



47-SM Captive Screws

Styled knob series · Surface Mount Technology (SMT) Style

- For installation to PC Board material utilizing surface mount technology
- Smooth knob meets UL-1950
- Designed for hand operation
- Spring ejected
- Variety of sizes, recesses

Material and Finish

Ferrule: Steel, Tin plated

Knob:

Aluminum, natural

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Internal spring: 300 series stainless steel passivated

Plug: Silicone rubber

Installation Notes

Visit www.southco.com for additional installation guidelines

To ensure you receive



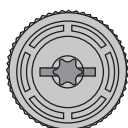
SOUTHCO® quality parts, look for the segmented circle.

Part Number

See table

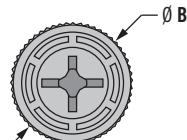
Recess Styles

TORX® / Slot Combination

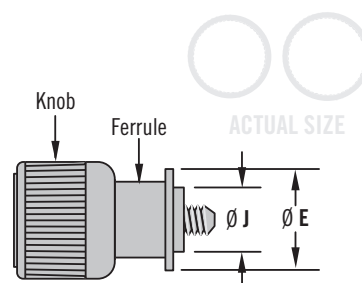


T10 TORX® / Slot Combination (M3,4-40)
T15 TORX® / Slot (6-32)

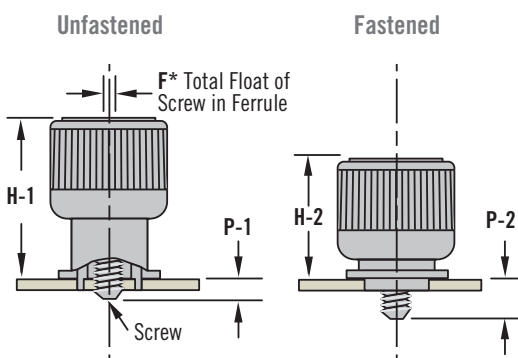
Phillips / Slot Combination



No. 1 Phillips / Slot Recess (M3,4-40)
No. 2 Phillips / Slot Recess (6-32)



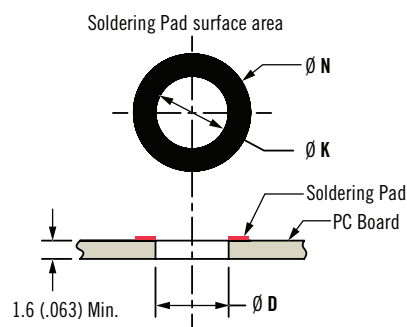
Knob Height and Screw Projection



* Value represents float in unfastened position

Notes: P-1, P-2 Screw Projection measured from the top side of panel

PC Board Preparation



47 Captive Screws Styled knob series - SMT Style

Part Number

Specify Package

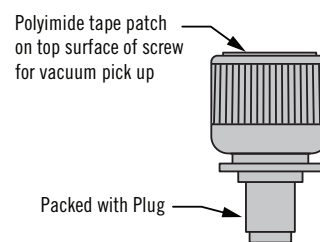
Indicate package option with last digit of the part number

Example

47-SM-1311-K-R: Reel Package (as shown in table)

47-SM-1311-K-T: Tray Package

Screw as Shipped in Reel Pack or Tray Pack



Thread Size	Part Number (Reel package shown)				H-1	H-2	P-1	P-2	øB	øJ	øE	F*	ø K	ø N	Panel Preparation
	Knurled Head		Smooth Head												ø D
	Phillips / Slotted	TORX® / Slotted	Phillips / Slotted	TORX® / Slotted											
M3 x 0.5	47-SM-3311-K-R	47-SM-3411-K-R	47-SM-3311-N-R	47-SM-3411-N-R	11.4 (.45)	8.4 (.33)	1.4 (.05)	4.4 (.17)	10.7 (.42)	5.5 (.217)	7.6 (.30)	0.7 (.03)	5.6 (.22)	8.6 (.34)	5.6 +0.08/-0 (.220 +.003/-000)
	47-SM-3321-K-R	47-SM-3421-K-R	47-SM-3321-N-R	47-SM-3421-N-R			2.2 (.09)	5.2 (.20)							
4-40	47-SM-1311-K-R	47-SM-1411-K-R	47-SM-1311-N-R	47-SM-1411-N-R	15.5 (.61)	10.7 (.42)	1.4 (.05)	4.4 (.17)	11.4 (.45)	6.2 (.244)	8.1 (.32)	0.7 (.03)	6.4 (.25)	10.2 (.40)	6.4 +0.08/-0 (.252 +.003/-000)
	47-SM-1321-K-R	47-SM-1421-K-R	47-SM-1321-N-R	47-SM-1421-N-R			2.2 (.09)	5.2 (.20)							
6-32	47-SM-2311-K-R	47-SM-2411-K-R	47-SM-2311-N-R	47-SM-2411-N-R	15.5 (.61)	10.7 (.42)	0.8 (.03)	5.6 (.22)	11.4 (.45)	6.2 (.244)	8.1 (.32)	0.7 (.03)	6.4 (.25)	10.2 (.40)	6.4 +0.08/-0 (.252 +.003/-000)
	47-SM-2321-K-R	47-SM-2421-K-R	47-SM-2321-N-R	47-SM-2421-N-R			2.3 (.09)	7.1 (.28)							

