
INSTALLATION INSTRUCTIONS

Load-Shed Kits PA-320267 and PA-320267-SD For M340 Transfer Switch

These instructions cover the steps to install the load-shed control kit.

 <b style="font-size: 1.2em;">DANGER

Hazardous voltage. Will cause severe injury or death. Disconnect power sources before servicing. Barrier must be installed after adjustments, maintenance, or servicing.

(600 Volt and above)

Hazardous voltage can cause severe injury or death. Perform electrical service only as prescribed in equipment manual. Be sure that generator is properly grounded. Never touch electrical leads or appliances with wet hands, when standing in water, or on wet ground as the chance of electrocution is especially prevalent under such conditions. Wiring should be inspected at the interval recommended in the service schedule—replace leads that are frayed or in poor condition. The function of a generator set is to produce electricity and wherever electricity is present, there is the hazard of electrocution.

 <b style="font-size: 1.2em;">WARNING

Hazardous voltage. Can cause severe injury or death. Do not open enclosure until all power sources are disconnected.

(under 600 Volt)

Hazardous voltage can cause severe injury or death. Disconnect harness plug before installing any accessories involving connection to transformer assembly primary terminals. Terminals are at line voltage!

(M340 models only)

INSTALLATION

1. De-energize both normal and emergency power sources before proceeding.
2. Move generator master switch on controller to OFF position and disconnect battery inputs from TB-DC1 before working on transfer switch. Disconnect battery negative (–) input from TB-DC1-32, TB-DC1-33, or TB-DC1-34. Disconnect battery positive (+) input from TB-DC1-29 and tape it.
3. Remove M340 remote communication board cover (if equipped) by removing the nuts holding the cover in place.
4. If the remote communications option KD-51-A or KD-51-B is installed, it must be removed. Disconnect the P12 ribbon cable connector from the M340 main logic board. Remove the remote communications board (B-294499 or B-294501) and spacers and save for reuse. See Figure 1.
5. Install load-shed control board (C-294495) with four fiber spacers (X-712-2) and 8-32 hex nuts. If remote communications board (B-29449 or B-294501) is to be installed, the following connections should be made prior to installing remote communications board and spacers.
6. Connect wire harness (294616) to load-shed control board (C-294495) at connector P17.
7. Connect the P11 ribbon cable connector to load-shed control board (C-294495) at connector P11 and to microcontroller circuit board at connector P10.

8. If the remote communications option KD-51-A or KD-51-B was installed, it should be reconnected. Connect the P12 ribbon cable connector to the M340 main logic board.
9. Install the load-shed and communications board cover with five #8 split lock washers (X-18-2) and 8-32 hex nuts (X-72-4).

NOTE

If a DC inductive load is connected to a load-shed relay board contact, a flyback diode should be installed across the DC inductive load. The flyback diode will limit the transient voltage that will occur when a DC inductive load is de-energized. Contact the authorized distributor/dealer to order flyback diode (233959). The flyback diode has 1/4" fast-on terminals. It is important to connect the flyback diode at the load, not at the load-shed relay board. To install flyback diode, connect the cathode to positive (+) side of the load. Connect the anode to the negative (–) side of the load. See Figures 3 and 4.

10. Install ten-relay dry contact circuit board (D-294303) with six plastic grommets (X-593-2) and 8-32 x 1.125-in. pan head machine screws (X-51-2). See Figure 1.
11. Connect wiring harness (294616) to ten-relay dry contact circuit board at terminal strip TB1, as

shown in Figure 2. Install terminal strip contact cover (294632).

12. Connect external loads to K1-K9 relay connections at terminal strip TB2. See "Electrical Connections" section. Install terminal strip covers (294631).
13. Reconnect battery positive (+) input to TB-DC1-29. Reconnect battery negative (–) input to TB-DC1-32, TB-DC1-33, or TB-DC1-34.
14. Re-energize normal and emergency power sources.

