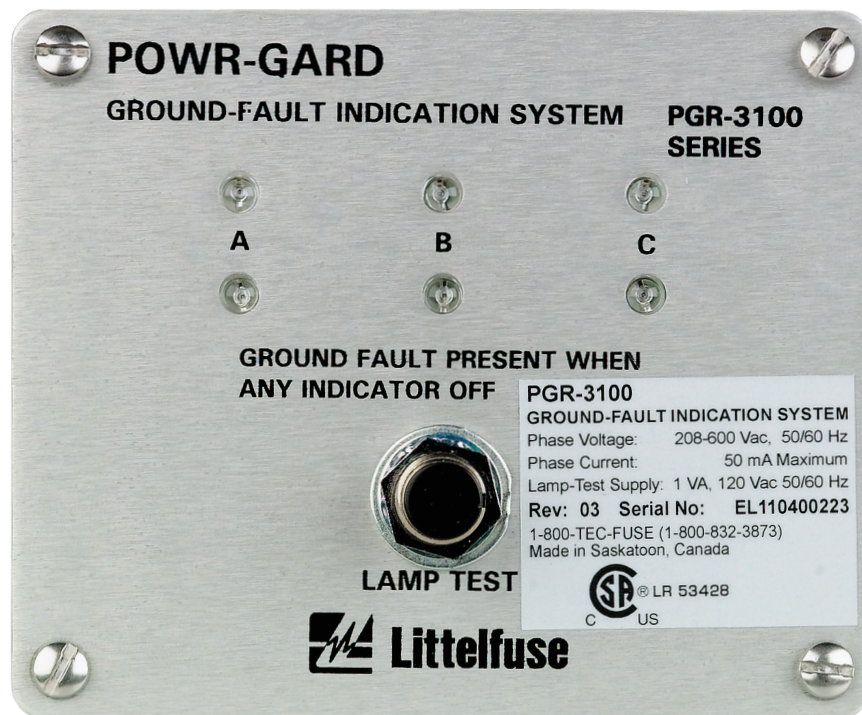


PGR-3100 MANUAL GROUND-FAULT INDICATION SYSTEM

Revision 6-B-061422



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1. FEATURES

- Green LEDs indicate presence of voltage to ground for each phase of a power system.
 - A ground fault (or phase loss) is indicated when a set of LEDs is off.
 - For systems up to 240 Vac, LEDs are on when phase-to-ground voltage exceeds 25 Vac.
 - For systems above 240 Vac up to 600 Vac, LEDs are on when phase-to-ground voltage exceeds 40 Vac.
 - Redundant LEDs are used for reliability.
- Pressing LAMP TEST causes all LEDs to light.

NOTE: The LAMP TEST feature requires an isolated 120 Vac supply.

- Direct connection for voltages up to 600 Vac line to line.
 - Potential transformers (PTs) are required for voltages greater than 600 Vac.
- Provides faulted-phase indication for resistance-grounded systems and ungrounded systems.

2. DESCRIPTION

The PGR-3100 is a self-powered ground-fault indication system. Presence of phase-to-ground voltage is indicated by redundant LEDs (two per phase). The respective phase LEDs are off when phase-to-ground voltage is less than 25 Vac for L terminals, and less than 40 Vac for H terminals. The PGR-3100 meets the National Electrical Code requirements for ground detectors for ungrounded alternating-current systems as defined in NEC 250.21. It also meets the Canadian Electrical Code requirements for ungrounded alternating-current systems in accordance with C22.1 Rule 10-400 (2).

3. INSTALLATION

Outline and panel-mounting details are shown in Fig.1.

For 208- to 600-Vac systems, connect the PGR-3100 directly to the three-phase bus. For 208- or 240-volt installations, use terminals AL, BL, and CL. For systems above 240 V and up to 600 V use terminals AH, BH, and CH. See Figs. 2 and 4.

For systems above 600 V, install PTs as shown in Figs. 3 and 5.

