52 Captive Screws
Miniature low profile series · Press-in style

- Low profile for limited space application
- Heat treated steel screw for optimum strength
- Designate access points with color
- Color match captive screws to your industrial design

Material and Finish
Screw: Hardened carbon steel, zinc plated, chrome, plus sealer
Spring: 300 series stainless steel, passivated
Standoff: Carbon steel, zinc plated, chrome, plus sealer
Prism: PC/ABS

Performance Details
Flammability Rating: UL94-VO

Installation Notes
For use in most aluminum or low carbon steels that are 1/4 hard or softer. Visit www.southco.com for more information.

Part Number
See table

Knob Height and Screw Projection

<table>
<thead>
<tr>
<th>Color/ Appearance</th>
<th>Thread Size</th>
<th>Phillips / Slotted</th>
<th>Smooth Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4-40</td>
<td>52-A10-51-4</td>
<td>52-A17-51-4</td>
</tr>
<tr>
<td></td>
<td>M3 x 0.5</td>
<td>52-A15-51-4</td>
<td>52-A18-51-4</td>
</tr>
<tr>
<td></td>
<td>(1/8)</td>
<td>(.31)</td>
<td>(.64)</td>
</tr>
<tr>
<td></td>
<td>8.1</td>
<td>52-A11-51-4-000</td>
<td>52-A13-51-4-000</td>
</tr>
<tr>
<td></td>
<td>(.32)</td>
<td>(.13)</td>
<td>(.17)</td>
</tr>
</tbody>
</table>

Notes: Recommended minimum distance from edge of panel to centerline of hole is 1.5 x Ø for press-in version.

Torx® is a registered trademark of ACUMENT® Intellectual Properties, LLC

Dimensions in millimeters (inch) unless otherwise stated
# 52 Captive Screws

Miniature low profile series - Surface Mount Technology (SMT) Style

## Recess Styles

<table>
<thead>
<tr>
<th>Bright</th>
<th>Prism</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Bright" /></td>
<td><img src="image2.jpg" alt="Prism" /></td>
</tr>
</tbody>
</table>

- No. 2 Phillips/Slot combination
- T15 TORX®/Slot combination

## Knob Height and Screw Projection

<table>
<thead>
<tr>
<th>Unfastened</th>
<th>Fastened</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.jpg" alt="Unfastened" /></td>
<td><img src="image4.jpg" alt="Fastened" /></td>
</tr>
</tbody>
</table>

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

## PC Board Preparation

- Soldering pad surface area
- Soldering Pad
- PC Board
- Screw as Shipped in Reel Pack or Tray Pack
- Polymide tape patch on top surface of screw for vacuum pickup

## Specifying Color

To indicate color, change the last three digits of the part number
**Example:** 52-SM-A1111-K000-R, 52-SM-A1111-K013-R

Visit [www.southco.com](http://www.southco.com) for additional installation guidelines

<table>
<thead>
<tr>
<th>Color/Appearance</th>
<th>Thread Size</th>
<th>Phillips/Slotted</th>
<th>T15 TORX®/Slotted</th>
<th>Phillips/Slotted</th>
<th>T15 TORX®/Slotted</th>
<th>F*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bright</strong></td>
<td>4-40</td>
<td>52-SM-A1311-K-R</td>
<td>52-SM-A1411-K-R</td>
<td>7</td>
<td>52-SM-A1311-N-R</td>
<td>8.6 (0.34)</td>
</tr>
<tr>
<td></td>
<td>M3 x 0.5</td>
<td>52-SM-A3311-K-R</td>
<td>52-SM-A3411-K-R</td>
<td>(0.28)</td>
<td>52-SM-A3311-N-R</td>
<td>5.6 (0.22)</td>
</tr>
<tr>
<td><strong>Prism (black shown)</strong></td>
<td>4-40</td>
<td>52-SM-A1111-K-R</td>
<td>52-SM-A1211-K-R</td>
<td>8.1</td>
<td>52-SM-A1111-N-R</td>
<td>8.6 (0.34)</td>
</tr>
<tr>
<td></td>
<td>M3 x 0.5</td>
<td>52-SM-A3111-K-R</td>
<td>52-SM-A3211-K-R</td>
<td>(1.32)</td>
<td>52-SM-A3111-N-R</td>
<td>5.6 (0.22)</td>
</tr>
</tbody>
</table>

- Phillips
- **TORX**

- **TORX** is a registered trademark of ACUMENT® Intellectual Properties, LLC

- Dimensions in millimeters (inch) unless otherwise stated

**For installation to PC Board material utilizing surface mount technology**
- **Heat treated steel screw for optimum strength**
- **Designate access points with color**
- **Color match captive screws to your industrial design**

**Material and Finish**
- Screw: Hardened carbon steel, zinc plated, chromate, plus sealer
- Spring: 300 series stainless steel, passivated
- Standoff: Carbon steel, tin plated, chromate, plus sealer
- Prism: High heat resistant plastic

**Performance Details**
- Flammability Rating: UL94-VO

**Installation Notes**
- Visit [www.southco.com](http://www.southco.com) for additional installation guidelines

**Part Number**
- See table

Visit [www.southco.com/52](http://www.southco.com/52)
Installation Guidelines

Self-clinching product installation is offered on these SOUTHCO® products, making them easy-to-use captive panel fasteners:

- Captive Screws
- Receptacles for Quarter-turn Fasteners
- Receptacles for Fast-lead Thread Screws

When pressed into a properly prepared hole, self-clinching captive fasteners cold-flow (move) the panel material into the retaining groove of the fastener. This material then retains the fastener in the panel.

**Successful press-in installations depend on:**

**Material:**
The hardness of the panel material must not exceed SOUTHCO® recommendations. If the panel is too hard, the fastener will not install correctly.

**Installation Holes:**
Mounting holes may be drilled, punched, or cast.
- Hole edge: the top hole edge must be sharp but with no broken edges.
- Do not chamfer or debur edge.
- Punched holes: use a punch and die with a small clearance to minimize the rollover and fracture angle.
- Hole diameter: measure the hole diameter at the panel surface on the side on which the fastener will be installed. The diameter must be within SOUTHCO® specifications for that product.
- If the hole is too large, not enough material will flow into the retaining groove and the fastener may not be retained adequately.
- If the hole is too small, the fastener will not fit and installation may become difficult and unsafe.
- Hole distance from the edge of panel: the minimum recommended distance is 1.5 x the diameter of the mounting hole, unless otherwise indicated.

**Panel Thickness:**
The thickness of the panel at the mounting hole location must meet or exceed Southco’s stated minimum recommendations. If the material is too thin, panel deformation and/or damage to the fastener may result.

**Installation is fast and easy if you follow these tips:**

How to install: Use the recommended force where noted and a proper back-up tool.
- Use any parallel-acting press
- Use a punch whose diameter is larger than the head of the fastener

Installation Force: Proper installation requires an even distribution of adequate force. It does not depend on the distance the fastener is pressed into the panel.
- Southco does not recommend using a hammer. The impact force does not provide an even distribution of force to allow the panel material to completely flow into the fastener’s retaining groove.
- Installation force varies from application to application, depending on the criteria noted above.

- On parts without a collar to provide a hard stop, press-in until the edge of the knurl is just barely visible.

When to Install:
Installation is recommended after plating or finishing has been applied to the panel.
The hole diameter must meet specifications before finish or plating is applied.
- Do not over-install parts. This interrupts the material and will reduce the retention strength.