



INSTRUCTIONS

GEK-65693
Insert Booklet GEK-49900

STATIC BREAKER BACKUP RELAY

TYPE SBC53D

INTRODUCTION

This instruction book, together with insert booklet GEK-49900, forms the instructions for the SBC53D relays.

The SBC53D relay is electrically equivalent to the SBC99AH, but it is packaged in a 19 inch relay rack. Four new printed circuit cards are required for the diode bridge, reed relay switches, power supply logic, and mode select.

DESCRIPTION

The SBC53D is normally de-energized until a contact closure from a breaker failure initiate (BFI) relay occurs. The BFI contact may be from any or all phases. The BFI input supplies the relay with DC control voltage. In order to produce an output signal, the SBC53D must have DC control voltage and detect one or more input currents which exceed the preset current pickup level.

There are three current inputs, one for each phase, and the level detector operates on the highest output of the rectified input signals. Each phase current signal has a normally open switch connecting it to the level detector. The switch is controlled by the BFI or auxiliary relays from each phase protection scheme. The level detector may see the highest of one, two or three of the phase current signals, depending on the fault pattern. The BFT1 output can come from the A/O timer or from the output of an OR gate. The OR gate has two inputs; the A/O output and the AND gate output. When the BFT1 is driven by the A/O timer, it always operates after a time delay of A milliseconds. When the BFT1 is driven by the OR gate, it will operate after time delay A/O for all faults except three phase types, which cause the output to operate immediately.

The BFT2 output operates after a time delay (A + B) milliseconds for all faults except three phase types, which cause the output to operate after B milliseconds.

There is one isolated normally open contact for BFT1, and three isolated normally open contacts for BFT2. Two BFT2 outputs contain series target coils.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

To the extent required the products described herein meet applicable ANSI, IEEE and NEMA standards; but no such assurance is given with respect to local codes and ordinances because they vary greatly.

