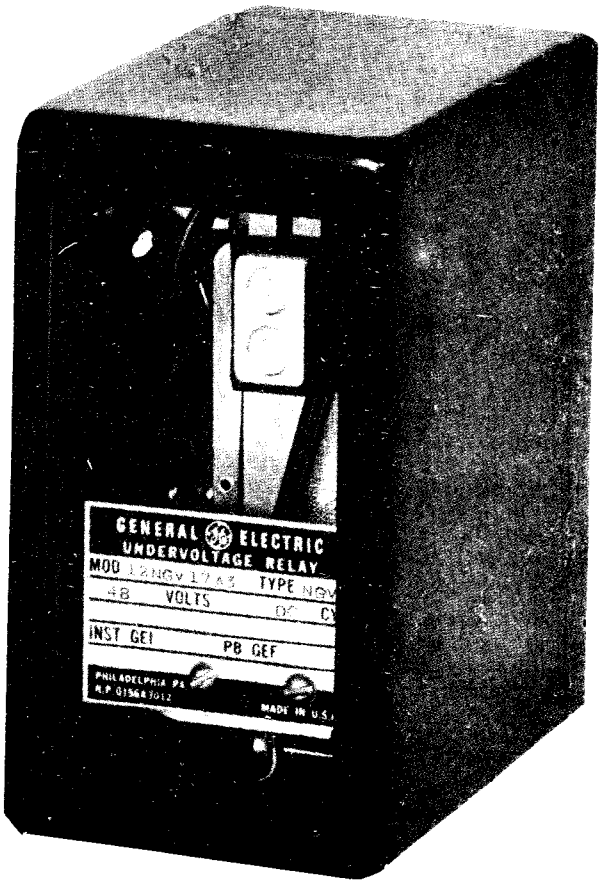
INSTRUCTIONS

GEI-90804E
Supersedes GEI-90804D

D.C. UNDERVOLTAGE RELAY

NGV17A, NGV17B, NGV17C



GENERAL ELECTRIC

BURDEN

The resistances of the DC windings are given in Figures 3, 4, and 5.

The current at rated volts when set for minimum dropout is given in Table III. If the relay is set for a higher dropout, then the current at rated volts will be less.

TABLE III

RATED VOLTS	MAXIMUM CURRENT
250	.02
125	.02
48	.066
24	.03

CONSTRUCTION

The telephone-type voltage unit, the fixed and variable resistors and the zener regulator are mounted on a compound base, and the cover is attached to the front of this base. See Figures 6, 7, and 8 for dimensions and panel drilling.

RECEIVING, HANDLING AND STORAGE

These relays, when not included as part of a control panel, will be shipped in cartons designed to protect them against damage. Immediately upon receipt of a relay, examine it for any damage sustained in transit. If injury or damage resulting from rough handling is evident, file a damage claim at once with the transportation company and promptly notify the nearest General Electric Sales Office.

Reasonable care should be exercised in unpacking the relay in order that none of the parts are broken or the adjustments disturbed.

If the relays are not to be installed immediately, they should be stored in their original cartons in a place that is free from moisture, dust and metallic chips. Foreign matter collected on the outside of the case may find its way inside when the cover is removed, and cause trouble in the operation of the relay.

ACCEPTANCE TESTS

Immediately upon receipt of the relay, an inspection and acceptance test should be made to ensure that no damage has been sustained in shipment.

VISUAL INSPECTION

Check the nameplate stamping to ensure that the model number, rating and calibration range of the relay received agree with the requisition.

Remove the relay from its case and check by visual inspection that there are no broken or cracked molded parts or other signs of physical damage, and that all screws are tight.

MECHANICAL INSPECTION

It is recommended that the following mechanical adjustments be checked:

1. Operate the armature by hand; allow it to reset to ensure that all parts are free from friction or binding.

2.† With the relay de-energized, each normally-open contct should have a gap of .015" or more. Observe the wipe on each normally-closed contact by deflecting the stationary contact member towards the frame. Wipe should be approximately .005".

