High Capacity Standard Size Toggles

GENERAL SPECIFICATIONS FOR S800s ~ S732

Electrical Capacity (Resistive & Inductive Load)

Power Level: Shown in the following tables

Other Ratings

- **Contact Resistance:** 10 milliohms maximum
- **Insulation Resistance:** 1,000 megohms minimum @ 500V DC
- **Dielectric Strength:** 2,000V AC minimum for 1 minute minimum for S800s & S800Ds, 3,000V AC minimum for 1 minute minimum for S732
- **Mechanical Life:** 50,000 operations minimum
- **Electrical Life:** 10,000 operations minimum for S800Ds, 25,000 operations minimum for S800s & S732

Materials & Finishes

- **Toggle:** Brass with nickel plating for S732, Brass with chrome plating for S800s & S800Ds
- **Bushing:** Brass with chrome plating
- **Case:** Phenolic resin for S732; melamine phenol for S800s
- **Case Cover:** Steel with chromate plating over zinc plating
- **Movable Contactor Plate:** Copper with silver plating
- **Movable & Stationary Contacts:** Silver alloy capped on copper with silver plating
- **Common Terminals:** Brass
- **Contact Terminals:** Brass with silver or nickel plating

Environmental Data

- **Operating Temp Range:** –10°C through +70°C (+14°F through +158°F)

Installation

- **Mounting Torque:** 2.94Nm (26 lb-in) for double nut
- **Maximum Panel Thickness:** Shown beneath panel cutout in switch dimension drawings

Standards & Certifications

- **UL:** File No. E44145 - Recognized only when ordered with marking on switch. Add “/U” or “/cUL” to end of part number to order UL recognized switch. UL or cULus recognition designated beside part numbers on following pages. See Supplement section to find UL or cULus rating details.

- **CSA:** File No. 023535_0_000 - Certified only when ordered with marking on switch. Add “/C” to end of part number to order CSA certified switch. CSA certification designated beside part numbers on following pages. See Supplement section to find CSA rating details.
### Double Pole with Screw Lug

<table>
<thead>
<tr>
<th>*Approvals</th>
<th>Pole &amp; Throw</th>
<th>Toggle Position/Connected Terminals</th>
<th>Electrical Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Down</strong></td>
<td><strong>Center</strong></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S821</td>
<td>DPST</td>
<td>ON 2-3 5-6</td>
<td>NONE</td>
</tr>
<tr>
<td>S822</td>
<td>DPDT</td>
<td>ON 2-3 5-6</td>
<td>NONE</td>
</tr>
<tr>
<td>S823</td>
<td>DPDT</td>
<td>ON 2-3 5-6</td>
<td>OFF</td>
</tr>
</tbody>
</table>

**Notes:**
- Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.
- Optional Splashproof Boot Assembly: AT401 boot plus hex nut & o-ring. See Accessories & Hardware section.

### Three Pole with Screw Lug

<table>
<thead>
<tr>
<th>*Approvals</th>
<th>Pole &amp; Throw</th>
<th>Toggle Position/Connected Terminals</th>
<th>Electrical Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Down</strong></td>
<td><strong>Center</strong></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S831</td>
<td>3PST</td>
<td>ON 2-3 5-6 8-9</td>
<td>NONE</td>
</tr>
<tr>
<td>S832</td>
<td>3PDT</td>
<td>ON 2-3 5-6 8-9</td>
<td>NONE</td>
</tr>
<tr>
<td>S833</td>
<td>3PDT</td>
<td>ON 2-3 5-6 8-9</td>
<td>OFF</td>
</tr>
</tbody>
</table>

**Notes:**
- Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.
- Optional Splashproof Boot Assembly: AT401 boot plus hex nut & o-ring. See Accessories & Hardware section.
High Capacity Standard Size Toggles

