2.6 REMOTE RESET

Terminals 5 and 6 are used for remote reset. A normally closed contact is required to configure the PGR-4700 for latching operation with remote reset. See Section 2.2.3.

2.7 CT VERIFICATION

A trip will occur and the red CT LED will light when a PGC-5000-series CT is not connected to terminals 7 and 8.

3. INSTALLATION

NOTE: Mounting, terminal block connections and wiring must conform to applicable local electrical codes. Check all applicable codes prior to installation.

This ground-fault monitoring system consists of a PGR-4700-series Sensitive Ground-Fault Relay and a PGC-5000-series CT connected as shown in Fig. 2.

A PGR-4700 can be surface or DIN-rail mounted. See Fig. 1. Panel mounting requires a PMA-55 or PMA-60 Panel-Mount Adapter. See Figs. 4 and 5.

Use terminal 1 (L1) as the line terminal on ac systems or the positive terminal on dc systems. Use terminal 2 (L2/N) as the neutral terminal on ac systems or the negative terminal on dc systems. There is no separate ground terminal for a ground wire.

Pass the phase conductors through the CT window and position them in the centre of the opening (for 4-wire and single-phase systems, also pass the neutral conductor through the CT window). Do not pass ground conductors through the CT window. In applications that require shields or drain wires to pass through the CT window, return them through the CT window before connecting them to ground. Connect the PGC-5000-series CT to terminals 7 and 8, and connect the shield to terminal 8. CT connections are not polarity sensitive. Certain applications require twisted- or shielded-twisted pair secondary CT conductors. See Fig. 3 for PGC-5000-series CT dimensional drawings.

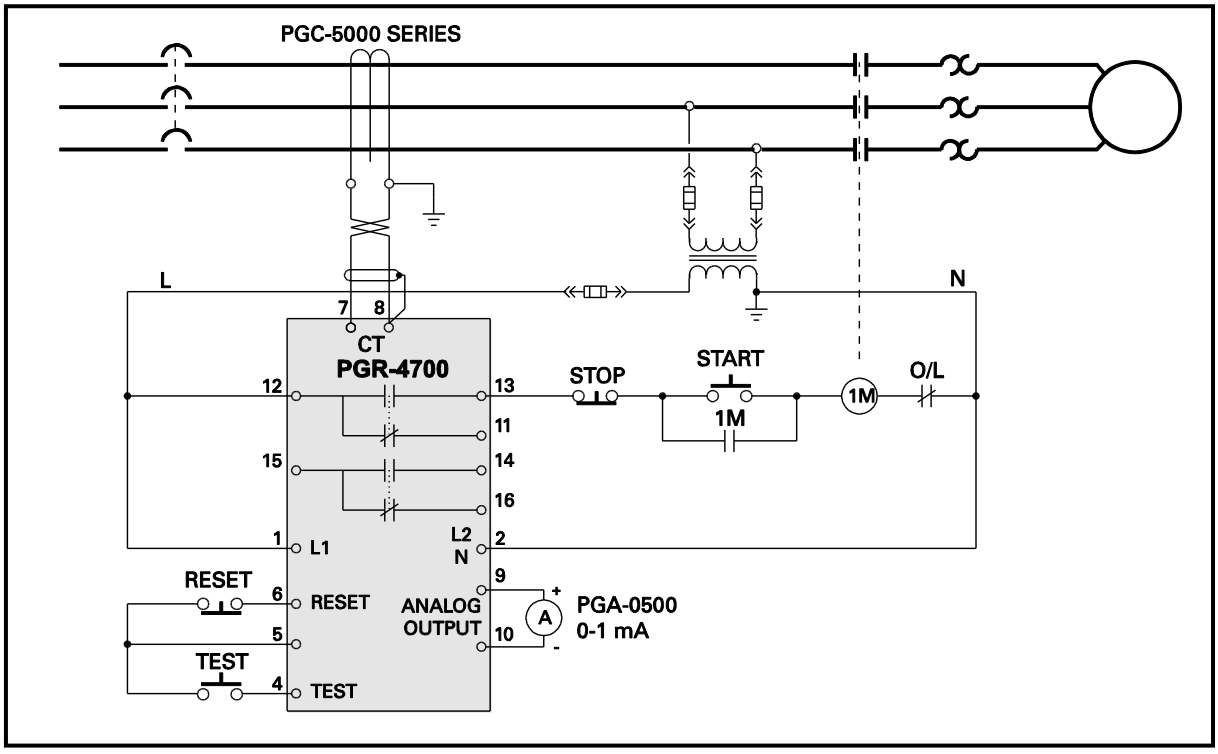
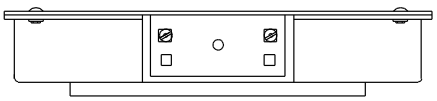
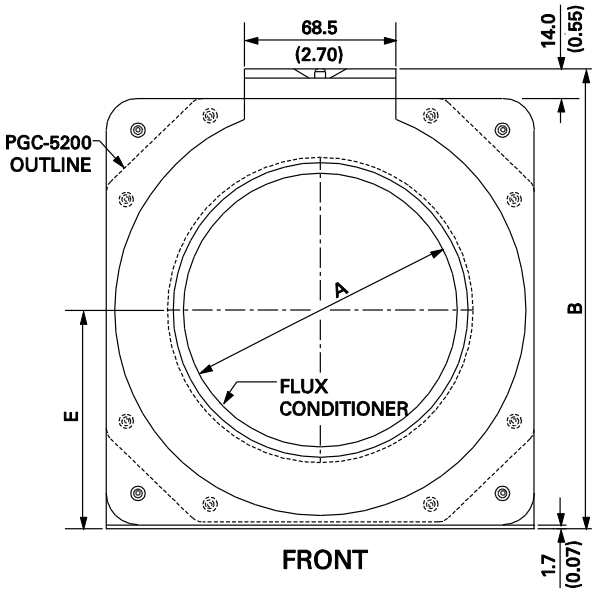