Other options available. For complete details on variety, part numbers, installation and specification, go to



www.southco.com/47

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Dimensions in millimeters (inch) unless otherwise stated

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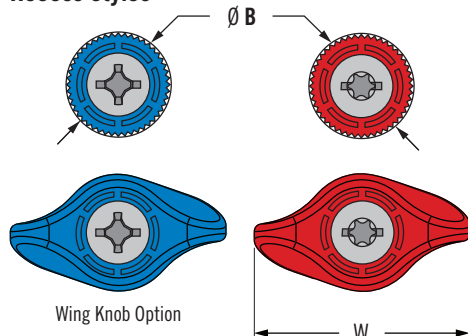
4C-SM Captive Screws

Prism series · Surface Mount Technology (SMT) Style



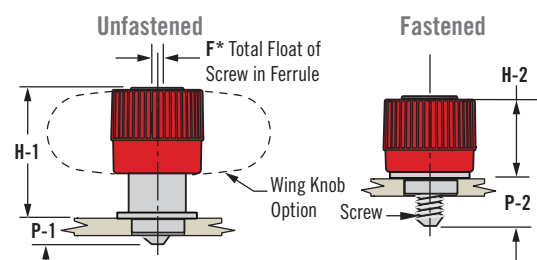
471

Recess Styles



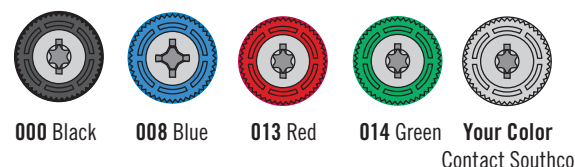
No. 2 Phillips Recess (M3,4-40) T10 TORX® / Slot Combination (M3,4-40)
No. 2 Phillips / Slot Recess (6-32) T15 TORX® / Slot Combination (6-32)

Knob Height and Screw Projection



F* Value represents float in unfastened position

Notes: P-1, P-2 Screw Projection measured from the top side of panel



Part Number

Specify Package

Indicate package option with last digit of the part number

Example

4C-SM-1111-N000-R, Reel Package

(as shown in table)

4C-SM-1111-N000-T, Tray Package

Part Number

Specify Color

To indicate Color, change the three digits of the part number indicated below

Example

4C-SM-1111-K000-R, black

4C-SM-1111-K008-R, blue

Part Number

Specify Wing Knob Option

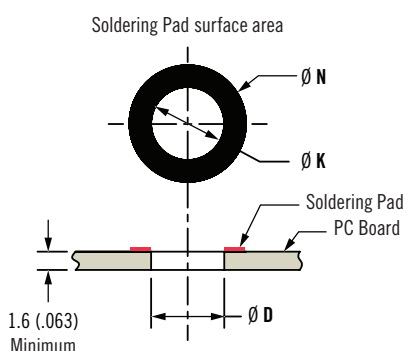
To indicate Wing Knob, change the K or N to W of the part number

Example

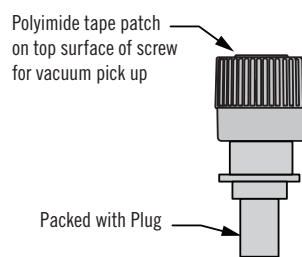
4C-SM-1111-K000-R, Round Knob

4C-SM-1111-W008-R, Wing Knob

PC Board Preparation



Screw as Shipped in Reel Pack or Tray Pack



- For installation to PC Board material utilizing surface mount technology
- Designate access points with color
- Color match captive screws to your industrial design
- High strength screw for use with high torque drivers

Material and Finish

Standoff: Steel, Tin plated

Knob: High heat resistant plastic

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Internal spring: 300 series stainless steel passivated