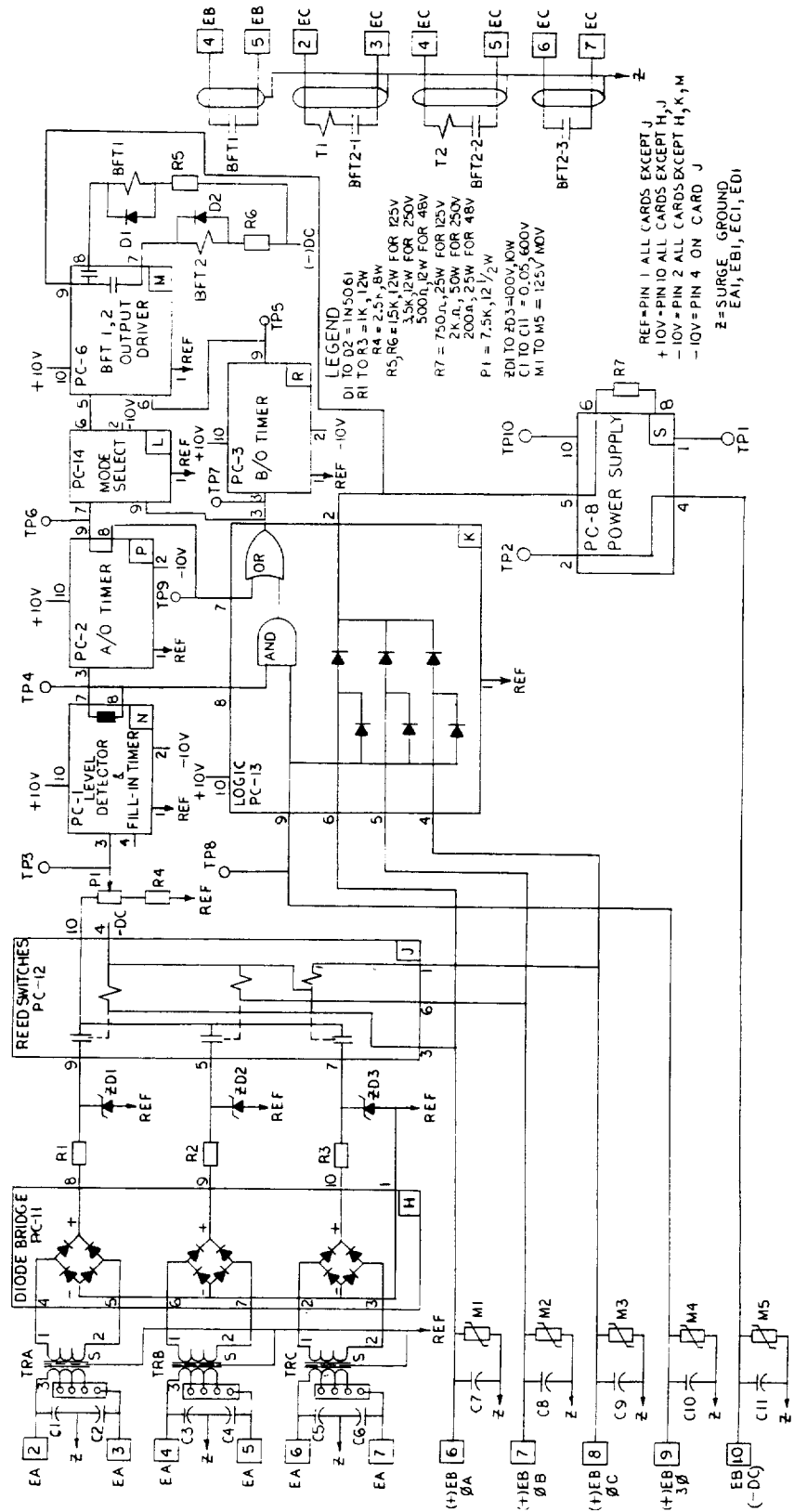
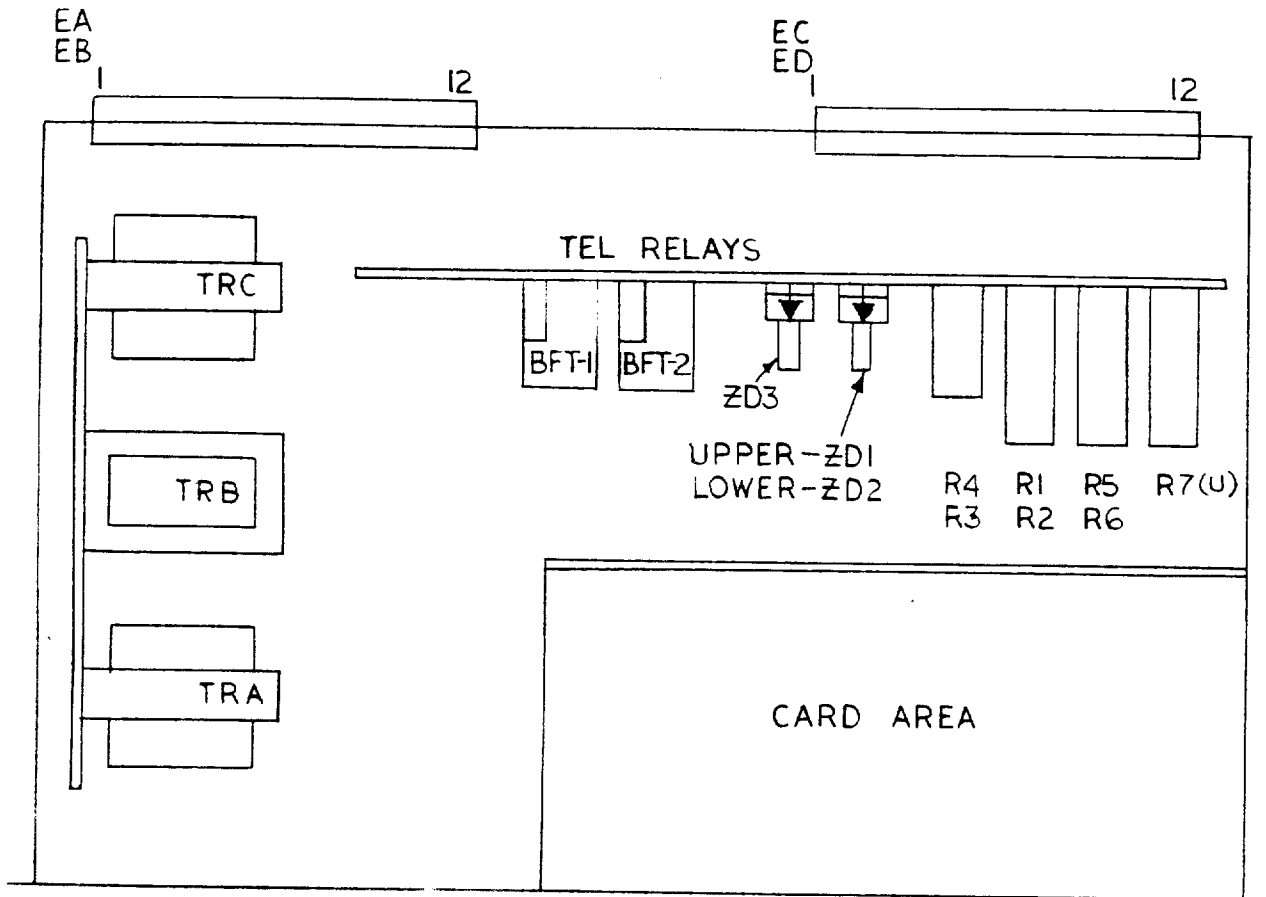