   The wipe on each normally-open contact should be approximately .005". This can be checked by inserting a .005" shim between the residual screw and the pole piece and operating the armature by hand. The normally-open contacts should make before the residual screw strikes the shim.

INSTALLATION PROCEDURE

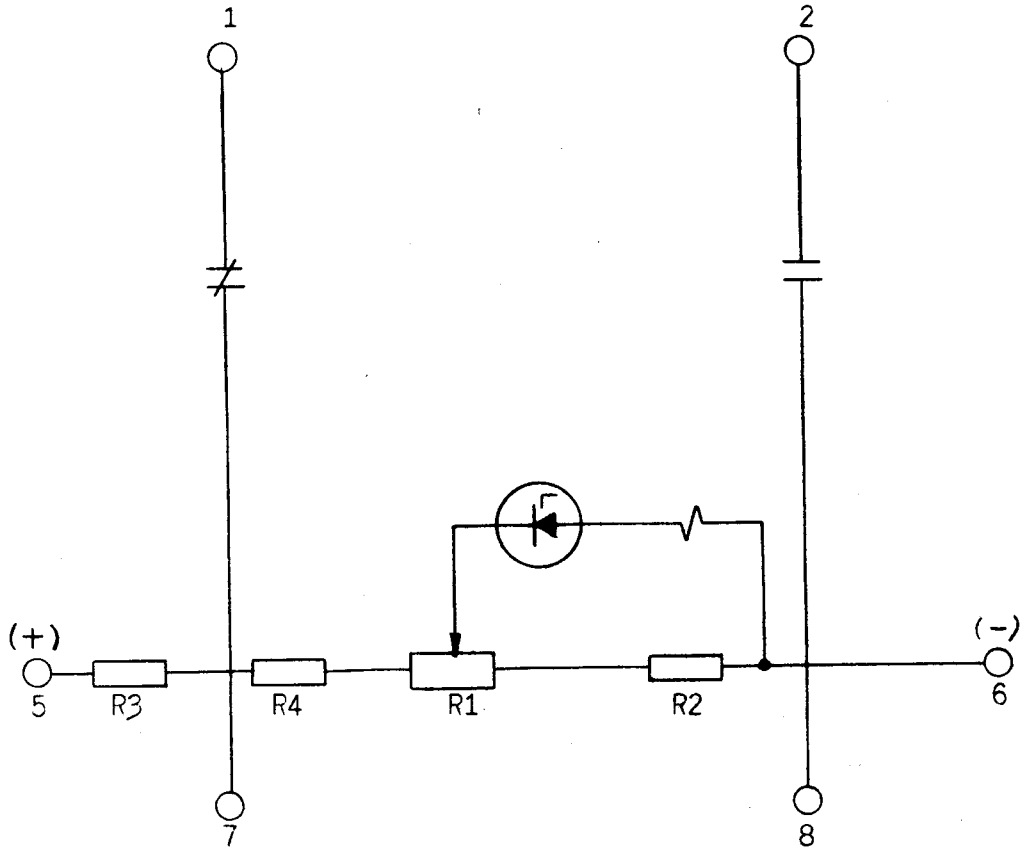
If, after the performance of the **ACCEPTANCE TESTS**, the relay is held in storage before shipment to the job site, it is recommended that the visual and mechanical inspection described in the section on **ACCEPTANCE TESTS** be repeated before installation.

Also, the relay should be set at the dropout value to be used, and it should be checked. When making this check, the relay should be installed in its permanent location and preheated. After the dropout is set, check that the relay will pick up at the lowest acceptable battery charger output voltage. Also check tht the contact adjustment is correct (see section on **ACCEPTANCE TESTS**).

PERIODIC CHECKS AND ROUTINE MAINTENANCE

In view of the vital role of protective relays in the operation of a power system, it is important that a periodic test program be followed. It is recognized that the interval between periodic checks will vary depending upon environment, type of relay and the user's experience with periodic testing. Until the user has accumulated enough experience to select the test interval best suited to his individual requirements, it is suggested that the following points be checked at an interval of from one to two years.

