

### FEATURES

- Cermet resistive element.
- Available in all series T-21 models (except detent option).
- High power dissipation.
- More than 50.000 operations.
- Series I-21 switches adaptable.

### MECHANICAL SPECIFICATIONS

- Mechanical rotation angle:  $310^\circ \pm 5^\circ$
- Electrical rotation angle:  $290^\circ \pm 20^\circ$
- Operating torque: 0,5 to 1,5 Ncm.  
(0.7 to 2.1 in-oz)
- Max. stop torque:  $> 80$  Ncm ( $> 112$  in-oz)

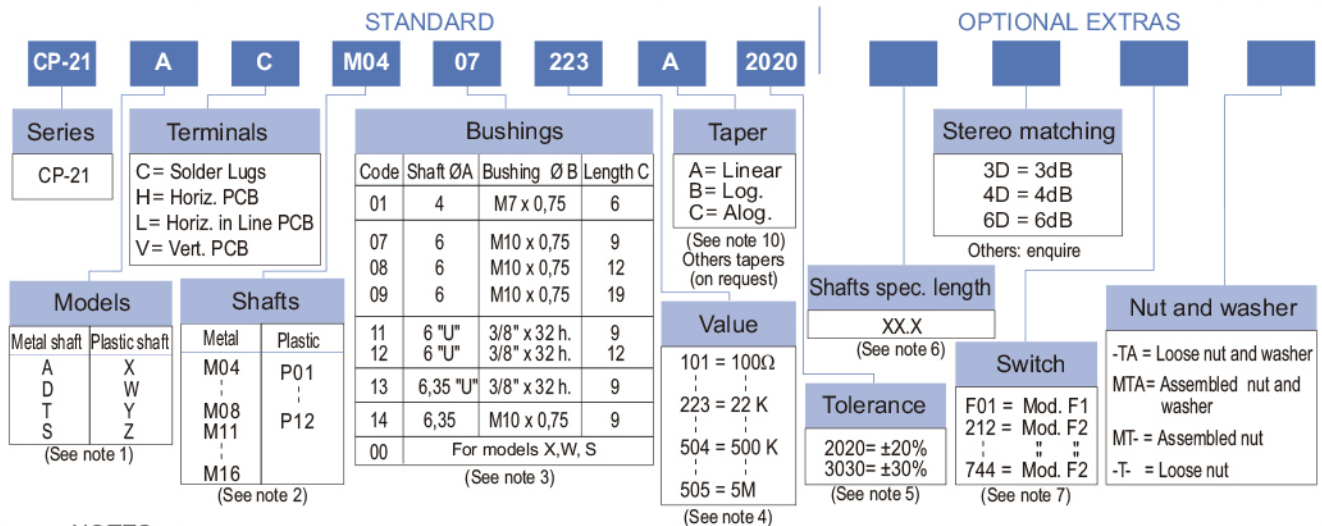
### ELECTRICAL SPECIFICATIONS

- Range of values (\*)  
 $100\Omega \leq R_n \leq 5$  M (Decad. 1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)
- Tolerance (\*):  $100\Omega \leq R_n \leq 1$  M  $\Omega$  .....  $\pm 20\%$   
 $1$  M  $\Omega < R_n \leq 5$  M .....  $\pm 30\%$
- Max. Voltage: 500 VDC (lin.); 250 VDC (no lin)
- Nominal Power  $70^\circ\text{C}$  ( $158^\circ\text{F}$ ) (see power rating curve)  
2 W (lin.); 0.5 W (no lin)
- Taper (\*\*): Lin.; Log.; Alog.
- Residual resistance(\*):  $\leq 0.5\%$   $R_n$  (5  $\Omega$  min.)
- Equivalent noise resistance:  $\leq 3\%$   $R_n$  (3  $\Omega$  min.)
- Breakdown voltage:  $> 750$  VAC.
- Operating temperature:  $-40^\circ\text{C}$ ;  $+ 90^\circ\text{C}$  ( $-40^\circ\text{F}$ ;  $194^\circ\text{F}$ )

(\*) Others on request

(\*\*) Other tapers on request. No linear tapers; values higher than 1 K  $\Omega$ .

### HOW TO ORDER



### NOTES:

- MODELS: Models "D" and "T" are not available with terminals "V".
- SHAFTS: The codes indicate diameter and length. Shaft M08 for double potentiometer.
- BUSHINGS: The codes types 11, 12 and 13 have an antirotation lug (at  $90^\circ\text{CW}$ ). Plastic shafts and tandem model, are only available with  $\varnothing 6$  bushing.
- VALUE:
  - Code: 10  $\rightarrow$  100  $\Omega$
  - Number of zeros
  - 2 first digits of the value.
  - Standard values: - Decades of 10, 20, 22, 25, 47, 50.
  - Other values will be special.
  - In models "D" and "T" with different values, ask by drawing.
- Tolerance (special), upon request. Code eg.: +7 = 07 05  
-5  $\rightarrow$  negative tolerance  
5  $\rightarrow$  positive tolerance
- Shafts special length:
  - Only for special length and plain shafts (not knurled). Example: E $\varnothing 6$  L= 24.5
  - Flatted and slotted shafts, etc. will need drawing.
  - Shaft M08 (T21D) with other length, ask by drawing. Recommendation: Eje L>60 ... bushing C=19
- SWITCHES: Two types of switches are offered: F1 and F2.
  - F1 = The code is "F01".
  - F2 = We can put in its place any of the I-21 switch codes (only with metal shaft).
 SWITCH WITH PLASTIC SHAFT: F 1 = Available in shafts with code P10, P11 and P12.
- Switch option not available with antilog taper.

