Bussmann® Power Module™ Switch

All-In-One Module

How to configure Part Numbers:

Step 1: Select Switch Amperage

<table>
<thead>
<tr>
<th>Power Module™ Switch Rating (Amps)</th>
<th>Power Module Switch Catalog No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>PS3</td>
</tr>
<tr>
<td>60</td>
<td>PS6</td>
</tr>
<tr>
<td>100</td>
<td>PS1</td>
</tr>
<tr>
<td>200</td>
<td>PS2</td>
</tr>
<tr>
<td>400</td>
<td>PS4</td>
</tr>
</tbody>
</table>

Step 2: Select Options Needed

Optional Accessories

<table>
<thead>
<tr>
<th>Option 1</th>
<th>Control Power Transformer (CPT) Std. 100VA with PRI &amp; SEC Fuse (120V Secondary)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>208V</td>
</tr>
<tr>
<td></td>
<td>240V</td>
</tr>
<tr>
<td></td>
<td>480V</td>
</tr>
<tr>
<td></td>
<td>600V</td>
</tr>
<tr>
<td>Option 2</td>
<td>Fire Safety Interface Relay (3PDT, 10 amp, 120V)</td>
</tr>
<tr>
<td></td>
<td>24 Vdc, Coil</td>
</tr>
<tr>
<td></td>
<td>120 Vac Coil</td>
</tr>
<tr>
<td>Option 3</td>
<td>Key to Test Switch</td>
</tr>
<tr>
<td></td>
<td>120V</td>
</tr>
<tr>
<td>Option 4</td>
<td>Pilot Light – “ON”</td>
</tr>
<tr>
<td></td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td>White</td>
</tr>
<tr>
<td>Option 5</td>
<td>Isolated Neutral Lug (Full Capacity)</td>
</tr>
<tr>
<td></td>
<td>30-60A</td>
</tr>
<tr>
<td></td>
<td>100A</td>
</tr>
<tr>
<td></td>
<td>200A</td>
</tr>
<tr>
<td></td>
<td>400A</td>
</tr>
<tr>
<td>Option 6</td>
<td>Mechanically interlocked auxiliary contact for hydraulic elevators with automatic recall (5 amp 120 Vac rated)</td>
</tr>
<tr>
<td></td>
<td>1 NO &amp; 1 NC</td>
</tr>
<tr>
<td>Option 7</td>
<td>Fire Alarm Voltage Monitoring Relay (To monitor Shunt Trip Voltage)</td>
</tr>
<tr>
<td></td>
<td>Single-Pole</td>
</tr>
<tr>
<td></td>
<td>Three-Pole</td>
</tr>
<tr>
<td>Option 8</td>
<td>Optional Enclosure</td>
</tr>
<tr>
<td></td>
<td>NEMA 3R</td>
</tr>
<tr>
<td></td>
<td>NEMA 4</td>
</tr>
<tr>
<td></td>
<td>NEMA 12</td>
</tr>
</tbody>
</table>

Catalog No. Construction: Catalog number of PS Switch. Options as required in option order as listed above (i.e. option 1, 2, 3, etc.).

Example: • 100A S.T. Switch 480V-3P – PS1
• 480–120V CPT – T48
• 120 Vac Coil Fire Safety Interface Relay – R1
• Pilot Light - “ON” (Green) – G
• Mech. Interlock (1 NO & 1 NC) – A

Catalog Number PS1T48R1GA

1Class J fuses not included.
2Oversized 200% rated neutral option available where required by excessive non-linear loads.
3Through 200A.
4Through 100A.
5Options 1, 2, & 6 are standard for elevator circuits.

