Eaton’s closed transition contactor-based automatic transfer switch (CTC8) is designed to provide unmatched performance, reliability and versatility for critical standby power applications. Eaton’s closed transition ATSs exclusively use Eaton’s ATC-800 controller.

Product description
Eaton’s closed transition contactor-based automatic transfer switch (CTC8) is designed to avoid intentional interruption of power when both sources of power are available by momentarily paralleling both sources.

The ATC-800 is a comprehensive, multi-function, microprocessor-based controller, offering extensive monitoring, status reporting and transfer control operation.

The make-before-break contact sequence coupled with Eaton’s ATC-800 provides a transfer switch that is useful in critical standby power applications available from 40 to 1200A.

Application description
A transfer switch designed for closed transition has make-before-break contacts, which requires the normal and alternate sources to be synchronized. The source contacts on Eaton’s CTC8 will parallel for 100 ms or less. In addition, a parallel limit timer (watchdog relay) comes standard to prevent paralleling sources for an extended period of time. The ATC-800 provides all-phase undervoltage, underfrequency, overvoltage and overfrequency protection as a standard. Consult with the local utility company for permission and to verify the protection requirements, as each utility may have different rules regarding closed transition applications.

Protective relays may be available as an option upon request.

Closed transition controls
The CTC8 accomplishes the closed transition transfer by monitoring the voltage and frequency set point conditions of both power sources. Once the set point conditions are met, the ATC-800 controller will start the closed transition synchronization timer (TSCT). The TSCT is adjustable from 1 to 60 minutes in duration. This duration is the time during which the ATC-800 controller will monitor the phase angles to anticipate when they will be within 8 electrical degrees. The closed transition scheme is anticipatory, allowing the close contacts signal to be initiated before the sources are exactly in phase. If the TSCT times out and the transfer switch has not reached synchronization, the transfer switch will remain connected to the current power source and a failure-to-transfer alarm will be displayed.

The transfer switch can also be equipped with an optional open transition transfer method for situations where synchronization is not possible but a transfer is required. One of the following transition features can be selected:

- Closed transition only
- Closed transition with default to load voltage decay
- Closed transition with default to time delay neutral
Industrial design highlights
• Field-selectable multi-tap transformer panel permits operation on a wide range of system voltages

Electrical ratings
• 40, 80, 100, 150, 200, 225, 260, 400, 600, 800,1000 and 1200A ratings
• Two-, three- or four-pole
• Up to 600 Vac, 50/60 Hz
• Standard three-position fixed-mounted switching device
• NEMA® 1, 3R, 12
• UL® 1008 Listed
• CSA® C22.2 No. 178 certified

Standard features
• Auxiliary relay contacts:
  • Source 1 available 1NO/1NC
  • Source 2 available 1NO/1NC
• Switch position indication contacts:
  • Source 1 position 1NO/1NC
  • Source 2 position 1NO/1NC
• Source 1 and Source 2 sensing:
  • Undervoltage/underfrequency
  • Overvoltage/overfrequency
• Go to emergency (Source 2)
• Seven field-programmable time delays

Optional features
• UL 1449 3rd Edition compliant surge suppression devices
• Space heater with thermostat
• Power quality metering
• Stainless steel cover for controller
• Pre-transfer signal contacts 1NO/1NC
• Three-phase rotation protection (Source 1, Source 2 or both)
• Three-phase voltage unbalance protection (Source 1, Source 2 or both)

Contactor-Based Transfer Switch 40–1200A Closed Transition—Dimensions in Inches (mm) and Approximate Shipping Weight

<table>
<thead>
<tr>
<th>Ampere Rating</th>
<th>Enclosure (Height)</th>
<th>Bolt Pattern (Width)</th>
<th>C (Depth)</th>
<th>G (Horizontal)</th>
<th>H (Vertical)</th>
<th>Load Side, Normal and Standby Source</th>
<th>Neutral Connection</th>
<th>Weight in Lbs (kg)</th>
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<tbody>
<tr>
<td>40–100 at 480V</td>
<td>52.74 (1339.6)</td>
<td>25.00 (635.0)</td>
<td>17.18 (436.4)</td>
<td>10.25 (260.4)</td>
<td>37.38 (949.5)</td>
<td>(1) #14–2/0</td>
<td>(3) #14–1/0</td>
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<td>40–100 at 600V</td>
<td>52.74 (1339.6)</td>
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<td>150–200 at 480V</td>
<td>52.74 (1339.6)</td>
<td>25.00 (635.0)</td>
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<td>37.38 (949.5)</td>
<td>(1) #6–250 kcmil</td>
<td>(3) 1/0–250 kcmil</td>
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<td>150–200 at 600V</td>
<td>71.02 (1803.9)</td>
<td>31.11 (790.2)</td>
<td>14.72 (373.9)</td>
<td>13.00 (330.2)</td>
<td>47.84 (1215.1)</td>
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<td>225–400 at 480V</td>
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<tr>
<td>225–1200 at 600V</td>
<td>90.00 (2286.0)</td>
<td>46.00 (1168.4)</td>
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<td>N/A</td>
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<tr>
<td>600–1200 at 480V</td>
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UL 1008 Withstand and Close-On Ratings (kA)

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<th>Any Breaker</th>
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Height “A” Includes Top and Bottom Bracket on Wallmount Units

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