Connect terminal G and chassis-bonding terminal (⊕) to ground.

For LAMP TEST connect 120 Vac supply to terminals L and G. Connection and use of LAMP TEST circuit is optional.

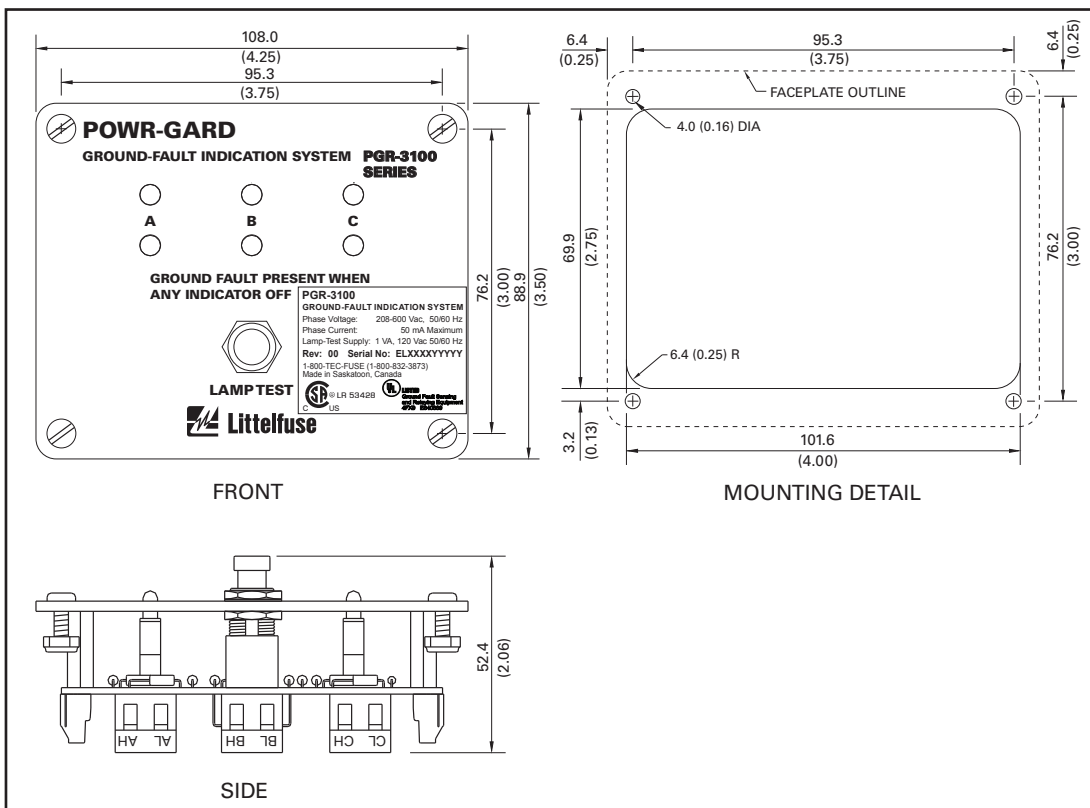


FIGURE 1. PGR-3100 Outline and Mounting Details.

