

**PT-10**

## FEATURES

## 10 mm Carbon Potentiometer

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

## **MECHANICAL SPECIFICATIONS**

- Mechanical rotation angle:  $235^\circ \pm 5^\circ$
  - Electrical rotation angle:  $220^\circ \pm 20^\circ$
  - Torque: 0.4 to 2 Ncm.  
(0.6 to 2.7 in-oz)
  - Stop torque:  $> 5$  Ncm. ( $> 7$  in-oz)

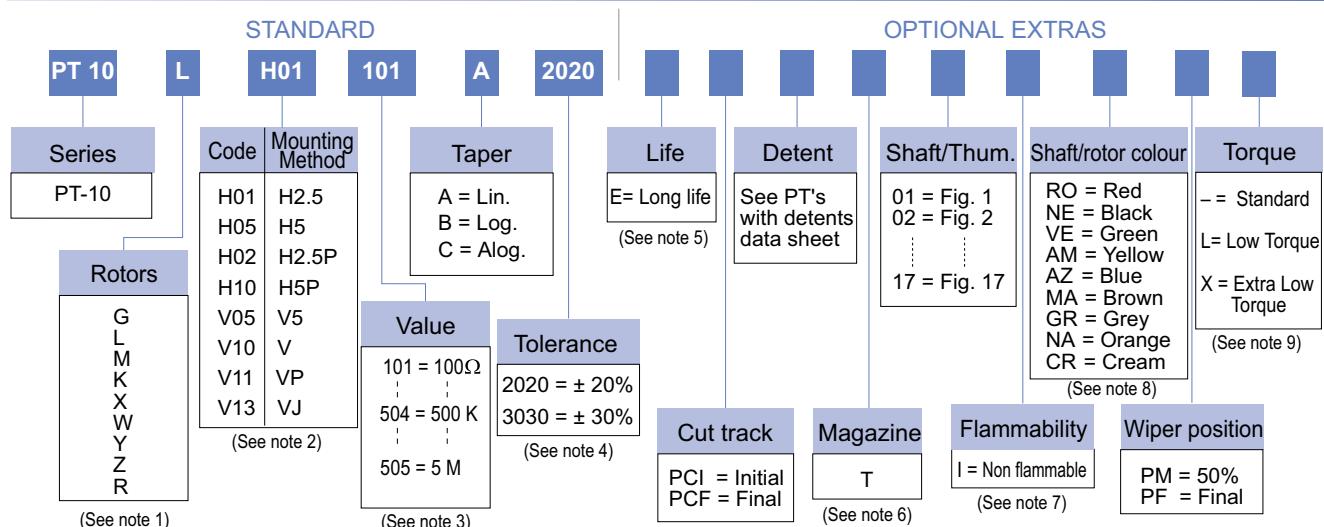
## ELECTRICAL SPECIFICATIONS

- 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 (\*):  $100\Omega \leq R_n \leq 1\text{ M} \Omega$  .....  $\pm 20\%$   
 $1\text{ M}\Omega < R_n \leq 5\text{ M} \Omega$  .....  $\pm 30\%$
  - Max. Voltage: 200 VDC (lin) 100 VDC (no lin)
  - Nominal Power 50°C (122°F) (see power rating curve)  
0.15 W (lin) 0.07 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°C depending on application**

## **HOW TO ORDER**



#### **NOTES:**



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

ISO TS 16949 / ISO 14001

## HOW TO ORDER CUSTOM DRAWING

PT-10 LH 01 + DRAWING NUMBER (Max. 16 characters)

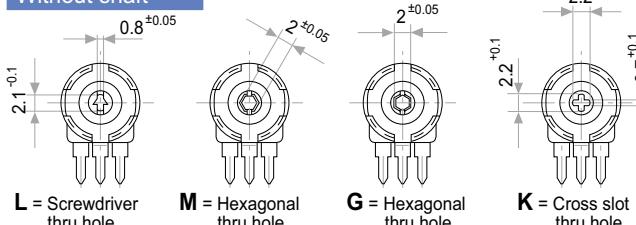
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.