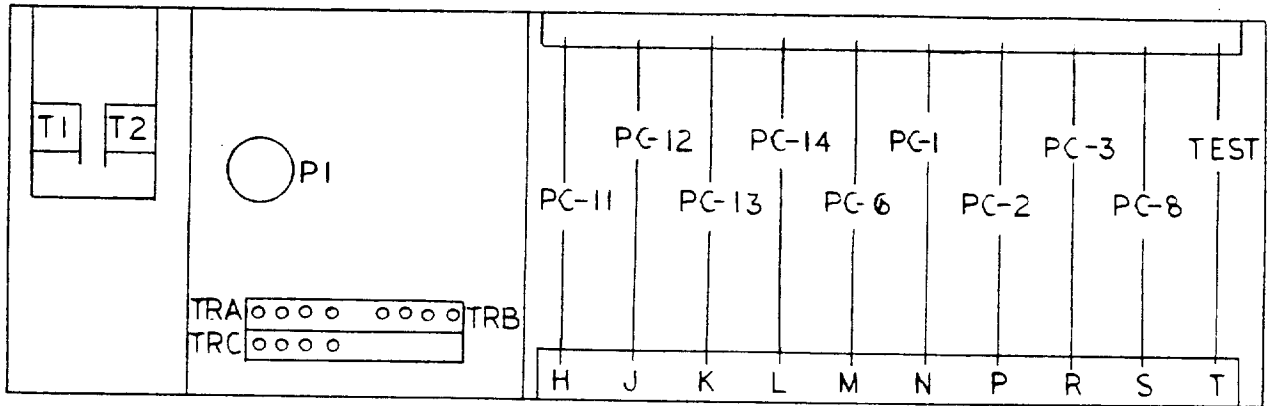