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

## HOW TO ORDER CUSTOM DRAWING

CP-21 A C + DRAWING NUMBER (Max. 16 digits)

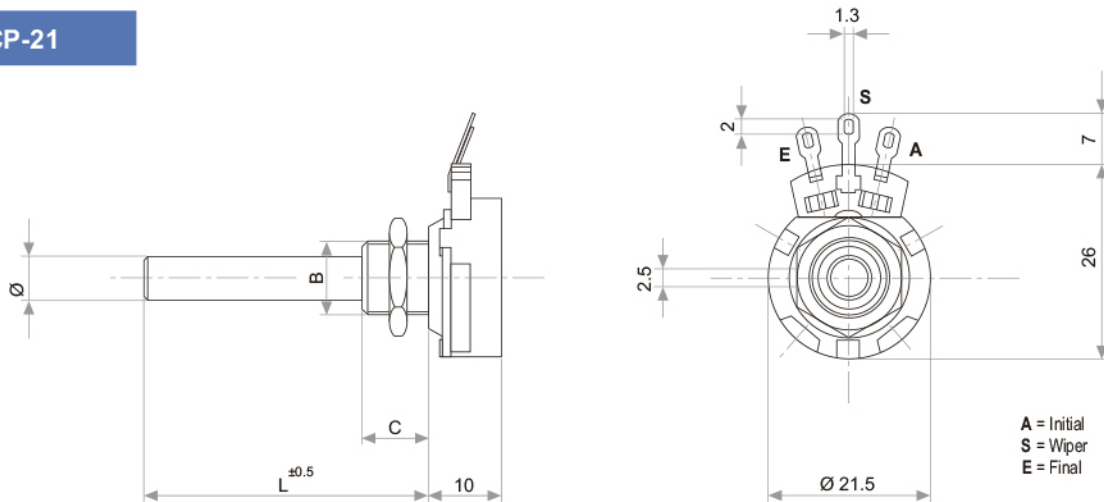
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.

## STANDARD OPTIONS

Shaft special length ..... 0; standard length  
 Stereo matching ..... Only in model "T" and upon request  
 Switch ..... No switch  
 Nut & washer ..... Without nut and washer

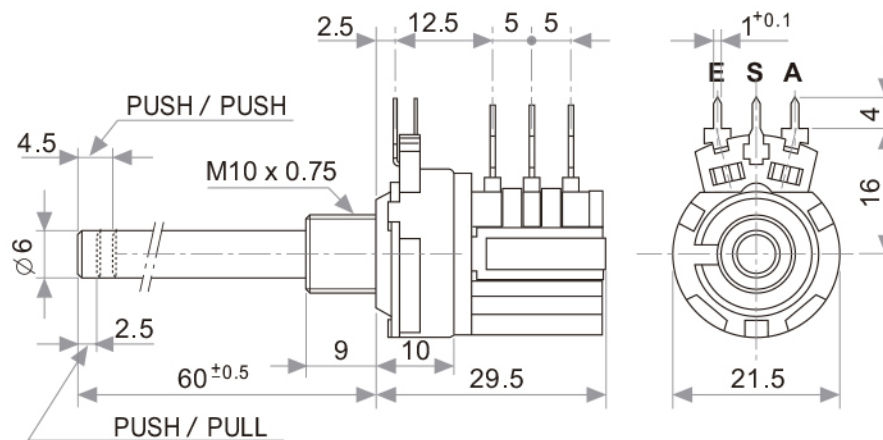
## DIMENSIONS \*

### CP-21



A = Initial  
 S = Wiper  
 E = Final

### CP-21 with switch



(\*) For more detailed information see T-21 data sheet.

## TESTS

## TYPICAL VARIATIONS

|                                  |                              |              |
|----------------------------------|------------------------------|--------------|
| ELECTRICAL LIFE                  | 1.000 h. @ 70°C              | ± 5 %        |
| MECHANICAL LIFE: POT.            | 50.000 CYCLES                | ± 5 %        |
| TCR                              | -40°C; +90°C (-40°F; +194°F) | ±350 ppm /°C |
| THERMAL CYCLING                  | 16 h. @ 85°C; 2h. @ -25°C    | ± 5 %        |
| DAMP HEAT                        | 500 h. @ 40°C @ 95% HR       | ± 5 %        |
| VIBRATION (for each plane X,Y,Z) | 2 h. @ 10 Hz ... 55 Hz.      | ± 3 %        |

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

## PACKAGING

Boxes of 260 x 170 x 110: 150 Singl. Pots.