

INSTALLATION INSTRUCTIONS

Original Issue Date: **8/02**
 Model: **450-2000 kW**
 Market: **Industrial Generator Sets**
 Subject: **Run Relay Kit 365569-KP8**

Introduction

The run relay kit can control air intake and/or radiator louvers and is energized only when the generator set is running. Alarms, lights, and other customer-provided accessories can also be connected to the 3PDT, form C relay. See Figure 1 for an illustration of the run relay kit.

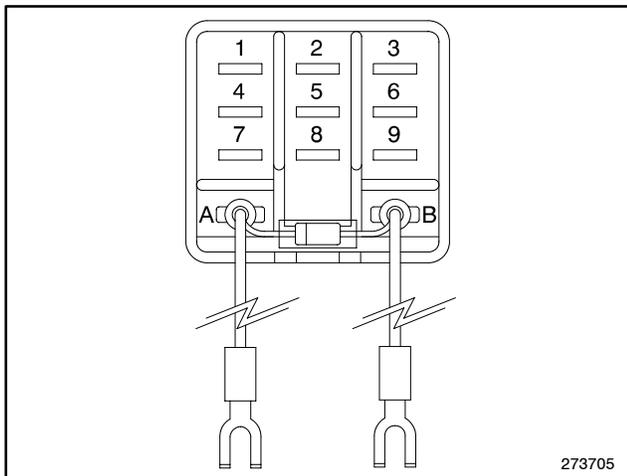


Figure 1 Run Relay Kit

Check the electrical requirements of customer-provided accessories prior to run relay kit installation. Do not exceed the following relay contact ratings.

Relay Contact Rating

| | |
|--------------------------------|----------------------------|
| Max. Switching Voltage/Current | 28 volts DC at 10 amps |
| | 120 volts AC at 10 amps |
| | 250 volts AC at 6 2/3 amps |
| Minimum Switching Current | 10 milliamps |

Do not use terminals 42A or N on the controller connection kit terminal strip to supply voltage to customer-provided accessories. Customer-provided DC accessories require separate leads connected directly to the battery for the voltage supply. Attach customer-supplied 12/24-volt DC accessories to the battery positive (+) connection at the starter solenoid and to the battery negative (-) connection at the engine ground. 120 VAC accessories require a customer-supplied voltage source.

Read the entire installation procedure and compare the kit parts with the parts list in this publication before beginning installation. Perform the steps in the order shown.

Observe applicable local and national electrical codes when installing the wiring system.

Safety Precautions

Observe the following safety precautions while installing the kit.

⚠ WARNING



Accidental starting.
Can cause severe injury or death.

Disconnect the battery cables before working on the generator set. Remove the negative (-) lead first when disconnecting the battery. Reconnect the negative (-) lead last when reconnecting the battery.

Disabling the generator set. Accidental starting can cause severe injury or death. Before working on the generator set or connected equipment, disable the generator set as follows: (1) Move the generator set master switch to the OFF position. (2) Disconnect the power to the battery charger. (3) Remove the battery cables, negative (-) lead first. Reconnect the negative (-) lead last when reconnecting the battery. Follow these precautions to prevent starting of the generator set by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer.

Installation Procedure

1. **Remove the generator set from service.**
 - 1.1 Place the generator set master switch in the OFF position.
 - 1.2 Disconnect the power to the battery charger, if equipped.
 - 1.3 Disconnect the generator set engine starting battery(ies), negative (-) lead first.
2. **Mounting the run relay to the junction box bracket.**
 - 2.1 Remove the inner panel access door screws and swing open the access door.
 - 2.2 Attach the run relay 273706 to the junction box bracket using two plain washers (X-25-9) and flange nuts (X-6210-3).
3. **Connect the run relay to terminal strip TB10.**

