INSTRUCTIONS

GEI-31010E

INSERT BOOKLET GEH-1753
SUPERSEDES GEI-31010D

SHORT-TIME OVERCURRENT RELAYS

IAC55A
IAC55B
IAC55F

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.

GENERAL ELECTRIC

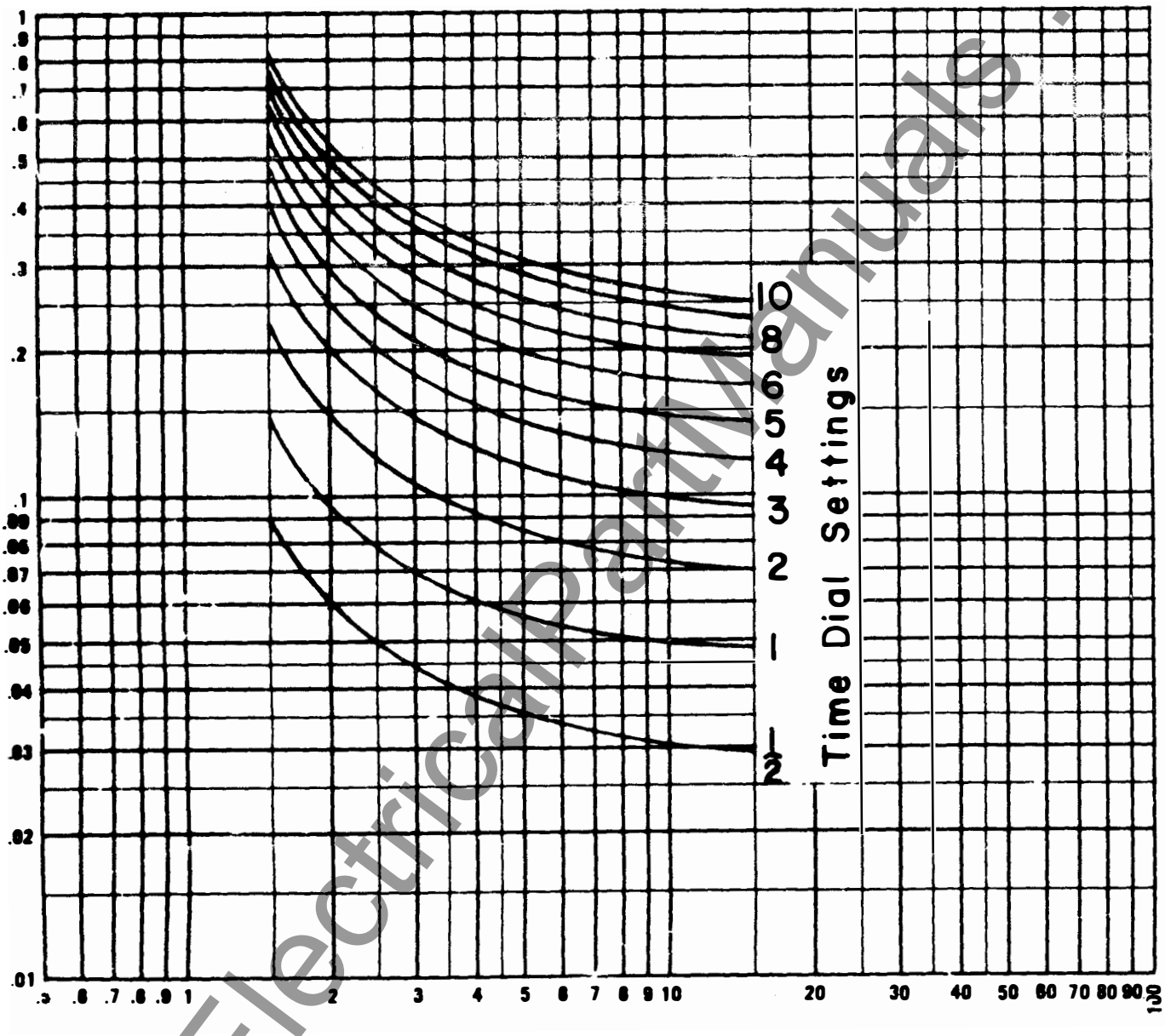

Figure 1. (0888B0271-1) Typical Time-Current Curves For Type IAC55 Relays

SHORT TIME OVERCURRENT RELAYS

TYPES IAC55 AND 56

INTRODUCTION

* Types IAC55A and 55B are of the same general construction as Types IAC51A and 51B respectively as described in the included instructions GEH-1753. Some of the parts to these relays have been altered, however to give short operating times.

The most obvious of the changes are that the U-magnet is mounted on the opposite side and the spiral cut-out of the disk has been omitted. The former is of little importance but the latter means that there is no compensation for the windup of the control spring. This means that more current is required, in the operating coil, to close the contacts than to start the disk turning from the No. 10 timing position. This ratio is approximately 1.4 to 1 and will not be of much importance on the applications to which this relay is usually applied.

Since these relays operate at a very high torque level, they are supplied with a "locked" time dial,to prevent any possible change in setting due to this high torque. To change a time dial setting, loosen the two screws in the dial hub, turn the time dial to the described setting and retighten the screws.