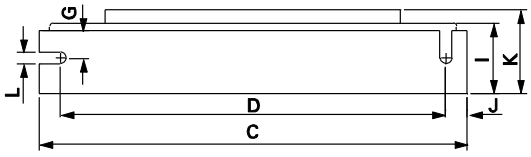
FIGURE 2. Typical Connection Diagram.



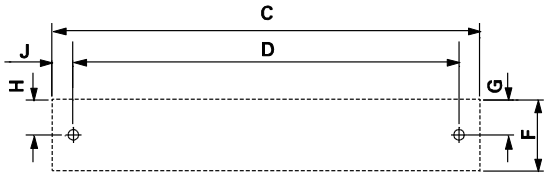
TOP (COVER REMOVED)



FRONT



BOTTOM



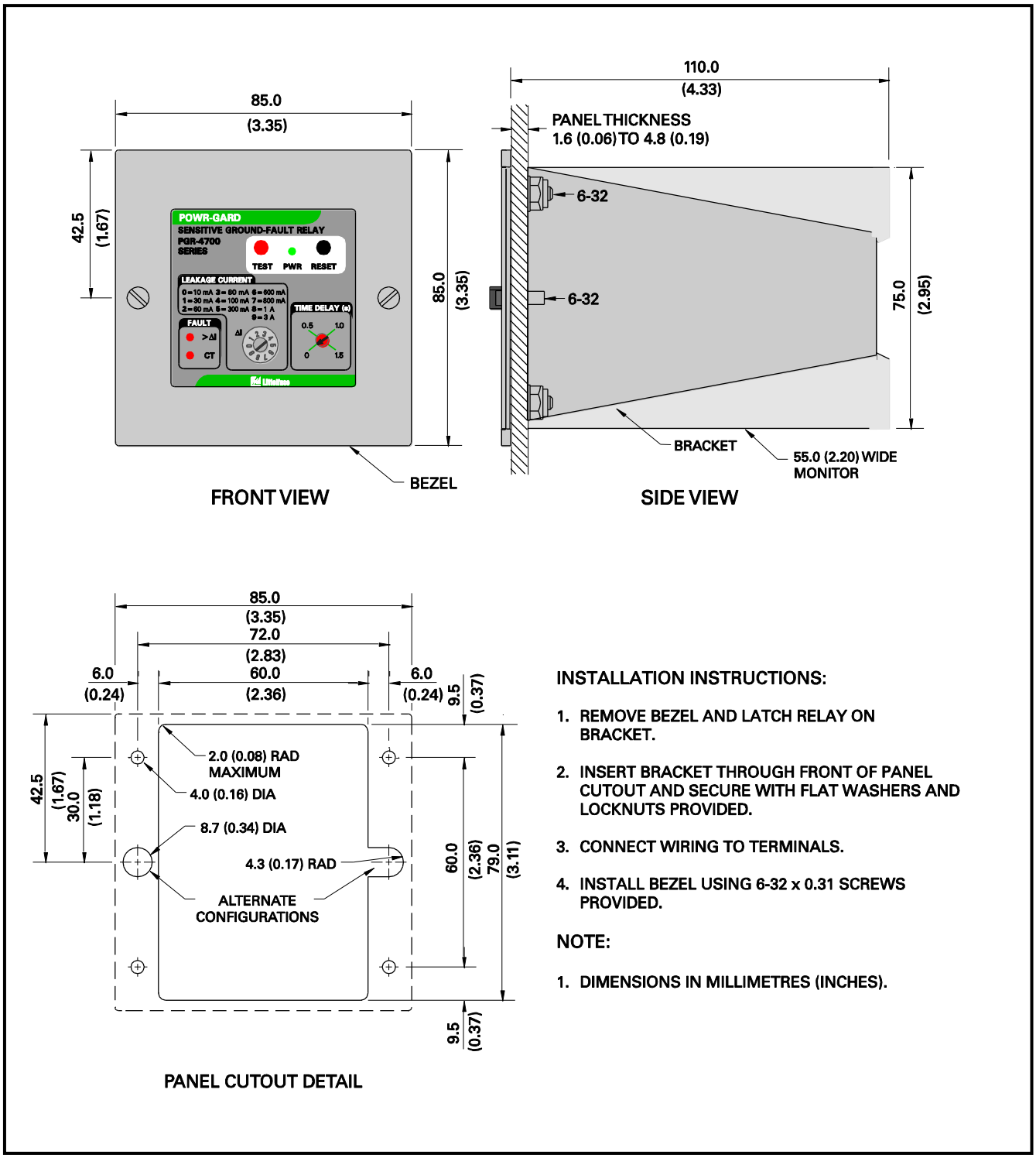
MOUNTING DETAIL

NOTES:

1. DIMENSIONS IN MILLIMETRES (INCHES).
2. MOUNTING SCREWS: M5 OR 10-32.
3. RoHS COMPLIANT.
4. CE COMPLIANT.

	DIMENSIONS				
	PGC-5025	PGC-5060	PGC-5095	PGC-5130	PGC-5200
A	25.0 (0.98)	61.0 (2.40)	95.0 (3.74)	130.0 (5.12)	200.0 (7.87)
B	99.0 (3.90)	131.5 (5.18)	175.0 (6.89)	218.0 (8.78)	309.0 (12.17)
C	92.5 (3.64)	115.0 (4.53)	158.0 (6.22)	203.0 (7.99)	290.5 (11.44)
D	75.0 (2.95)	98.0 (3.86)	141.0 (5.55)	178.0 (7.01)	267.5 (10.50)
E	42.5 (1.67)	60.5 (2.38)	82.0 (3.22)	103.5 (4.07)	150.0 (5.90)
F	32.0 (1.26)	32.0 (1.26)	32.0 (1.26)	32.0 (1.26)	34.0 (1.34)
G	15.5 (0.61)	15.5 (0.61)	17.5 (0.69)	11.0 (0.43)	11.0 (0.43)
H	15.0 (0.59)	14.5 (0.57)	15.0 (0.59)	13.3 (0.52)	13.3 (0.52)
I	34.0 (1.34)	33.5 (1.32)	33.0 (1.30)	34.0 (1.34)	43.0 (1.69)
J	9.0 (0.35)	7.5 (0.30)	9.0 (0.35)	11.0 (0.43)	11.5 (0.45)
K	40.0 (1.57)	40.5 (1.59)	40.0 (1.57)	40.0 (1.57)	50.0 (1.97)
L	5.3 (0.21)	5.3 (0.21)	5.3 (0.21)	7.0 (0.28)	7.0 (0.28)

FIGURE 3. PGC-5000-Series Current Transformers.



