Field Upgrade Instructions
ATC-600/800 to ATC-900 for an Automatic Transfer Switch
Instruction Leaflet

Field Upgrade Kit Part Numbers (Number to Order)
8160A91G01 ATC-600/800 to ATC-900 Upgrade Kit
8160A91G04 ATC-600/800 to ATC-900 Upgrade Kit (Bypass Contactor, Open & Closed)

Field Upgrade Kit Components:

<table>
<thead>
<tr>
<th>PART #</th>
<th>DESCRIPTION</th>
<th>QTY.</th>
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</thead>
<tbody>
<tr>
<td>ATC-900</td>
<td>Automatic Controller</td>
<td>1</td>
</tr>
<tr>
<td>6908390G01</td>
<td>Adapter Harness</td>
<td>1</td>
</tr>
<tr>
<td>68A8190H02</td>
<td>4 pin COMM and I/O Conn</td>
<td>2</td>
</tr>
<tr>
<td>IB140012EN</td>
<td>ATC-900 Instruction Book</td>
<td>1</td>
</tr>
<tr>
<td>6908397G01</td>
<td>Generic Drawings</td>
<td>1</td>
</tr>
<tr>
<td>6908391H01 &amp; H02</td>
<td>I/O Inside Door Labels</td>
<td>2</td>
</tr>
<tr>
<td>6908052G01*</td>
<td>Logic Controller</td>
<td>1</td>
</tr>
<tr>
<td>6908099G01*</td>
<td>Monitor Mode NC wires</td>
<td>2</td>
</tr>
</tbody>
</table>

* Only included with 8160A91G04

Tools Required
- Appropriate PPE
- Wire Cutters
- Phillips & Flat Head Screwdriver (#2)
- Small Flat Head Screwdriver
- Multimeter

Directions
1. Write down the setpoints from the ATC-600 or 800 before replacing it.
2. Verify that NO power is present on the system and it has been properly shut off and locked out for safety. Wear appropriate PPE and safety glasses.
3. Remove J7 for the existing controller.
4. Remove the remaining connectors from the existing controller: J1, J2, J3, J4, J5. One can use the flathead screwdriver to help remove the long connectors, J4 and J5.

Note: It may be necessary to remove existing wire ties where required.

5. Remove the existing Controller’s mounting hardware and remove the controller. The six screws are on the back of the unit holding it onto the door.
6. Install the NEW ATC-900 Controller. (note: Door cutout is the same) The existing mounting hardware (6 screws) can be reused to install the NEW controller.
7. Using the harness pictured in Figure 1, connect the connectors using the new harness and the one that was disconnected from the ATC-600/800. Keep in mind that the X’ (primed) are from the harness already on the door. The harness’s connectors that remains on the door are now: J1’, J2’, etc.

<Figure 1>

The controller drawing(s) may help with the connections. Keep in mind that X’ is to the present harness, while X is to the ATC-900.

Present Door Harness
ATC-900

ATC-900
J1, J2, J3, J4, J6, J7, J9, J15
8. Double check connections. If the switch is a contactor bypass type, first see "Contactor Legacy Bypass Additional Directions" below. Close doors and apply power. The J9 inputs should be configured by the user and written down below, added to the drawings, and written on door labels supplied.

The ATC-600/800 had inputs into the J4 connector. These inputs were: Lockout, Go to Neutral, S2 Inhibit, and Go to S2. There were also the Manual re-Transfer and the bypass timer that used a push button switch. The controller front push buttons have a "bypass timer" so there is no need for another switch on the door unless it is desired by the user.

The kit is currently wired with inputs of the following into J9 (from J4 of the ATC-600/800) of the ATC-900:

<table>
<thead>
<tr>
<th>In-1</th>
<th>Lockout</th>
</tr>
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<tbody>
<tr>
<td>In-2</td>
<td>Go to Neutral</td>
</tr>
<tr>
<td>In-3</td>
<td>S2 Inhibit</td>
</tr>
<tr>
<td>In-4</td>
<td>Go to S2</td>
</tr>
</tbody>
</table>

The user may continue to use these inputs as shown or remove the wires from J9 on the controller and wire in other inputs. Either way, the user must configure the inputs (and outputs if used) on the controller. The user must be careful and not to reconfigure an input for example, that is required for the present system to function correctly. (ie, a trip unit on a breaker, trips the breaker and signals the controller to place the switch in lockout. If lockout is not one of the input signals wired to the correct spot, the controller will force the breaker to close which is not functionally correct.)

9. Change setpoints to match the user inputs and outputs. See the ATC-900 instruction book mainly in section 5.

Contactor Legacy Bypass Additional Directions

For the older legacy contactor bypass's (2009, 2010, & some 2011), using the 8160A91G04 ATC-600/800 to ATC-900 upgrade kit, an additional step must be performed and that is to add two wires supplied with the kit from the Logic Controller to the ATC-900's Input #1 Monitor Mode (NC).

There is an easy way to verify if the contactor bypass is a legacy type and that is to look at the front of the ATS switch. If it has a kirk-key on both doors (instead of just one on the bottom door) then it is a legacy type and this step is required per the years 2009, 2010, and some of 2011.

There will be two wires supplied with the kit, one end being a female pin and the other end being a wire to strip by the user. Unplug P22 from the Logic Controller and insert the pins into P22-15 and P22-16. See Figures 3A and 3B. The figures show the orientation of the plug and the pins. (If pins 15 and 16 are already there then the wiring is complete.) After pins insertion, tug on the wire slightly to make sure that the pins are inserted fully into the plug. Route the two wires up to the door and out to the top of the ATC-900. Strip the wires as required and insert them into J9-1 and J9-2 (right side of connector, Figure 4.) It does not matter which wire goes to which pin as it is just a contact closure. Wire-tie as required.

For Contactor Bypass only, configure/change Input 1 of the controller through the I/O setpoints to "Monitor Mode NC."

Figure 2.

Figure 3A. P22 Shown on the End.

Figure 3B. Orientation of the Pins.

Contactor Bypass Logic Controller Replacement

Instructions to replace the logic controller for the bypass contactor type switches are shown in these instruction literatures:

- IL140013EN: Small frame, fixed or dual-drawout
- IL140014EN: Large frame, dual-drawout
- IL140015EN: Large frame, fixed

For ATS assistance, call Eaton Care at: 877-386-2273 option 2, option 4, and then option 3.
Figure 4. ATC-900 (Top, Left, and Right Side Views).
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