



GFR-3 GROUND FAULT PROTECTION RELAY

INSTRUCTION MANUAL

11/16/05

GFR3IM0a

INTRODUCTION

The Ground Fault Protection System consists of a GFR-3 Ground Fault Protection Relay, and a Zero Sequence Current Transformer (SENSOR), to provide protection of industrial electrical equipment against low magnitude ground currents. The system works reliably on either resistance or solidly grounded distribution systems.

OPERATION

The GFR-3 is factory calibrated to operate with the SENSOR identified on the nameplate. The front panel controls include Ground Fault trip sensitivity and Time delay setting. Test pushbuttons with indicators are also provided.

When the Ground Fault develops, the SENSOR creates signal that will trip the GFR-3 relay. DPDT output contacts are provided to operate breaker trip coil or annunciator. After the fault has been cleared, the GFR-3 will reset automatically (non-latching option), or has to be manually reset (mechanically latched option).

GFR-3 features definite time-current characteristics. See drawing GFR3TD00

INSTALLATION

The SENSOR should be mounted to allow all phase conductors (and a neutral conductor, if used) to be wired through the SENSOR window. The RELAY can be installed in any position, allowing an easy access to the terminals and to the controls. The mounting dimensions are shown in the drawing GFR3ML00.

CONNECTION

Typical connection diagram is shown in drawing GFR3CD00

TESTING

The GFR-3 features a build-in test function. The self-test initiated by depressing the TEST pushbutton. This will trip both the relay and the interrupter (breaker).

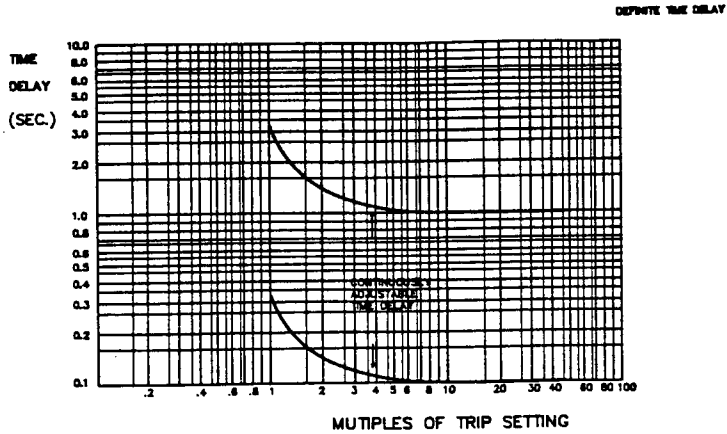
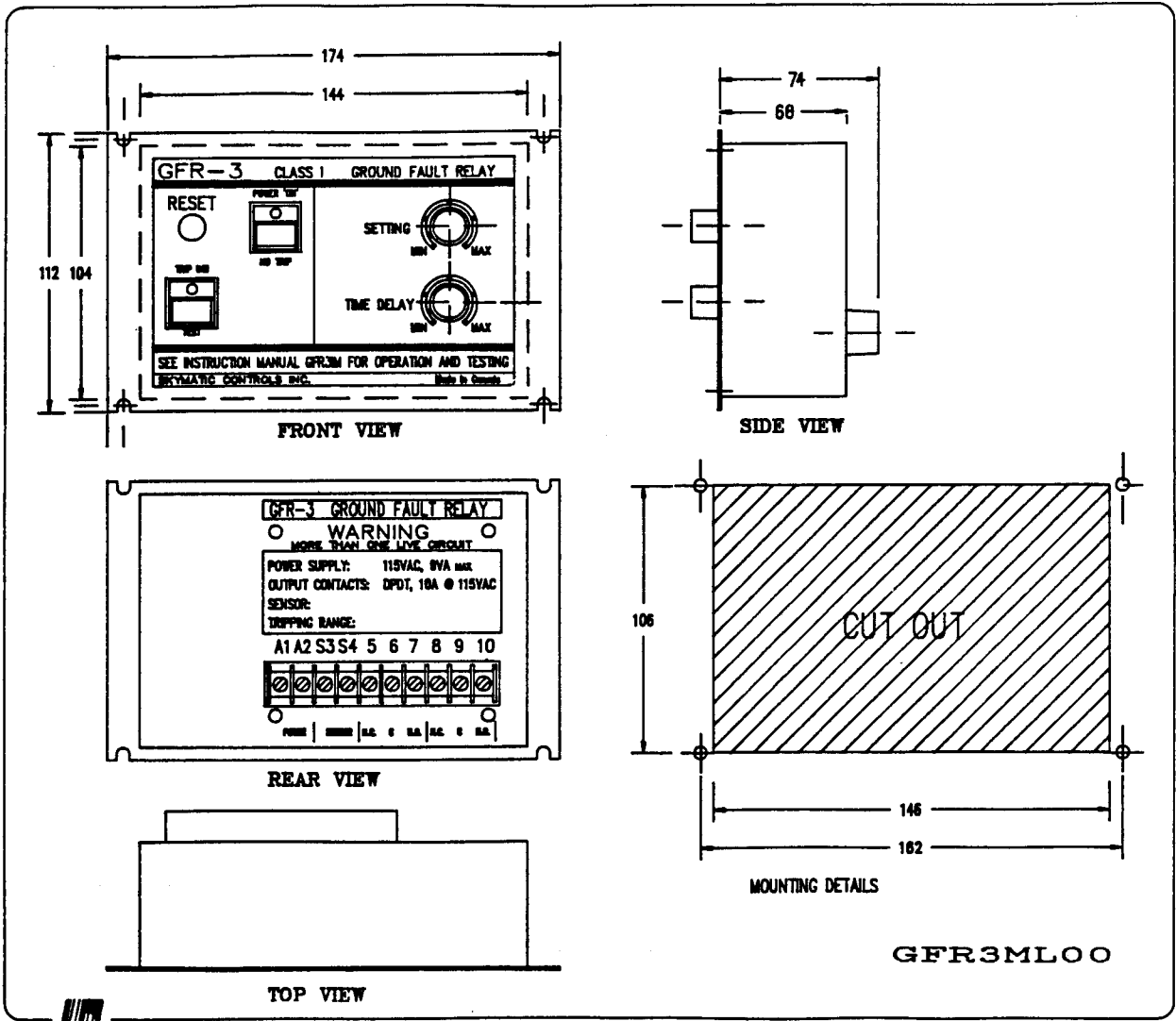
To test the Ground Fault Relay only, without tripping the breaker, first press the NO-TRIP pushbutton and hold it in. Next, press the TEST pushbutton and wait for the relay to trip. After the trip, first releases the TEST button, then push the RESET button, and finally, release the NO-TRIP pushbutton.

NOTE

This Instruction Manual will be kept at the switchboard where the Ground Fault Relay is installed.

WARNING

MORE THAN ONE LIVE CIRCUIT MAY BE PRESENT AT THE TERMINALS. DISCONNECT ALL POWER SOURCES BEFORE SERVICING THE RELAY.



GFR3TD00 GFR-3 GROUND FAULT RELAY TIME-CURRENT CHARACTERISTICS.