INSTALLATION INSTRUCTIONS:

1. REMOVE BEZEL AND LATCH RELAY ON BRACKET.
2. INSERT BRACKET THROUGH FRONT OF PANEL CUTOUT AND SECURE WITH FLAT WASHERS AND LOCKNUTS PROVIDED.
3. CONNECT WIRING TO TERMINALS.
4. INSTALL BEZEL USING 6-32 x 0.31 SCREWS PROVIDED.

NOTE:

1. DIMENSIONS IN MILLIMETRES (INCHES).

FIGURE 4. PMA-55 Panel-Mount Adapter.

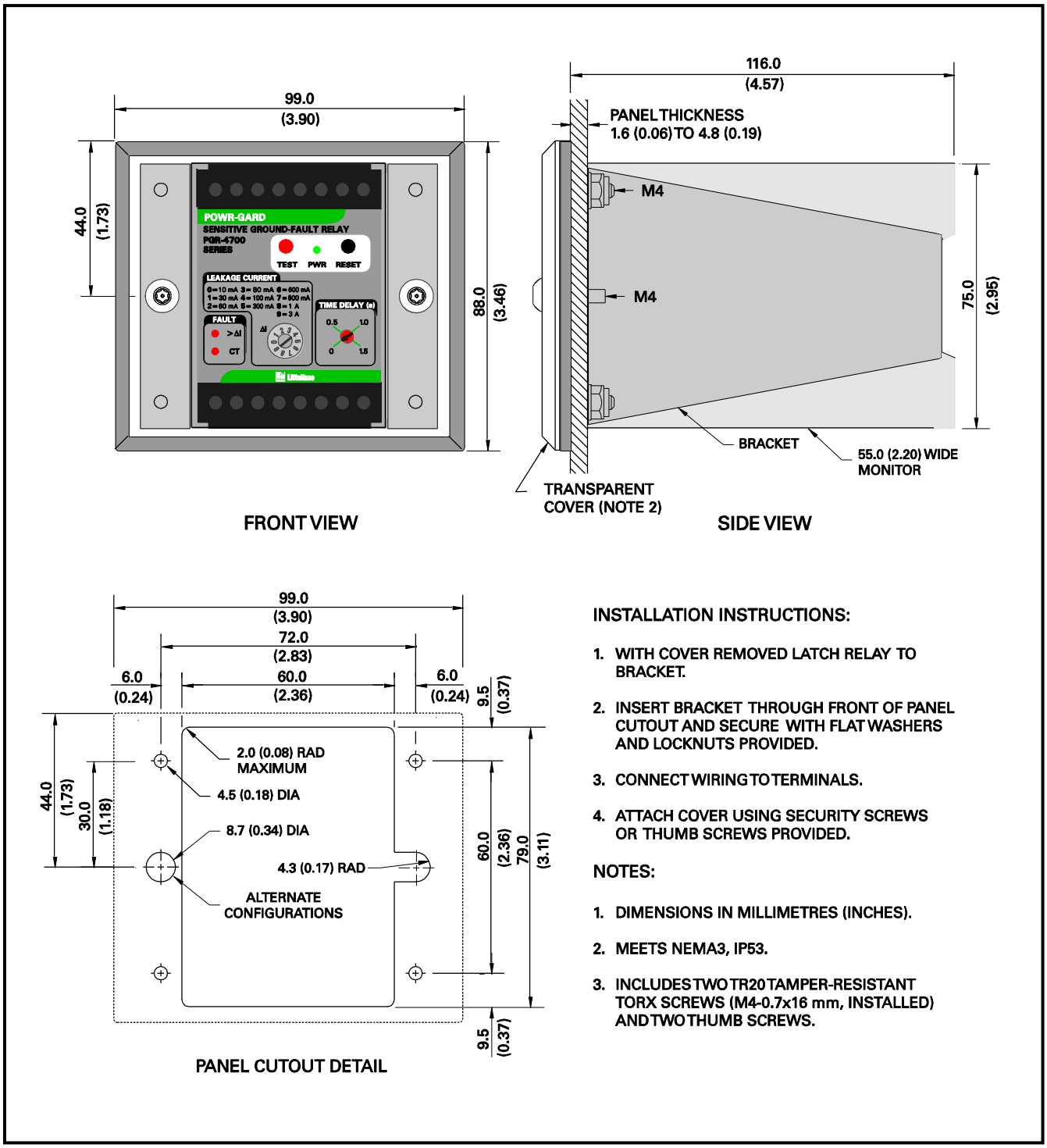


FIGURE 5. PMA-60 Panel-Mount Adapter.

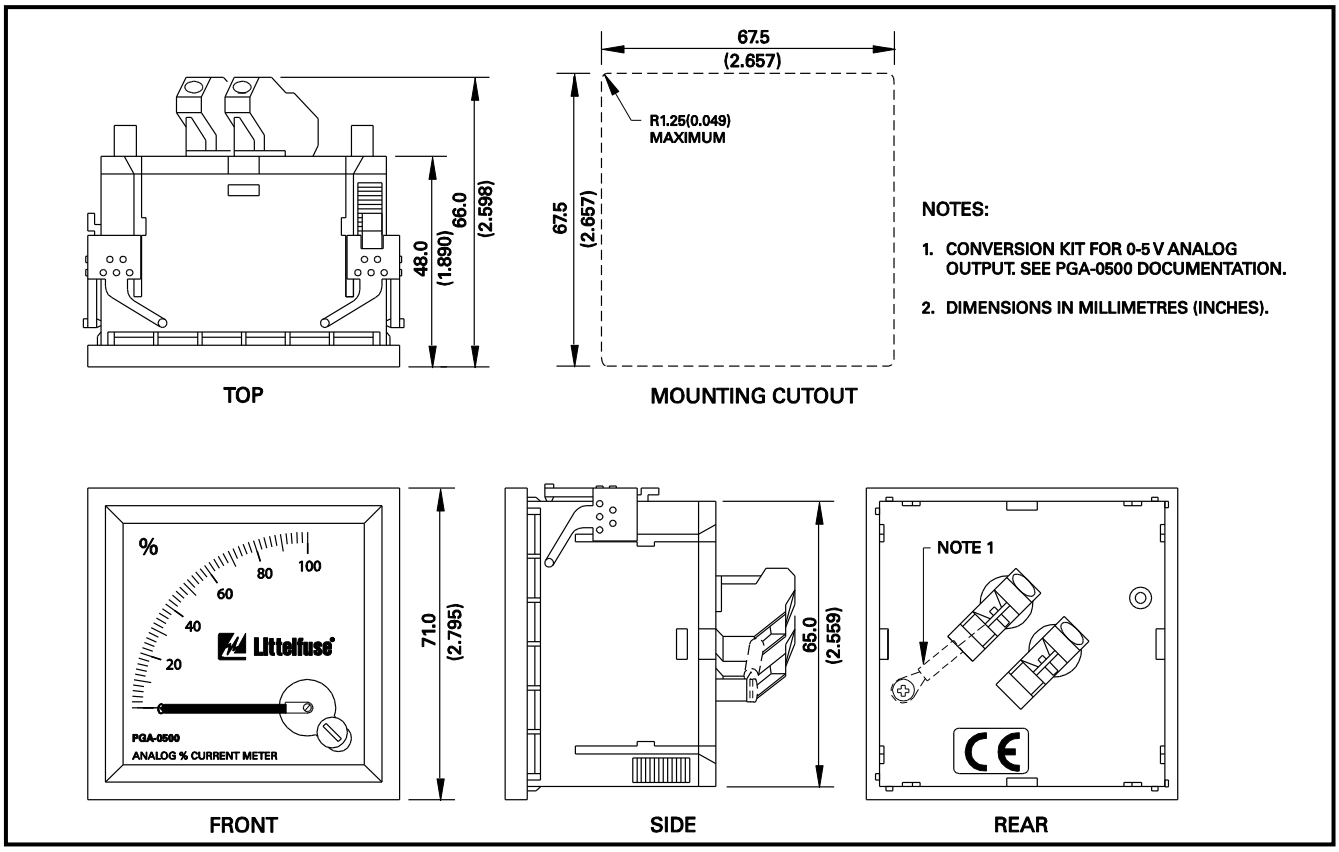


FIGURE 6. PGA-0500 Analog Percent Current Meter.