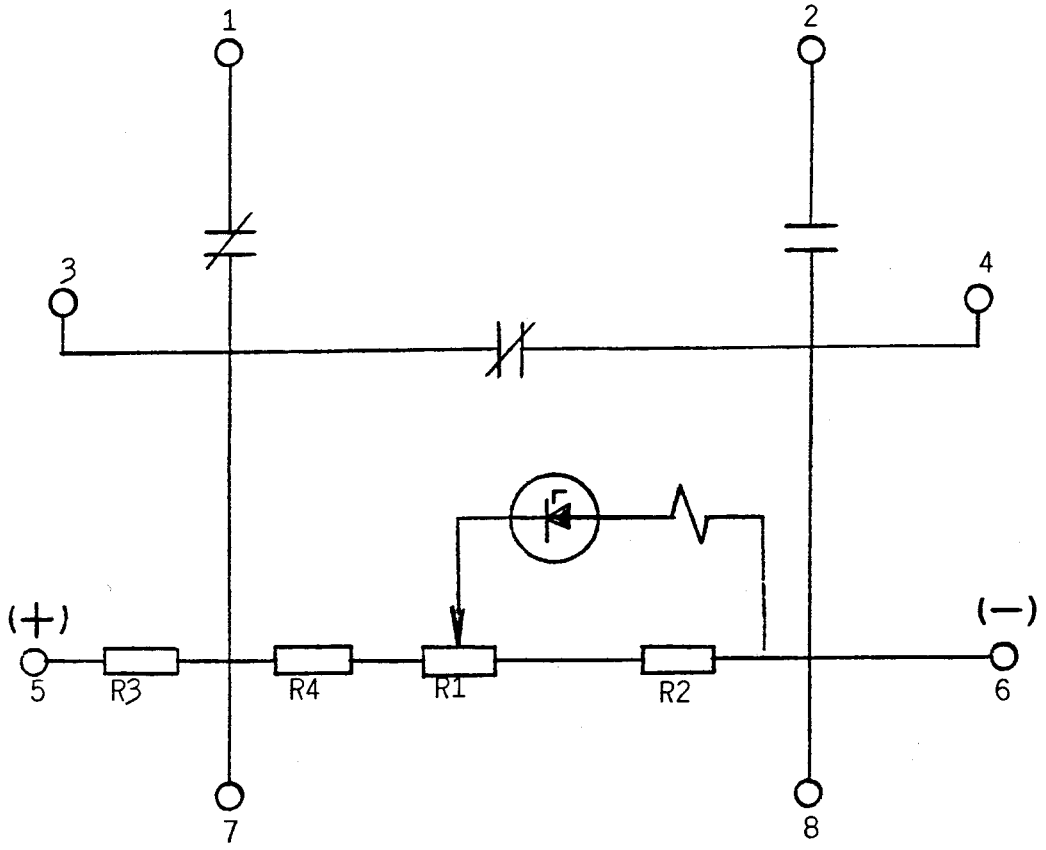
† Revised since last issue



BACK VIEW

MODEL	R1	R2	R3	R4
12NGV17A1	5,000	10,000	3,500	3,500
12NGV17A2	5,000	7,500	—	—
12NGV17A3	1,000	2,000	—	—
12NGV17A4	5,000	10,000	2,500	2,500
12NGV17A5	1,000	2,000	-	-
12NGV17A6	5,000	10,000	-	1,000
12NGV17A7	5,000	10,000		1,000
12NGV17A8				
12NGV17A9	1,000	2,000	—	—
12NGV17A10	25	30	—	—