## STANDARD OPTIONS

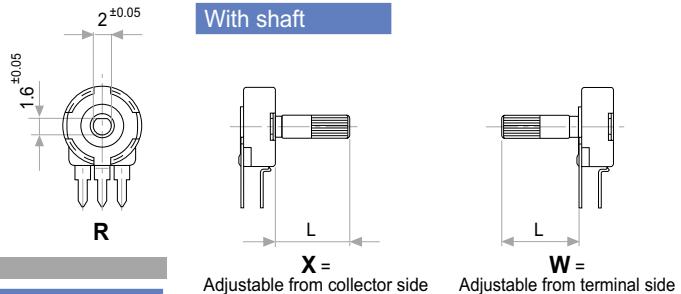
Mechanical Life	-----	500 cycles
Cut track	-----	No
Detents	-----	None
Packing	-----	Bulk
Non flammable	-----	No
Rotor colour	-----	White
Shaft colour	-----	Natural
Wiper position	-----	Initial
Torque	-----	Standard

## ROTORS

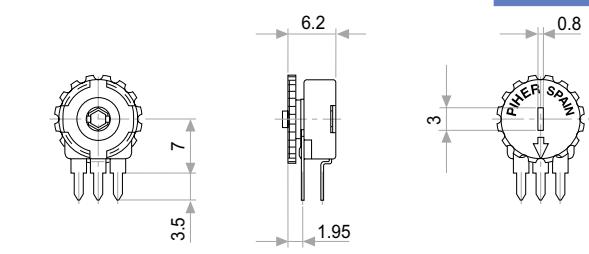
### Without shaft



### With shaft



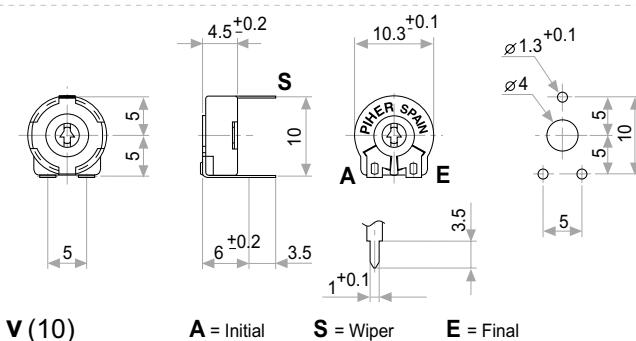
### With thumbwheel



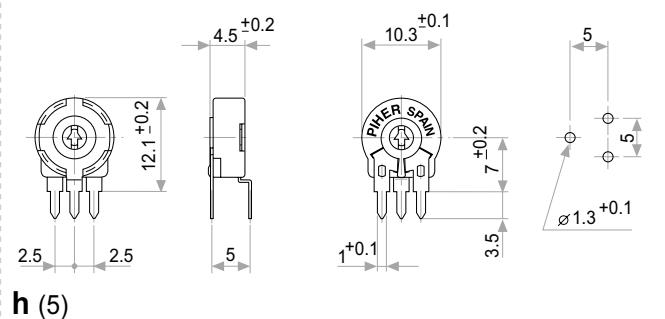
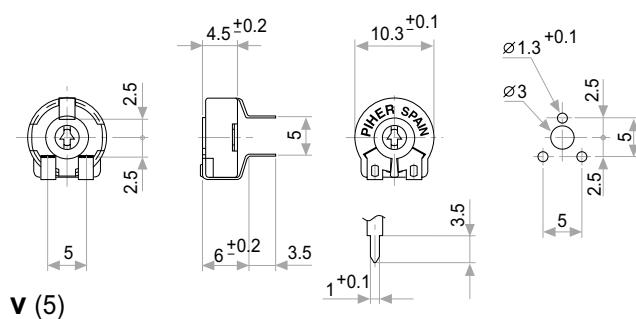
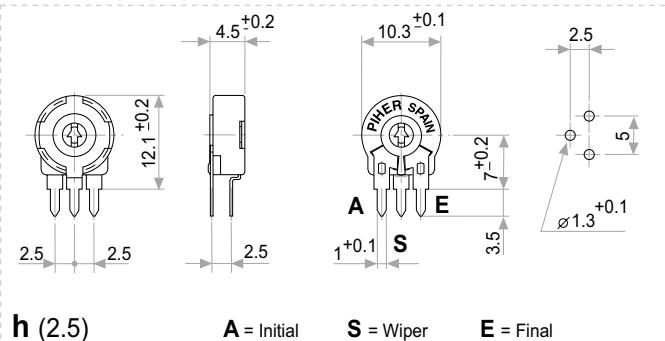
Z = Adjustable from collector side

## MOUNTING METHODS

V = horizontal mount – vertical adjust

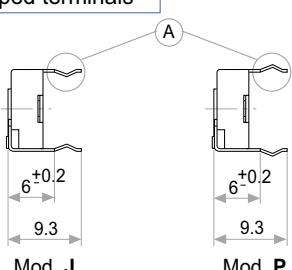


h = vertical mount – horizontal adjust

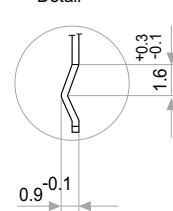


NOTE = Please note relative terminal positions when ordering non linear tapers.

