

# Replacing the circuit breaker

(pns 48100014SP and 48100013SP)

Line voltage to each line of the sign is routed through a 30A single-pole 120v or double-pole 240v, single-throw circuit breaker. One circuit breaker is used for each line of the sign. These circuit breakers are used in the AlphaEclipse™ Excite™, AlphaEclipse™ RoadStar™, and AlphaEclipse™ StreetSmart™ signs.



Figure 1: 30A SPST circuit breaker

## Before you begin

### Tools needed

- 5/32-inch hex tool (pn 68117076)
- Screwdriver

## Identifying the sign

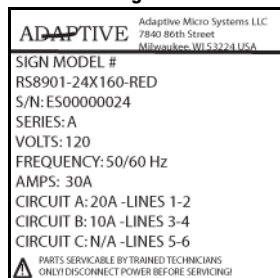
Sign model labels are located inside the main section or cube and on the outside of each sign.

### Excite sign model label



To replace the circuit breaker in an Excite sign go to page 2.

### RoadStar sign model label



To replace the circuit breaker in a RoadStar sign, go to page 5.

### StreetSmart sign model label



To replace the circuit breaker in a StreetSmart sign, go to page 8.

Figure 2: Sign labels for different types of signs

## AlphaEclipse Excite sign installation instructions

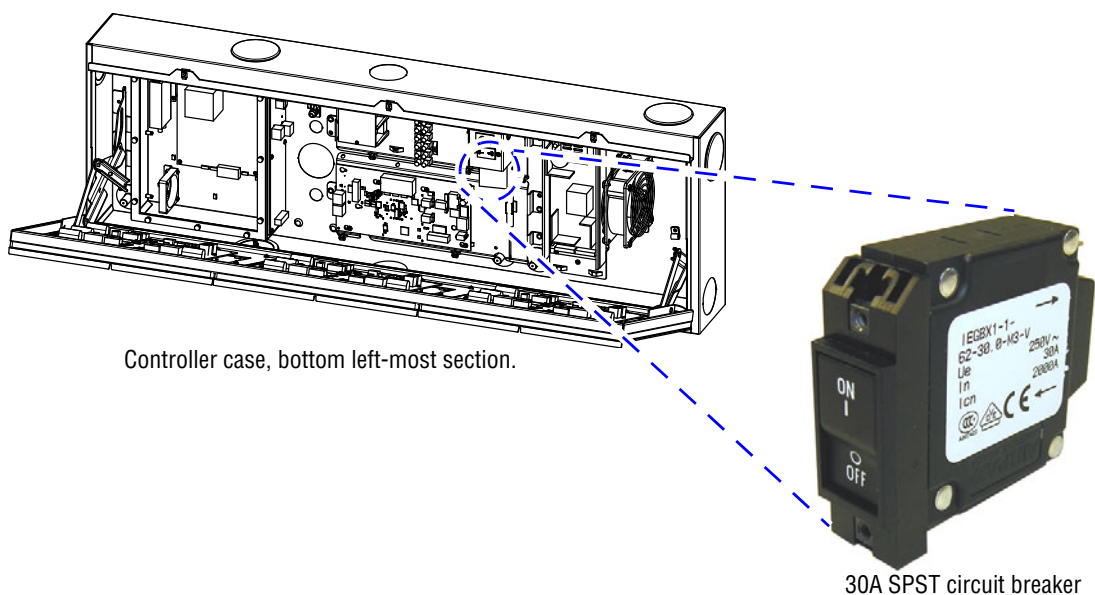


Figure 3: Circuit breaker location in an AlphaEclipse Excite sign

**WARNING! Hazardous voltage. Contact with high voltage may cause death or serious injury. Always disconnect power to unit prior to servicing.**

Notice: Observe appropriate precautions to prevent electrostatic discharge (ESD) or “static” damage to the replacement part. For safe handling of ESD-sensitive parts, see TechMemo #00-0005.