Agency Information:

Bussmann® Power Module™ Switch

Standard Features:
• 30-400 amp 600 Vac 3p Fused Power Switch
• 200,000 amp RMS Short-Circuit Current Rating
• Shunt trip 120V
• Control power terminal block
• Ground lug per NEC
• Class J fuse mounting only

Optional Features:
• Control power transformer with fuses and blocks
• Fire safety interface relay
• Key to test switch
• Pilot light – “ON”
• Isolated neutral lug
• Mechanically interlocked auxiliary contact for hydraulic elevators with battery backup (5 amp 120 Vac rated)
• Fire Alarm Voltage Monitoring Relay (To monitor Shunt Trip Voltage)
• NEMA 3R, 4, and 12 enclosures available
• Phase failure and undervoltage relay available, consult factory
• For added protection, use the Bussmann SAMI fuse covers to improve maintenance personnel protection (OSHA 1910.333, paragraph C)

Agency Information:

U.L. 98 Enclosed and Dead Front Switch
Guide 96NK3917, File E182262
NEMA 1, U.L. 50, listed enclosure
cU.L. per Canadian Standards C22.2, No. 0-M91-CAN/CSA C22.2, No. 4-M89 Enclosed Switch
Standard Shunt Trip Ratings

<table>
<thead>
<tr>
<th>Amp Rating</th>
<th>Voltage</th>
<th>Max Inrush</th>
<th>Max(^1) On Time</th>
<th>Momentary Inrush</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-100</td>
<td>120V, 60Hz</td>
<td>4 amps</td>
<td>1.5 cycles</td>
<td>140VA</td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)Will handle up to 447VA inrush.
Typical Control with Wiring Options for Fire Safety Interface (Option R1)

**Legend:**
- **N.O.F.A.** - Normally Open Fire Alarm contacts supplied from the fire alarm system to initiate the shunt trip.
- **Shunt Trip** - Solenoid for remote trip of switch, which is activated by the closing of the fire alarm contacts or key test switch.
- **Option R1** - Fire Safety Interface Relay that is operated at 120VAC from secondary of transformer. No additional power needed.
- **CR** - Control Relay used to isolate the N.O.F.A. contacts from the duty of the shunt trip.
- **FR** - Fire Alarm Voltage Monitoring Relay used to monitor presence of voltage in switch from a remote location (i.e. Fire Alarm Control Panel).
- **PL** - Pilot Light to visually indicate presence of voltage on outside of switch enclosure.
- **CPT** - Control Power Transformer used to step down line voltage to 120VAC to power shunt trip coil.
- **SW Aux.** - Normally closed contact when switch is closed. Opens as power switch opens.
- **Key Test** - Key-to-Test switch used to operate shunt trip from the outside of switch enclosure. Can be used for trouble-shooting and inspection.
- **Mechanically Interlocked Auxiliary Contact** - Contact used to disconnect secondary source of power.

**Option A: Battery Backup Terminal Configuration**

To connect the battery lowering for hydraulic elevator, connect to Points NC and COM.

**Option F1: Relay Terminal Configuration**

Note: Contacts For FR are Shown in De-energized position.
Bussmann® Power Module™ Switch
All-In-One Module

Typical Control with Wiring Options for Fire Safety Interface (Option R2)

Legend:
N.O.F.A. – Normally Open Fire Alarm contacts supplied from the fire alarm system to initiate the shunt trip.
Shunt Trip – Solenoid for remote trip of switch, which is activated by the closing of the fire alarm contacts or key test switch.
Option R2 – Fire Safety Interface Relay that is operated at 24VDC from fire alarm system. May require an additional power source to be needed.
CR – Control Relay used to isolate the N.O.F.A. contacts from the duty of the shunt trip.
FR – Fire Alarm Voltage Monitoring Relay used to monitor presence of voltage in switch from a remote location (i.e. Fire Alarm Control Panel).
PL – Pilot Light to visually indicate presence of voltage on outside of switch enclosure.
CPT – Control Power Transformer used to step down line voltage to 120VAC to power shunt trip coil.
SW Aux. – Normally closed contact when switch is closed. Opens as power switch opens.
Key Test – Key-to-Test switch used to operate shunt trip from the outside of switch enclosure. Can be used for trouble-shooting and inspection.
Mechanically Interlocked Auxiliary Contact – Contact used to disconnect secondary source of power.
• – Terminal Block Connection Point.
● – Pre-wired Connection Points

Option F1: Relay Terminal Configuration

Frequency: 60Hz
Input: 140VA

To connect the battery lowering for hydraulic elevator, connect to Points NC and COM.