Figure 2 (013887559-) Internal Connections for the Type SBC53D Relay

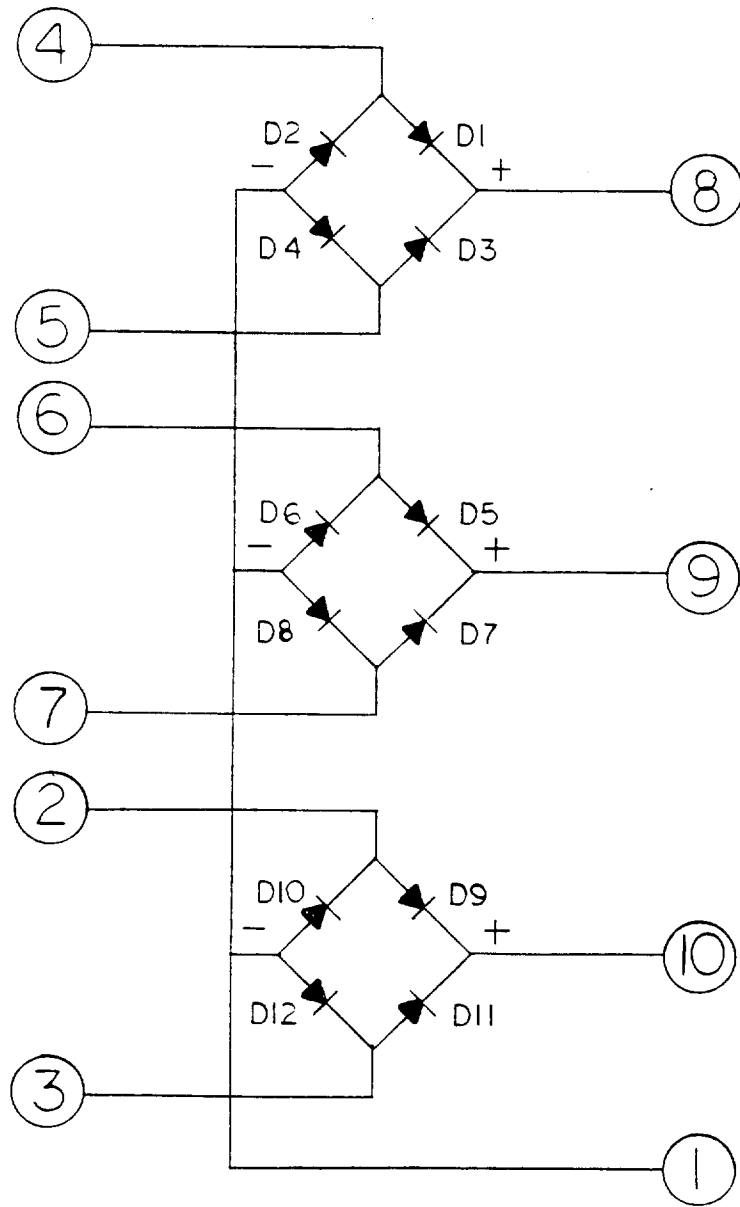


TOP VIEW



FRONT VIEW

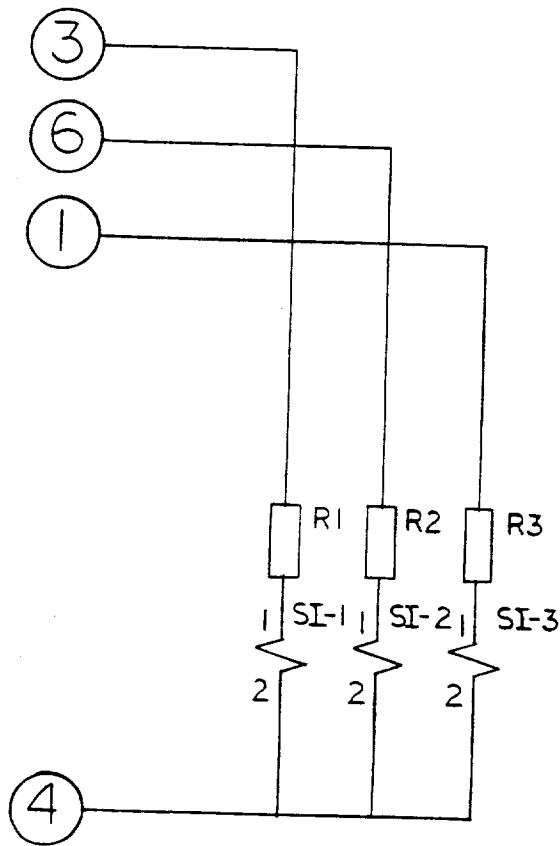
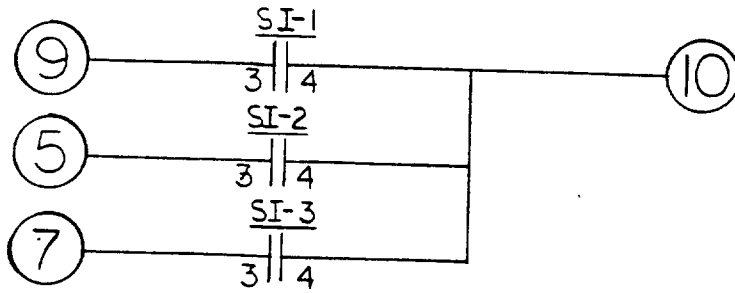
Figure 3 (0275A1349-1, Sh. 2) Component Location Diagram
for Type SBC53D Relay



LEGEND

D1 TO D12 = IN5061

Figure 4 (0285A6150-) Internal Connections for Phase Diode Bridge (PC-11)



