



### FEATURES

- Carbon resistive element.
- High mechanical endurance.
- Upon request:
  - Detents
  - Stereo matching
  - Switch
  - Nut & washer

### 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: 250 VDC (lin) 125 VDC (no lin)
- Nominal Power 50°C (122°F) (see power rating curve)  
 0.2 W (lin) 0.1 W (no lin)
- Taper\* (Log. & Alog. only  $R_n > 1\text{K}$ ) Lin ; Log; Alog.
- Residual resistance\*:  $\leq 0.5\% R_n$  (5  $\Omega$  min.)
- Equivalent Noise Resistance:  $\leq 3\% R_n$  (3  $\Omega$  min.)
- Operating temperature\*\*:  $-25^\circ\text{C} + 70^\circ\text{C}$  ( $-13^\circ\text{F} + 158^\circ\text{F}$ )

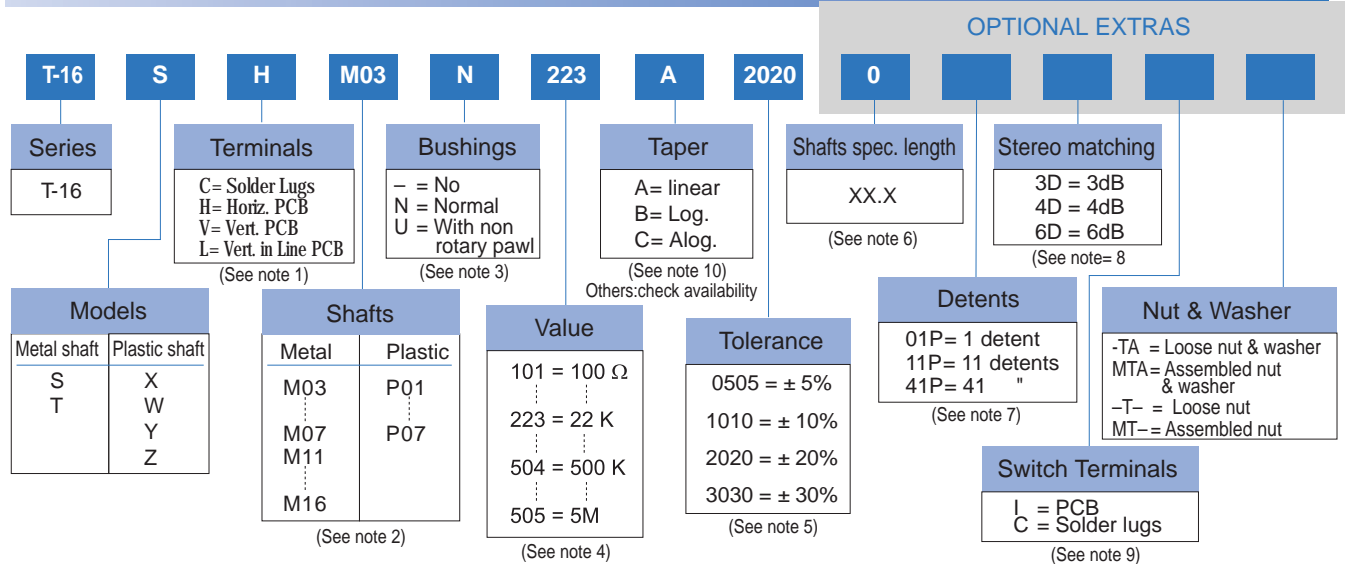
### MECHANICAL SPECIFICATIONS

- Mechanical rotation angle:  $300^\circ \pm 5^\circ$
- Electrical rotation angle:  $280^\circ \pm 20^\circ$
- Torque: 0.5 to 1.5 Ncm.  
(0.7 to 2.1 in-oz)
- Stop torque:  $> 40\text{ Ncm.}$  ( $> 56\text{ in-oz}$ )

\* Others upon request.

\*\* Up to 85°C depending on application.