### ⇒ To replace the circuit breaker

1. Disconnect all power to the sign at the power source.

Notice: If you are working on a back-to-back unit, disconnect power to the slave sign at the power source.

2. Locate the door locks in the section door.

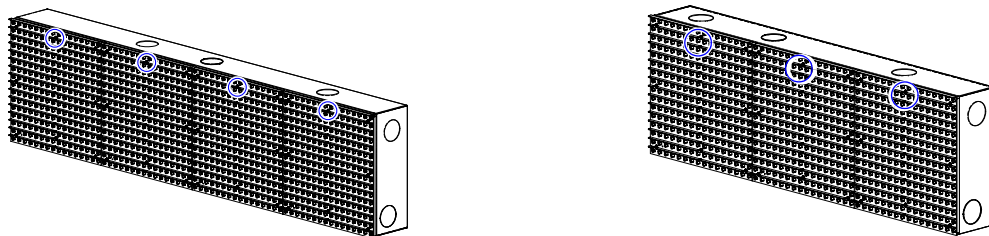


Figure 4: Door lock locations

3. Open the section door.

- Using a 5/32-inch hex tool to open the section door lock, turn counterclockwise and then pull the door toward you.

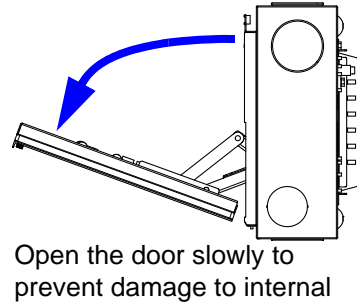
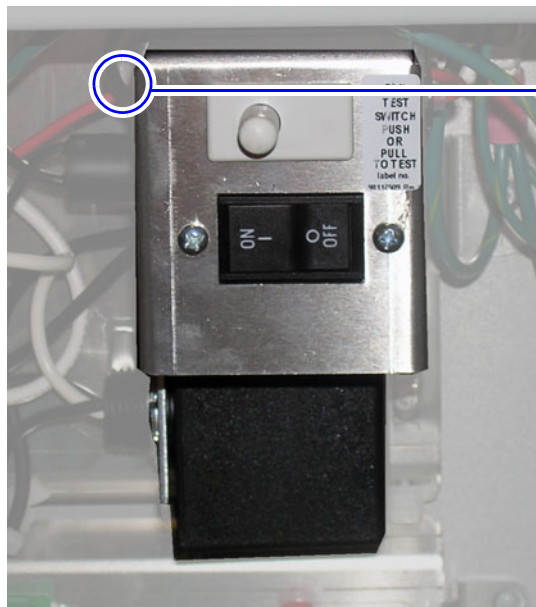


Figure 5: Use a hex tool to open the door

4. Remove the power bracket from the power distribution plate.

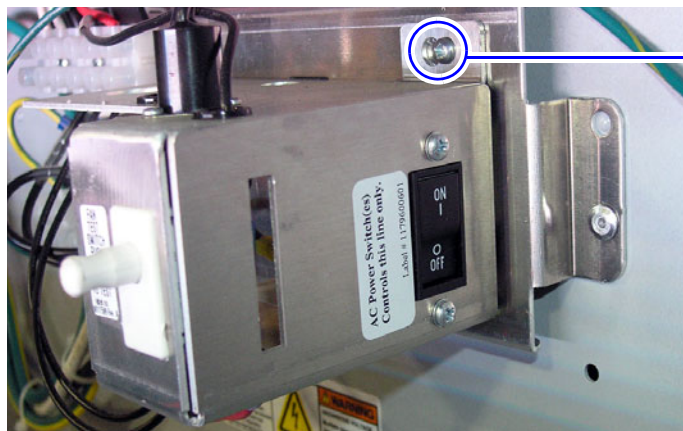
- 23mm Series A signs



- Remove the screw on the power bracket.
- Lift the power bracket up and off.

Figure 6: Power bracket location in 23mm Series A signs

- All other Excite signs



- Remove the screw on the power bracket.
- Lift the power bracket up and off.

