

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.
- IP54 protection according to IEC 60529.

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: > 40 Ncm. (> 56.6 in-oz)
- Mechanical life***: $\geq 10K$ cycles

* Others check availability.

** Up to 85°C depending on application.

*** For Ohmic values $\geq 1 K \Omega$. Lower values check availability.

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*: $100\Omega \leq R_n \leq 1M \Omega$ $\pm 20\%$
 $1M\Omega < R_n \leq 5M \Omega$ $\pm 30\%$
- 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 $R_n > 1K$): Lin; Log; Alog.
- Residual resistance*: $\leq 0.5\%$ R_n (5Ω min.)
- Equivalent noise resistance: $\leq 3\%$ R_n (3Ω min.)
- Operating temperature:
• Carbon SM-10 : $-25^\circ\text{C} + 70^\circ\text{C}^{**}$ ($-13^\circ\text{F} + 158^\circ\text{F}$)
• Cermet SMC-10 : $-40^\circ\text{C} + 90^\circ\text{C}$ ($-40^\circ\text{F} + 194^\circ\text{F}$)

HOW TO ORDER

SM-10	H04	102	A	2020	OPTIONAL EXTRA	S
Series	Code	Mounting Method	Value	Taper	Tolerance	Nut and Washer
SM-10 SMC-10	H04 H14 H12 H20 V10 V11 H03 H13 H22 H30	H 2.5A H 5A H 2.5PA H 5PA V V P H 2.5B H 5B H 2.5PB H 5PB	101 = 100Ω 102 = 1 K 504 = 500 K 505 = 5 M 000 = C M (See note 2)	A = Linear B = Log. C = Alog. (Other tapers on request)	0505 = $\pm 5\%$ 0707 = $\pm 7\%$ 1010 = $\pm 10\%$ 2020 = $\pm 20\%$ 3030 = $\pm 30\%$ (See note 3)	-TA = Loose nut and washer MTA = Assembled nut and washer -T = Loose nut MT = Assembled nut (See note 4)

NOTES:

- (1) Mount. Method: • Position with "P" will be with crimped terminals.
• Denominations (a), (b) (see Mounting Methods)
- (2) 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)
- (3) Tolerance (non standard). check availability.. Code eg.: +7 -5 = 07 05
negative tolerance
positive tolerance
- (4) Leave blank for SMC-10

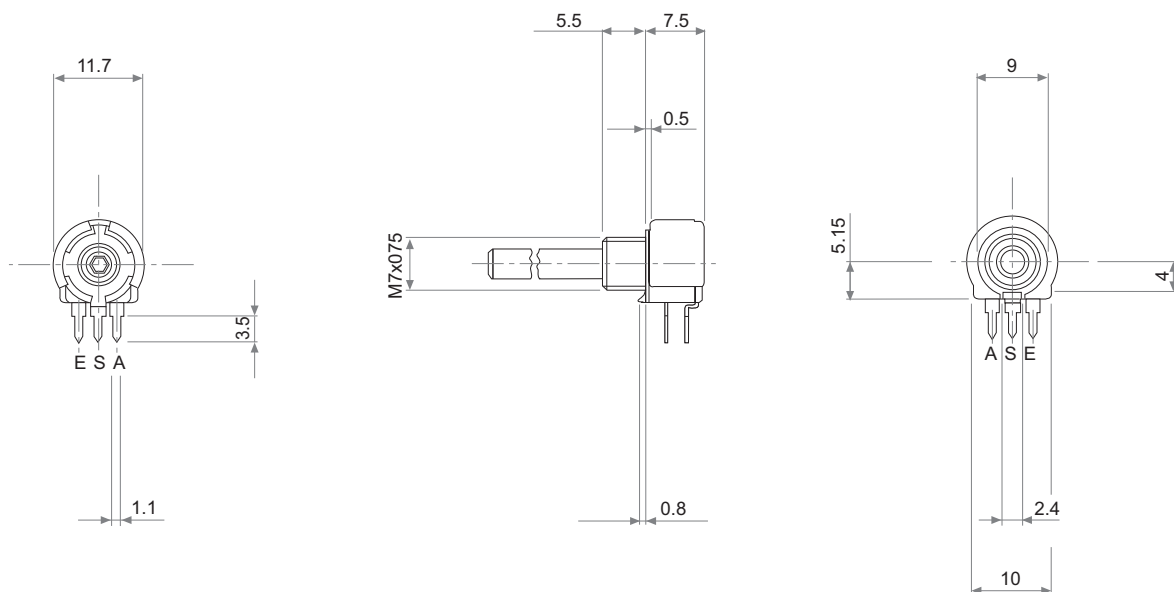
NOTE: The information contained here should be used for reference purposes only.