Note: Contacts For Mechanically Interlocked Auxiliary Contact are Shown in the Energized position.
Section 16XXX - Power Module Switch

Part 1 - General
1.01 Description
A. Work of this section shall conform to the requirements of the Contract Documents.

1.02 Section Includes
A. Provide Elevator Power Module Switch(es), fuses and accessories as required and specified on Contract Drawings to distribute electrical power to all Elevators.

1.03 Related Systems
A. (Reference other sections of the specification which cover Elevator installation)

1.04 Codes
A. All work shall be performed in accordance with the latest edition of applicable standards, codes and laws.
1. NFPA 70 – 1999 Section 620-51 (a)-(c), 620-62, 620-91(c)
2. Canadian Electric Code Part 1 38-034(3)
3. ANSI/ASME A17.1 - 1996 Section 102.2 (c) (3)
4. BOCA 3006.2.3
5. NFPA 72 – 1999 Section 3-9.4.4

1.05 Standards
A. Except as modified by governing codes, all equipment shall be manufactured in accordance with the latest applicable standards:
1. Enclosed Switches, U.L. 98 and CSA – C22.2 No. 4

1.06 Substitutions
A. Substitutions shall comply with the requirements of the General Conditions and General Requirements.

1.07 Submittals
A. Submit shop drawings and product data under the provisions of the General Conditions.
B. Product Data: Provide manufacturer's catalog information showing dimensions, configurations, and methods of mounting and installation.
C. Submit listing of all types, sizes and quantity of fuses which will be installed including the location of each.
D. Spare fuses shall be supplied as required by (reference fuse specification section).

Part 2 - Products
2.01 Manufacturers
A. Bussmann® Power Module™ Switch – PS

2.02 General Conditions & Requirements
A. Provide Power Module Switch in a single NEMA enclosure with all necessary relay(s), control transformer and other options (as listed below), and as shown on drawings. The Power Module Switch shall be constructed, listed, and certified to the standards as listed in above. The Power Module Switch shall have an amperage rating as shown on the Contract Drawings, and shall include a horsepowered rated fusible switch with shunt trip capabilities. The amperage rating of the switch shall be based upon elevator manufacturer requirements and utilize Class J Fuses (provided separately). It shall include as an accessory, a 100VA control power transformer with primary and secondary fuses. The primary voltage rating shall be ______ volts with a 120 volt secondary. It shall also contain an isolation relay (3PDT, 10 amp, 120V). The coil of the isolation relay shall be ______ (120 V AC or 24 V DC). A normally open dry contact shall be provided by the Fire Alarm Safety System to energize the isolation relay and activate the shunt trip solenoid (140VA inrush at 120V). (Note: If 24 V DC coil is selected, a separate 24 V DC source and contact must be provided by the Fire Alarm Safety System.)

The module shall contain the following options:
1. “ON” Pilot Light (Green, Red or White)
2. Isolated Full Capacity Neutral Lug
3. 1P NC Mechanically Interlocked Auxiliary Contact (required for hydraulic elevators with automatic recall).
4. Fire Alarm Voltage Monitoring Relay (Needed to comply with NFPA 72)
5. NEMA ___ Enclosure (NEMA 1 standard), 12, 3R or 4) (through 200A)

Complete catalog number for the Power Module Switch shall be ____________

The module shall have been successfully tested to a short circuit rating with Bussmann® LOW-PEAK® Class J fuses at 200,000 amps RMS Symmetrical. All switches shall have shunt trip capabilities at 120 V AC from remote fire safety signal. Branch feeders shall be selectively coordinated and fed with an upstream supply overcurrent protective device at a minimum of 2:1 size ratio utilizing LOW-PEAK® (Class J, RK1, or L) fuses.

Part 3 - Execution
3.01 Installation
A. All material installation shall be in accordance with manufacturers recommendations and the provisions of applicable codes.
B. Fuses shall not be installed until equipment is ready to be energized.