

FEATURES

- Excellent low price control potentiometer.
- Based on the PT-15 / PTC-15 series.
- Available in carbon (SM-15) and cermet (SMC-15).
- Enclosed in plastic housing.

MECHANICAL SPECIFICATIONS

- Mechanical rotation angle: $265^\circ \pm 5^\circ$
- Electrical rotation angle: $240^\circ \pm 20^\circ$
- Torque: 0.5 to 2.5 Ncm. (0.7 to 3.4 in-oz)
- Stop torque: > 10 Ncm. (14 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 (*): $100\Omega \leq R_n \leq 1\text{M}\Omega$ $\pm 20\%$
 $1\text{M}\Omega < R_n \leq 5\text{M}$ $\pm 30\%$
- Max. Voltage: 250 VDC (lin) 125 VDC (no lin)
- Nominal Power: • 50°C (122°F) 0.25W (lin), 0.12W (no lin) carbon
• 70°C (158°F) 0.5W (lin) 0.25W (no lin.) cermet
- Power derating: 0 Watt a 100°C
- Taper (**): Lin., Log., Alog.
- Residual resistance(*): $\leq 0.5\%$ R_n (5 Ω min.)
- Operating temperature: $-25^\circ\text{C} + 70^\circ\text{C}$ (***) ($-13^\circ\text{F} + 158^\circ\text{F}$) carbon
 $-40^\circ\text{C} + 90^\circ\text{C}$ ($-40 + 194^\circ\text{F}$) cermet
- Mechanical life: ≥ 10.000 (***)

(*) Others upon request.

(***) Up to 85°C depending on application

(**) Others tapers on request. No linear tapers; values higher than $1\text{ K}\Omega$.

(***) For Ohmic values $\geq 1\text{ K}\Omega$. Lower values upon request

HOW TO ORDER SM-15

SM-15	H04	102	A	2020					S
Series	Code	Mounting Method	Value	Taper	Cut track	Shafts	Shaft Colour	Nut and Washer	
SM-15	H04 H14 H12 H20 H24 V02 V21 V12 V22 V15 V17 H16 H26 H03 H13 H22 H30 H23 V23	H 2.5A H 5A H 2.5PA H 5 PA HC 5A V 12.5 V 12.5P VA VA P V 15 V17.5 BA BB H 2.5B H 5B H 2.5PB H 5PB HC 5B V 15P	101 = 100 Ω 102 = 1 K 504 = 500 K 505 = 5 M (See note 2)	A = Linear B = Log. C = Alog. (Other tapers on request)	PCI = Initial PCF= Final	02 = Fig.2 06 = Fig.6 07 = Fig.7 08 = Fig.8 10 = Fig.10 11 = Fig.11 12 = Fig.12 17 = Fig.17 21 = Fig.21 (See note 4)	RO = Red VE = Green AM = Yellow AZ = Blue IN = Natural MA = Brown GR = Grey NA = Orange CR = Cream (See note 5)	-TA = Loose nut and washer MTA = Assembled nut and washer -T- = Loose nut MT- = Assembled nut	
				Tolerance 2020 = + 20% 3030 = + 30% (See note 3)					

HOW TO ORDER CUSTOM DRAWING

SM-15 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

Cut track Non cut track
Shaft Fig. 9
Shaft colour Black
Nut and washer Without nut & washer

NOTES:

- (1) Mounting Method: Positions with "P" will be with crimped terminals.
- (2) Value: Code: $\begin{matrix} 10 & 1 & 100\Omega \\ \downarrow & \downarrow & \downarrow \\ \text{Number of zeros} & \text{2 first digits of the value.} & \end{matrix}$
• Standard values: Decades of 10, 20, 22, 25, 47, 50. Other values upon request.
- (3) Tolerance (non standard). Upon request. Code eg.: $\begin{matrix} +7 & 05 \\ -5 & \end{matrix}$ → negative tolerance
positive tolerance
- (4) Shafts: These figures coincide with the PT15 references (Standard material).
- (5) Colour: Only applicable to the shaft.

