



INSTRUCTIONS

GEI-50279

PHASE DIRECTIONAL OVERCURRENT RELAYS

Types

IBC51E(-)Y1

IBC52E(-)Y1

IBC53H(-)Y1

GENERAL  ELECTRIC

GEI-50279 Phase Directional Overcurrent Relays Types IBC

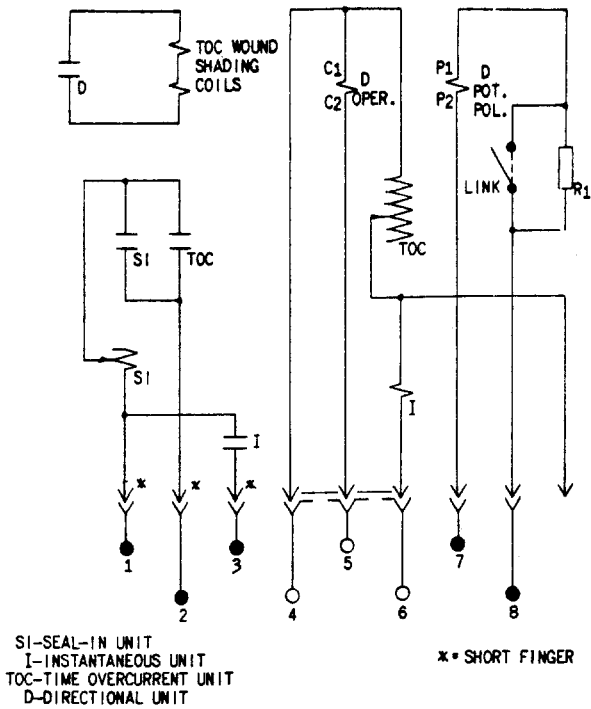


Fig. 1 Internal Connections For Type IBC51E(-)YI Relay (Front View)

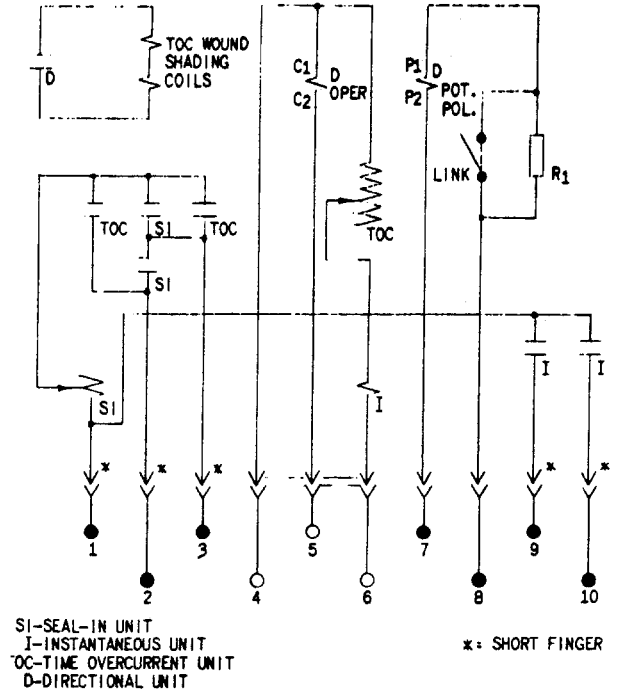


Fig. 2 Internal Connections For Type IBC52E(-)YI Relay (Front View)