Figure 7: Power bracket location in a 23mm Series B sign and in 20mm and 35mm signs

5. Remove the circuit breaker from the power bracket.

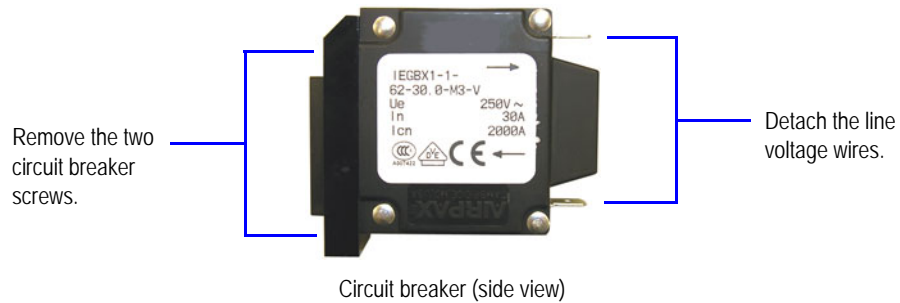


Figure 8: Remove the circuit breaker

6. Install the replacement circuit breaker.

- Reattach the line voltage wires to the replacement circuit breaker.
- Using the two screws removed in step 5, attach the replacement circuit breaker to the power bracket.
- Using the screw removed in step 4, reattach the power bracket to the power distribution plate.
- Turn the replacement circuit breaker on.

7. Close the sign door, tighten door locks, and apply power to the sign.

# AlphaEclipse RoadStar sign installation instructions

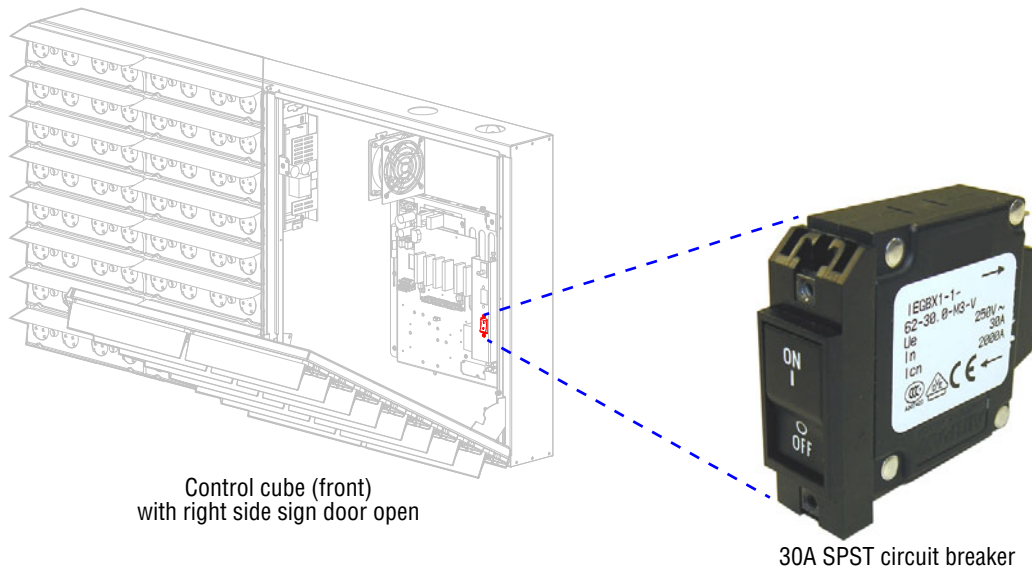


Figure 9: 30A SPST circuit breaker

**WARNING! Hazardous voltage. Contact with high voltage may cause death or serious injury. Always disconnect power to unit prior to servicing.**

Notice: Observe appropriate precautions to prevent electrostatic discharge (ESD) or "static" damage to the replacement part. For safe handling of ESD-sensitive parts, see TechMemo #00-0005.

1. Disconnect all power to the sign at the power source.

Notice: All power switches must be in the off position to remove power from the sign. On a two or more line sign, odd numbered lines have power switches that must be turned off prior to servicing.

