


## Installation Instructions



**⚠ DANGER**

**Hazardous Voltage.**  
**Will cause death or severe injury.**

Turn off and lock out all power before working on the circuit breaker.

Replace all covers and shields before power supplying the circuit breaker is restored.

**SAFETY INSTRUCTIONS**

### GENERAL

The Siemens Sensitrip III circuit breaker may be equipped with integral ground fault protection. These devices are identified by a "G" in the catalog number and the presence of the ground fault adjustments. The National Electrical Code® requires that these devices be performance tested when first installed [215-10, 230-95 (c), 249-13]. These instructions are intended to guide the installer in meeting this requirement.

### GENERAL INSTRUCTIONS

1. The interconnected system shall be evaluated when initially installed by qualified personnel. It is also suggested this be done periodically thereafter.
2. The proper location of the sensors around the bus of the circuit to be protected shall be determined. This can be done visually, with knowledge of which bus is involved.
3. The grounding points of the system shall be verified to determine that ground paths do not exist that would bypass the sensors.
4. The polarity of the sensor connections must agree with the installation instructions to avoid improper operation.

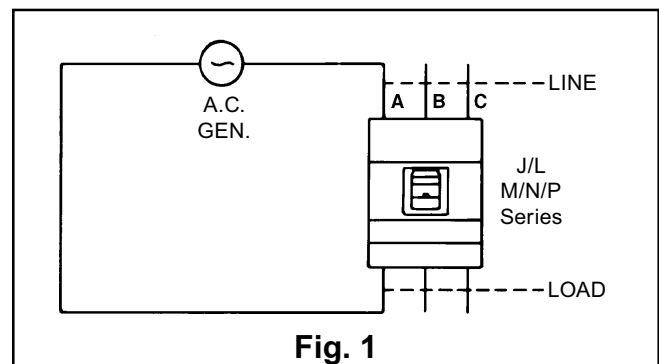
5. A simulated test is to be done using a low voltage high current source. This test is not intended to verify the calibration of the ground fault protection but to verify it is properly functioning.
6. The results of this testing should be recorded on the form provided at the end of this document or on other appropriate forms and should be available to the inspection authority.
7. These breakers may be set for different modes of operation, Residual or Ground Return, as described in the instructions supplied with the circuit breaker. For further information on applications, refer to the NEMA standards publication No. PB 2.2 Application Guide For Ground Fault Protective Devices for Equipment.<sup>1</sup>

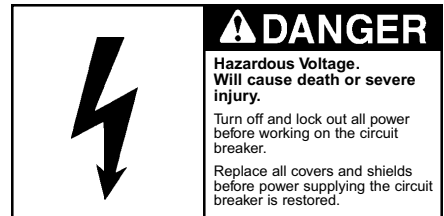
### OPERATION TEST

#### SWITCH SETTING — RESIDUAL Outgoing Circuit Method 3 Phase 3 Wire

Using Figure 1, individually test breaker poles A, B, and C for proper Ground Fault operation.

Each of the circuit breaker's front panel controls should be set to the highest setting. Using a low-voltage current source, apply a test current equal to 125 percent of the ground fault pickup setting to one pole of the circuit breaker. The circuit breaker must trip.





