



## 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)

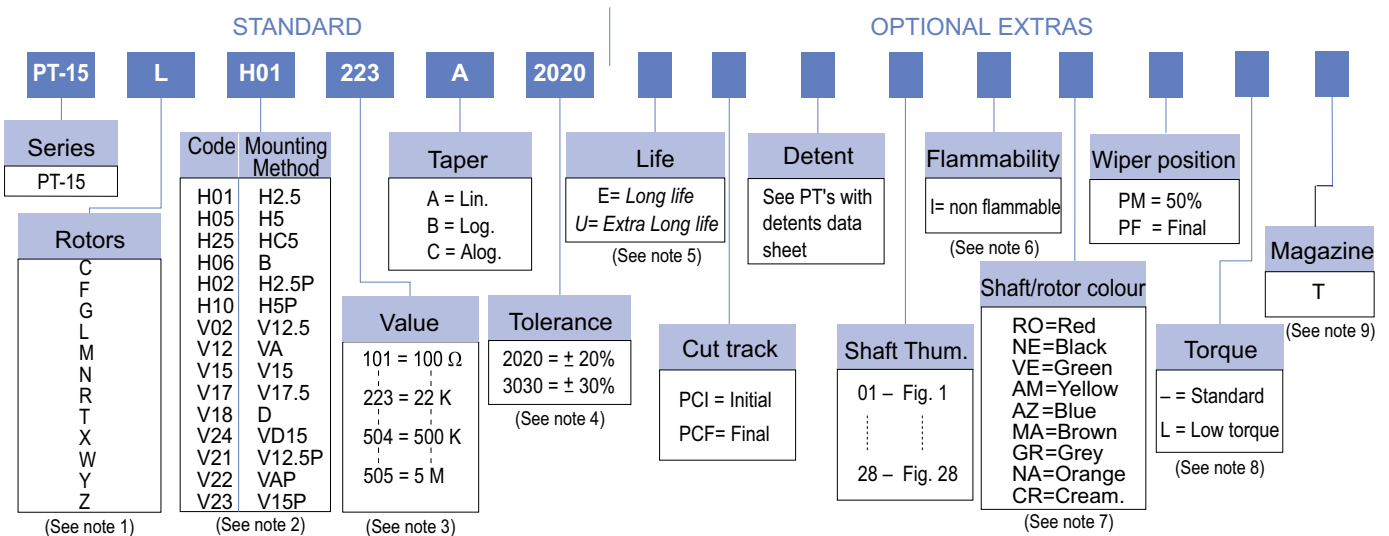
## ELECTRICAL SPECIFICATIONS

- 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:

- "Z" adjustment only available on "H" versions. Standard colour for the "T" rotor: Orange
- Terminal styles: "P" are crimped terminals. V=Vertical adjust; H=Horizontal Adjust
- Value Example: Code:  $\begin{matrix} 10 & 1 & 100 & \Omega \\ \downarrow & \downarrow & \downarrow & \\ \text{First two digits of the value.} & \text{Num of zeros} & & \end{matrix}$
- Non standard tolerance, upon request. Example: +7% Code:  $\begin{matrix} 07 & 05 \\ \downarrow & \downarrow \\ \text{negative tolerance} & \text{positive tolerance} \end{matrix}$
- Life
  - Standard 500 cycles
  - Long life 10000 cycles
  - Extra Long life 100000 cycles (to be studied case by case)
- Non flammable: housing, rotor and shaft.
- Colour shaft/rotor:
  - Potentiometer without shaft: only rotor
  - Potentiometer with shaft: only shaft
  - Cream colour only available in standard plastic
- Low Torque:  $\leq 1.5\text{Ncm}$ . No detent option available for low torque models
- 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.