### HOW TO ORDER



### NOTES:

- (1) Terminals: Model T is not available with terminals "V" or "L".
- (2) Shafts: The codes indicate diameter and length. Shaft M05 only for double potentiometer.
- (3) Bushings: - = Only for potentiometer model X, W.  
U = Standard antirotation lugs (at 90° CW).
- (4) Value:
  - Code:  $\frac{10}{1} 100\Omega$  → Number of zeros / 2 first digits of the value.
  - In model "T" with different values, ask by drawing.
- (5) Tolerance (non standard), upon request. Example code:  $\frac{+15}{-20}$  → negative tolerance / positive tolerance
- (6) Shafts length:
  - Only for special length and plain shafts (not knurled). Example: Shaft  $\varnothing 6,25$  L= 24.5 M07 ..... 24.5 → Shafts length shafts
  - Flatted and slotted shafts, etc. will need drawings.
  - NOTE: Max. length 40 mm. ( shafts 4, 6, 6.25)
- (7) Detents : - Not available for models with plastic shaft X, W, Y, Z.  
- Detents and switch are not compatible.
- (8) Stereo matching: Only available in tandem models and upon request.
- (9) Switch: Not available for models X, W, Y, Z, T.
- (10) Switch option not available with antilog taper.

## HOW TO ORDER CUSTOM DRAWING

T-16 SH + DRAWING NUMBER (Max. 16 digits)

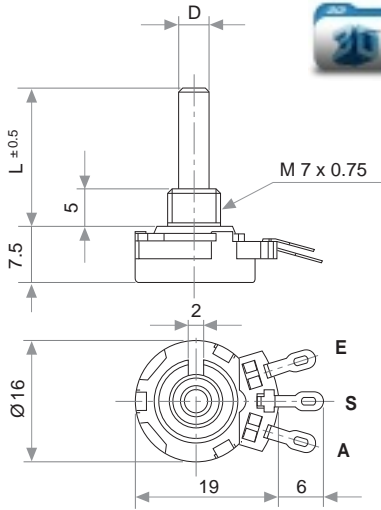
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.

## STANDARD OPTIONS

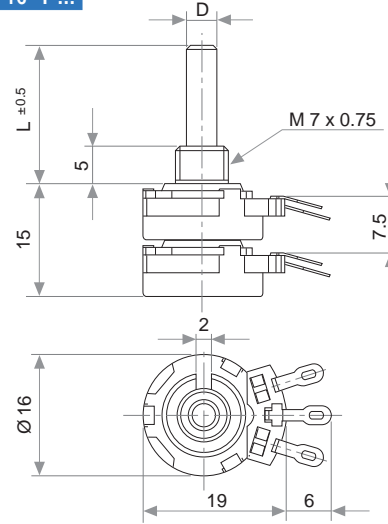
Shaft length .....	0 standard length
Detents .....	Not included
Stereo matching .....	Only for model "T" and upon request
Switch .....	No switch
Nut & washer .....	Without nut and washer
Packaging .....	Bulk

## MODELS WITH METALIC SHAFTS

T-16 S ...

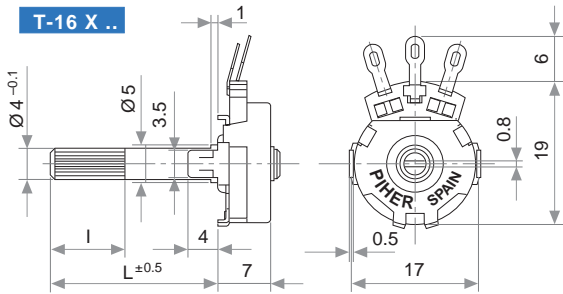


T-16 T ...

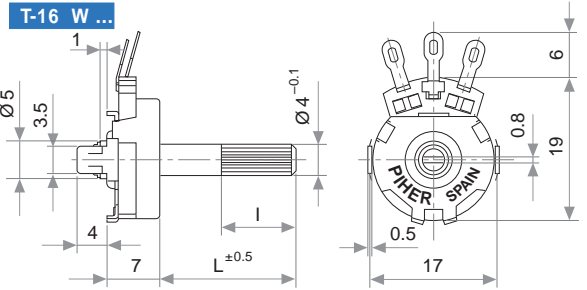


## MODELS WITH PLASTIC SHAFTS

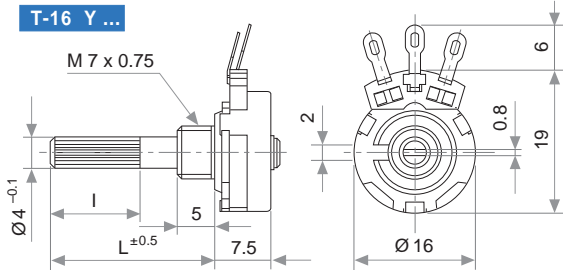
T-16 X ...



