

FEATURES

- Excellent low price control potentiometer.
- Available in Carbon (SM-10) and Cermet (SMC-10)
- Based on the PT-10 / PTC-10 series.
- Enclosed in plastic housing.

MECHANICAL SPECIFICATIONS

- Mechanical angle: $235^\circ \pm 5^\circ$
- Electrical angle: $220^\circ \pm 20^\circ$
- Torque: 0.5 to 2.5 Ncm.
(0.71 to 3.5 in-oz)
- Stop torque: > 25 Ncm. (> 35.5 in-oz)
- Nut Torque: > 80 Ncm. (113.6 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 :
 - Carbon SM-10 (50°C-122°F): 0.15W (lin), 0.07W (no lin)
 - Cermet SMC-10 (70°C-158°F): 0.33W(lin), 0.17 W (no lin)
- Taper (*) (Log. & Alog. only $R_n > 1\text{K}$) Lin ; Log; Alog.
- Residual resistance: $\leq 5 \times 10^{-3} R_n$ (2 Ω min.)
- Equivalent noise resistance: $\leq 3\% R_n$ (3 Ω min.)
- Operating temperature:
 - Carbon SM-10 : -25°C + 70°C** (-13°F + 158°F)
 - Cermet SMC-10 : -40°C + 90°C (-40°F + 194°F)
- Mechanical life: ≥ 10.000 cycles (***)

* Others tapers on request. No linear tapers; values higher than 1 K Ω .
 ** Up to 85°C depending on application
 *** For Ohmic values $\geq 1\text{ K}\Omega$. Lower values upon request

HOW TO ORDER

| STANDARD | | | OPTIONAL EXTRAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--|------------|-----------------|-------------|----------------|-----|------|-----|---------|-----|-------|-----|---|-----|-----|-----|--------|-----|------|-----|---------|-----|-------|---|--------------------|-----------|-------------|-----------|-----------|--|------------|----------|-----------|---|-------------------|-------------------|--|----------------------------|--------------------------------|----------------|--------------------|
| SM-10 | H04 | 102 | A | 2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Series | Code | Value | Taper | Tolerance | Nut and Washer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SM-10 SMC-10 | <table border="1"> <thead> <tr> <th>Code</th> <th>Mounting Method</th> </tr> </thead> <tbody> <tr><td>H04</td><td>H 2.5A</td></tr> <tr><td>H14</td><td>H 5A</td></tr> <tr><td>H12</td><td>H 2.5PA</td></tr> <tr><td>H20</td><td>H 5PA</td></tr> <tr><td>V10</td><td>V</td></tr> <tr><td>V11</td><td>V P</td></tr> <tr><td>H03</td><td>H 2.5B</td></tr> <tr><td>H13</td><td>H 5B</td></tr> <tr><td>H22</td><td>H 2.5PB</td></tr> <tr><td>H30</td><td>H 5PB</td></tr> </tbody> </table> (See note 1) | Code | Mounting Method | H04 | H 2.5A | H14 | H 5A | H12 | H 2.5PA | H20 | H 5PA | V10 | V | V11 | V P | H03 | H 2.5B | H13 | H 5B | H22 | H 2.5PB | H30 | H 5PB | <table border="1"> <tbody> <tr><td>101 = 100 Ω</td></tr> <tr><td>102 = 1 K</td></tr> <tr><td>504 = 500 K</td></tr> <tr><td>505 = 5 M</td></tr> <tr><td>000 = C M</td></tr> </tbody> </table> (See note 2) | 101 = 100 Ω | 102 = 1 K | 504 = 500 K | 505 = 5 M | 000 = C M | <table border="1"> <tbody> <tr><td>A = Linear</td></tr> <tr><td>B = Log.</td></tr> <tr><td>C = Alog.</td></tr> </tbody> </table> (Other tapers on request) | A = Linear | B = Log. | C = Alog. | <table border="1"> <tbody> <tr><td>2020 = $\pm 20\%$</td></tr> <tr><td>3030 = $\pm 30\%$</td></tr> </tbody> </table> (See note 3) | 2020 = $\pm 20\%$ | 3030 = $\pm 30\%$ | <table border="1"> <tbody> <tr><td>-TA = Loose nut and washer</td></tr> <tr><td>MTA = Assembled nut and washer</td></tr> <tr><td>-T = Loose nut</td></tr> <tr><td>MT = Assembled nut</td></tr> </tbody> </table> | -TA = Loose nut and washer | MTA = Assembled nut and washer | -T = Loose nut | MT = Assembled nut |
| Code | Mounting Method | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H04 | H 2.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H14 | H 5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H12 | H 2.5PA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H20 | H 5PA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V10 | V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V11 | V P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H03 | H 2.5B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H13 | H 5B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H22 | H 2.5PB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H30 | H 5PB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 101 = 100 Ω | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102 = 1 K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 504 = 500 K | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 505 = 5 M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 000 = C M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A = Linear | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B = Log. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C = Alog. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020 = $\pm 20\%$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3030 = $\pm 30\%$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -TA = Loose nut and washer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MTA = Assembled nut and washer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -T = Loose nut | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MT = Assembled nut | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