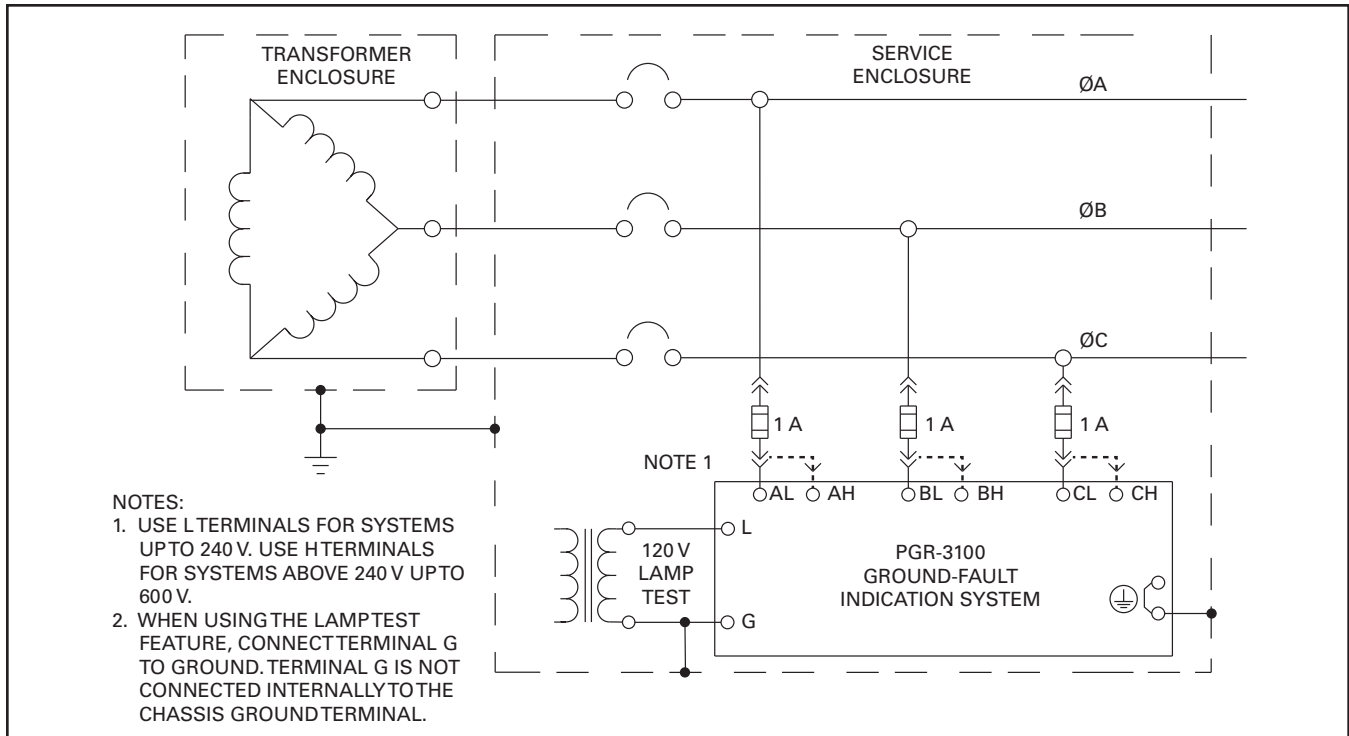


FIGURE 2. Connection Diagram for an Ungrounded 240- to 600-V System.