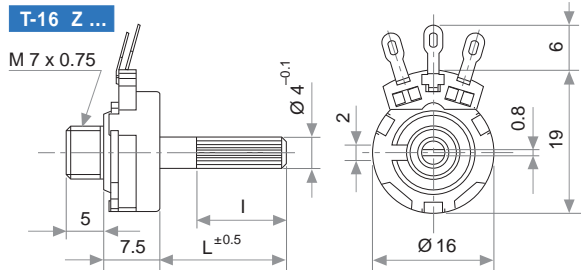
T-16 W ...



T-16 Y ...

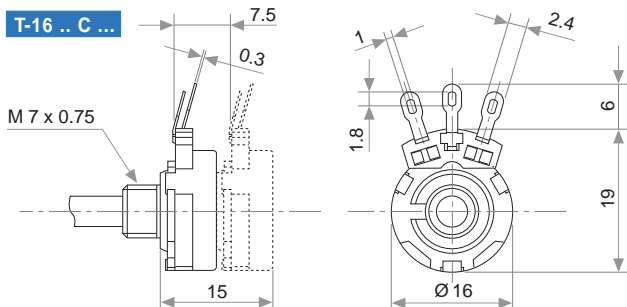


T-16 Z ...

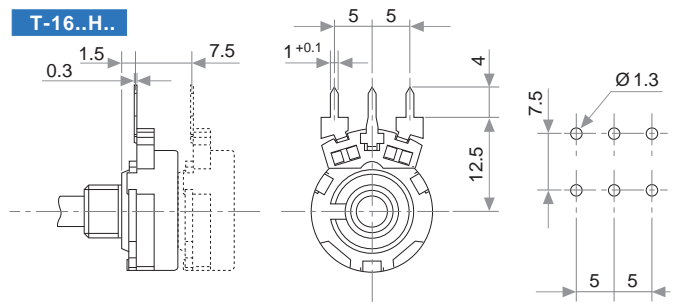


## TERMINALS

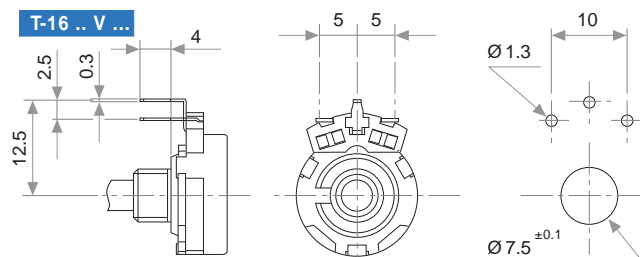
T-16 .. C ...



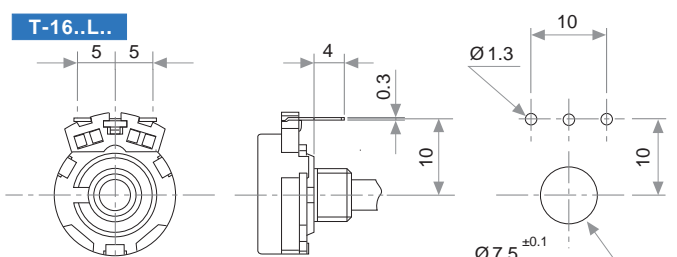
T-16..H..



T-16 .. V ...



T-16..L..



## PLASTIC SHAFTS

T-16 X / Y		Without Switch		CODE
T-16 X		T-16 Y		
L	I	L	I	
2	—	—	—	P01
21	12	20.5	12	P02
24.5	15	24	15	P03
40	31	39.5	31	P04

T-16 W / Z		Without Switch		CODE
T-16 W	T-16 Z			
L	I			
9.5	5			P05
23.5	19			P06
40	35			P07

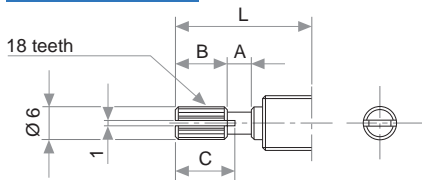
## METALIC SHAFTS

### PLAIN SHAFT



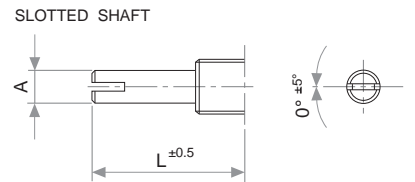
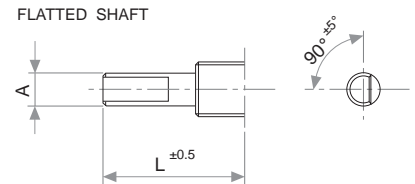
D	L	CODE
3	30	M03
4	40	M04
6	40	M06
6.25	40	M07
3/4	40/30	M05

