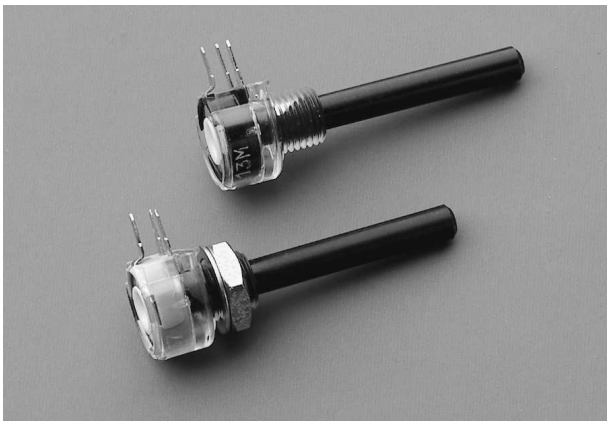
PIHER

SM/SMC-10 10 mm Carbon/ Cermet Potentiometer



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° ± 5°
- Electrical angle: 220° ± 20°
- 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***: ≥ 10K cycles

ELECTRICAL SPECIFICATIONS

- Range of values*
  100Ω ≤ Rn ≤ 5 M (Decad. 1.0 - 2.0 - 2.2 - 2.5 - 4.7 - 5.0)
- Tolerance*: 100Ω ≤ Rn ≤ 1M Ω ------ ± 20%
  1MΩ < Rn ≤ 5M Ω ------ ± 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 Rn > 1K): Lin; Log; Alog.
- Residual resistance*: ≤ 0.5 % Rn (5 Ω min.)
- Equivalent noise resistance: ≤ 3% Rn (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)

* Others check availability.
** Up to 85°C depending on application.
*** For Ohmic values ≥ 1 K Ω. Lower values check availability.

HOW TO ORDER

SM-10	H04	102	A	2020	OPTIONAL EXTRA	S
Series	Code / Mounting Method	Value	Taper	Tolerance	Nut and Washer	(See note 4)
SM-10 SMC-10	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 = 100Ω 102 = 1 K 504 = 500 K 505 = 5 M 000 = C M	A = Linear B = Log. C = Alog.	0505 = ± 5% 0707 = ± 7% 1010 = ± 10% 2020 = ± 20% 3030 = ± 30%	–TA = Loose nut and washer MTA = Assembled nut and washer –T– = Loose nut MT– = Assembled nut	
	(See note 1)	(See note 2)	(Other tapers on request)	(See note 3)		

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
10 → 2 first digits of the value.
1 → Number of zeros
• 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
05 → negative tolerance
07 → positive tolerance

(4) Leave blank for SMC-10

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

rev020719

HOW TO ORDER CUSTOM DRAWING

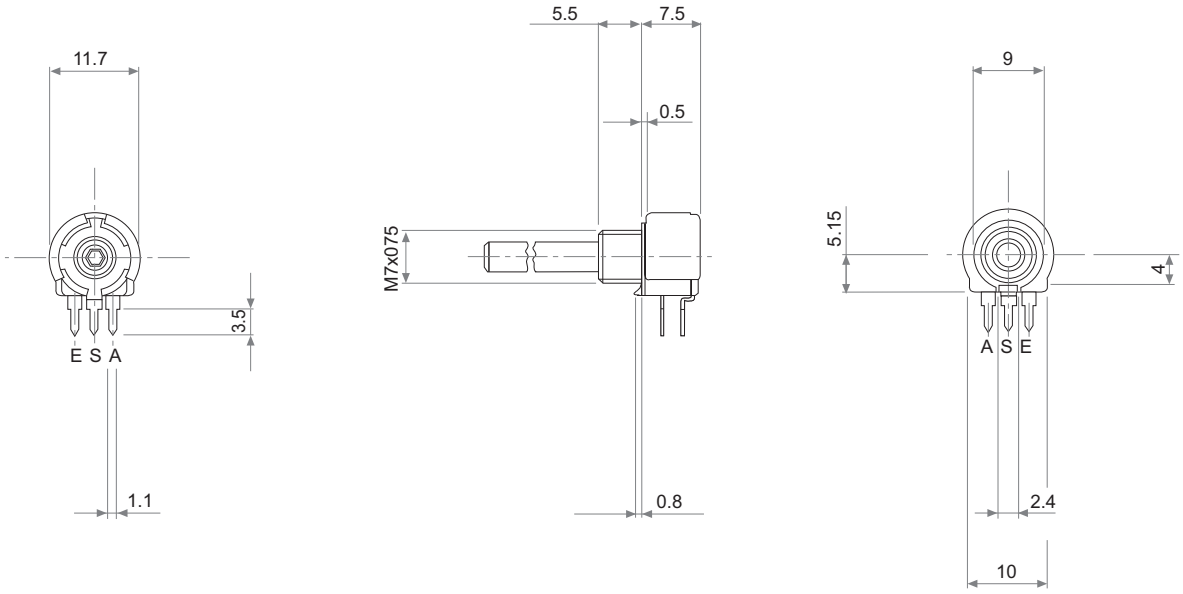
SM-10 H04 + DRAWING NUMBER (Max. 16 digits)