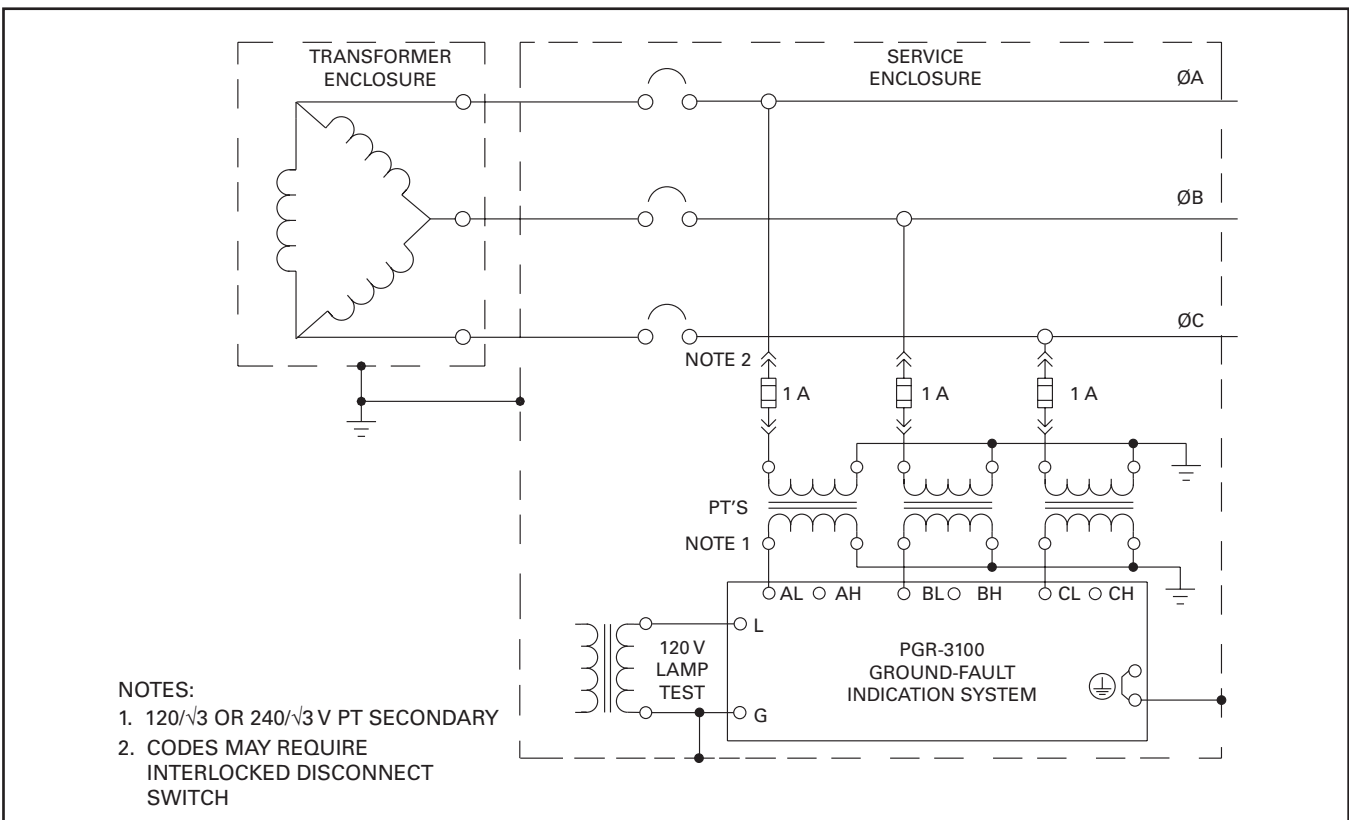


FIGURE 3. Connection Diagram for an Ungrounded System above 600 V.