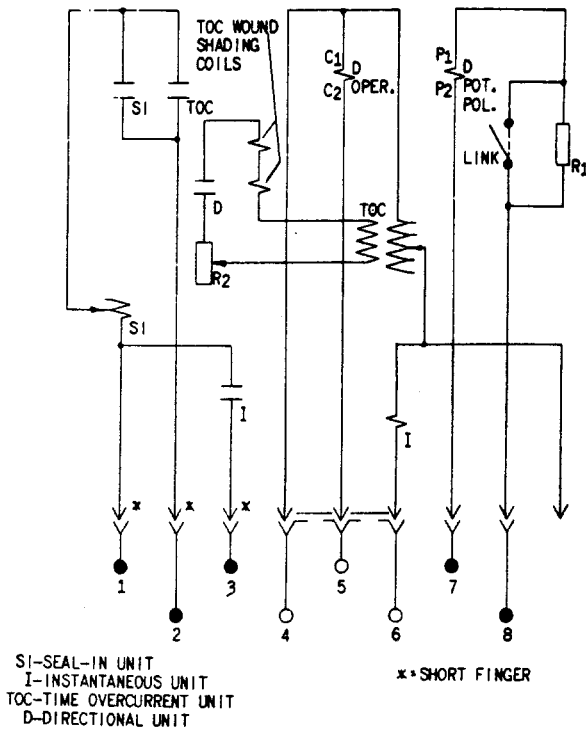


Fig. 3 Internal Connections For Type IBC53H(-)YI Relay (Front View)

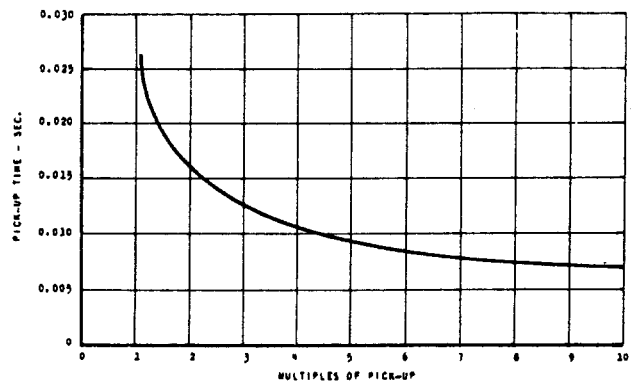


Fig. 4 Time-Current Curve For Instantaneous Element

PHASE DIRECTIONAL OVERCURRENT RELAYS

TYPES

IBC51E(-)Y1 IBC52E(-)Y1 IBC53H(-)Y1

INTRODUCTION

This instruction book includes a copy of GEH-1817 which describes the basic Phase Directional Overcurrent Relays, Type IBC. These instructions are supplemented by the description below of the instantaneous element, thus forming instructions for relays with these elements. The addition of the instantaneous element constitutes a special relay of the same model type as the standard with the addition of "Y1" in the model nomenclature.

INSTANTANEOUS ELEMENT

DESCRIPTION

The instantaneous element is a small instantaneous hinge-type element which may be mounted on the right front side of the induction unit. Its contacts are normally connected in parallel with the contacts of the main unit. Its coil is connected in series with the operating coil of the main unit.

When the current reaches a predetermined value, the instantaneous element operates, closing the contact circuit and raising its target into view. The target latches in the exposed position until released by pressing the button beneath the lower left corner of the relay cover.

The instantaneous element operates over a 4 to 1 range and has its calibration stamped on a scale mounted beside the adjustable pole piece. Time-current characteristics are shown in Fig. 4.

RATINGS

The instantaneous element is designed to use any one of three coils having pickup ranges of 4 to 16, 10 to 40 and 20 to 80 amperes respectively. The current closing rating of the contacts is 30 amperes for voltages not exceeding 250 volts.

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.

BURDENS

Burden data on the instantaneous element coils are given in the following table:

BURDEN TABLE

Coil	Freq.	I Amp	VA	Z Ohms	PF
4-16	60	5	5.0	.20	.95
	50	5	5.0	.20	.95
	25	5	4.4	.17	.98
10-40	60	5	0.83	.033	.95
	50	5	0.80	.032	.95
	25	5	0.65	.027	.98
20-80	60	5	0.21	.008	.95
	50	5	0.20	.008	.95
	25	5	0.15	.007	.98

INSTALLATION

MOUNTING

Outline and panel drilling dimensions for these relays are shown in Fig. 14 of the included GEH-1817.

CONNECTIONS

Internal connections for the various relay types are shown in Fig. 1 to Fig. 3 inclusive.

ADJUSTMENTS

Select the current above which is desired to have the instantaneous element operate and set the adjustable pole piece so that the top of the hexagon head is even with the desired calibration on the scale. To raise or lower the pole piece loosen the locknut and turn it up or down and then tighten in position.

The contacts should be adjusted to make at about the same time and to have approximately 1/8" wipe. This adjustment can be made by loosening the screws holding the stationary contacts and moving the contacts up or down as required.