NOTES:

- Mount. Method:
 - Position with "P" will be with crimped terminals.
 - Denominations (a), (b) (see Mounting Methods)
- Value:

| | | | |
|-------|----|---|------------------------------|
| Code: | 10 | 1 | 100 Ω |
| | | | Number of zeros |
| | | | 2 first digits of the value. |

 - Standard values: Decades of 10, 20, 22, 25, 47, 50. Other values as specials.
 - 000 = CM = Switch 45° (only SMC-10)
- Tolerance (non standard). Upon request. Code eg.: $\frac{+7}{-5}$ = $\frac{07}{05}$
 - negative tolerance
 - positive tolerance

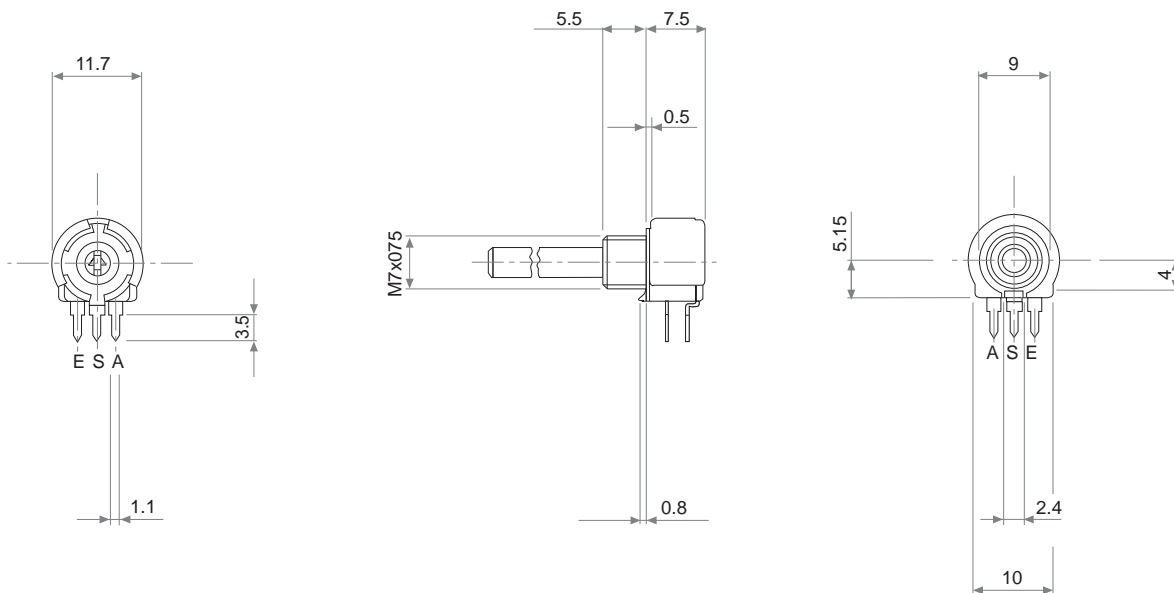
NOTE: The information contained here should be used for reference purposes only.

