



INSTRUCTIONS

GEI-50251B
SUPERSEDES GEI-50251A

J. L. STIPE, 10-6

RELAYS

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**DIRECTIONAL DISTANCE RELAY
FOR GROUND-FAULT PROTECTION**

TYPE CEB13G

RECEIVED
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LOW VOLTAGE SWITCHGEAR DEPARTMENT
GENERAL  ELECTRIC
PHILADELPHIA, PA.

GEI-50251 Directional Distance Relay Type CEB13G

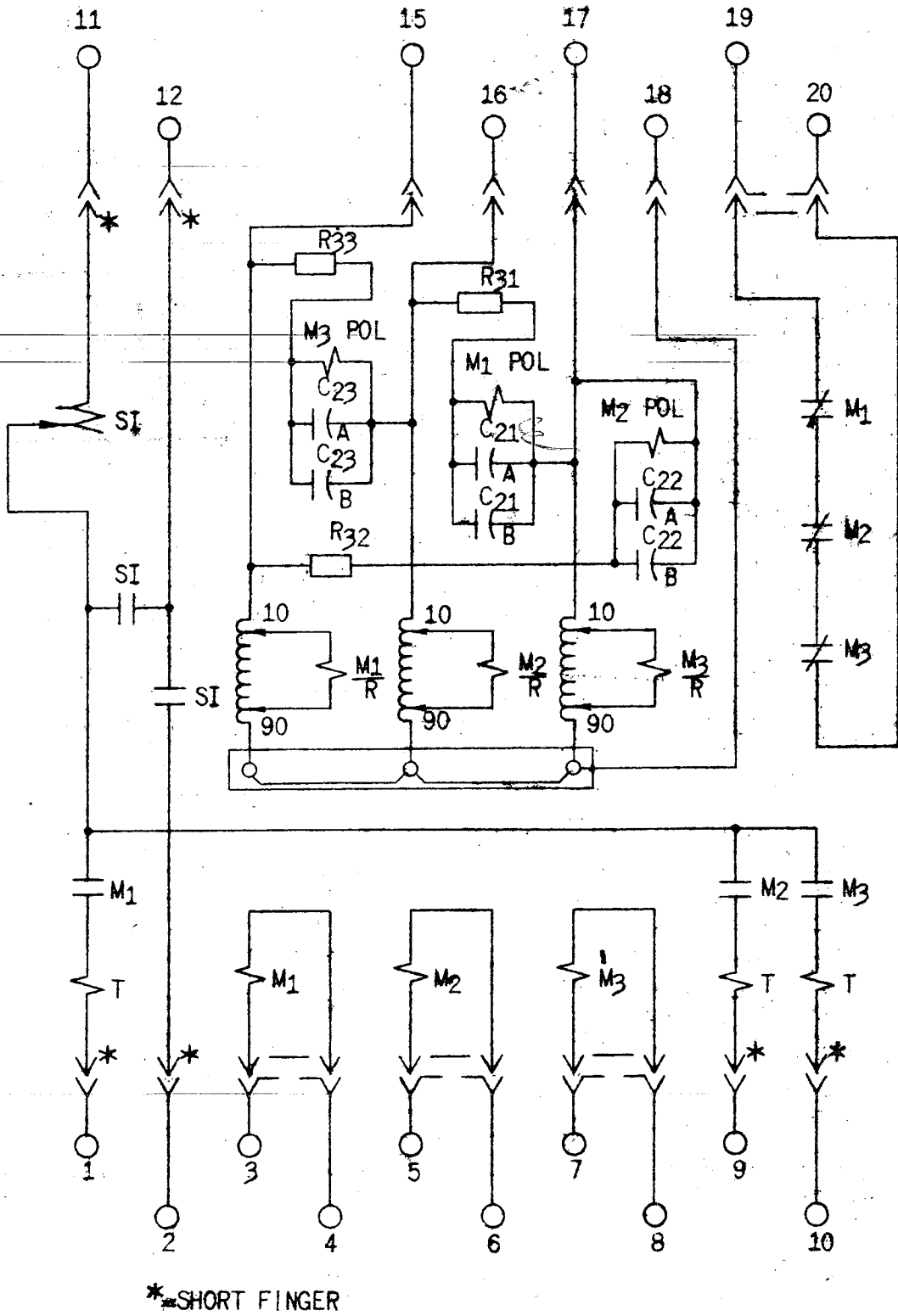


Fig. 1 Internal Connection Diagram for Type CEB13G Relay

Fig. 1 (0165A7508)

DIRECTIONAL DISTANCE RELAY FOR GROUND-FAULT PROTECTION

TYPE CEB13G

* INTRODUCTION

These instructions supplement instruction book GEI-90811. The combination of the two form instructions for the Type CEB13G relay.

The Type CEB13G relay contains three starting units, each similar to the starting unit of the Type GCX17G relay.

APPLICATION

The Type CEB13G relay is designed primarily for use as a carrier-starting relay in carrier-pilot relaying equipment which utilizes the GCX17G ground distance relay for carrier control and tripping in case of internal ground faults. Like the GCX17G, it uses line-to-neutral voltage for restraint, and quadrature voltage for polarizing, so the restraint torque on single-phase-to-ground faults is proportional to the phase-to-neutral voltage, and on phase-to-phase faults it is proportional to the area of the voltage triangle.