### KNURLED SHAFT



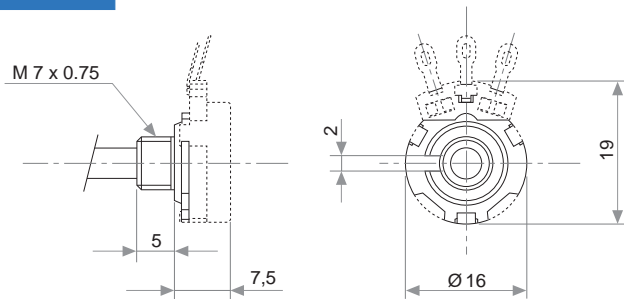
L	A	B	C	CODE
15	2	6	7	M11
20	2	10	11	M12
25	4	12	14	M13
30	4	12	14	M14
35	4	12	14	M15
40	4	12	14	M16

### UNDER DRAWING

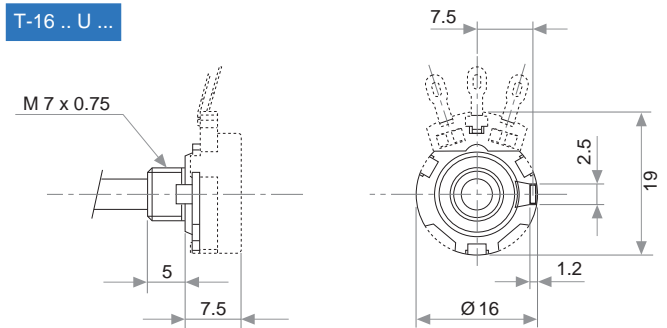


## BUSHINGS

### T-16 .. N ...



### T-16 .. U ...



## DETENTS

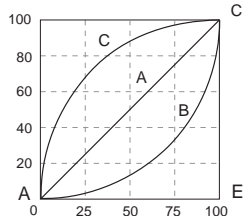


CODE	DETENTS
01 P.	1 detent (at 50%)
11 P.	11 detents
41 P.	41 detents

Only models with metallic shaft.

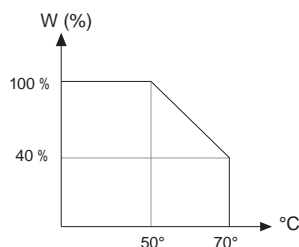
## TAPERS

Standard

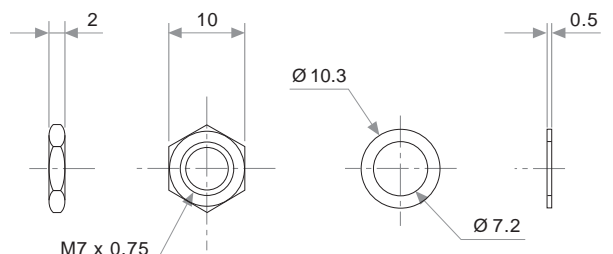


A: Lin.  
B: Log.  
C: Alog.

## POWER RATING CURVE



## NUT & WASHER

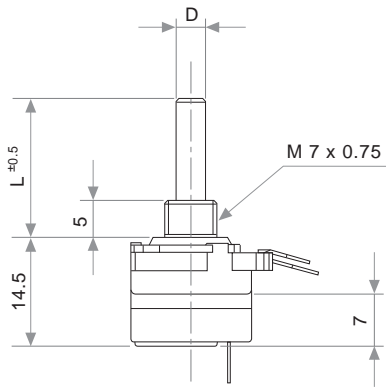


TESTS		TYPICAL VARIATIONS
ELECTRICAL LIFE	1.000 h. @ 50°C; 0.20 W	± 5 %
MECHANICAL LIFE : POT. SWITCH	25.000 (10-15 CPM) 10.000 (1A, 50 VAC)	± 3 % ( Rn < 1 MΩ )
TEMPERATURE COEFFICIENT	-25°C; +70°C	± 300 ppm (Rn < 100 K)
THERMAL CYCLING	16 h. @ 85°C; 2h. @ -25°C	± 2.5 %
DAMP HEAT	500 h. @ 40°C @ 95% HR	± 5 %
VIBRATION (each plane X,Y,Z)	2 h. @ 20 g. 10 Hz ... 55 Hz.	± 2 %