2. On the control cube, locate the two door locks on the right sign door.

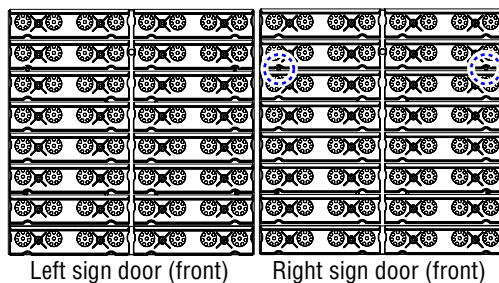


Figure 10: Door lock locations

3. Use a 5/32-inch hex tool to open each door lock and then pull the door back.

**WARNING!** Possible fall or crush hazard. Remain clear of door when opening or closing.



Figure 11: Use a hex tool to open the sign door

4. Remove the power bracket from the controller plate.

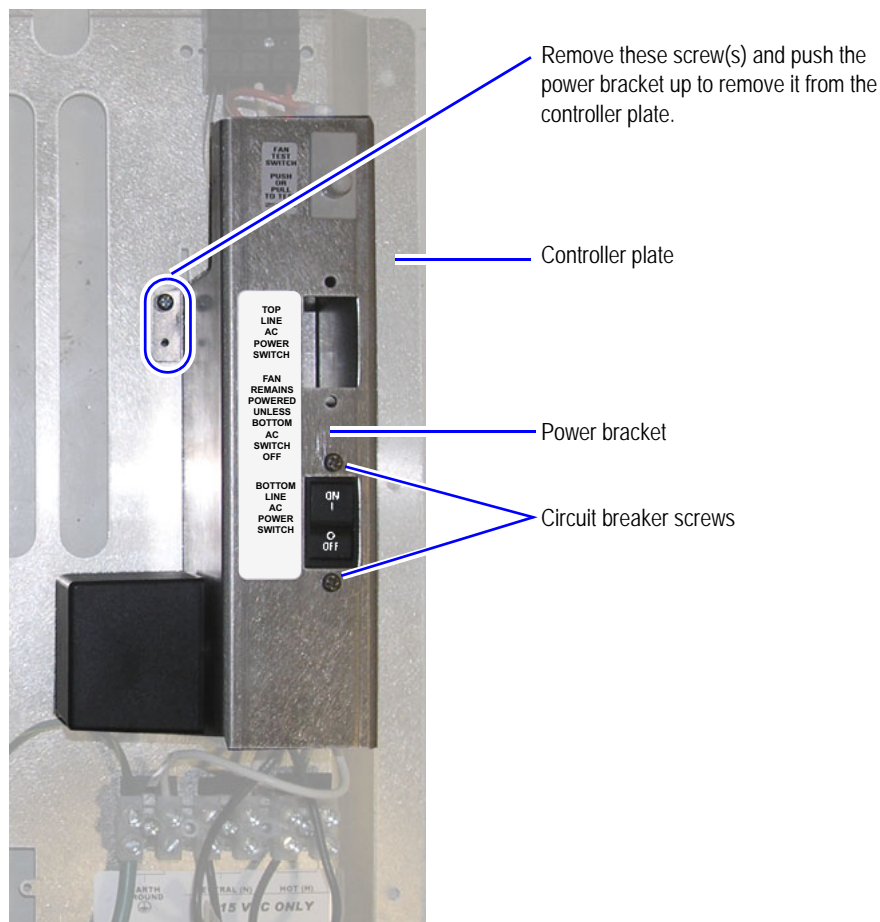


Figure 12: Remove the power bracket

5. Remove the circuit breaker from the power bracket.

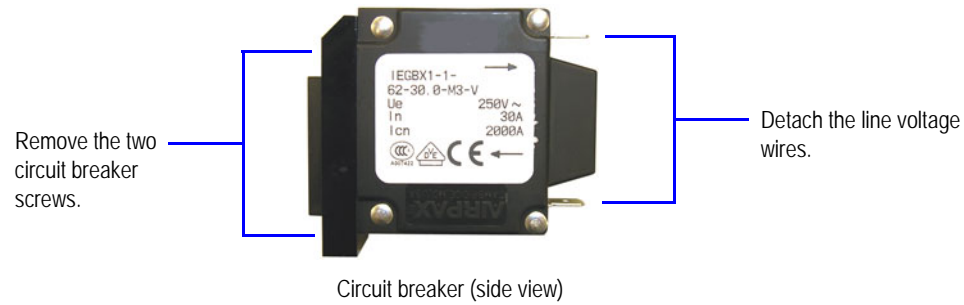


Figure 13: Remove the circuit breaker

6. Install the replacement circuit breaker.
  - Reattach the line voltage wires to the replacement circuit breaker.
  - Using the two screws removed in step 5, attach the replacement circuit breaker to the power bracket.
