**System 450™ Expansion Modules with Relay Output**

**Description**

System 450 expansion modules allow you to increase the number of outputs in your control system to meet your application requirements. The following models are available:

- C450SBN-3C: Relay Expansion Module with one relay output
- C450SCN-3C: Relay Expansion Module with two relay outputs

Refer to the following documents for important product application information:

- **System 450™ Series Modular Controls Product Bulletin** (LIT-12011458)
- **System 450™ Series Expansion Modules with Relay Outputs Installation Instructions** (Part No. 24-7664-2683)

**Features**

- Durable, compact, interchangeable modular components with plug-together connectors and DIN rail or direct wall mount capability eliminate field wiring between modules and allow you to quickly and easily design, assemble, install, and upgrade your control systems.
- Versatile, multipurpose, field-configurable control modules and expansion modules designed for global use allow you to create a wide variety of application-specific control systems capable of controlling temperature, pressure, or humidity, or all three conditions simultaneously, with only a small suite of module models.
- Up to three hard-wired input sensors and up to ten relay or analog outputs (in any combination) per control system allow you to build complex custom control systems while reducing your control system cost to only the cost of the required components.

**Repair Information**

If the System 450™ Expansion Module with Relay Output fails to operate within its specifications, replace the unit. For a replacement System 450™ Expansion Module with Relay Output, contact a Johnson Controls® representative.

**Selection Chart**

**Expansion System 450 Modules and Accessories Ordering Information**

<table>
<thead>
<tr>
<th>Product Code Number</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C450SBN-3C</td>
<td>Reset Control Module with LCD, Four-Button Touchpad UI, and SPDT relay output; provides one SPDT output relay. One A99BC-25C temperature sensor with 0.25 m (9-1/4 in.) silicon leads and one A99BC-300C temperature sensor with 3 m (9 ft 10 in.) silicon leads are included in the box with the Reset Control Module.</td>
</tr>
<tr>
<td>C450SCN-3C</td>
<td>Reset Control Module with LCD, Four-Button Touchpad UI, and SPDT relay output; provides two SPDT output relays. One A99BC-25C temperature sensor with 0.25 m (9-1/4 in.) silicon leads and one A99BC-300C temperature sensor with 3 m (9 ft 10 in.) silicon leads are included in the box with the Reset Control Module.</td>
</tr>
<tr>
<td>BKT287-1R</td>
<td>DIN Rail; 0.30 m (12 in.) long</td>
</tr>
<tr>
<td>BKT287-2R</td>
<td>DIN Rail; 1 m (39-1/3 in.) long</td>
</tr>
<tr>
<td>BKT287-3R</td>
<td>DIN Rail; 0.61 m (24 in.) long</td>
</tr>
<tr>
<td>BKT287-4R</td>
<td>DIN Rail; 0.36 m (14 in.) long</td>
</tr>
<tr>
<td>PLT344-1R</td>
<td>DIN Rail End Clamps (2 clamps)</td>
</tr>
</tbody>
</table>
## Technical Specifications

### C450SBN-3C and C450SCN-3C Expansion Modules with Relay Output

| Product | C450SBN-3C: System 450 Expansion Module with one SPDT output relay  
C450SCN-3C: System 450 Expansion Module with two SPDT output relays |
|---------|---------------------------------------------------------------------|
| Power Consumption | C450SBN-3C: 0.8 VA maximum  
C450SCN-3C: 1.2 VA maximum |
| Supply Power | Internal Supply Power: C450YN-1C Power Supply Module  
External Supply Power: 24 VAC (20–30 VAC) Safety Extra-Low Voltage (SELV) (Europe), Class 2 (North America), 50/60 Hz, 10 VA minimum; or 22 to 30 VDC  
**Note:** A System 450 control module or module assembly can use an internal or an external supply power source, but must not be connected to both simultaneously. |
| Ambient Operating Conditions | Temperature: -40 to 66°C (-40 to 150°F)  
Humidity: Up to 95% RH noncondensing; maximum dew point 29°C (85°F) |
| Ambient Shipping and Storage Conditions | Temperature: -40 to 80°C (-40 to 176°F)  
Humidity: Up to 95% RH noncondensing; maximum dew point 29°C (85°F) |
| Output Relay Contacts | General: 1/2 HP at 120/240 VAC, SPDT  
Specific: AC Motor Ratings  
- 120 VAC: 9.8 A  
- 208/240 VAC: 4.9 A  
| AC Full-Load Amperes: | 9.8 A  
| AC Locked-Rotor Amperes: | 58.8 A  
| 10 Amperes AC Noninductive at 24/240 VAC: | 29.4 A  
| Pilot Duty: | 125 VA at 24/240 VAC |
| Control Construction | Independently mounted control, surface mounted with Lexan® 950 enclosure suitable for DIN rail mounting or direct mounting to a hard, even surface. |
| Dimensions (H x W x D) | 127 x 61 x 61 mm (5 x 2-3/8 x 2-3/8 in.) |
| Weight | C450SBN-3C: 172 g (0.38 lb)  
C450SCN-3C: 186 g (0.41 lb) |
| Compliance | **North America:** cULus Listed; UL 60730, File E27734;  
FCC Compliant to CFR47, Part 15, Subpart B, Class B  
Industry Canada (IC) Compliant to Canadian ICES-003, Class B limits  
**Europe:** CE Mark – Johnson Controls, Inc. declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive and the Low Voltage Directive.  
**Australia:** Mark: C-Tick Compliant (N1813) |