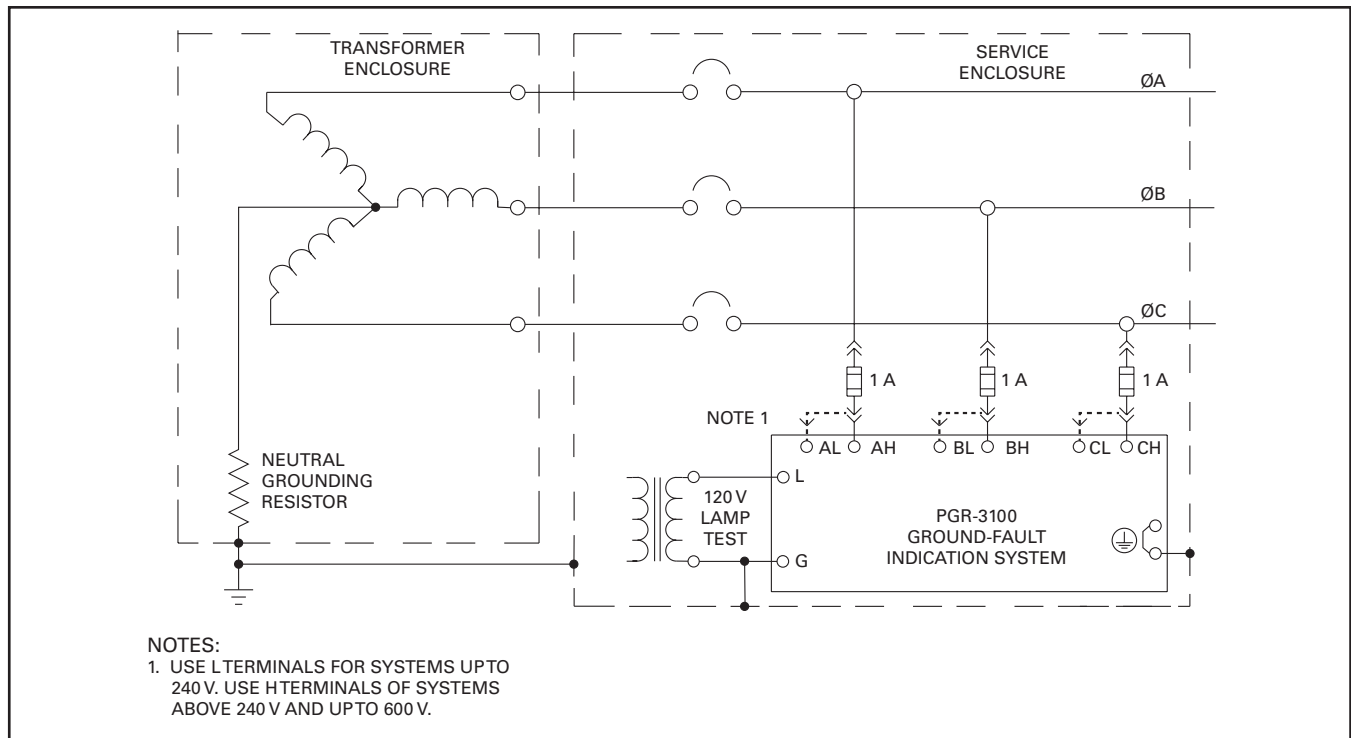


FIGURE 4. Connection Diagram for a Resistance-Grounded System up to 600 V.