4. TECHNICAL SPECIFICATIONS

Supply:
- 120 Option ..... 4 VA, 120 Vac, (+10, -15%) 50/60 Hz
- 240 Option ..... 4 VA, 240 Vac, (+10, -15%) 50/60 Hz
- 24 Option ..... 3.0 W, 14 to 30 Vdc

Trip-Level Settings (ΔI)..... 10, 30, 60, 80, 100, 300, 600, 800, 1,000, and 3,000 mA

Trip-Time Settings ..... 0 to 1,500 ms

Accuracies:[1, 2]
- Trip Level:[3]
  - 60 to 3,000 mA ..... ±15%
  - 30 mA ..... ±10 mA
  - 10 mA ..... ±5 mA
- Trip Time[4]
  - Minimum Setting ..... 50 to 100 ms
  - Typical ..... ±30%

Input:
- 3 dB Frequency Response ..... 20 to 90 Hz
- CT PGC-5000-Series
- CT Detection ..... Open-Circuit Detection
- Thermal Withstand:
  - Continuous ..... 25-A Ground-Fault Current
  - 1-Second ..... 400-A Ground-Fault Current

Analog Output:
- Mode ..... % of Trip-Level Setting
- Range ..... 0 to 1 mA dc

Reset ..... Front-Panel Button and Remote N.C. Contact

Test ..... Front-Panel Button and Remote N.O. Contact

Output Relay:
- Contact Configuration .....2 Form C
- Operating Mode .....Fail-Safe or Non-Fail-Safe
- UL Rating .....5 A, 125 Vac Resistive

Supplemental Contact Ratings:
- Carry Continuous .....5 A

Trip Mode .....Latching or Autoreset

Terminals.....Wire Clamping, 22 to 12 AWG (0.3 to 3.3 mm^2) Conductors
- Tightening Torque.....0.40 N•m (3.54 lbf•in)
- Conductor Type.....Copper, solid or stranded with ferrules.
- Conductor Rating 60/75ºC

Dimensions:
- Height.....75 mm (3.0")
- Width.....55 mm (2.2")
- Depth .....115 mm (4.5")

Shipping Weight.....0.45 kg (1 lb)

Environment:
- Operating Temperature .....-10 to 60°C (14 to 140°F)
- Storage Temperature.....-40 to 80°C (-40 to 176°F)
- Humidity.....85% Non-Condensing
- Enclosure Rating.....IP20
- Altitude.....2,000 m (6,562 ft) maximum
- Overvoltage Category.....II
- Pollution Degree 2

Certification .....UL Listed

c UL us LISTED SWITCHES, IND CONT 19PF NRNT, NRNT7, E183688

UL508 Industrial Control Equipment

FCC

NOTES:
(1) At 50 or 60 Hz unless otherwise noted.
(2) PGC-5000-series CT included.
(3) Maximum lead resistance of 2 Ω.
(4) At 3 x trip-level setting.

5. ORDERING INFORMATION

PGR-4700-☐

Supply:
120 120-Vac Supply
240 240-Vac Supply(1)
24 24-Vdc Supply

PGA-0500..... Analog Percent Current Meter
PGC-5025.....Current Transformer, 25.0 mm (1.0") Window
PGC-5060.....Current Transformer, 60.8 mm (2.4") Window
PGC-5095.....Current Transformer, 95.0 mm (3.7") Window
PGC-5130.....Current Transformer, 130.0 mm (5.1") Window
PGC-5200.....Current Transformer, 200.0 mm (7.9") Window
PMA-55.....Panel-Mount Adapter, NEMA 1
PMA-60.....Panel-Mount Adapter, NEMA 3, IP53
PMA-3.....Adapter Plate, GEC/MCGG

Consult factory for custom mounting adapters.