ELECTRICAL CONNECTIONS

The ten-relay dry contact circuit board provides contact closure to allow the load-shed board to remove loads during transfer and return loads after transfer from one source to another. The customer can choose to connect up to ten devices (external loads) to be removed in the event of an excessive load condition. Wire should be sized according to manufacturer's recommendations for the load.

RELAY CONTACT RATING

Maximum Switching Voltage	120 volts AC
Maximum Switching Current	10 amps
Minimum Switching Power at 28 Volts DC or Equivalent	10 milliamps

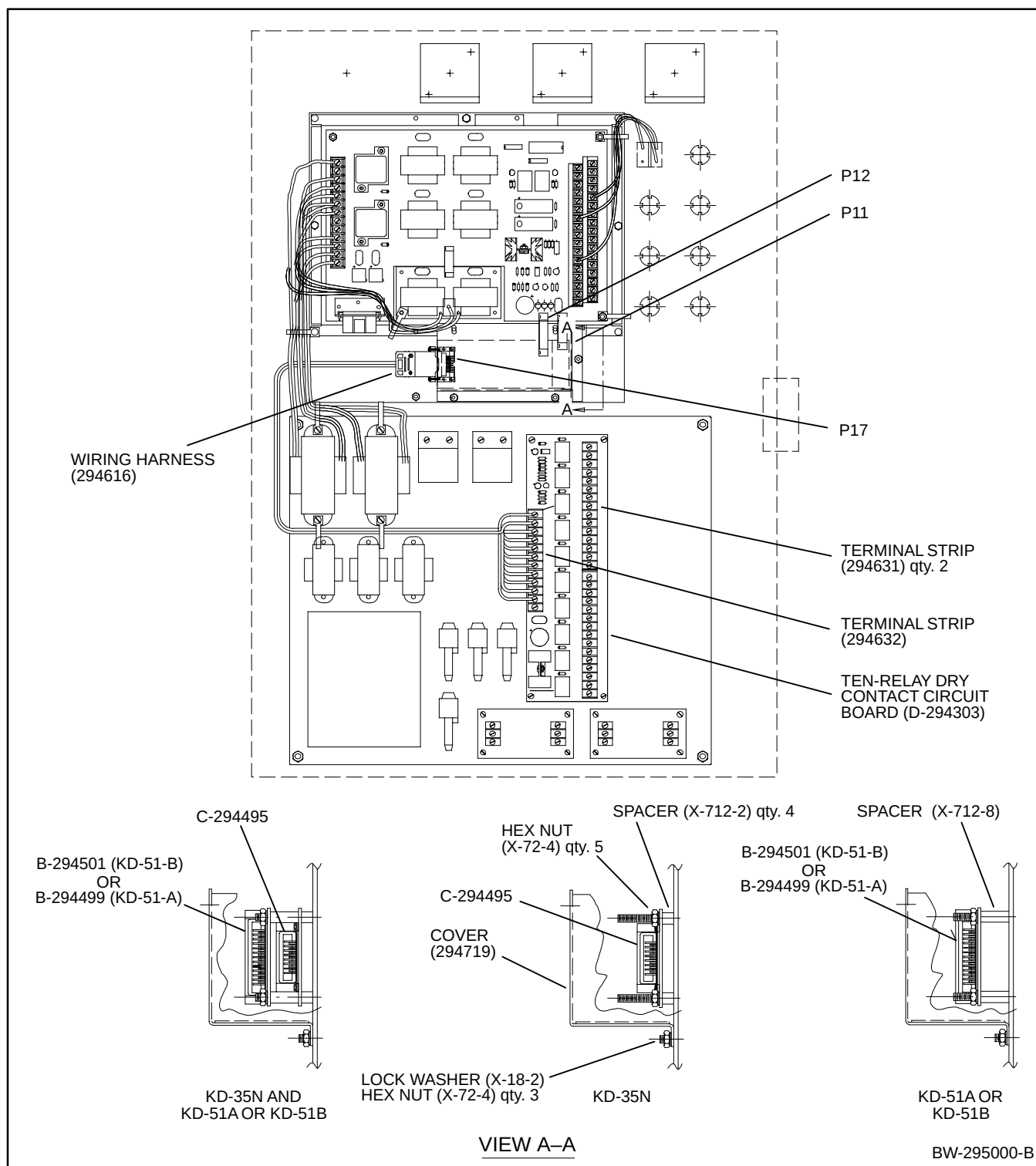
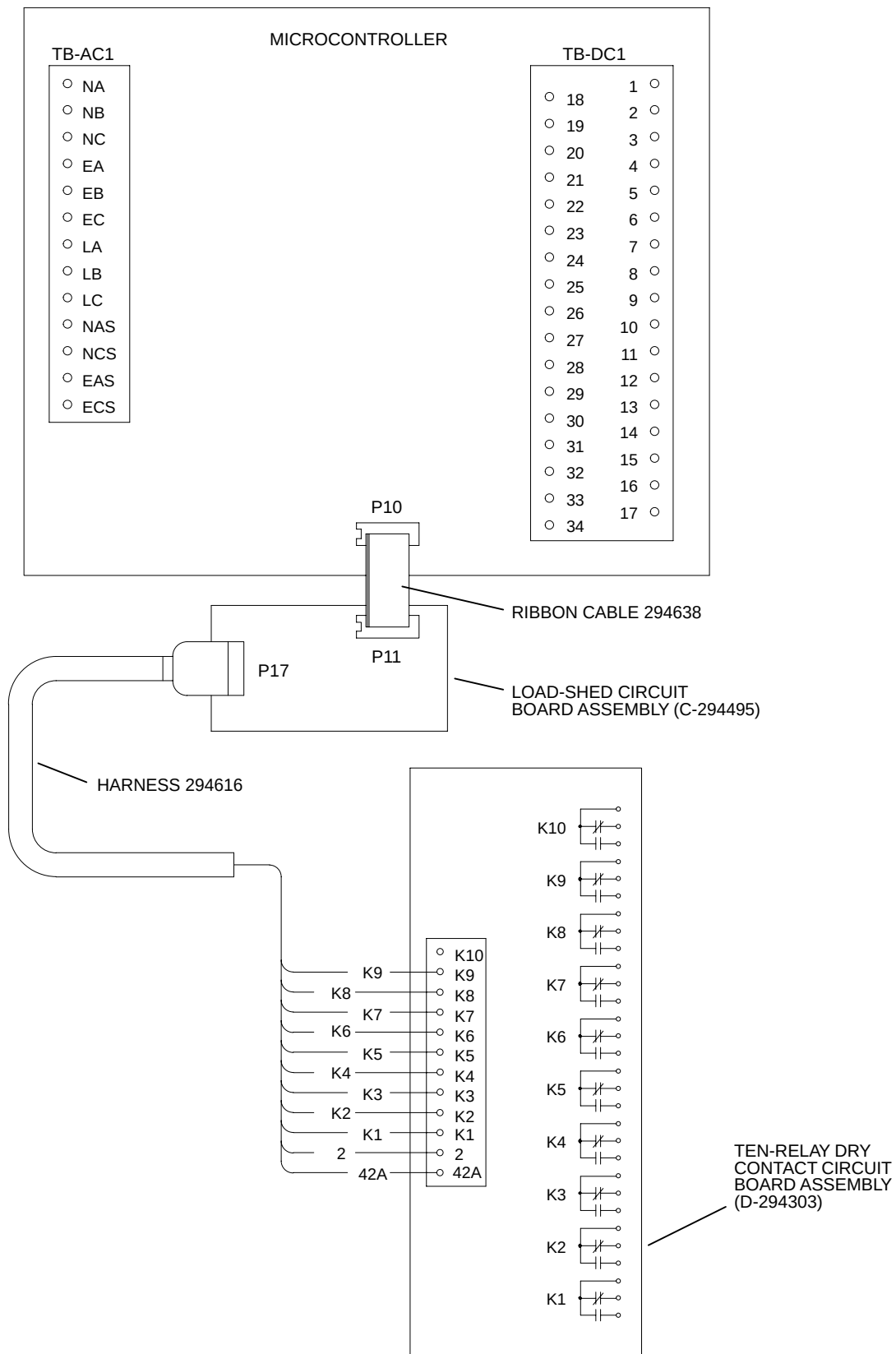