**DOUBLE POLE WITH SCREW LUG & FLATTED LEVER**

<table>
<thead>
<tr>
<th>Model</th>
<th>*Approvals</th>
<th>Pole &amp; Throw</th>
<th>Keyway</th>
<th>Toggle Position/Connected Terminals</th>
<th>Electrical Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Down</td>
<td>Resistive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Center</td>
<td>Inductive L/R = 3ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Up</td>
<td>DC 30V</td>
</tr>
<tr>
<td>S821D</td>
<td>✓ ✓ ✓</td>
<td>DPST</td>
<td>2-3 5-6</td>
<td>NONE</td>
<td>30A</td>
</tr>
<tr>
<td>S822D</td>
<td>✓ ✓ ✓</td>
<td>DPDT</td>
<td>2-3 5-6</td>
<td>NONE</td>
<td>30A</td>
</tr>
<tr>
<td>S823D</td>
<td>✓ ✓ ✓</td>
<td>DPDT</td>
<td>2-3 5-6</td>
<td>OFF</td>
<td>30A</td>
</tr>
</tbody>
</table>

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.

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**400V DC WIRING INSTRUCTIONS**

1. DC switch use
   - Middle terminal shall be the minus pole when using DC circuit. Switch case is marked with (+) and (-).
   - Do not store near (5cm) highly magnetic items.
   - If actuation is interrupted when switching from ON to OFF, arcing may continue and switch could be burned.

2. Wiring for DC400V 10A

3. Inductive load
   Inductive loads produce an arc caused by counter-electromotive force when opening the circuit. Recommend inserting spark elimination circuit. Contact factory for details.

4. Compressed terminal connection
   When connecting screw terminal with compressed terminal, select compressed terminal using drawing below.
### Series S

**High Capacity Standard Size Toggles**

#### THREE POLE WITH SCREW LUG & FLATTED LEVER

<table>
<thead>
<tr>
<th>Model</th>
<th>*Approvals</th>
<th>Pole &amp; Throw</th>
<th>Down</th>
<th>Center</th>
<th>Up</th>
<th>Resistive DC</th>
<th>Inductive L/R = 3ms</th>
</tr>
</thead>
<tbody>
<tr>
<td>S831D</td>
<td>✓ ✓ ✓</td>
<td>3PST</td>
<td>ON 2-3 5-6 8-9</td>
<td>NONE</td>
<td>OFF</td>
<td>30A 30A 15A 7.5A 15A 10A 6A 3A</td>
<td></td>
</tr>
<tr>
<td>S832D</td>
<td>✓ ✓ ✓</td>
<td>3PDT</td>
<td>ON 2-3 5-6 8-9</td>
<td>NONE</td>
<td>ON 2-1 5-4 8-7</td>
<td>30A 30A 15A 7.5A 15A 10A 6A 3A</td>
<td></td>
</tr>
<tr>
<td>S833D</td>
<td>✓ ✓ ✓</td>
<td>3PDT</td>
<td>ON 2-3 5-6 8-9</td>
<td>OFF</td>
<td>ON 2-1 5-4 8-7</td>
<td>30A 30A 15A 7.5A 15A 10A 6A 3A</td>
<td></td>
</tr>
</tbody>
</table>

**Throw & Schematics:**

- **3PST**
  - 2
  - 3
  - 6
  - 5
  - (COM)
  - 8
- **3PDT**
  - 3
  - 6
  - 5
  - (COM)
  - 8

*Note: Terminal numbers are on the switch*

**Notes:** Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.

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**Maximun Panel Thickness:**

- **.177” (4.5mm)**

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**S832D**

![Diagram](image)
### High Capacity Standard Size Toggles

#### Series S

### Double Pole with Screw Lug

<table>
<thead>
<tr>
<th>Model</th>
<th>Approvals</th>
<th>Pole &amp; Throw</th>
<th>Pole Position/Connected Terminals</th>
<th>Electrical Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>S732</td>
<td>–</td>
<td>DPDT</td>
<td>Down 2-3 5-6 Center NONE Up 2-1 5-4</td>
<td>Resistive: 50A 30A 50A 25A</td>
</tr>
</tbody>
</table>

**Notes:** Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.

- **Cap of phenolic resin is black**
- **Panel Mount with Mounting Screws**
  - Maximum Panel Thickness: .158" (4.0mm)
- **Panel Mount with Bushing Hardware**
  - Maximum Panel Thickness: .079" (2.0mm)
  - Maximum Panel Thickness: .118" (3.0mm)
  - Maximum Panel Thickness: .118" (3.0mm)

![Diagram of Double Pole with Screw Lug](image)

Note: Terminal numbers are on the switch.