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

HOW TO ORDER SMC-15

OPTIONAL EXTRAS

Series	Code	Mounting Method	Value	Taper	Shafts	Shaft Colour	Nut and Washer
SMC-15	H04	H 2.5A	101 = 100Ω	A = Linear	02 = Fig.2	RO = Red	-TA = Loose nut and washer
	H14	H 5A	102 = 1 K	B = Log.	06 = Fig.6	VE = Green	MTA = Assembled nut and washer
	H12	H 2.5PA	504 = 500 K	C = Alog.	07 = Fig.7	AM = Yellow	-T = Loose nut
	H20	H 5PA	505 = 5 M	(Other tapers on request)	08 = Fig.8	AZ = Blue	MT = Assembled nut
	H34	HA 5A	000 = C M		10 = Fig.10	IN = Natural	
	V02	V 12.5	(See note 2)	Tolerance	11 = Fig.11	MA = Brown	
	V21	V 12.5P		1010 = ± 10%	12 = Fig.12	GR = Grey	
	V12	VA		2020 = ± 20%	17 = Fig.17	NA = Orange	
	V22	VA P		3030 = ± 30%	21 = Fig.21	CR = Cream	
	V15	V 15		(See note 3)			
	V17	V 17.5					
	H16	BA					
	H26	BB					
	H03	H 2.5B					
	H13	H 5B					
	H22	H 2.5PB					
	H30	H 5PB					
	H33	HA 5B					
	V23	V 15P					

HOW TO ORDER CUSTOM DRAWING

SMC-15 H04 + DRAWING NUMBER (Max. 16 digits)

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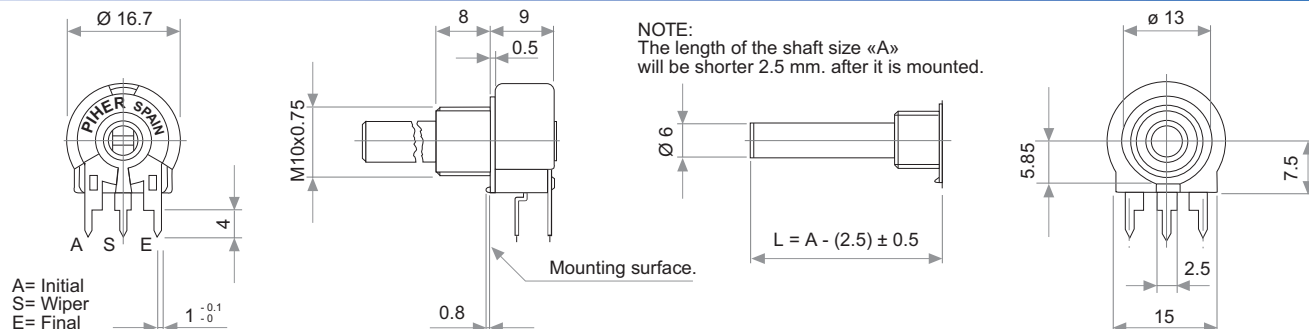
STANDARD OPTIONS

Shaft Fig. 9
 Shaft colour Black
 Nut and washer Without nut and washer

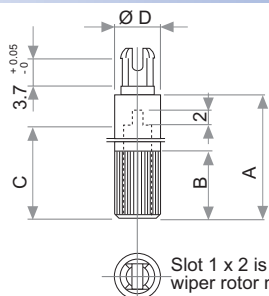
NOTES:

- Mounting Method: Positions with "P" are with crimped terminals.
- Value: Code: 10 1 100 Ω
 • Standard values: Decades of 10, 20, 22, 25, 47, 50. Other values upon request.
 • 000 = CM = Switch 45° (see PTC-15).
- Tolerance (non standard). Upon request. Code eg.: +7 = 07 05
 -5 = 07 05
 negative tolerance
 positive tolerance
- Shafts: The figures coincide with the numbers for PT15. (Standard material).
- Colour: Only applicable to the shaft.