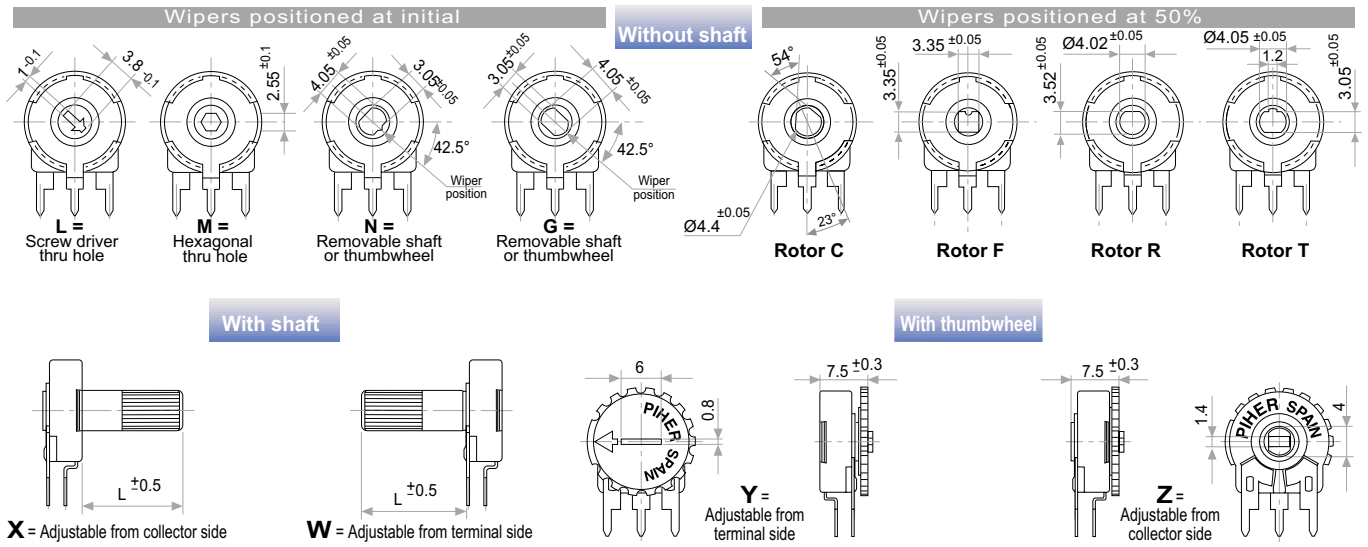
NOTE: The information contained here should be used for reference purposes only.

PT-15 LH 01 + DRAWING NUMBER (Max. 16 digits)

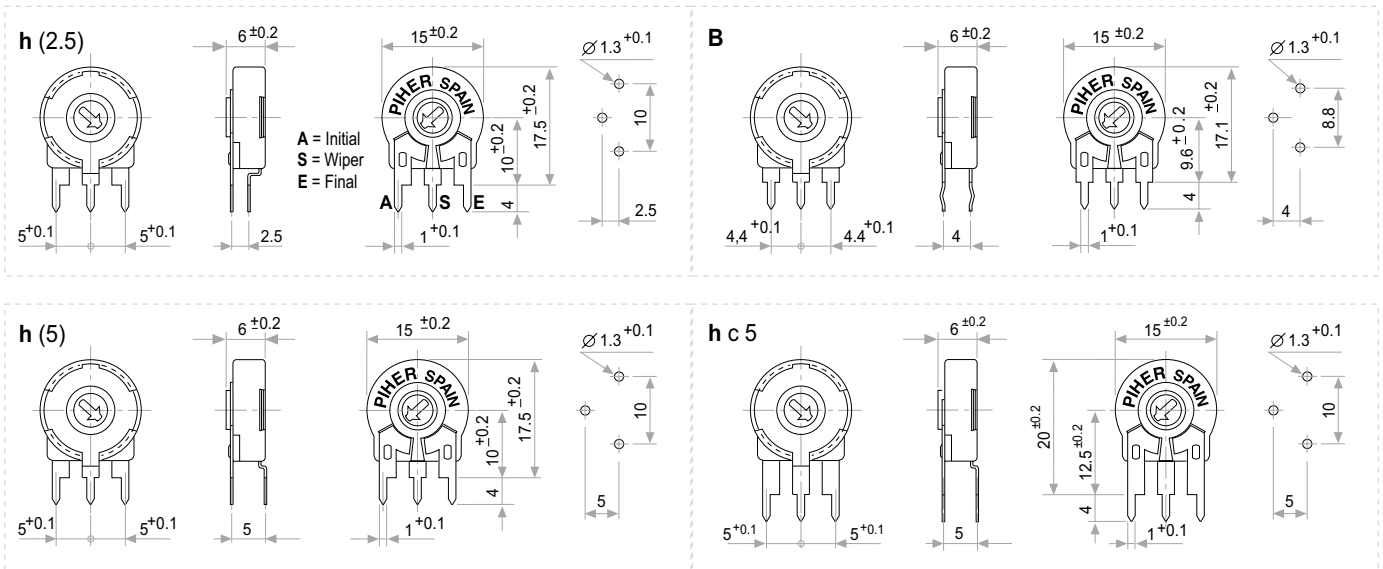
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.