Plug: Silicone rubber

Installation Notes

Visit www.southco.com for additional installation guidelines

To ensure you receive

 SOUTHCO® quality parts, look for the segmented circle

Part Number

See table

Thread Size	Part Number (Reel package shown)				H-1	H-2	P-1	P-2	ø B	ø J	ø E	F*	ø K	ø N	W	Panel Preparation
	Knurled Head		Smooth Head													ø D
	Phillips	TORX® / Slotted	Phillips	TORX® / Slotted												
M3 x 0.5	4C-SM-3111-K000-R	4C-SM-3411-K000-R	4C-SM-3111-N000-R	4C-SM-3411-N000-R	10.8 (.43)	8.6 (.34)	1.5 (.06)	3.7 (.15)	9.7 (.38)	5.5 (.217)	7.6 (.30)	0.7 (.03)	5.6 (.22)	8.6 (.34)	20 (.7878)	5.6 +0.08/-0 (.220 +.003/- .000)
	4C-SM-3121-K000-R	4C-SM-3421-K000-R	4C-SM-3121-N000-R	4C-SM-3421-N000-R			3.3 (.13)	5.5 (.22)								
4-40	4C-SM-1111-K000-R	4C-SM-1411-K000-R	4C-SM-1411-N000-R	4C-SM-1411-N000-R			16.3 (.64)	11.7 (.46)								
	4C-SM-1121-K000-R	4C-SM-1421-K000-R	4C-SM-1421-N000-R	4C-SM-1421-N000-R	3.3 (.13)	5.5 (.22)										
	Phillips / Slotted	TORX®/Slotted	Phillips / Slotted	TORX®/Slotted												
6-32	4C-SM-2311-K000-R	4C-SM-2411-K000-R	4C-SM-2311-N000-R	4C-SM-2411-N000-R			0.1 (.004)	4.6 (.18)								
	4C-SM-2321-K000-R	4C-SM-2421-K000-R	4C-SM-2321-N000-R	4C-SM-2421-N000-R			1.8 (0.7)	6.1 (.24)								

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Dimensions in millimeters (inch) unless otherwise stated

Other options available. For complete details on variety, part numbers, installation and specification, go to



www.southco.com/4C



52-SM Captive Screws

Miniature series · Surface Mount Technology (SMT) Style

- For installation to PC Board material utilizing surface mount technology
- Smaller footprint for limited space applications
- Heat treated steel screw for optimum strength

Material and Finish

Screw: Hardened carbon steel, zinc plated, chromate, plus sealer

Internal spring: 300 series stainless steel, passivated

Standoff: Steel, Tin plated

Plug: Silicone rubber

Installation Notes

Visit www.southco.com for additional installation guidelines

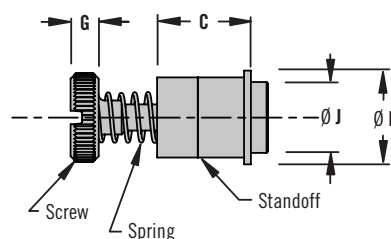
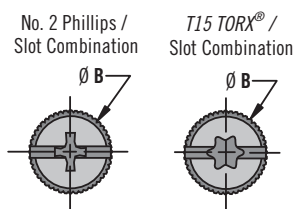


To ensure you receive **SOUTHCO®** quality parts, look for the segmented circle.

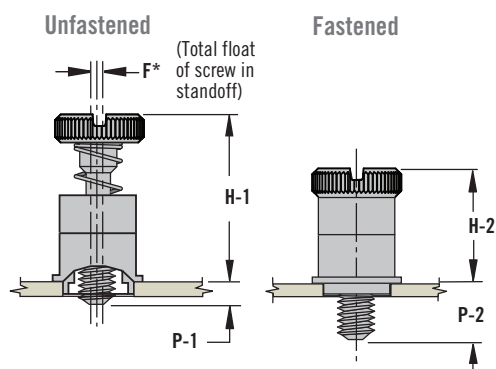
Part Number

See table

Recess Styles

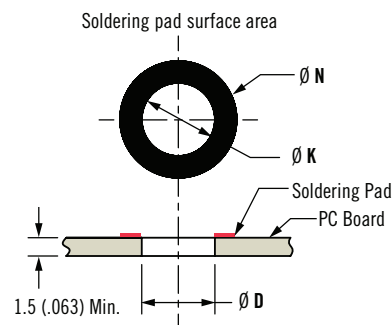


Screw Height and Screw Projection

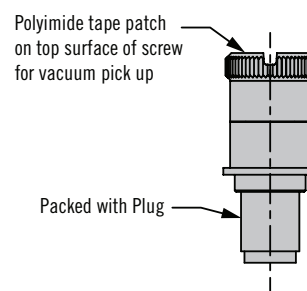


* Value represents float in unfastened position
Notes: P-1, P-2 Screw Projection measured from the top side of panel