COMMON DIMENSIONS



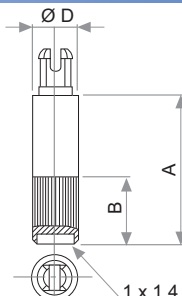
SHAFTS



Hollow model shafts

FIG.	A	B	C	D	Ref.
2	19	9	15	6	5214*
9	35	9	31	6	5216
10	37.8	9	33.8	6	5218
11	35	25	15	6	5209

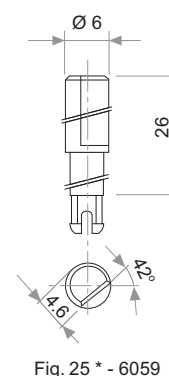
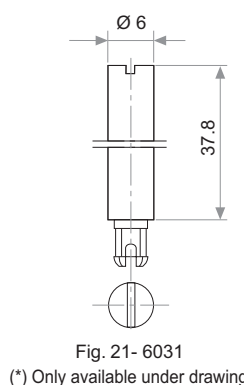
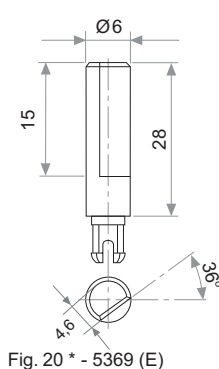
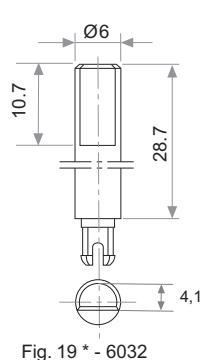
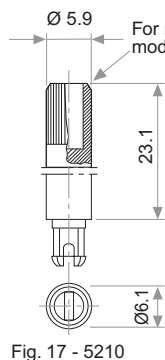
* Only available in black colour



Solid model shafts

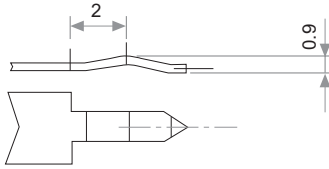
FIG.	A	B	C	Ref.
6	15	9	6	5219
7	16.8	9	6	5220
8	25.3	9	6	5207
12	46	5	6	5227

Slot (1 x 1.4) perpen to wiper position
 Fig. 12 slot is on line with wiper pos.



