



*MicroVersaTrip<sup>®</sup> Plus and  
MicroVersaTrip<sup>®</sup> PM  
Conversion Kits*

---

For GE Types AK-25 and AKU-25  
Low Voltage Power Circuit Breakers

**SUPPLEMENTARY INSTRUCTIONS ONLY**

This publication must be used in conjunction with the installation instructions for GE types AK-25 and AKU-25 MicroVersaTrip<sup>®</sup> Plus and MicroVersaTrip<sup>®</sup> PM Conversion Kits

**INTRODUCTION**

GE Conversion Kits are designed to upgrade existing GE Low Voltage Power Circuit Breakers, rather than replacing the entire breaker. The Conversion Kits contain enhanced solid-state MicroVersaTrip<sup>®</sup> Plus or MicroVersaTrip<sup>®</sup> PM Trip Units, representing the latest technological advancement in GE trip systems.

MicroVersaTrip<sup>®</sup> Plus and MicroVersaTrip<sup>®</sup> PM Conversion Kits are designed and breaker tested to conform to ANSI Standard C37.59, allowing the retrofitter to properly install and acceptance test the breaker.

This supplementary publication covers specific instructions for the installation of MicroVersaTrip<sup>®</sup> Plus and MicroVersaTrip<sup>®</sup> PM Conversion Kits with high range instantaneous trip elements on GE types AK-25 and AKU-25 Low Voltage Power Circuit Breakers. Each Conversion Kit contains all appropriate material to convert from an existing EC Power Sensor, ECS, or SST trip system, or upgrade MicroVersaTrip<sup>®</sup> and MicroVersaTrip<sup>®</sup> RMS-9 solid-state trip systems.

**TABLE OF CONTENTS**

	<b>Page</b>
<b>SECTION 4 BACK FRAME CONVERSION.....</b>	<b>3</b>
Installing Phase Sensors (CT's).....	3
<b>SECTION 8 TESTING AND TROUBLESHOOTING.....</b>	<b>4</b>
Cabling Diagram.....	4

The sections listed above are to be used in conjunction with the appropriate sections detailed in the installation instructions for GE types AK-25 and AKU-25 MicroVersaTrip® Plus and MicroVersaTrip® PM Conversion Kits. This supplementary publication does not detail all aspects of the conversion kit installation process.

## SECTION 4 BACK FRAME BREAKER CONVERSION (CONTINUED)

### Installing Phase Sensors (CT's) (High Range Instantaneous Kits Only)

Phase sensor installation for high range instantaneous conversion kits is very similar to the standard GE AK-25 or AKU-25 MicroVersaTrip® Plus and MicroVersaTrip® PM conversion kits. The high range instantaneous conversion kits differ in that the CT's are supplied with an integral terminal block and each phase sensor requires four (4) separate electrical connections.

Phase sensor modification for the AK-25 circuit breakers is completed by mounting the three (3) current sensor assemblies to the back frame. See Fig. 4-1, 4-2, and 4-3 on pages 13 and 14 of the original installation instructions.

#### Step 1.

Insert the lower copper stud through the back frame and attach it via the mounting screw.

#### Step 2.

Position the CT with its terminal toward the front and top and loosely mount it to the stud with the copper, 90° angled bus strap, and the bolt provided. Be sure to install the anti-rotation plate during this step and that the smaller diameter of the copper stud is towards the top of the assembly (Fig. 4-7). Note, Fig. 4-7 depicts a high range instantaneous CT assembly on the top and an AK-25 CT assembly on the bottom.

#### Step 3.

Align the assembly, then torque the two (2) 3/8" bolts in the strap to 250 in.-lbs. each to assure proper contact integrity.

#### Step 4.

Reassemble the front and back frames.

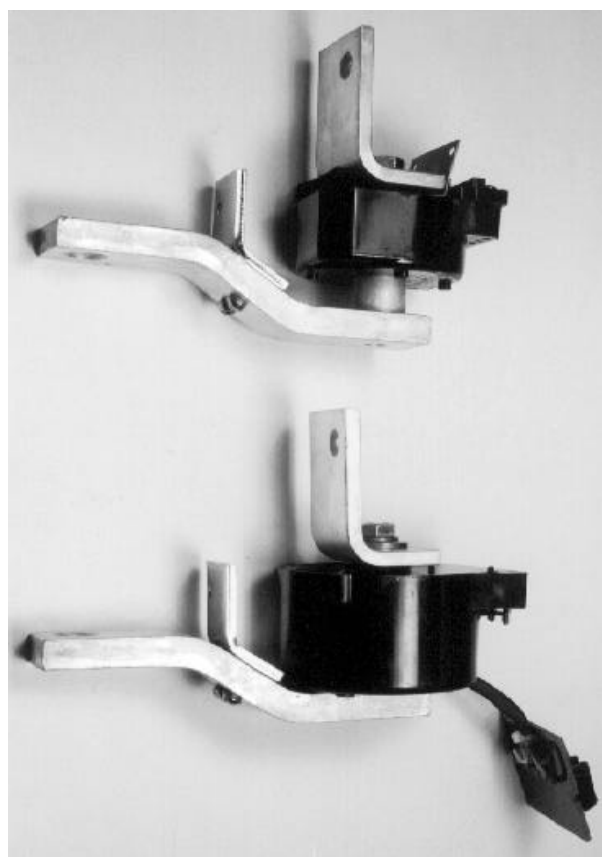
#### Step 5.