  - Using the screw(s) removed in step 4, reattach the power bracket to the controller plate.
  - Turn the replacement circuit breaker on.
7. Close the sign door and apply power to the sign.



## AlphaEclipse StreetSmart sign installation instructions

- StreetSmart 17X/35X signs require a 30A circuit breaker for **each power entry**. Consequently, a breaker could be used for multiple sign rows.
- StreetSmart 35V/35M signs require a 30A circuit breaker for **each sign row**. For example, a four row sign with only one power entry must have four circuit breakers—one breaker for each row.

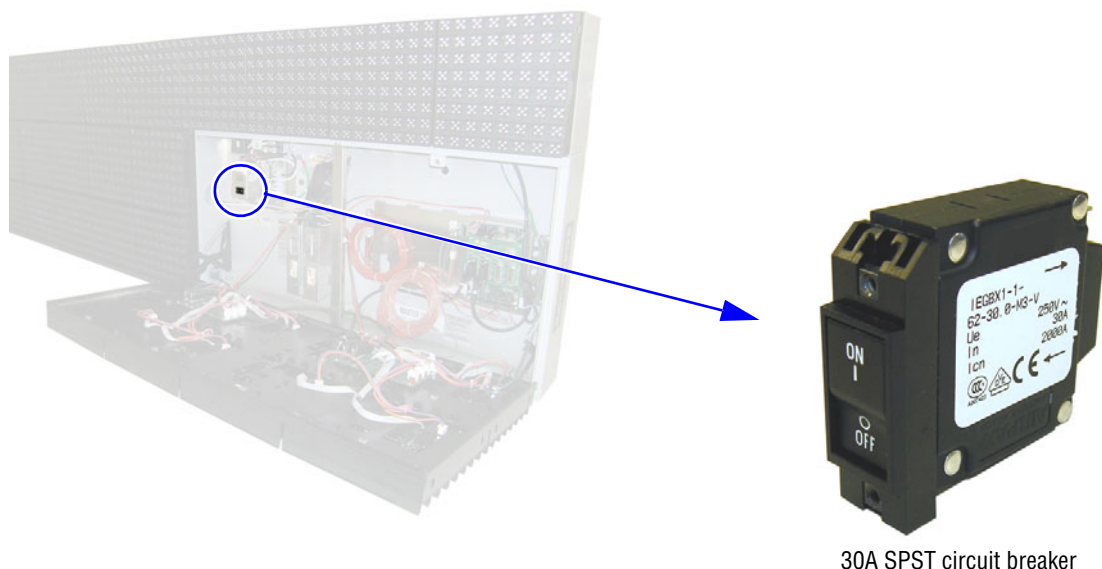


Figure 14: 30A SPST circuit breaker

**WARNING!** Hazardous voltage. Contact with high voltage may cause death or serious injury. Always disconnect power to unit prior to servicing.