Figure 1. Remote Communications Board



BN-294683-

Figure 2. Load-Shed Control Board

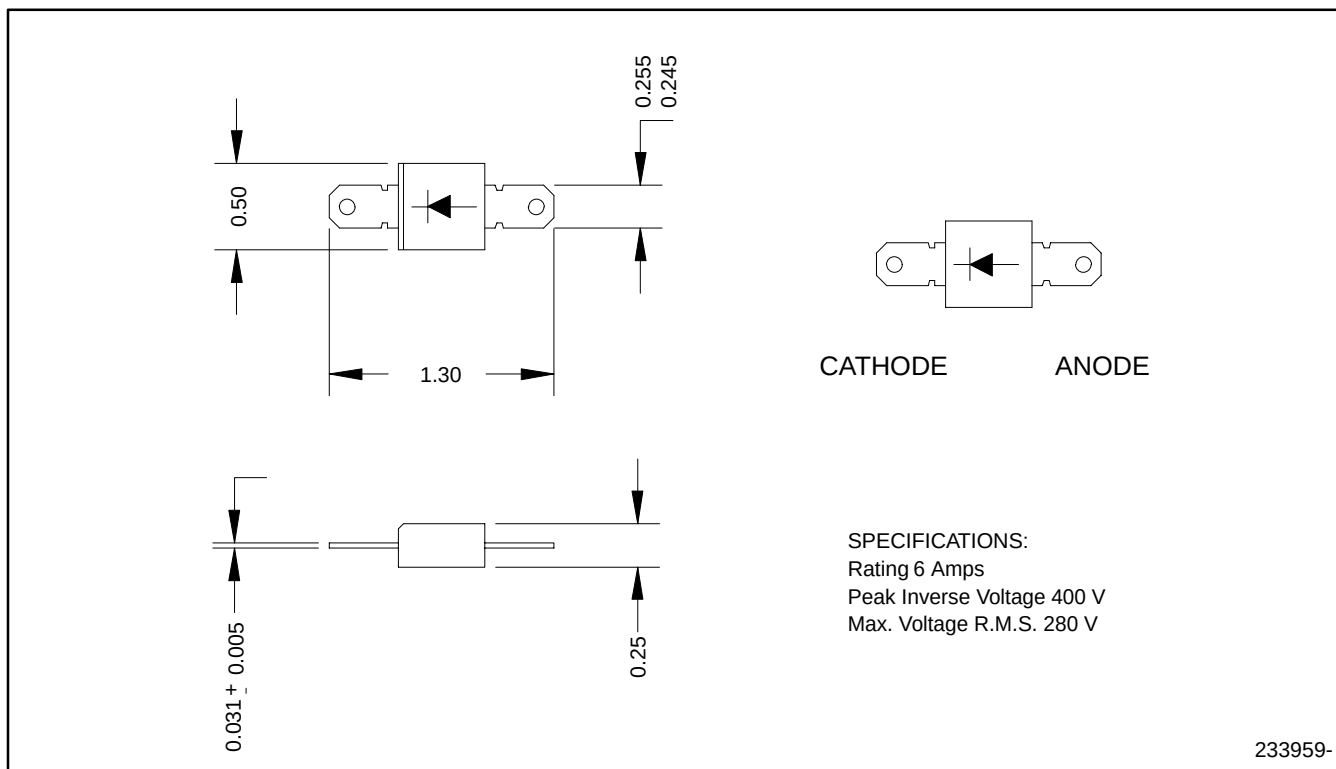


Figure 3. Flyback Diode

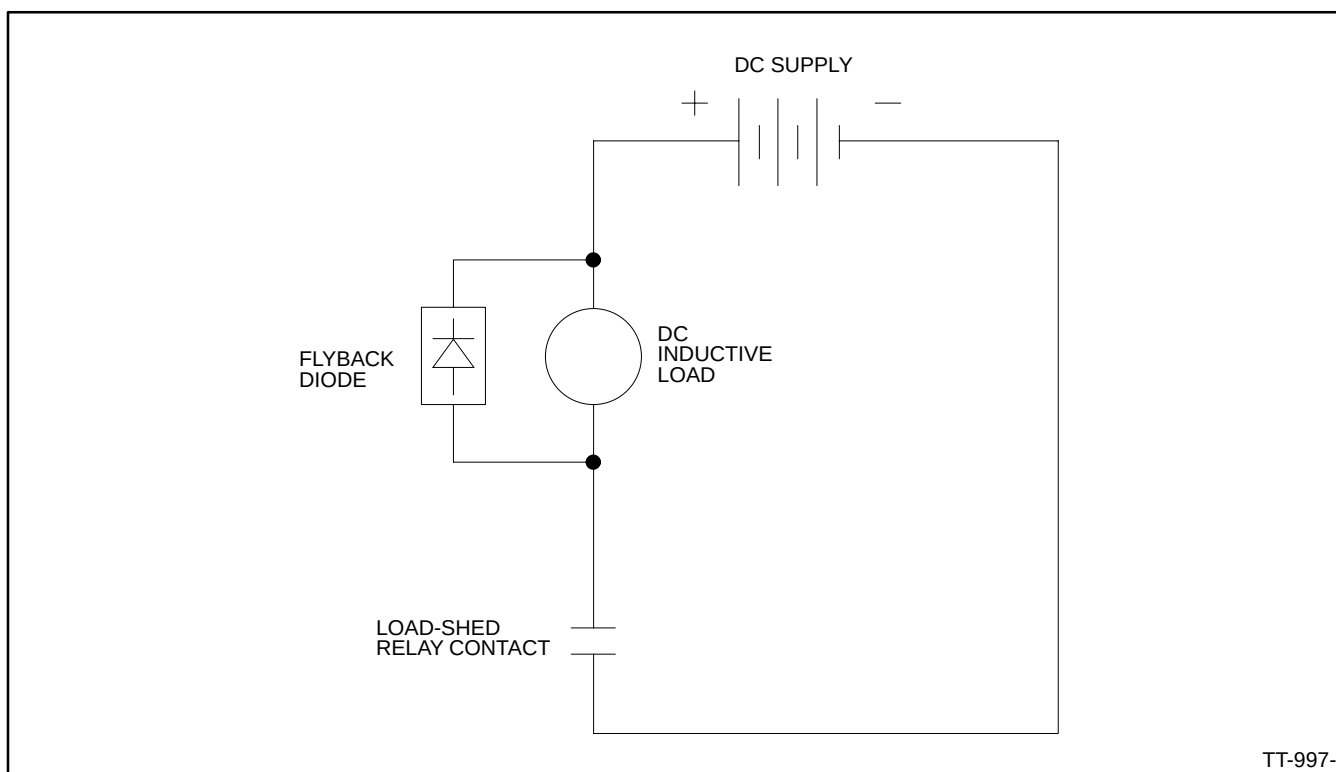


Figure 4. Wiring Schematic—Flyback Diode

Parts List		
Kits: PA-320267 and PA-320267-SD		
Description	Qty.	Part Number
Circuit Board Assembly, load-shed	1	C-294495
Circuit Board Assembly, 10-relay dry contact	1	D-294303
Washer, #8 split lock	5	X-18-2
Washer, #8 internal tooth lock	4	X-22-7
Screw, 8-32 x 1.125 in. pan head machine	6	X-51-2
Nut, 8-32 hex	7	X-72-4
Grommet, plastic	6	X-593-2
Spacer, fiber	4	X-712-2
Harness, wiring	1	294616
Cover, terminal strip	2	294631
Cover, terminal strip	1	294632
Cable Assembly, ribbon	1	294638
Box, cover	1	294719