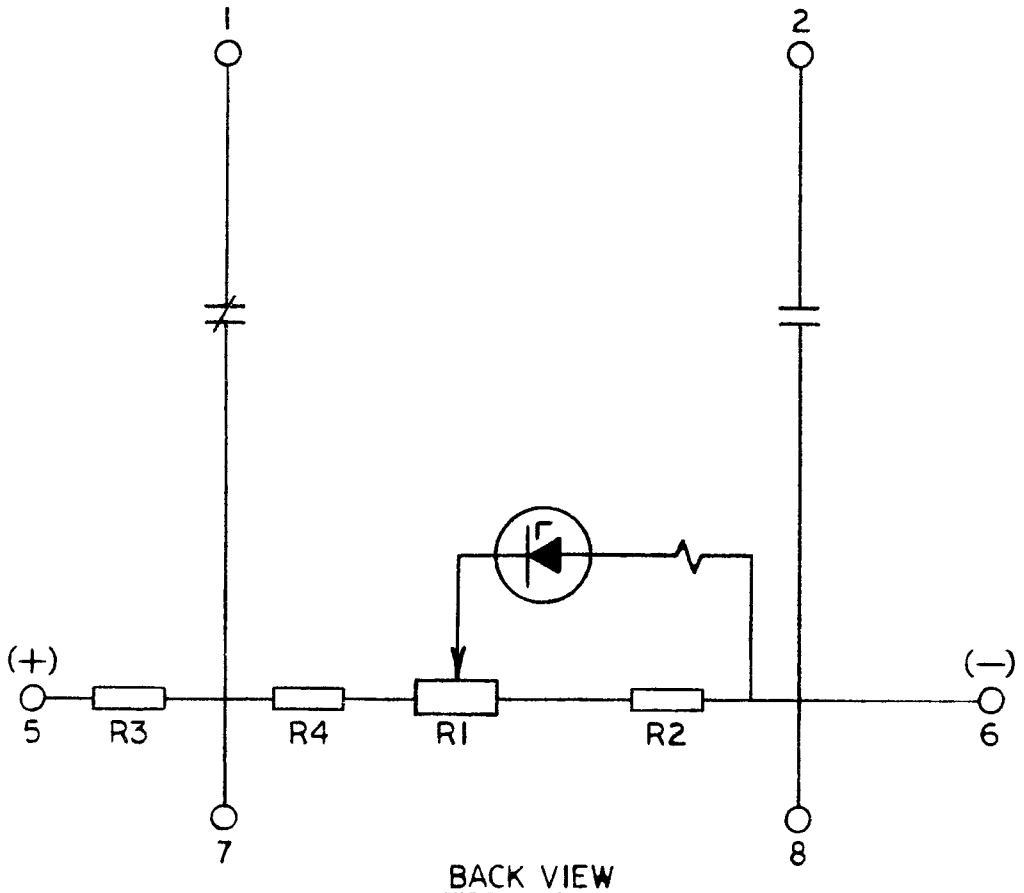
Figure 3 (0165A7517-5) Internal Connection Diagram and Table of Resistance Values for the NGV17A Relay