# Installation Instructions

## 3 Phase / 4 Wire

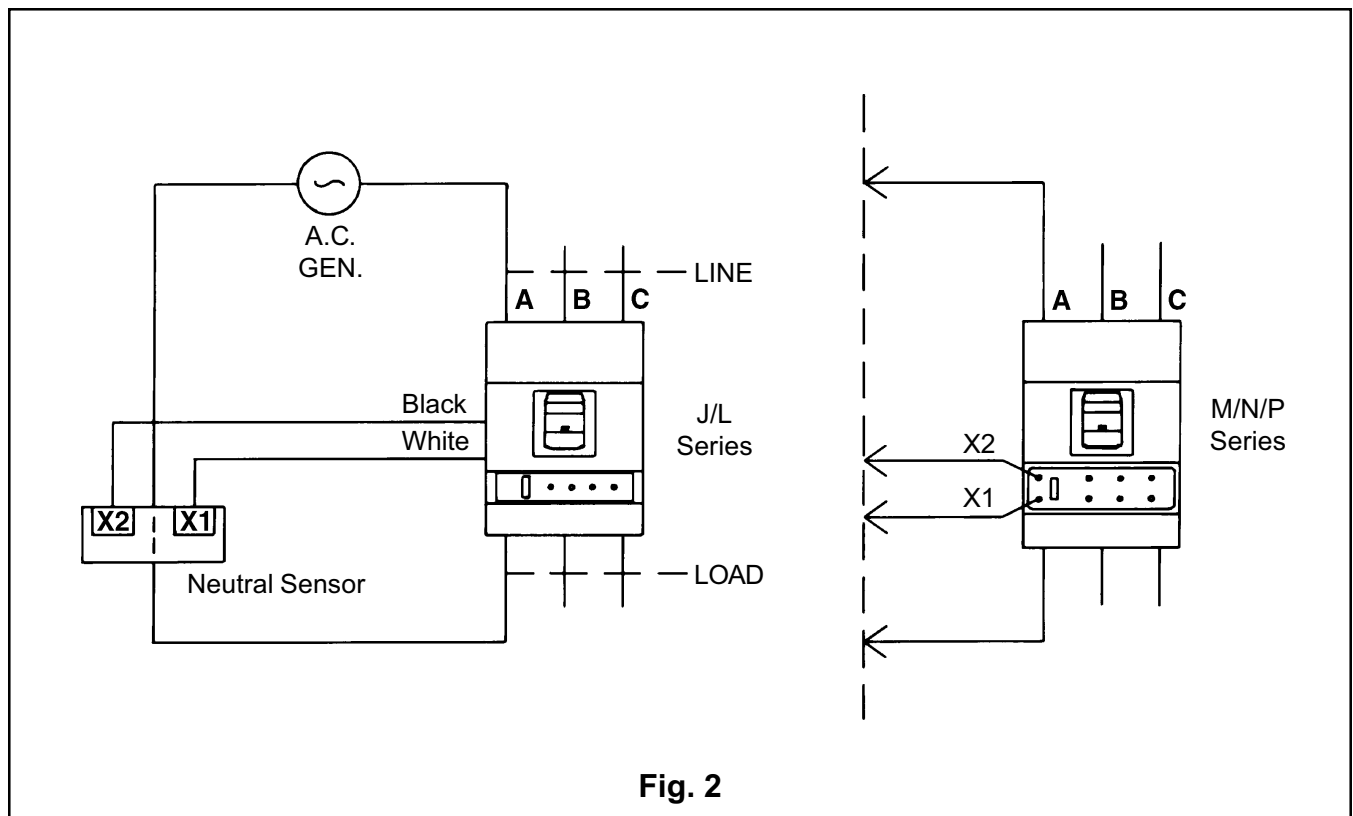
Using figure 2, individually test breaker poles A, B, and C in conjunction with the proper Neutral Sensor for proper Ground Fault operation.

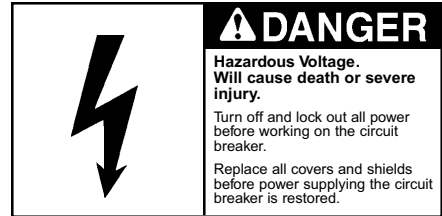
Each of the circuit breaker's front panel controls should be set to the highest setting. Using a low-voltage current source, apply 125 percent of the ground fault pickup setting to one pole of the circuit breaker. The circuit breaker must not trip. Reduce the test current to zero.

Using a suitable means, short the X1 / WHITE wire and X2 / BLACK wire connections together on the Neutral Sensor. Re-apply the 125 percent test current to the breaker pole under test. The breaker must trip. Reduce the test current to ZERO and remove the shorting means from the Neutral Sensor.

**WARNING:**

NEVER pass test current through an unterminated Neutral Sensor. Permanent sensor damage may occur if operated in this manner.





# Installation Instructions

## GF SWITCH SETTING — GROUND RETURN Ground Return Method 3 Phase / 3 Wire or 3 Phase / 4 Wire

Each of the circuit breaker's front panel controls should be set to the highest setting. Using a low-voltage current source, apply a current equal to 125 percent of the ground fault pickup setting per Figure 2. The circuit breaker must trip.

GROUND FAULT TEST RECORD	
Date Tested	Circuit Breaker No.
Tested By	
Results	

<sup>1</sup>NEMA PB 2.2 is available from : National Electrical Manufacturers Association  
2101 L Street, N.W., Suite 300  
Washington, D.C. 20037