Mechanical Life .....	500 cycles
Cut track .....	No
Detents .....	None
Non flammable .....	No
Rotor colour .....	White
Shaft colour .....	Natural
Wiper position .....	Initial
Torque .....	Standard

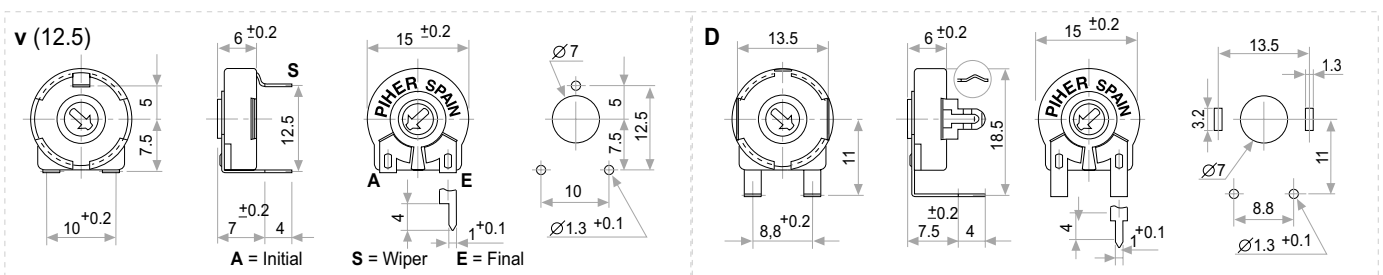
ROTORS



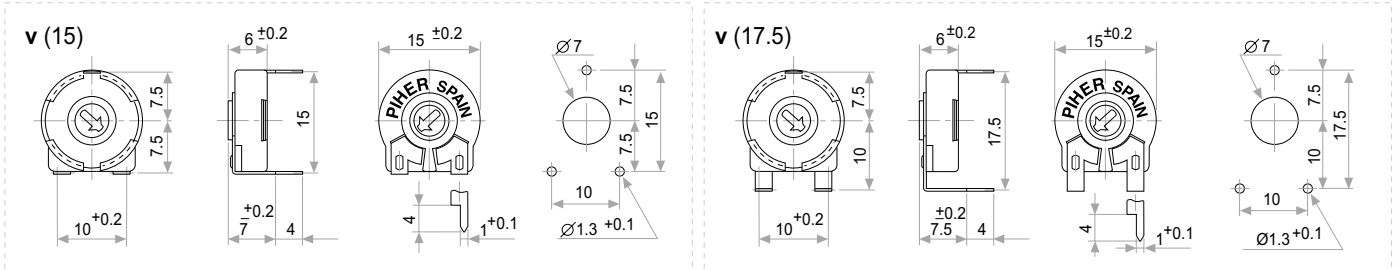
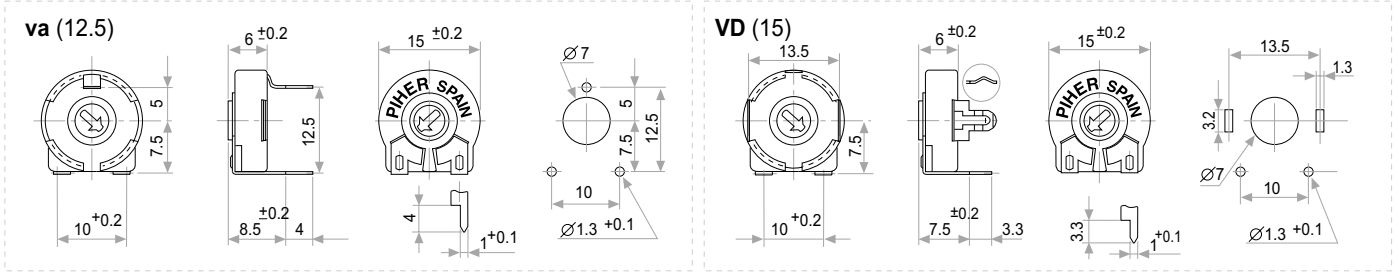
VERTICAL MOUNT - HORIZONTAL ADJUST