PC Board Preparation



Screw as Shipped in Reel Pack or Tray Pack



52 Captive Screws Miniature Series - SMT Style

Part Number

Specify Package

Indicate package option with last digit of the part number

Example

52-SM-1311-K-R: Reel Package (as shown in table)

52-SM-1311-K-T: Tray Package

Thread Size	Part Number (Reel package shown)				H-1	H-2	P-1	P-2	Ø B Knurled Head	Ø B Smooth Head	Ø J	Ø E	C	G	F*	Ø K	Ø N	Panel Preparation Ø D
	Knurled Head		Smooth Head															
	Phillips / Slotted	TORX®/Slotted	Phillips / Slotted	TORX®/Slotted														
M3 x 0.5	52-SM-3311-K-R	52-SM-3411-K-R	52-SM-3311-N-R	52-SM-3411-N-R	14	9.6	0.8 (.03)	5.3 (.21)	7	6.8	5.5	7.6	7	2.5	0.5	5.6 (.22)	8.6 (.34)	5.6 +0.08/-0 (.220 +.003/- .000)
	52-SM-3321-K-R	52-SM-3421-K-R	52-SM-3321-N-R	52-SM-3421-N-R	(.55)	(.38)	2.3 (.09)	6.8 (.27)	(.28)	(.27)	(.217)	(.30)	(.28)	(.1)	(.02)			
4-40	52-SM-1311-K-R	52-SM-1411-K-R	52-SM-1311-N-R	52-SM-1411-N-R	14	9.6	0.8 (.03)	5.3 (.21)	7	6.8	5.5	7.6	7	2.5	0.5	5.6 (.22)	8.6 (.34)	5.6 +0.08/-0 (.220 +.003/- .000)
	52-SM-1321-K-R	52-SM-1421-K-R	52-SM-1321-N-R	52-SM-1421-N-R	(.55)	(.38)	2.3 (.09)	6.8 (.27)	(.28)	(.27)	(.217)	(.30)	(.28)	(.1)	(.02)			
6-32	52-SM-2311-K-R	52-SM-2411-K-R	52-SM-2311-N-R	52-SM-2411-N-R	15.7	10.7	0.7 (.028)	5.8 (.23)	7.9	7.6	6.2	8.1	8.1	2.5	0.8	6.4 (.25)	10.2 (.40)	6.4 +0.08/-0 (.252 +.003/- .000)
	52-SM-2321-K-R	52-SM-2421-K-R	52-SM-2321-N-R	52-SM-2421-N-R	(.62)	(.42)	2.2 (.087)	7.4 (.29)	(.31)	(.30)	(.244)	(.32)	(.32)	(.1)	(.03)			

Other options available. For complete details on variety, part numbers, installation and specification, go to



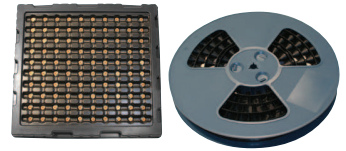
www.southco.com/52

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Dimensions in millimeters (inch) unless otherwise stated

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Installation Guidelines



473

Southco Surface Mounted Technology (SMT) Captive Screws include installation and packaging features for installation onto PC Boards during the Reflow Process as a surface mounted device (SMD).

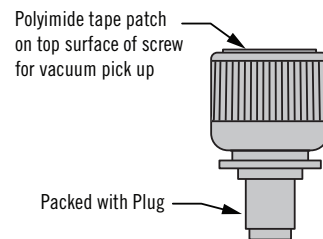
SMT product installation is offered on these Southco Captive Screws for 4-40, 6-32 and M3 thread sizes:

- 47 Styled Knob Series
- 4C Prism Series
- 52 Miniature Series

Installation Features

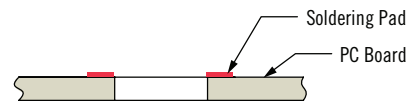
Each Southco SMT style captive screw includes a polyimide patch covering the screw head tool recess allowing for vacuum pick up during placement on the PC Board. The screw threads are protected from excess solder during the reflow process by a plug pre-assembled to the screw by Southco. The patch and plug are then removed after the final cool down phase.

Screw as Shipped in Reel or Tray Pack



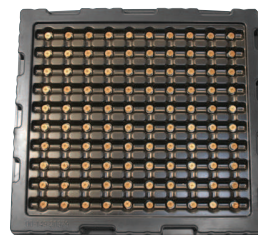
Preparing the PC Board to accept SMT Captive Screws

- See literature for optimum soldering pad surface area for the specific Southco Captive Screw being utilized



Packaging Features/Options

- Tray Pack
- Reel Pack



Tray Pack



Reel Pack

Reflow Process

- Reflow of Solder
 - Pre-heat
 - Soak
 - Reflow
 - Cooling
- Cleaning
 - Remove excess solder paste