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

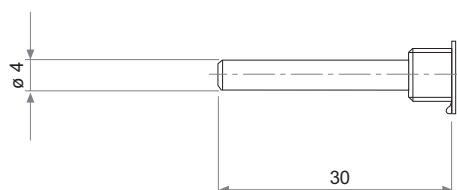
This way of ordering should be used for options which are not included in the "How to order" standard and optional extras.

NUT AND WASHER = Without nut and washer

COMMON DIMENSIONS



STANDARD SHAFT



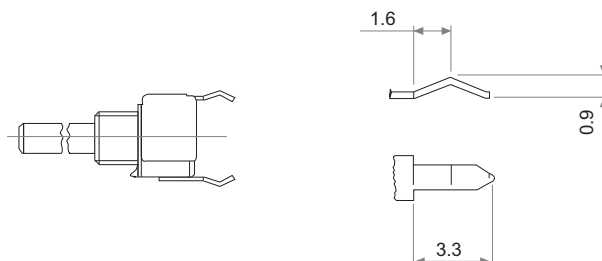
Shaft: The standard option is E4 L30 black colour.

TERMINALS

NOT CRIMPED



CRIMPED



PACKAGING

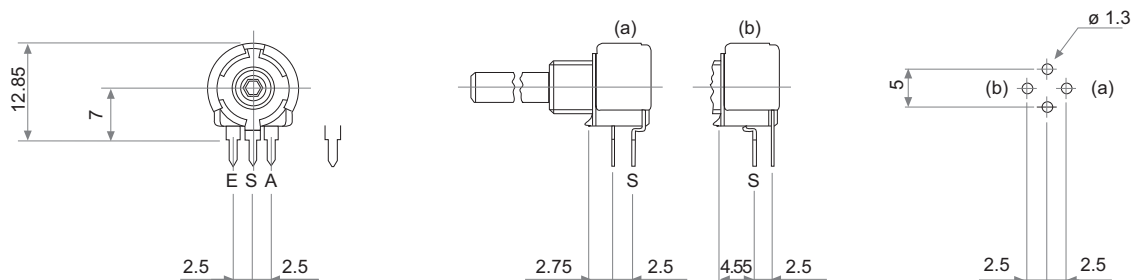
QUANTITY: 200 units

TESTS

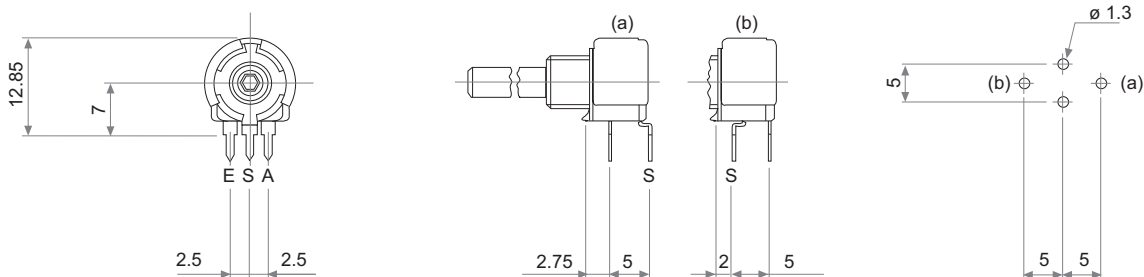
See PT-10 or PTC-10 data sheets.

MOUNTING METHOD

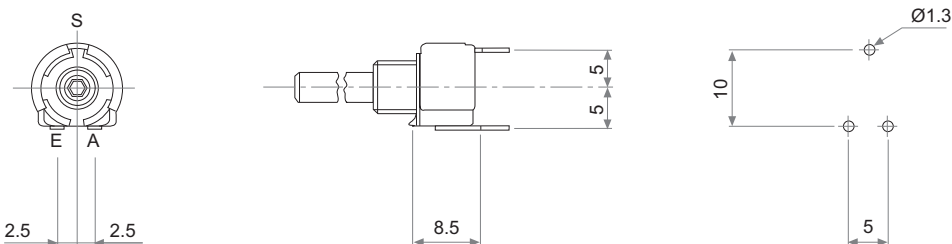
h 2.5



h 5

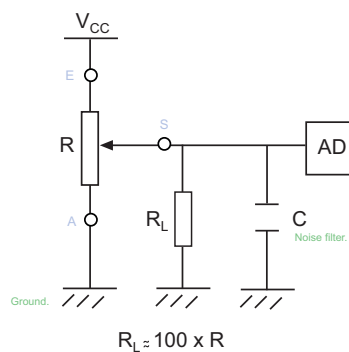


v 10



RECOMMENDED CONNECTIONS

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



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