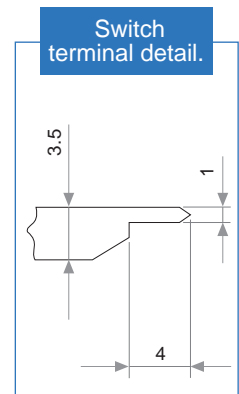
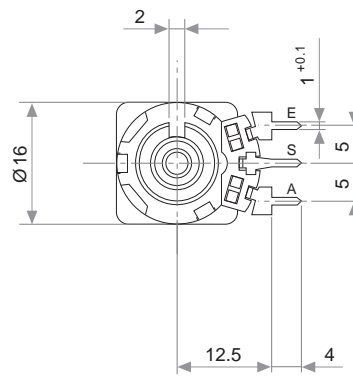
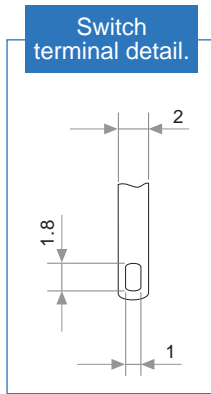
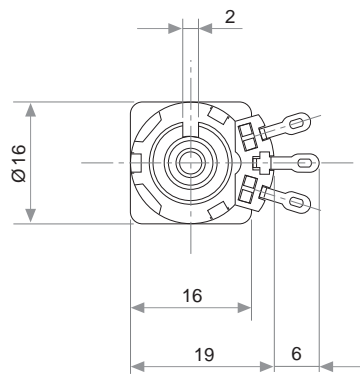
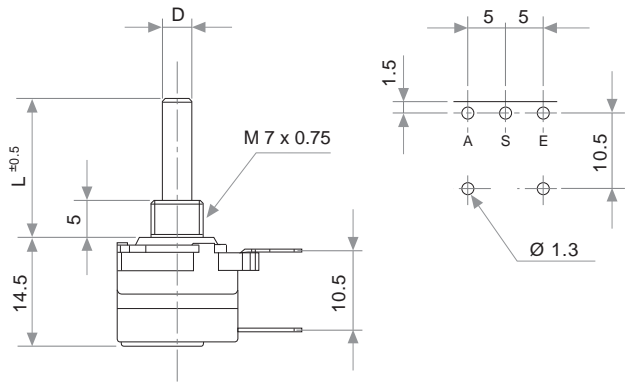
NOTE: Out of range values may not comply these results.

## SWITCH

T-16..C..C



T-16..H..I



## SWITCH SPECIFICATIONS

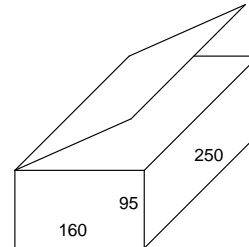
NOMINAL CURRENT	1A, 250 VAC
CONTACT RESISTANCE (Initial)	10 mΩ
OPERATING TORQUE	1 to 3 Ncm (1.4 to 4.2 in-oz)
OPERATING ANGLE	30° ±5°
TEST VOLTAGE	500 V

## PACKAGING

MODEL	PACKAGING
T 16 – L = 40 mm.	400 UNITS PER BOX (BULK)
T 16 – L = 20 mm.	600 UNITS PER BOX (BULK)
T 16 – c/i – Tandem	200 UNITS PER BOX (BULK)



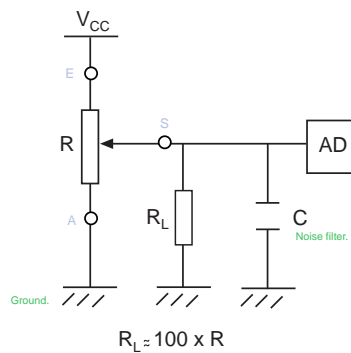
Box dimensions (cms).



Default packaging is bulk.  
Blister and other packaging types are available upon request, please contact [sales@piher.net](mailto:sales@piher.net).

## RECOMMENDED CONNECTIONS

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



## Piher's advantage

- ✓ Outstanding customer support.
- ✓ Design in support.
- ✓ Switch function.
- ✓ Cable & Connector assembly.
- ✓ Manufacturing competence for high and low volume in Europe & Asia.
- ✓ One-stop solution provider for inductive, capacitive, hall-effect and resistive solutions.
- ✓ Amphenol Global footprint and customer care.

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