The wire harness can be connected only to the CT's after the front and back frames have been joined. The pair of black wire leads in the wire harness are connected to the terminals labeled "HI INST" on each CT. Polarity for these black leads is not critical.

## SECTION 7 TESTING AND TROUBLESHOOTING

**CAUTION:** The wire harness for high range instantaneous conversion kits require four (4) separate electrical connections for each phase sensor in lieu of the two (2) connections in a standard GE type AK-25 conversion kit. Be sure to connect the wire harness to the phase sensors as shown in Fig. 8-1 of this supplementary publication.

**WARNING:** FAILURE TO PROPERLY CONNECT THE WIRE HARNESS ASSEMBLY TO THE PHASE SENSORS MAY RESULT IN INADEQUATE PROTECTION FROM THE PROGRAMMER AND DAMAGE TO THE CURRENT SENSORS.



**Fig. 4-7. High Range Instantaneous CT Assembly**

(CONTINUED)

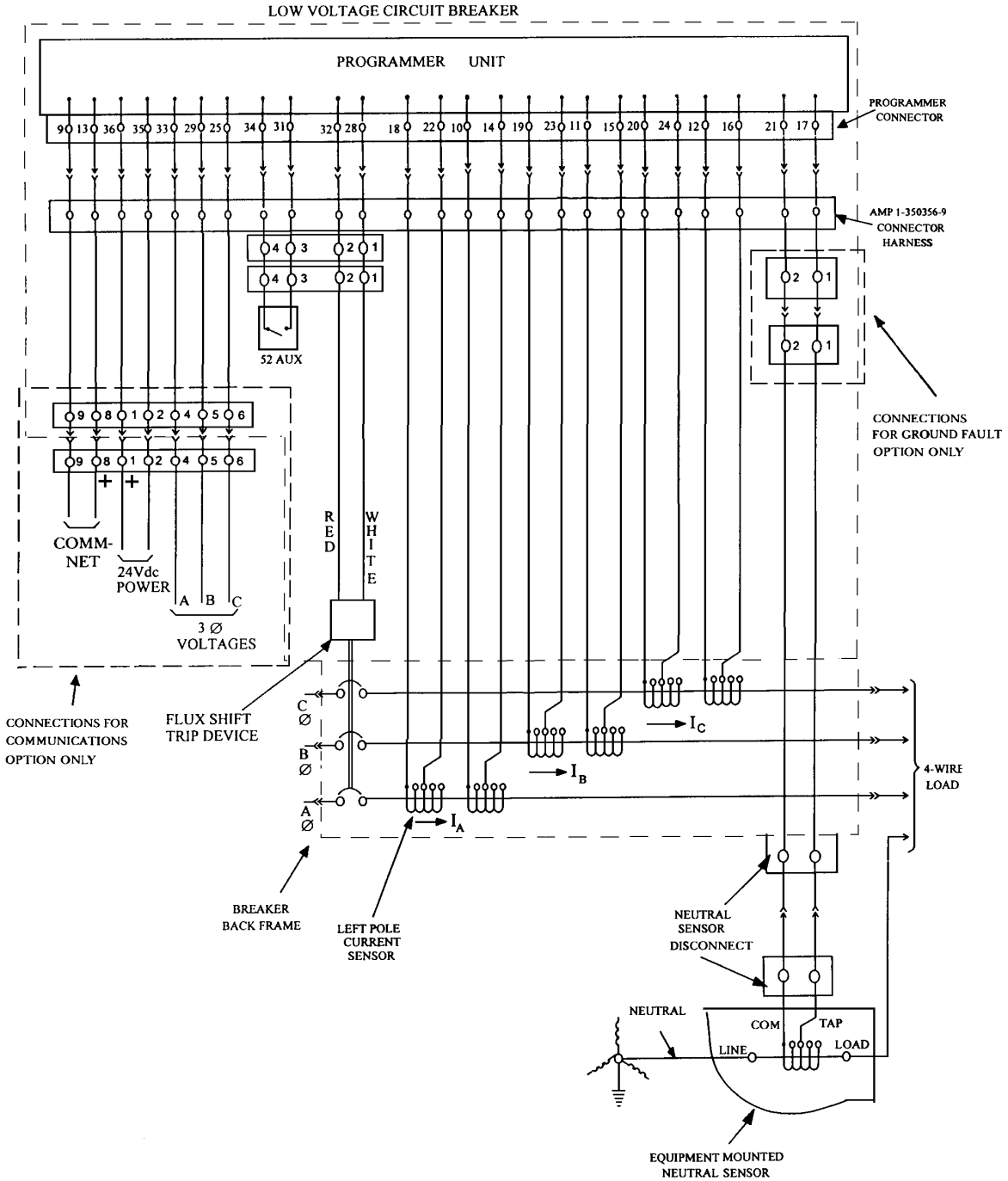


Fig. 8-1. Cabling Diagram - MicroVersaTrip<sup>®</sup> Plus and MicroVersaTrip<sup>®</sup> PM with Ground Fault on 4-Wire Load (High Range Instantaneous Kits Only)

**NOTES:**



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 GE Company.

**g**

***GE Electrical Distribution & Control***

DEH-126 0897 PSA

---

*General Electric Company  
41 Woodford Ave., Plainville, CT 06062  
© 1997 General Electric Company*