SM-10 H04 + DRAWING NUMBER (Max. 16 digits)

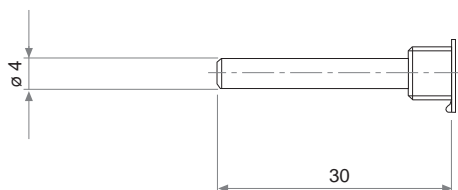
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.

NUT AND WASHER = Without nut and washer

COMMON DIMENSIONS



STANDARD SHAFT



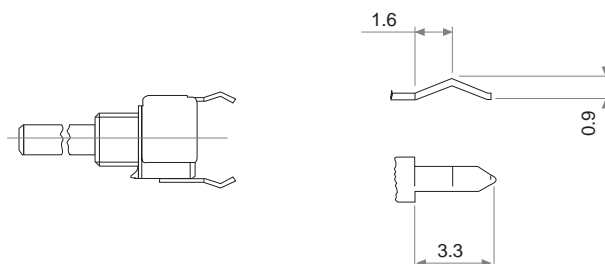
Shaft: The standard option is E4 L30 black colour.

TERMINALS

NOT CRIMPED



CRIMPED



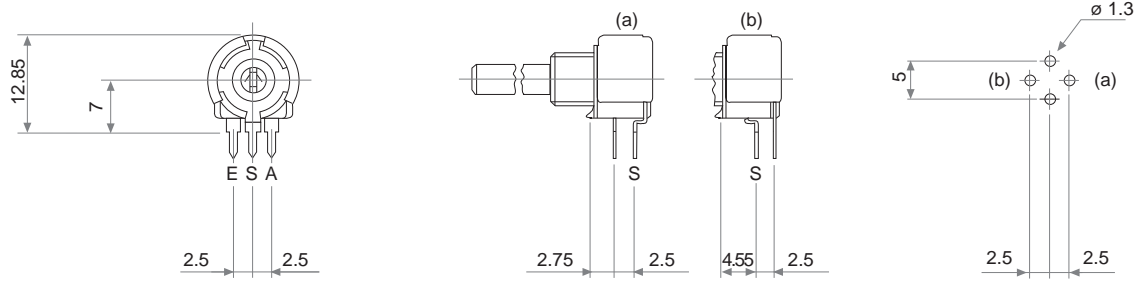
PACKAGING

QUANTITY: 100 units

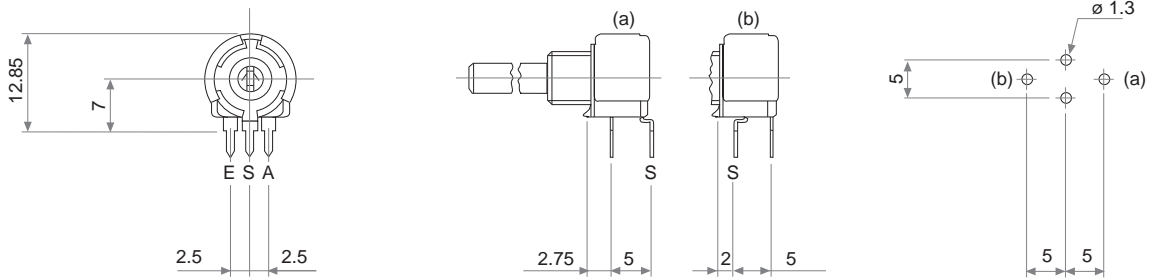
TESTS

See PT-10 or PTC-10 data sheets.

h 2.5



h 5



v 10