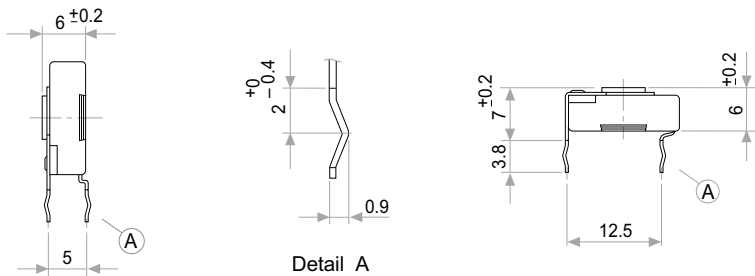
HORIZONTAL MOUNT - VERTICAL ADJUST



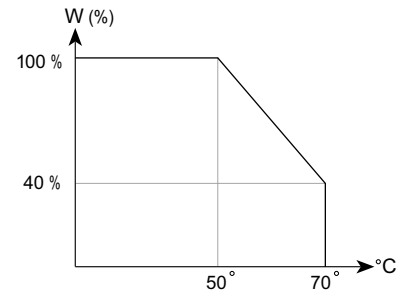
## HORIZONTAL MOUNT - VERTICAL ADJUST



## CRIMPED TERMINALS (DETAIL)

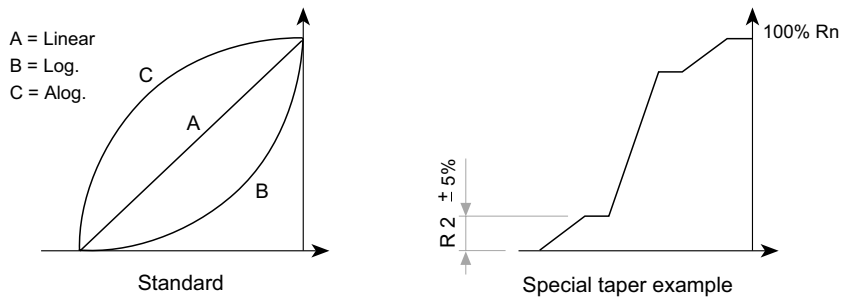


## POWER RATING CURVE



## TAPERS

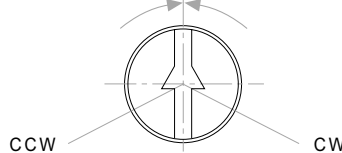
NOTE: Please note terminals disposition when ordering non linear curves.



## OPTIONS

### Positioning

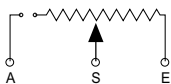
P.M.  
50% ±20°



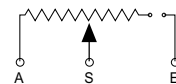
Std. Position = CCW

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 %

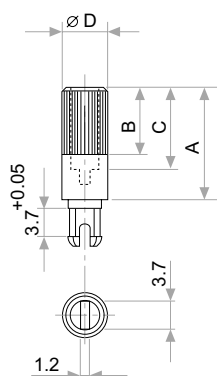
NOTE : Out of range values may not comply these results.