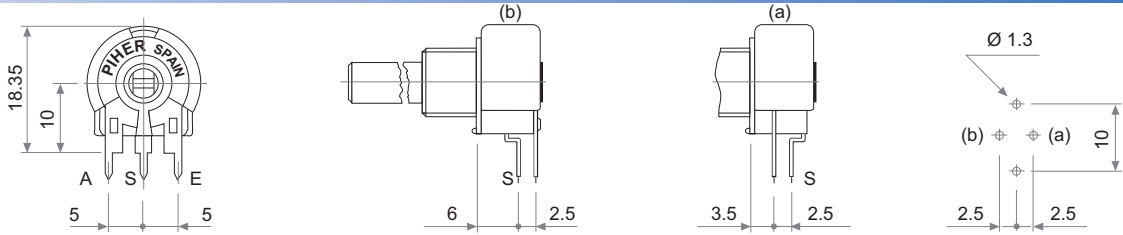
SNAP IN TERMINAL

P

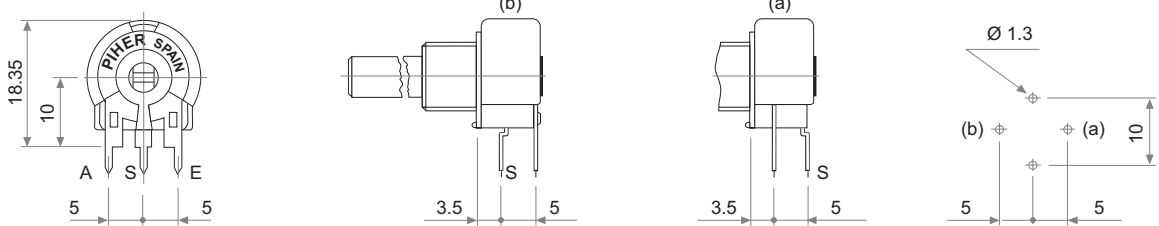


TERMINAL STYLES

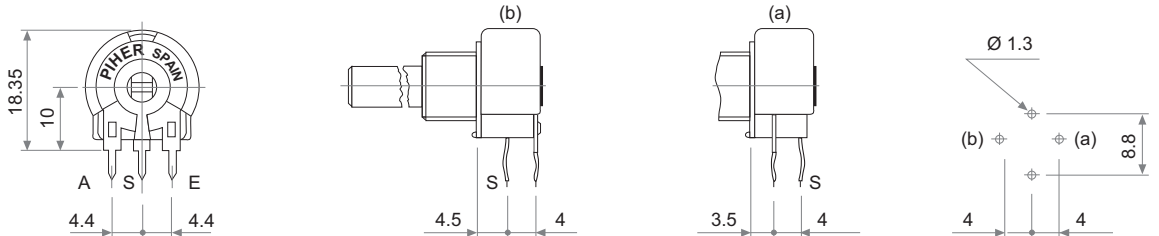
h 2.5



h 5

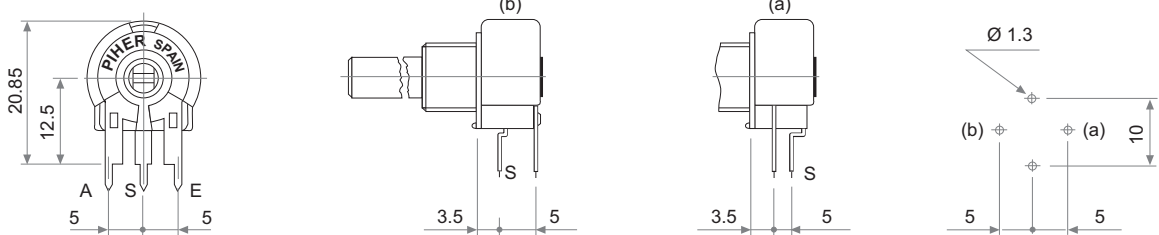


B



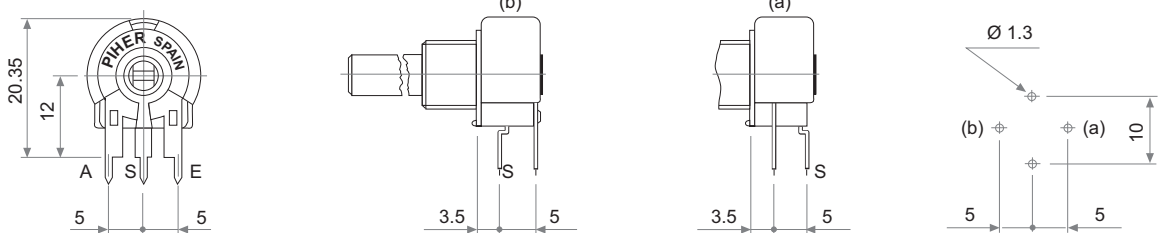
h C 5

Only SM-15

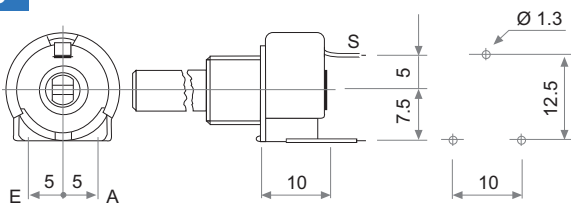


h A 5

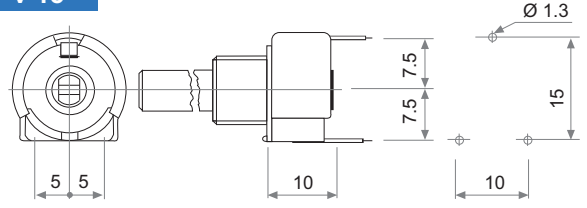
Only SMC-15



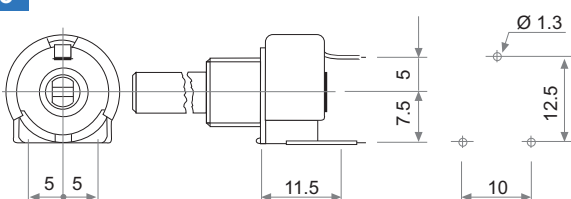
v 12.5



v 15



va 12.5



v 17.5

