

INSTRUCTIONS

GEI-92027A



SCR REGULATOR LINEAR TIME CARD

WARNING: ALWAYS DISCONNECT ALL POWER TO THE DRIVE BEFORE REMOVING OR INSERTING A PRINTED CIRCUIT CARD. FAILURE TO DO SO MAY CAUSE SERIOUS INJURY TO PERSONNEL AND DAMAGE TO THE DRIVE OR DRIVEN MACHINERY.

BE SURE THAT CARD IS INSERTED INTO THE CORRECT REGULATOR RACK SLOT. CARD IDENTIFICATION NUMBER AND SLOT MARKING NUMBER MUST BE IN AGREEMENT. IF THEY ARE NOT, CONTACT SPEED VARIATOR PRODUCTS DEPARTMENT, GENERAL ELECTRIC COMPANY, ERIE, PA. 16501.

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.

CONTENTS

	Page
Description and Application	1
Operation	1
Adjustment	2
Troubleshooting	2
Illustrations	
Fig. 1 Linear time subfunctions	2
Fig. 2 Simplified diagram	2
Fig. 3 Function schematic	3
Fig. 4 Function connection and specification data	4
Fig. 5 Card schematic 193X701CEG01	5
Fig. 6 Card layout 193X701CEG01	6

DESCRIPTION AND APPLICATION

The timing circuit utilizes two universal amplifiers to generate a ramp output that varies linearly with time to a voltage value determined by the input voltage. The linear time function is used primarily in single-motor, non-coordinated drives or multi-motor drives requiring relatively long acceleration or deceleration times.

OPERATION

The constant generator amplifier (AMPL 251) saturates for any error between the input and output

voltages of the timing circuit. The saturation level is limited by diodes D251 and D252, which provides a strong negative feedback around the amplifier. Resistor R257 is connected to the output of the second amplifier (AMPL 252) to provide the feedback to AMPL 251. The input to AMPL 251 is connected through an external resistor. The constant generator output (Tab 16) can be used for an inertia compensation signal.

AMPL 252 has no steady state feedback around it. Capacitors C251 through C254 are used as feedback elements that provide a feedback for a changing output. Resistors R259, R260, and R261 are input resistors to AMPL 252. One of these resistors is connected to resistor R258, and diodes D253 and D254 to complete the circuit. The resistor selected de-