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

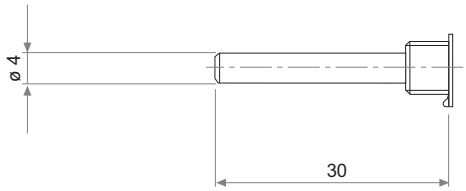
STANDARD OPTIONS

NUT AND WASHER = Without nut and washer

COMMON DIMENSIONS



STANDARD SHAFT

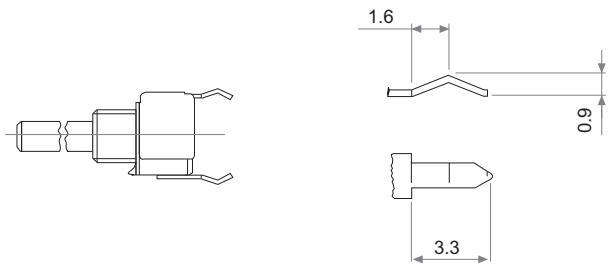


Shaft: The standard option is E4 L30 black colour.

TERMINALS

NOT CRIMPED

CRIMPED



PACKAGING

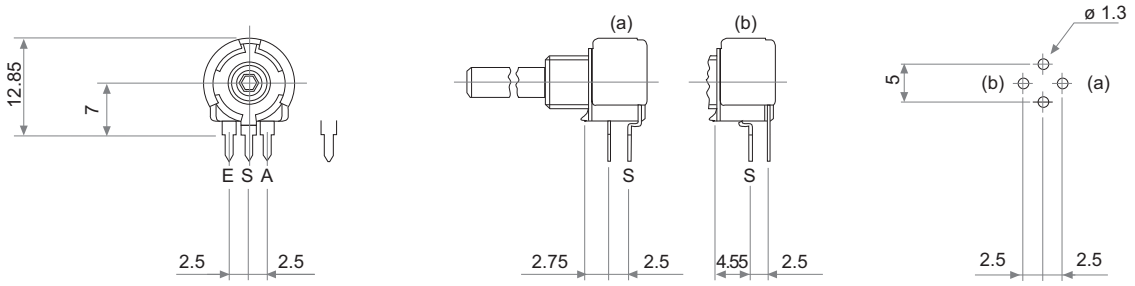
QUANTITY: 200 units

TESTS

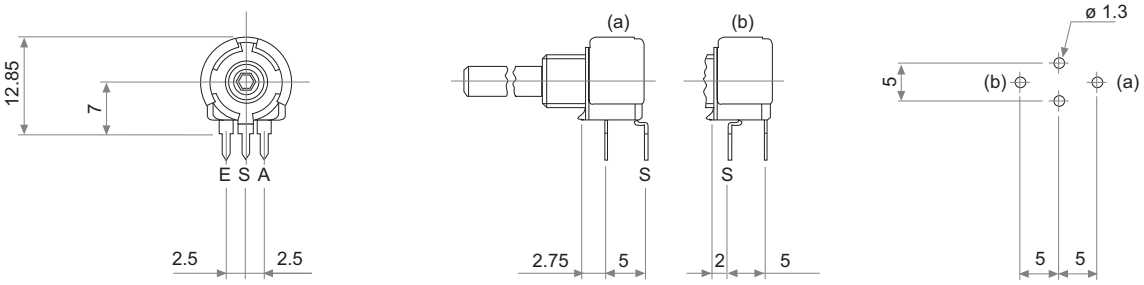
See PT-10 or PTC-10 data sheets.

MOUNTING METHOD

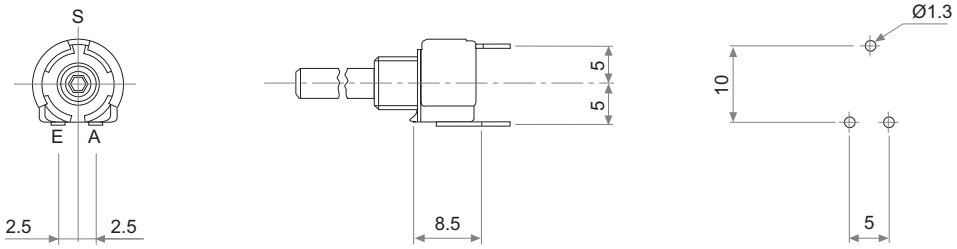
h 2.5



h 5

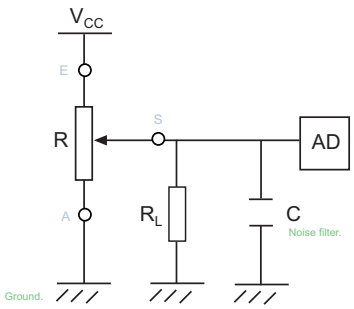


v 10



RECOMMENDED CONNECTIONS

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



$R_L \geq 100 \times R$