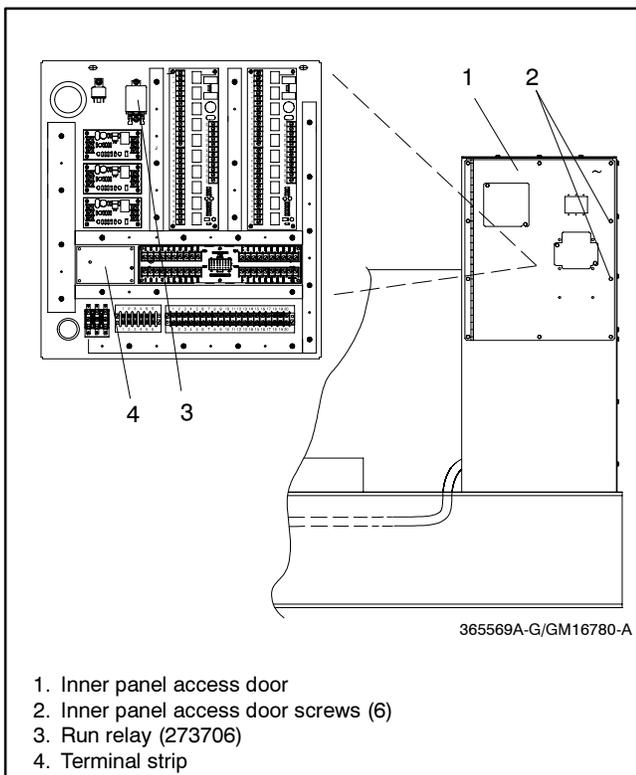


Figure 2 Run Relay Mounting in Junction Box

- 3.1 550 Controllers
 - 3.1.1 Locate terminal strip TB10 in the inner panel. See Figure 2.
 - 3.1.2 Connect the red wire of the run relay to TB10-70. See Figure 3.
 - 3.1.3 Connect the black wire of the run relay to TB10-7N.
- 3.2 Non-550 Controllers.
 - 3.2.1 Locate terminal strip TB5 in the inner panel. See Figure 2.
 - 3.2.2 Connect the red wire of the run relay to TB5-70. See Figure 4.
 - 3.2.3 Connect the black wire of the run relay to TB5-7N.

Note: Do not reverse the leads as this may damage the relay diode and/or blow the controller fuse.

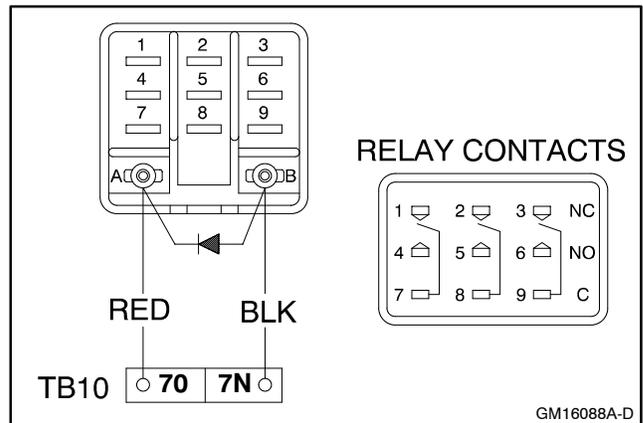


Figure 3 Run Relay Kit Connections for 550 Controller

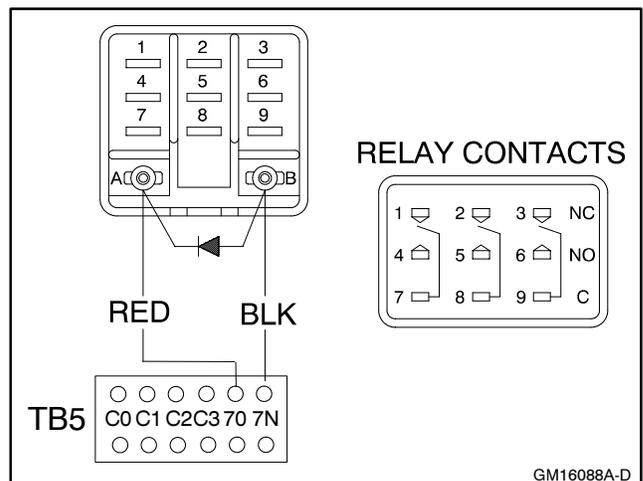


Figure 4 Run Relay Kit Connections for non-550 Controller

4. Connect the run relay to the customer-supplied device.

Select the normally open (NO) and/or normally closed (NC) contacts of the relay, form C, depending upon the application. Use a two-wire harness for either NO or NC connections. Use a three-wire harness for both NO and NC connections.

- 4.1 Supply two or three lengths of stranded wire to make leads long enough to connect the customer-supplied device to relay terminals and the power supply. Use color-coded wire for easy identification. Make the leads long enough to allow for walls, ductwork, and other obstructions. Use separate conduit for the relay wiring.
- 4.2 **12/24-Volt DC Devices.** Attach the customer-supplied 12/24-volt DC accessories to the starting battery positive (+) connection at the starter solenoid and to the battery negative (-) connection at the engine ground. Otherwise, use a separate 12/24-volt DC supply. Do not use terminals 42A and N on the controller connection kit terminal strip to supply the voltage to the relay contacts. Supply separate leads directly to the battery for the supply voltage. The circuit must include fuse or circuit breaker protection.
- 4.3 **120-Volt AC Devices.** Connect the customer-supplied accessories to a separate 120-volt AC power supply. The circuit must include fuse or circuit breaker protection.

4.4 Connect the customer-supplied device per the installations and/or schematic supplied with the device to a power source and to the relay terminals. Cut the customer-supplied leads to length, strip lead ends, crimp on terminals (not supplied), and connect the leads to the relay terminals. Keep the relay wiring away from the generator set output leads.

4.5 Swing the access door closed and install the screws.

5. Restore the generator set to service.

- 5.1 Check that the generator set master switch is in the OFF position.
- 5.2 Reconnect the generator set engine starting battery, negative (-) lead last.
- 5.3 Reconnect power to the battery charger, if equipped.
- 5.4 Move the generator set master switch to AUTO for startup by remote transfer switch or remote start/stop switch.

Parts List

Run Relay Kit

| Kit: 365569-KP8 | | |
|-----------------|------------------------|-------------|
| Qty. | Description | Part Number |
| 1 | Relay assembly | 273706 |
| 2 | Washer, plain | X-25-9 |
| 2 | Nut, whiz flange, 6-32 | X-6210-3 |