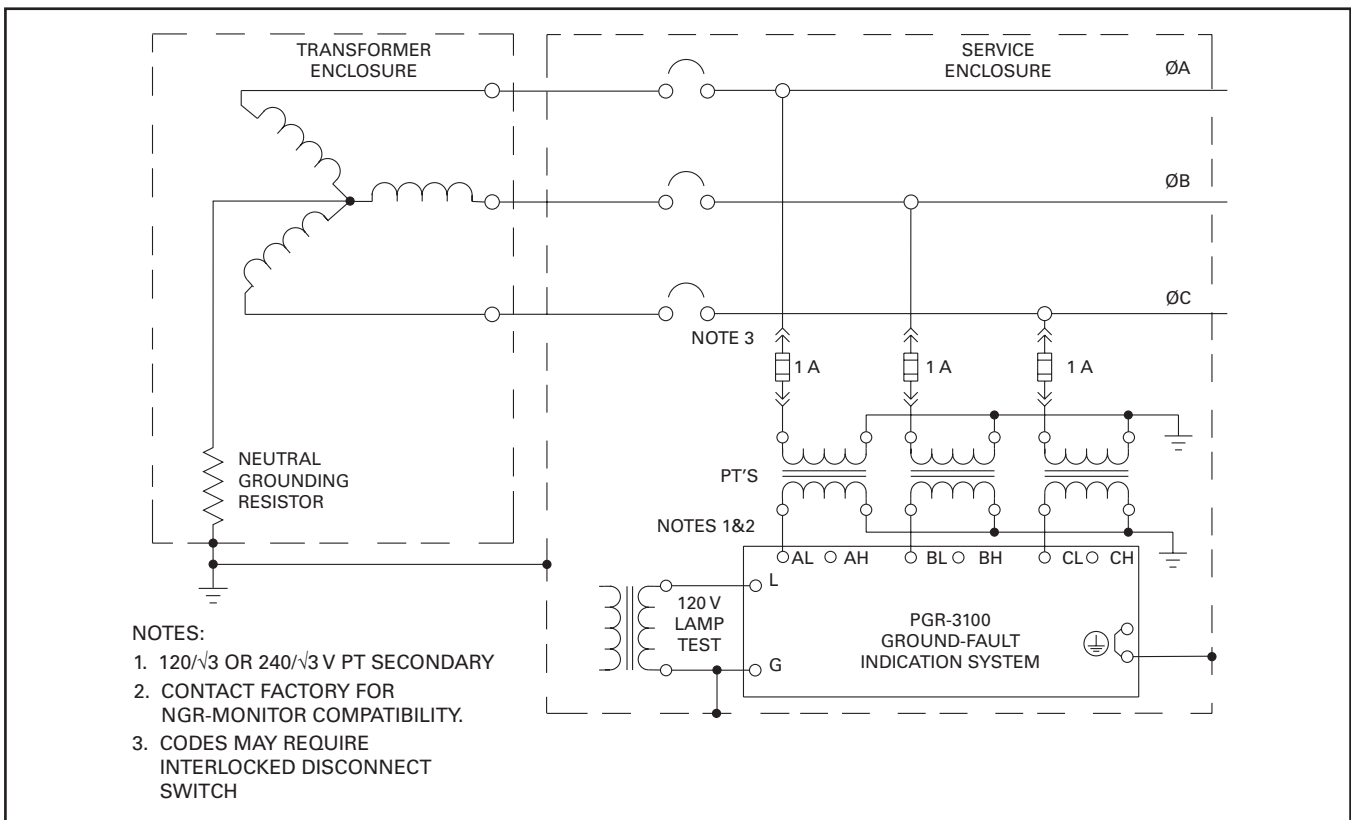


FIGURE 5. Connection Diagram for a Resistance-Grounded System above 600 V.

4. TECHNICAL SPECIFICATIONS

Phase Voltage

Input L, maximums	240 Vac to ground, 3.5 mA
Input H, maximums	600 Vac to ground, 4.5 mA

Lamp Test	Isolated 120 Vac, 1 VA maximum
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LED Threshold

Input L, minimum	25 Vac
Input H, minimum	40 Vac

Dielectric Strength	2,200 Vac, 1 minute
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Shipping Weight	0.3 kg (0.8 lb.)
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Dimensions:

Height	108 mm (4.3 in.)
Weight	88.9 mm (3.5 in.)
Depth	54 mm (2.1 in.)

Environment:

Operating Temperature	-40 to 60°C (-40 to 140°F)
Storage Temperature	-55 to 80°C (-67 to 176°F)
Humidity	85% Non-Condensing
Enclosure Rating	IP40 (When installed on panel)

Terminals:

Type	Wire Clamping
Conductor Size	24 to 12 AWG (0.2 to 3.3 mm ²)
Tightening Torque	0.6 N·m (5.31 lbf·in)

PWB Conformal Coating	MIL-1-46058 qualified UL QMJU2 recognized
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Certification	CSA, USA and Canada
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UL Listed



APPENDIX A
PGR-3100 REVISION HISTORY

MANUAL RELEASE DATE	MANUAL REVISION	PRODUCT REVISION (REVISION NUMBER ON PRODUCT LABEL)
June 14, 2022	6-B-061422	03
June 08, 2018	6-A-060818	
March 09, 2012	6	

MANUAL REVISION HISTORY

REVISION 6-B-061422

SECTION 1

Updated Canadian Electrical Code reference.

SECTION 4

Added individual L and H input minimum thresholds.

Added Terminal information.

REVISION 6-A-060818

SECTION 1

Format updated.

PRODUCT REVISION HISTORY

PRODUCT REVISION 03