

INSTRUCTIONS**AF-400*****AC ADJUSTABLE SPEED DRIVE****(500 KVA ONLY)**

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 General Electric Company

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This publication affects **GEK-24982** for 500 KVA applications. It should be attached to and retained as a portion of that book. GEK-24982 text should be changed in accordance with the following information on 500 KVA units only.

All pages — **SIGNAL NOMENCLATURES** should be changed as indicated below:

FVRO	→	FVR
OCL	→	<u>CL</u>
OCP	→	<u>OP</u>
IMP	→	MP
ODMF	→	<u>DMF</u>
OSTOP	→	<u>STOP</u>
OSTART	→	START
1XFR	→	XFR
OFT	→	<u>FT</u>
OCL	→	<u>CL</u>
OSYNC	→	<u>SYNC</u>
OITOC	→	<u>IIOC</u>
OMVFRO	→	<u>MVFR</u>
ORRO	→	<u>RUNR</u>
ORI	→	<u>RI</u>
IRI	→	RI
ORST	→	<u>RST</u>
IFTRO	→	FTR
OIS	→	<u>IS</u>
IFI	→	FI
OSRO	→	<u>SR</u>
IFD	→	FD
OIFT	→	<u>IFT</u>
OIOF	→	<u>IOF</u>
OLOV	→	<u>LOV</u>

PAGE i

References indicating 125 HP to 400 HP should be changed to 125 HP to 500 HP.

PAGE 17

The paragraph entitled "BASE FREQUENCY RANGE (BFR) JUMPER" is replaced by:

BASE FREQUENCY RANGE (BFR) JUMPER

The Regulator card provides a jumper for selecting base frequency ranges of:

- 37.5 to 75 Hz
- 75 to 150 Hz
- 150 to 300 Hz

The jumper should be placed in the desired frequency range location as indicated on the card. The 500 KVA assembly is not designed to operate with the 150 to 300 Hz jumper.

PAGE 17

The paragraph entitled "OVERFREQUENCY TRIP JUMPER" is replaced by:

OVERFREQUENCY TRIP JUMPER

This jumper selects the upper inverter frequency at which the drive will trip and shut down to prevent motor overspeed. The frequency trip levels are selected on the Inverter card as follows:

- 75 Hz Frequency Trip
- 110 Hz Frequency Trip

Trip frequency selections above 110 Hz for 500 KVA units are not recommended.

PAGE 21

The paragraph entitled "BF—BASE FREQUENCY" is replaced by:

BF—BASE FREQUENCY

With the driver references at the rated 15 volts (TB16 to TB8—Meter card position 2), adjust the BF potentiometer to obtain the desired base frequency. This frequency can be read by means of a frequency counter between TB37 (IPAD) and TB34 (COM). It can also be read to within ± 2% accuracy by connecting a digital voltmeter between TB22 (FVR) and TB8 (COM). The frequency is obtained by multiplying the voltage reading by 5 when the base is at 75 HZ or 10 when the base frequency selection is at 150 Hz.

PAGE 23

Reference the paragraph entitled "TEST EQUIPMENT REQUIRED".

CHANGE:

Clamp-on ammeter Adjustable range up to 600 amps.

TO:

Clamp-on ammeter Adjustable range up to 800 amps.

PAGE 25 CHART

DELETE:

Receptacle G
Regulator Card

- term. 7—SSDI
- term. 11—BFI
- term. 12—BFD
- term. 23—SSDO
- term. 32—RFC

ADD:

Receptacle G
System Card

- term. 28—RFC

Receptacle H
System Card

- term. 28 — RFC

Receptacle H
Regulator Card

- term. 7—SSDI
- term. 23—SSDO
- term. 32—RFC

PAGE 25

REFER TO THE LAST PARAGRAPH:

CHANGE: (TB16, receptacle G term,)

TO: (TB16, receptacle H, term,)

PAGE 26

REFER TO "CAUTION"

DELETE:

REGULATOR CARD — NINE POTENTIOMETERS
— (INCL. VLIM)

ADD:

REGULATOR CARD — TEN POTENTIOMETERS
INVERTER CARD — 460V JUMPER
— TRIP FREQUENCY JUMPER

PAGE 26

REFER TO PARAGRAPH A.1.c.)

DELETE:

The drive output frequency should be 5 times this voltage reading when driver TB35 is connected to TB34 or 10 times when TB35 is left open. If the FVRO reading agrees with the output frequency, if the presence or absence of the base frequency range BFR jumper at TB35 is correct, and if BFD TB43 is jumpered to TB44 or properly connected to an external base frequency potentiometer which is set correctly, then the BF potentiometer card should be adjusted.

ADD:

The drive output frequency should be 5 times this voltage reading when the base frequency selection is at 75 Hz and 10 times when the base frequency selection is 150 Hz.

PAGE 27

REFERENCE PARAGRAPH 3.b)

CHANGE: On driver receptacle G,

TO: On driver receptacle H,

PAGE 28

DELETE PARAGRAPHS 7.a, 7.b, 7.c

PAGE 28

REFER TO PARAGRAPH B.1.a)

DELETE:

Check the frequency trip selection driver TB30 through TB31.

ADD:

Check for the appropriate trip frequency selection on the Inverter card.

PAGE 29

REFER TO PARAGRAPH 2.a)

CHANGE: Terminals 32, 31, and 30

TO: Terminals 22, 21 and 4

PAGE 30

REFER TO PARAGRAPH 4.a)

CHANGE: On driver receptacle G

TO: On driver receptacle H

PAGE 31

REFER TO PARAGRAPH 8.b)

DELETE:

If frequency pulses appear at OCPD, check ICFF signal at Meter card, pos. 15 or receptacle K, term. 5. If high going frequency pulses appear at ICFF, replace the Phase Logic card and check operation. If no frequency pulses appear at ICFF, replace the Inverter card and check operation.

PAGE 33

REFER TO FIRST PARAGRAPH

DELETE: The fan or blower fuses.

DELETE PARAGRAPH 1. "Fan or blower fuses"

PAGE 49

REFER TO PARAGRAPH 16

ADD: 500 — 2-3/6

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