
INSTALLATION INSTRUCTIONS

Ten-Relay Dry Contact Kit PA-256887

For 5-18 kW Standby Generator Sets with Microprocessor Controllers

The ten-relay dry contact kit provides closure to activate warning devices and other customer-provided accessories. This allows monitoring of the standby system from a location remote from the generator set. Up to ten controller faults (from TB1 terminal strip) can be connected to the ten-relay kit. Lamps, audible alarms, and other devices may be connected to ten generator functions selected by the customer. Accessories are typically connected to signal an overspeed, overcrank, high engine temperature, low oil pressure, and low water temperature condition. See Figure 1.

NOTE

A total of three dry contact relays may be connected to a single fault on the microprocessor controller terminal strip.

Customer-provided accessories require their own electrical power source and must not exceed the relay contact rating given below.

If customer accessory supply voltage is to be 12 volts DC, make connections to battery positive at starter solenoid, and to battery negative at engine ground. Do not use terminals 42A and N of dry contact kit terminal strip to supply voltage to relay contacts. These must be supplied by separate leads directly from the battery. Leads should be sized according to appropriate electrical codes.

RELAY CONTACT RATING

Maximum Switching Voltage	120 volts
AC Maximum Switching Current	10 amps
Minimum Switching Power	10 milliamps at 28 volts DC (or equivalent)

NOTE

Applicable local, state, and national electrical codes must be observed when installing the alarm contact kit and related accessories.



Accidental starting.

Can cause severe injury or death.

Disconnect battery cables before working on generator set (negative lead first and reconnect it last).

Accidental starting can cause severe injury or death. Turn generator master switch to OFF position, disconnect power to battery charger, and remove battery cables (remove negative lead first and reconnect it last) to disable generator set before working on any equipment connected to generator. The generator set can be started by automatic transfer switch or remote start/stop switch unless these precautions are followed.

MOUNTING

The dry contact kit should be mounted in the junction box and connected to the controller. Alternate locations include the top of the junction box, on top of the generator set skid, or in an area as close as practical to the generator set controller. (Mounting hardware is not included in the kit.) Location should not affect ability to service controller.

ELECTRICAL CONNECTIONS

Connect the dry contact kit according to the wiring diagram shown in Figure 2. Controller/junction box terminals 2 (ground) and 42A (battery voltage) must be connected to alarm contact terminal strip to provide an electrical source to operate the K1-K10 relays. The customer then has the choice of up to ten generator functions (typical functions are indicated in the wiring diagram). Customer-provided devices connected to the dry contact kit must be furnished with an electrical

supply adequate to operate the device. Check the electrical requirements of the customer-provided accessories prior to installation.

When a generator fault condition occurs, the contact kit relay (K1-K10) tied to that function is energized. The customer has the option of selecting the normally open or normally closed contacts from each relay depending

upon the application requirements. The relay contact closures will correspond to the selected microprocessor controller lights being activated.

NOTE

The electrical supply furnished to customer-provided alarm devices must be a minimum of 10 milliamps at 28 volts DC.

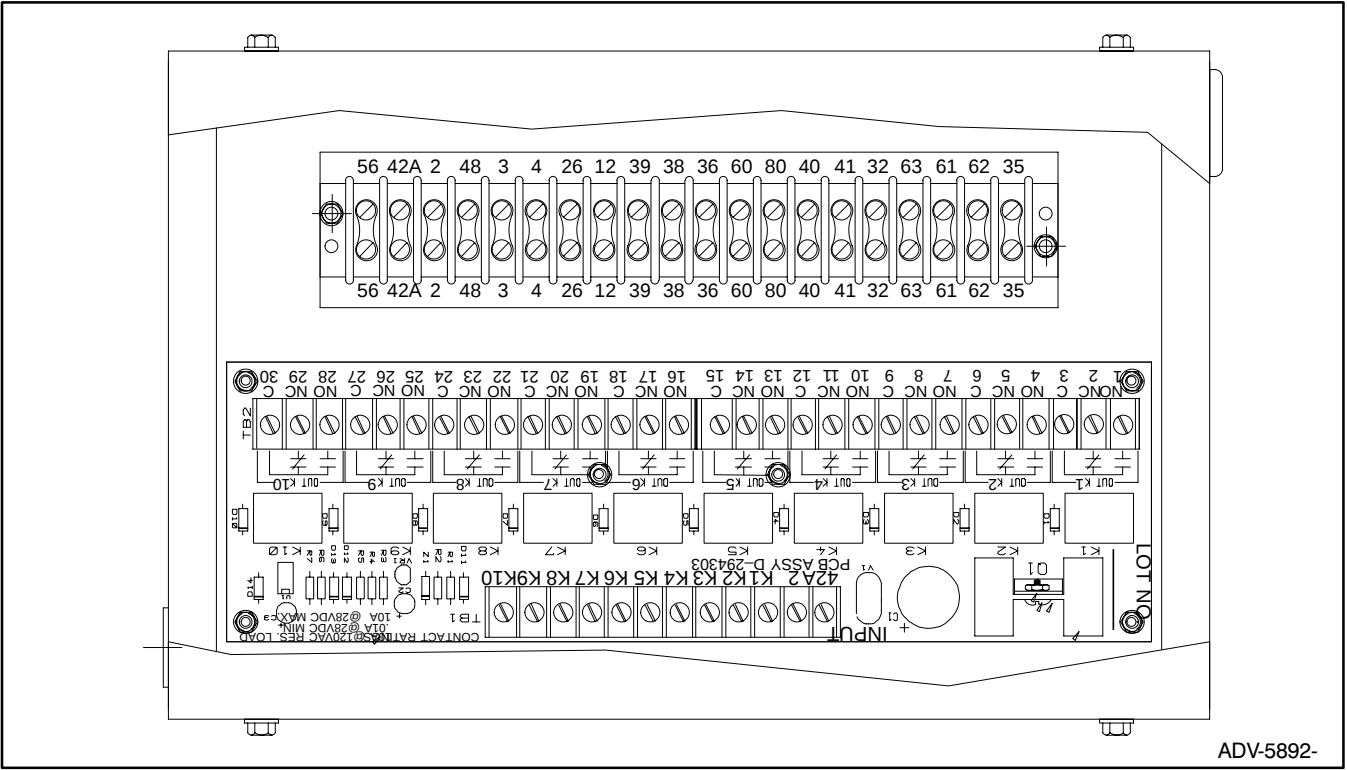


Figure 1. Ten-Relay Dry Contact Kit

Parts List		
Kit PA-256887		
Description	Qty.	Part No.
Circuit Board Assembly, ten-relay dry contact	1	D-294303
Plug, button	1	X-301-29
Screw, 10-24 x 0.50 in., Phillips™ hex Crimptite	4	X-6216-1
Nut, hex, 8-32	8	X-70-12
Spacer, #8 x 0.25 x 0.50 in. nylon	6	X-712-9
Grommet	1	243319
Box, dry contact	1	256878
Cover, dry contact box	1	256880
Block, terminal	1	273769
Strip, terminal	1	273770