BACK VIEW

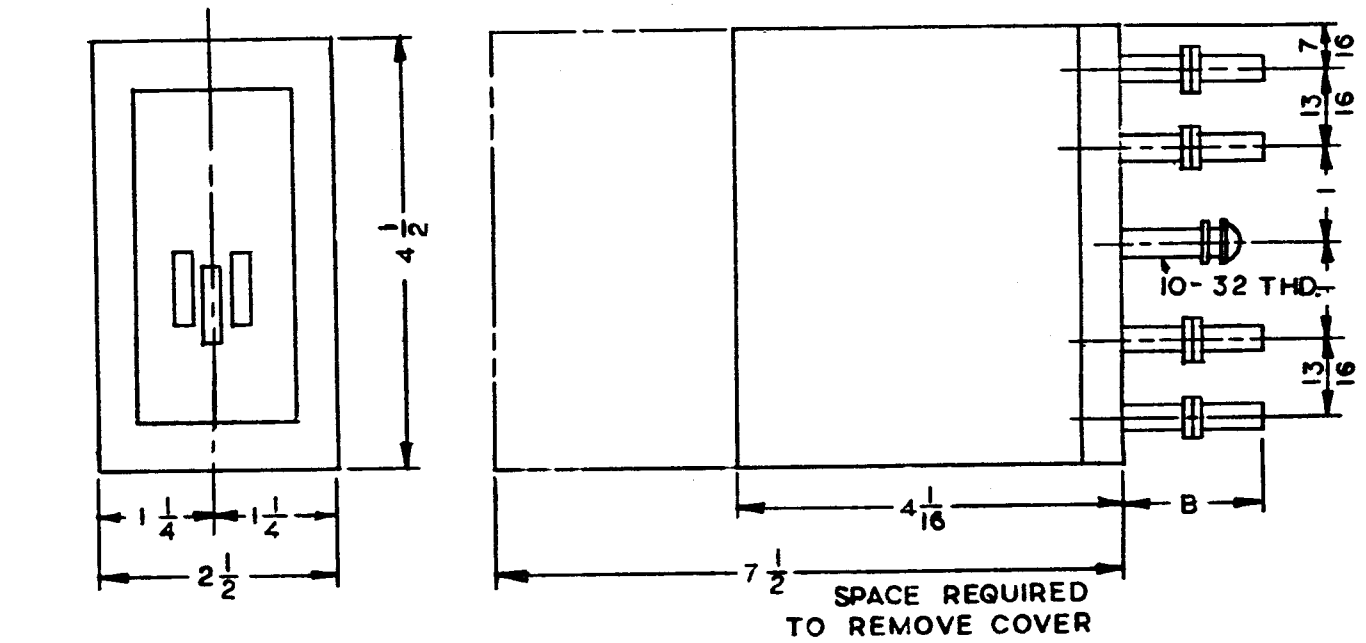
MODEL	R1	R2	R3	R4
12NGV17B2,4	5,000	7,500	—	—
12NGV17B3,5	5000	10,000	2500	2500
12NGV17B1	1500	2000	—	—

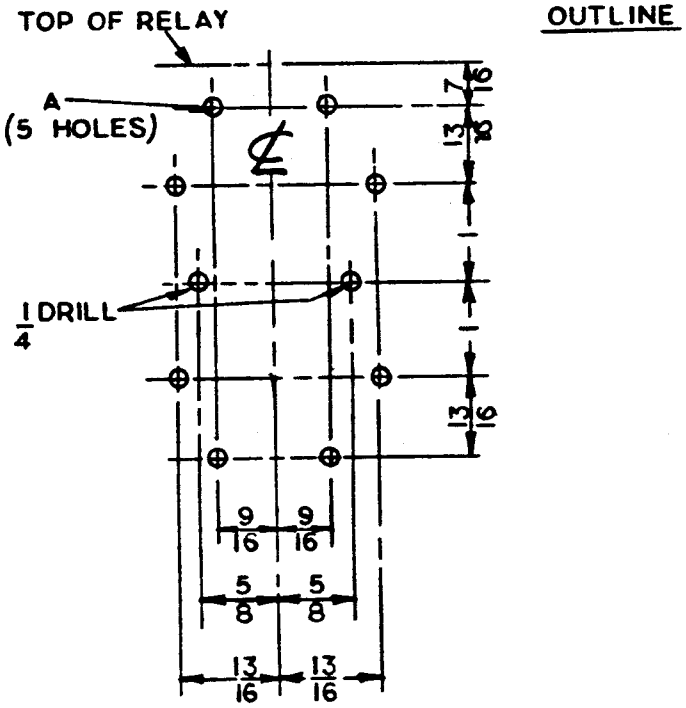
Figure 4 (0203A8691-4) Internal Connection Diagram and Table of Resistance Values for the NGV17B Relay



MODEL	R1	R2	R3	R4
12NGV17C1	5K Ω	7.5K Ω	—	—
12NGV17C2	5K Ω	10K Ω	2.5K Ω	2.5K Ω
12NGV17C3	1K Ω	2K Ω	—	—

Figure 5 (0257A9610-0) Internal Connection Diagram and Table of Resistance Values for the NGV17C Relay





TYPE OF PANEL	A	B
INSULATING	7/16	2-13/16
STEEL	9/16	1-3/8

PANEL DRILL (FRONT VIEW)

Figure 6 (0148A3979-6) Outline and Drilling Dimensions for the Projection Mounted NGV17A or NGV17B Relay