### Crimped terminals

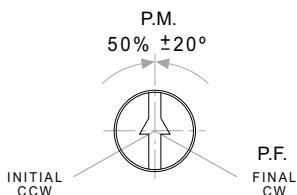


Detail

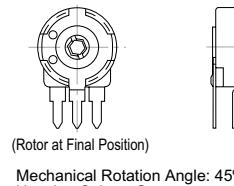


## OPTIONS

Positioning (Std. Position = CCW)



Special SWITCH (Upon request)



CUT TRACK  
CCW on-off (A)



CW on-off (E)

A = Initial

E = Final

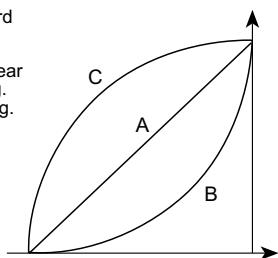
S = Wiper

## TAPERS

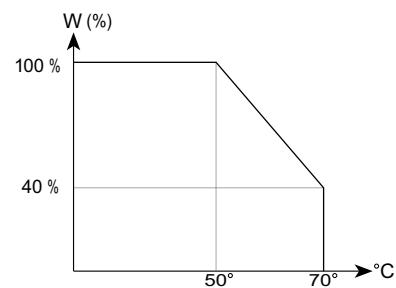
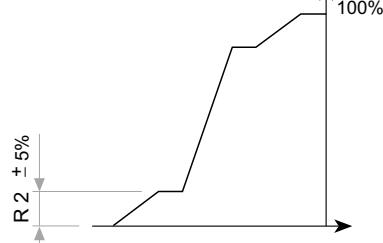
## POWER RATING CURVE

Standard

A = Linear  
B = Log.  
C = Alog.



Special taper example



NOTE = Please note relative terminal positions when ordering non linear tapers.

## TESTS

## TYPICAL VARIATIONS

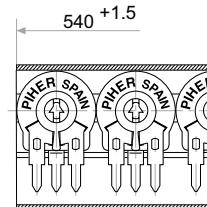
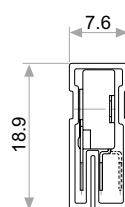
ELECTRICAL LIFE	1.000 h. @ 50°C; 0.15 W	±5 %
MECHANICAL LIFE (CYCLES)	500 @ 10 CPM ... 15 CPM	±3 % (Rn < 1 MΩ)
TEMPERATURE COEFFICIENT	-25°C; +70°C	±300 ppm (Rn < 100 K)
THERMAL CYCLING	16 h. @ 85°C; 2h. @ -25°C	±2.5 %
DAMP HEAT	500 h. @ 40°C @ 95% HR	±5 %
VIBRATION (for each plane X,Y,Z)	2 h. @ 10 Hz ... 55 Hz.	±2 %

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

## PACKAGING

### BOXES

Model	Units
Without shaft	500 (40 x 85 x 185 mm.)
With thumbwheel	400 (40 x 85 x 185 mm.)
With shaft	200 (40 x 85 x 185 mm.)

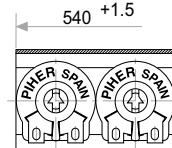
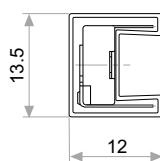