## 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

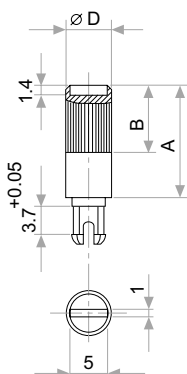


FIG.	A	B	D	Ref.
6	15	9	6	5219
7	16.8	9	6	5220
8	25.3	9	6	5207
12	46	5	6	5227

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

# SHAFTS

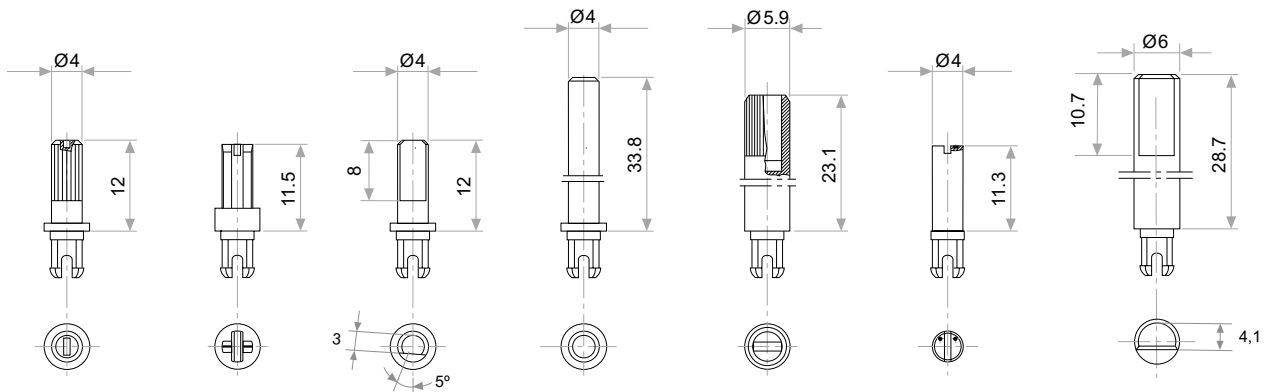


Fig. 3 / Ref. 5372    Fig. 14 / Ref. 5248    Fig. 15 / Ref. 5217    Fig. 16 / Ref. 5262\*    Fig. 17 / Ref. 5210    Fig. 18 / Ref. 5271    Fig. 19 / Ref. 6032\*

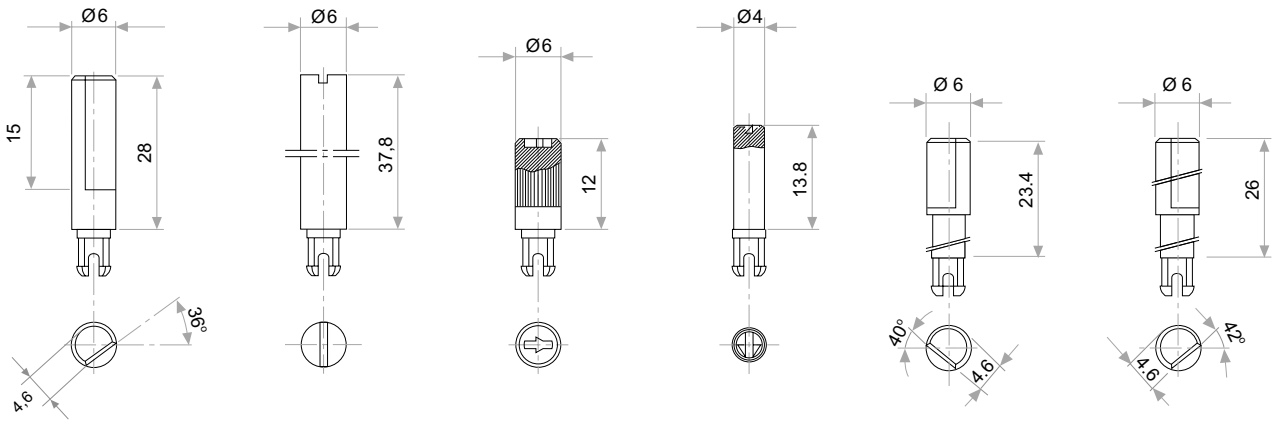


Fig. 20 / Ref. 5369\*    Fig. 21 / Ref. 6031\*    Fig. 22 / Ref. 6029    Fig. 23 / Ref. 6022    Fig. 24 / Ref. 6058    Fig. 25 / Ref. 6059

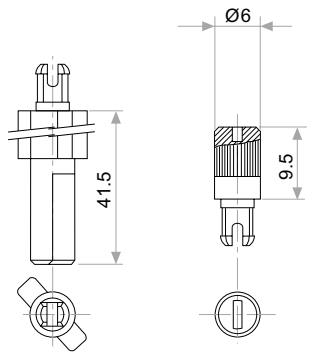


Fig. 27 / Ref. 5268\*    Fig. 28 / Ref. 6055

\* Not available in self extinguishable plastic

# THUMBWHEEL

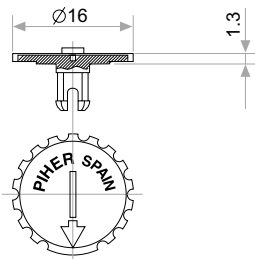


Fig. 4 / Ref. 5371