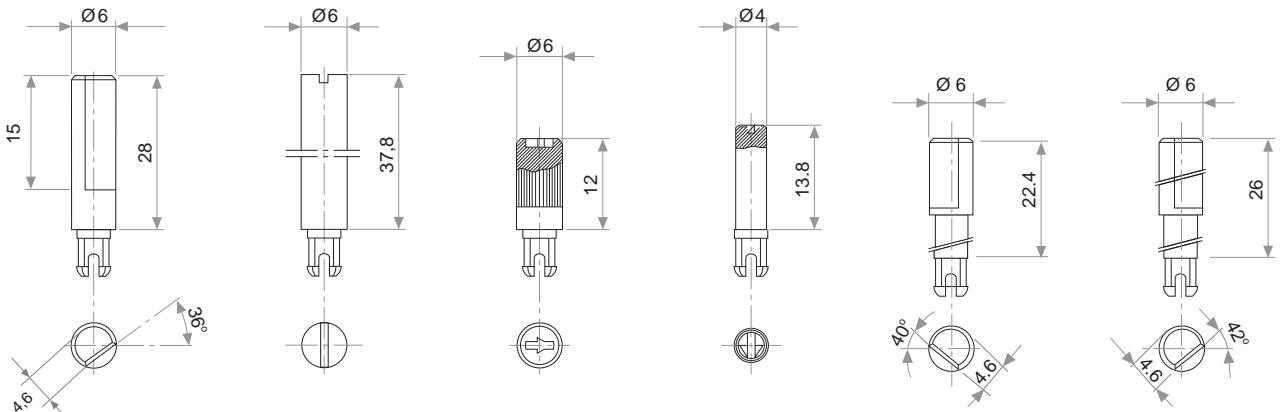


Fig. 20 / Ref. 5369\*    Fig. 21 / Ref. 6031\*    Fig. 22 / Ref. 6029    Fig. 23 / Ref. 6022    Fig. 24 / Ref. 6058    Fig. 25 / Ref. 6059

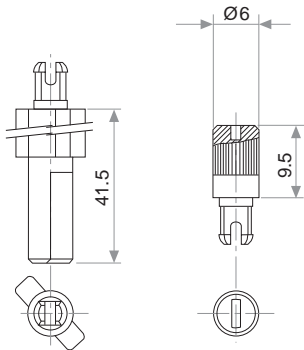


Fig. 27 / Ref. 5268\*    Fig. 28 / Ref. 6055

\* Not available in self extinguishable plastic

# THUMBWHEEL

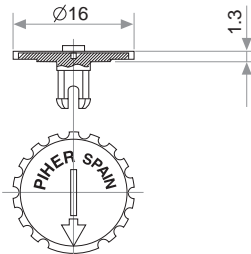


Fig. 4 / Ref. 5371

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