LEGEND

SI-1 TO SI-3 = 0207A5516 P21
 R1 TO R3 0246A9112 PI03B

Figure 5 (0285A6151-) Internal Connections for Reed Relay Assembly (PC-12)

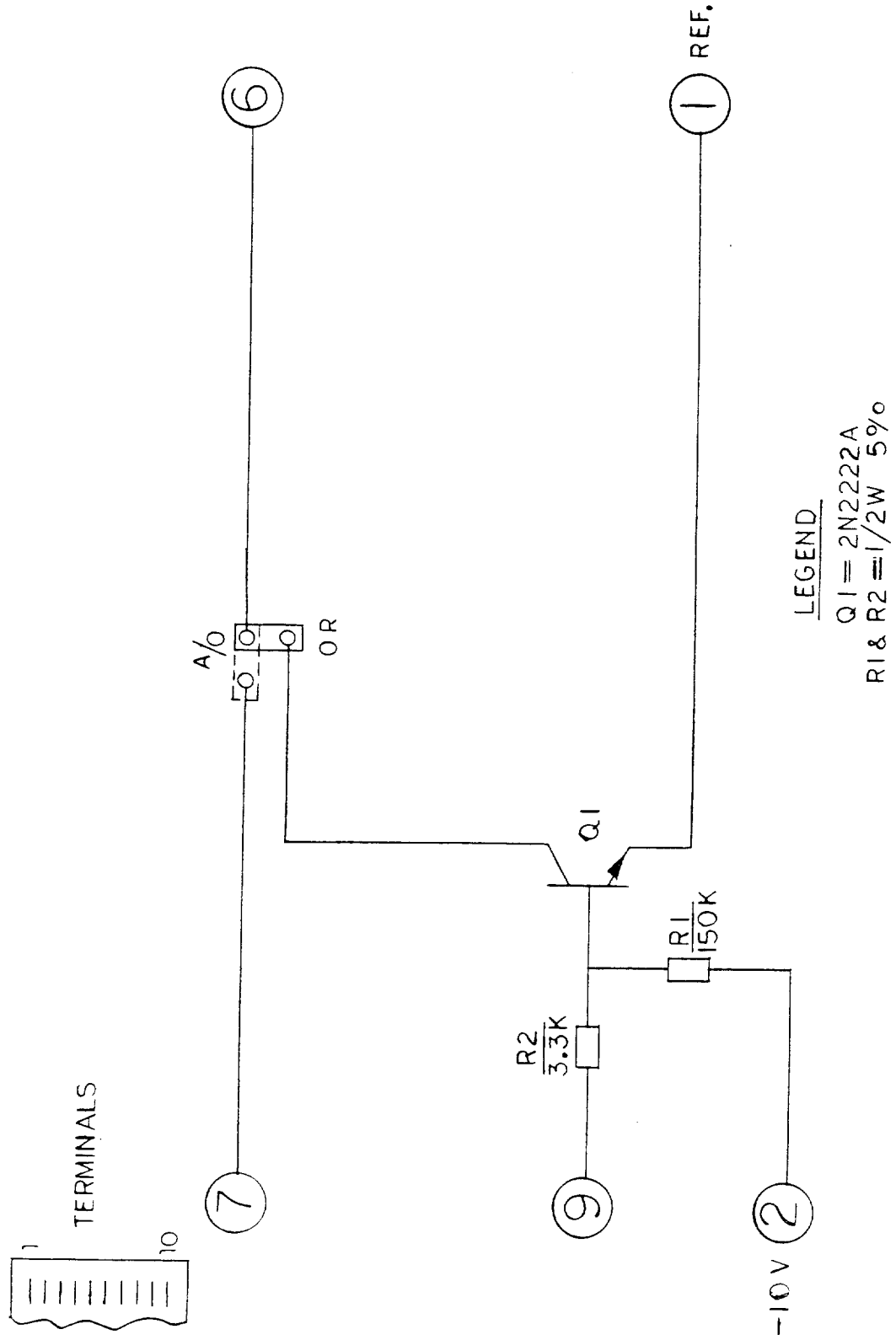


Figure 6 (0285A6227-) Internal Connections for Mode Select Card (PC-14)



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