Typical time-current curves for these relays are shown in Fig. 1 of this instruction book. Outline and panel drilling as well as internal connections for these relays are found in the included instructions, GEH-1753, and Table I, as follows:

TABLE I

*

TYPES	OUTLINE AND PANEL DRILLING	INTERNAL CONNECTION
IAC55A(-)A	Fig. 18	Fig. 11
IAC55B(-)A	Fig. 18	Fig. 12
IAC55F(-)A	Fig. 18	Fig. 2 (This Supplement)

BURDENS

Burdens for the time overcurrent unit are given in Table II.

TABLE II

RANGE	HZ	MIN. TAP	BURDENS AT MIN. PICKUP MIN. TAP			BURDENS IN OHMS (Z)			V.A. AT 5 AMPS CALCULATED FROM IMPEDANCE AT MIN PICKUP
			R	J_X	Z	3 TIMES PICKUP	10 TIMES PICKUP	20.0 TIMES PICKUP	
0.5 - 2	60	0.5	13.4	49.8	51.6	46.6	21.6	13.5	1290
1.5 - 6	60	1.5	1.5	5.55	5.75	5.2	2.4	1.5	144
4 - 16	60	4	0.23	0.78	0.81	0.73	0.34	0.21	20

NOTE: The impedance values given are those for minimum tap of each relay, the impedance for other taps at pick up current (tap rating) varies inversely, (approximately) as the square of the tap rating. For example, a relay with 0.5-2 amp range, the impedance of 0.5 amp tap is given as 51.6 ohms. The impedance of the 2.0 amp tap at 2.0 amperes is $(.5/2)^2 \times 51.6 = 3.2$ ohms.

With the above exceptions, the included instructions, GEH-1753, apply to these types in every respect.

* Indicates Revision

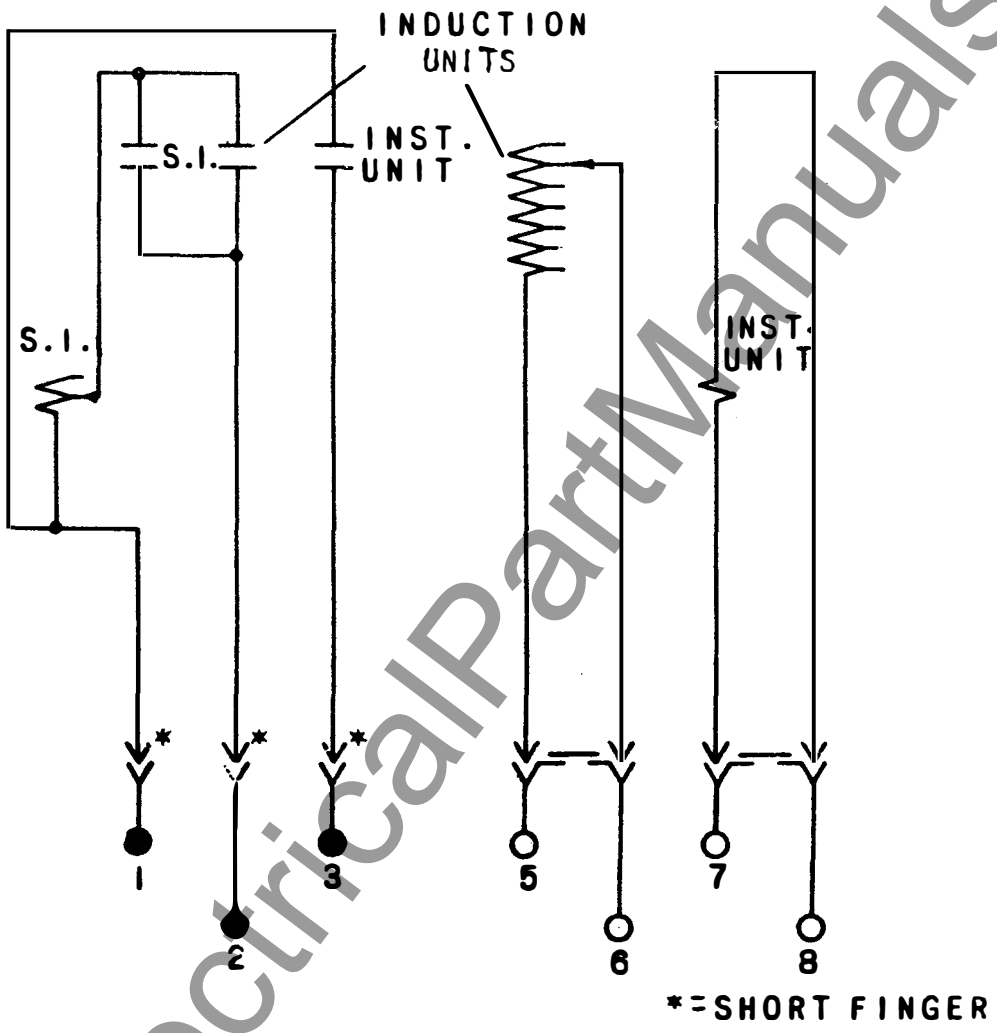

Figure 2. (0362A0506-1) Internal Connection Diagram for IAC55F Relay (Front View)

Meter and Control Business Department

General Electric Company
205 Great Valley Parkway
Malvern, PA 19355