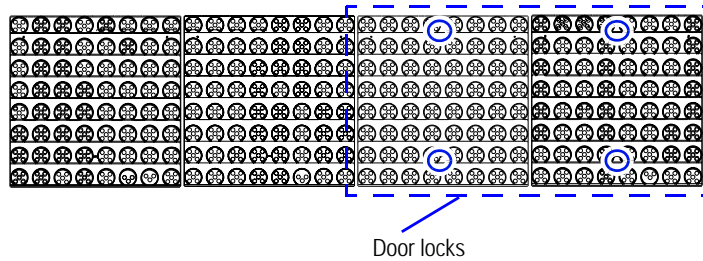
Notice: Observe appropriate precautions to prevent electrostatic discharge (ESD) or “static” damage to the replacement part. For safe handling of ESD-sensitive parts, see TechMemo #00-0005.

1. Disconnect all power to the sign at the power source.

Notice: All power switches must be in the off position to remove power from the sign. On a two or more line sign, odd numbered lines have power switches that must be turned off prior to servicing.



2. Locate the door locks in the section door with the circuit breaker.



**NOTE:** Door sizes and screw counts may vary.

Figure 15: Door lock locations

3. Open the section door.

**WARNING!** Possible fall or crush hazard. Remain clear of door when opening or closing.

- A Loosen hex screws with hex tool.
- B Open the section door.

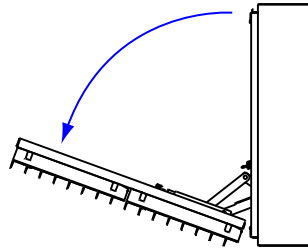
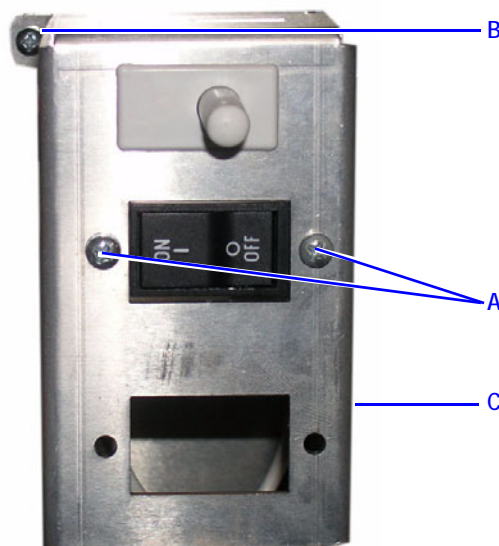


Figure 16: Use a hex tool to open the sign door

4. Remove the power bracket from the power distribution plate.



- A Remove the screws on the circuit breaker.
- B Remove the screw on the power bracket.
- C Lift the power bracket up and off.

Figure 17: Remove the power bracket

5. Remove the circuit breaker from the power bracket.

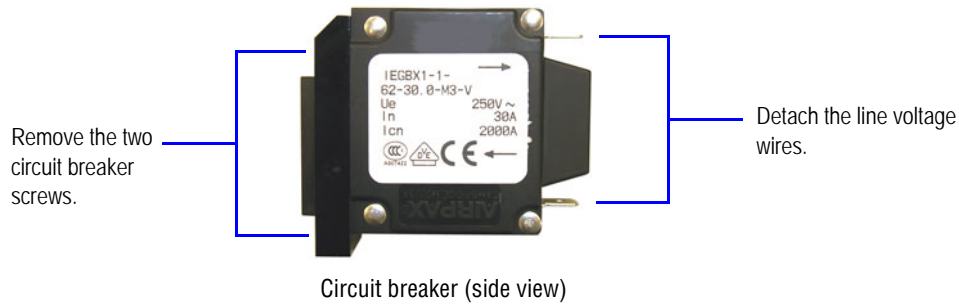


Figure 18: Remove the circuit breaker

6. Install the replacement circuit breaker.

- Reattach the line voltage wires to the replacement circuit breaker.
- Using the two screws removed in step 5, attach the replacement circuit breaker to the power bracket.
- Using the screw(s) removed in step 4, reattach the power bracket to the power plate.
- Turn the replacement circuit breaker on.

7. Close the sign door and apply power to the sign.