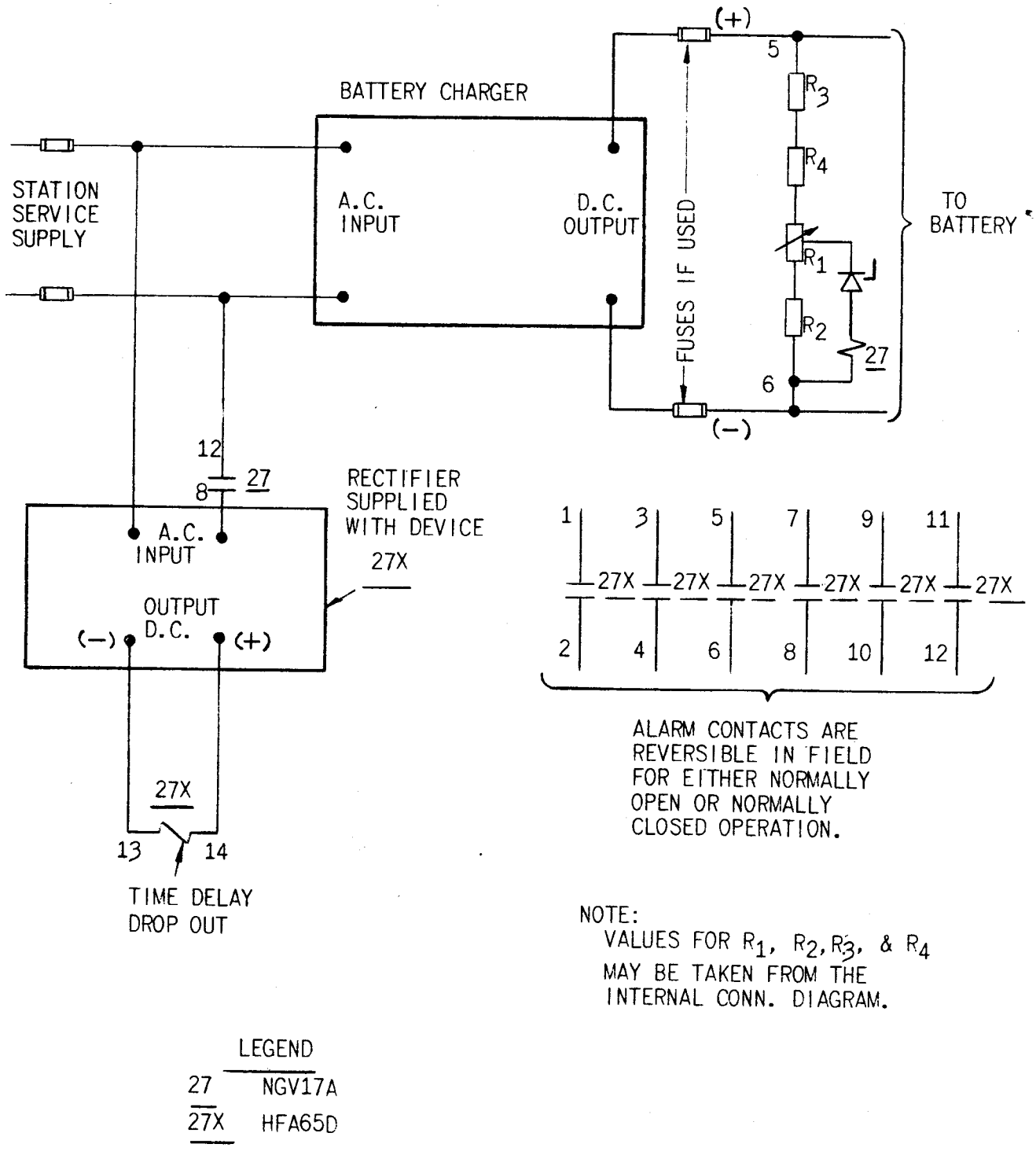


Figure 9 (0165A7553-0) External Connections for the NGV17 Relay with HEA65D Relay for Low Battery Voltage Indication