Figure 2 shows typical current and potential connections for the relay. The contact connections depend on the nature of the carrier relaying or other application.

The restraint voltage is adjustable in steps of five per cent. There is no intentional offset of the directional characteristic; none is required with quadrature voltage for ground faults; and other carrier-starting relays are usually provided for phase-to-phase faults.

RATINGS

The Type CEB13G relay is available in a five (5) ampere, 115 volt, 60 cycle rating. The three-phase pickup of each of the starting units is twenty-one (21) amperes.

* BURDEN

The potential circuit burdens are listed in the following table, on Page 4. The total potential burden is $13.77 + j 14.55$ volt-amperes.

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.

* Denotes change since superseded issue.

POTENTIAL CIRCUIT	V.A. BURDEN
Polarizing	6.46 + j 0
Restraint	6.48 + j 13.5
Transformer	0.63 + j 1.05

INSTALLATION

The outline and panel drilling dimensions are shown in Fig. 10 of the attached instructions. The internal connections are shown in Fig. 1 of this supplement.

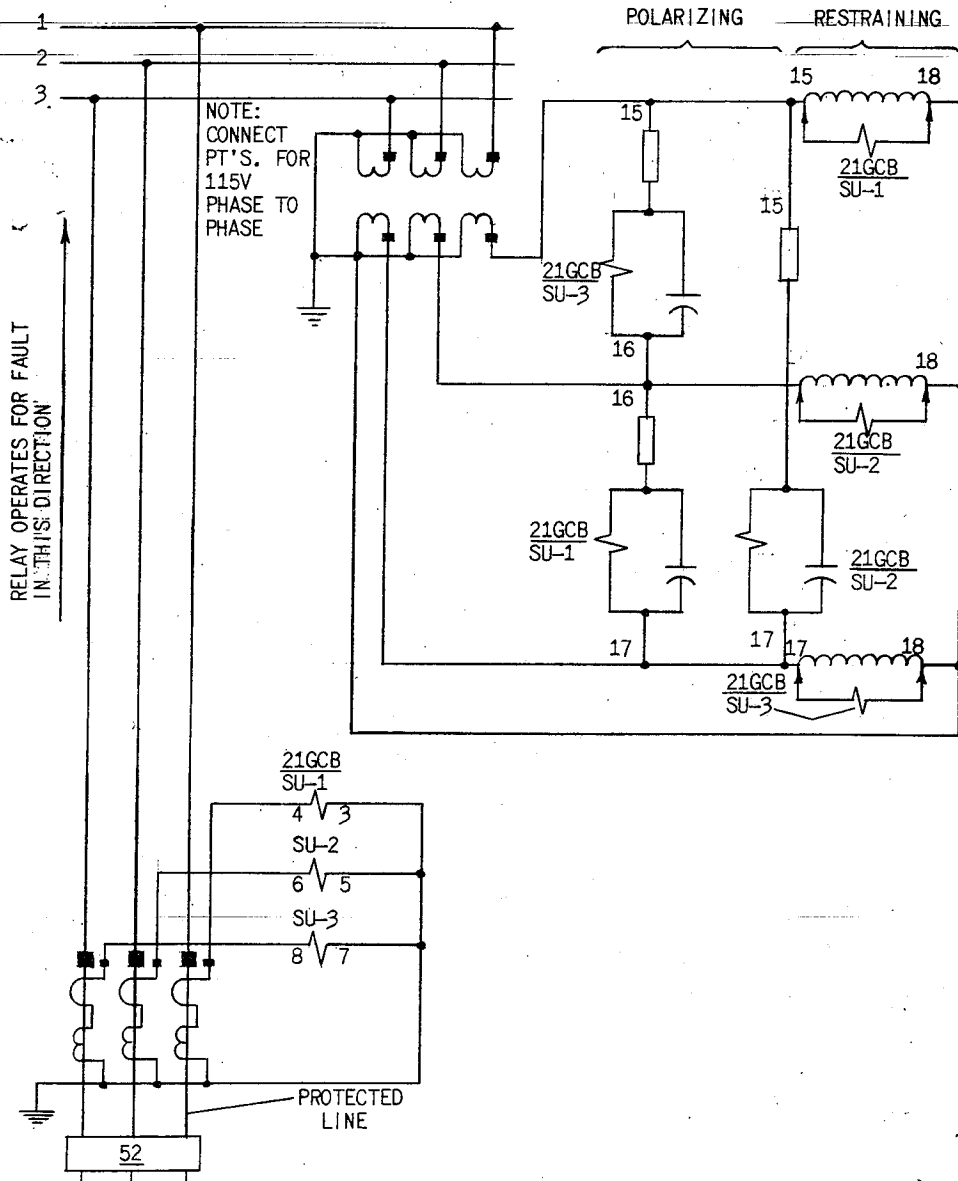


Fig. 2 (418A763)

* Fig. 2 Typical External Connections for Type CEB13G Relay

* Denotes change since superseded issue.