Magazines for PT-10 h 2.5; h 5

Also crimped term. h 2.5 P

### AUTOMATIC INSERTION

Magazines	Units per magazine
PT-10H & PT-10V	50 Pieces



Magazines for PT-10 V

Also crimped term. VP

## SHAFTS

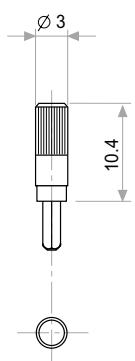


Fig. 1 / Ref. 5016

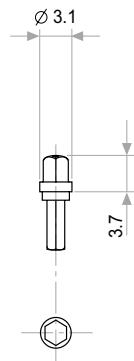


Fig. 2 / Ref. 5053

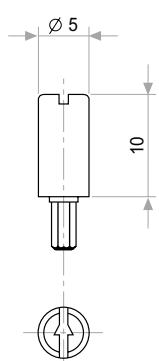


Fig. 3 / Ref. 5012

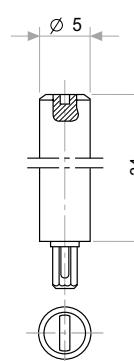


Fig. 4 / Ref. 6053

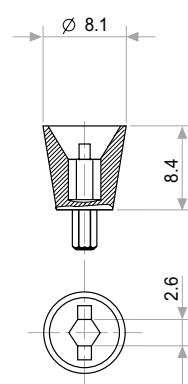


Fig. 6 / Ref. 5035

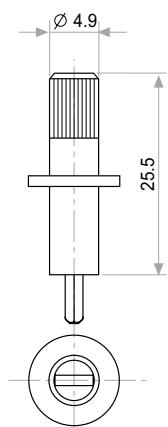


Fig. 7 / Ref. 5115

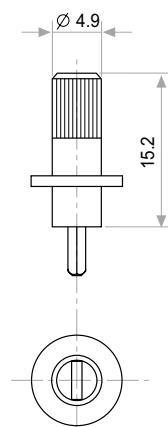


Fig. 8 / Ref. 5116

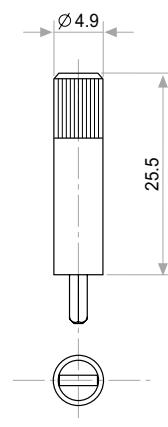


Fig. 9 / Ref. 5119

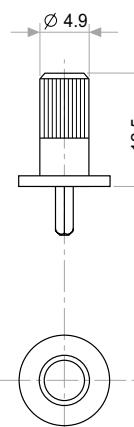


Fig. 10 / Ref. 5120

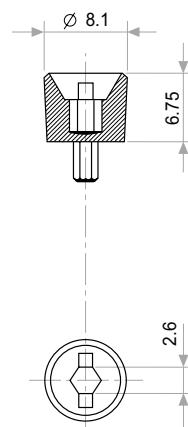


Fig. 11 / Ref. 5027

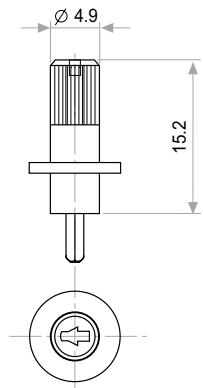


Fig. 12 / Ref. 6052

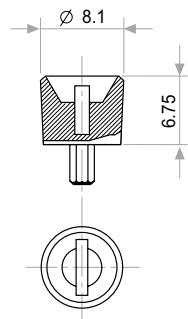


Fig. 13 / Ref. 5121

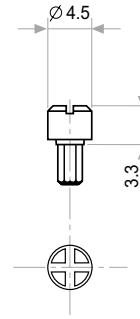


Fig. 14 / Ref. 5055

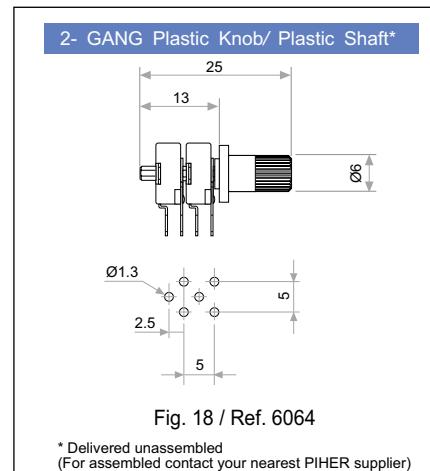


Fig. 18 / Ref. 6064

## THUMBWHEELS

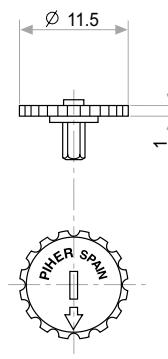


Fig. 5 / Ref. 5034

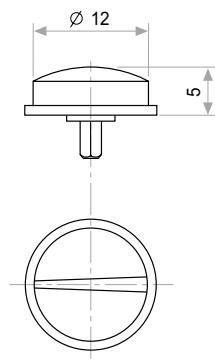


Fig. 15 / Ref. 6008

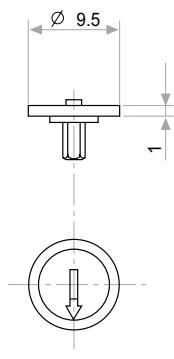


Fig. 16 / Ref. 5039

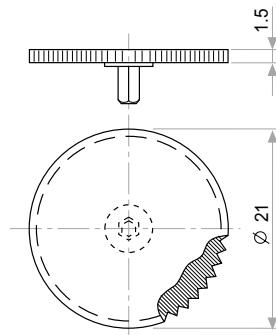


Fig. 17 / Ref. 5062