NOTES:
(1) UL not available for this ordering option.

6. PERFORMANCE TEST

Some jurisdictions require periodic ground-fault performance tests. A test record form is provided for recording the date and the result of the performance tests. The following ground-fault system tests are to be conducted by qualified personnel.

a) Evaluate the interconnected system in accordance with the overall equipment manufacturer's detailed instructions.

b) Verify proper location of the PGC-5000-series CT. Ensure the cables pass through the CT window. This check can be done visually with knowledge of the circuit. The connection of the current-transformer secondary to the PGR-4700 is not polarity sensitive.

c) Verify that the system is correctly grounded and that alternate ground paths do not exist that bypass the current transformer. High-voltage testers and resistance bridges can be used to determine the existence of alternate ground paths.

d) Verify proper reaction of the circuit-interrupting device in response to a simulated or controlled ground-fault current. To simulate ground-fault current, use CT-primary current injection. Fig. 7 shows a test circuit using the SE-400 Ground-Fault-Relay Test Unit. The SE-400 has a programmable output of 0.5 to 9.9 A for a duration of 0.1 to 9.9 seconds. Fig. 7 shows the use of resistors that reduce the injected current to 10% of the
SE-400 setting. Set the test current to 120% of the PGR-4700 setting. Inject the test current through the CT window for at least 2.5 seconds. Verify that the circuit under test has reacted properly. Correct any problems and re-test until the proper reaction is verified.

e) Record the date and the results of the test on the attached test-record form.

NOTE: Do not inject test current directly into CT-input terminals 7 and 8.

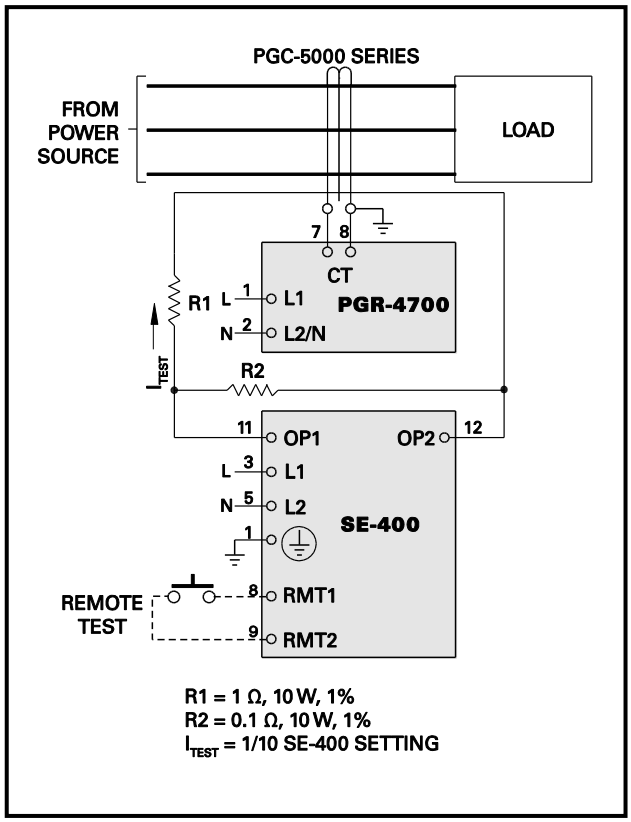


FIGURE 7. Ground-Fault-Test Circuit.

TABLE 1. GROUND-FAULT-TEST RECORD

DATE	TEST RESULTS

Retain this record for the authority having jurisdiction.

APPENDIX A
PGR-4700 REVISION HISTORY

MANUAL RELEASE DATE	MANUAL REVISION	PRODUCT REVISION (REVISION NUMBER ON PRODUCT LABEL)
March 22, 2018	2-B-032218	00
July 31, 2015	2-A-073115	

MANUAL REVISION HISTORY

REVISION 2-B-032218

SECTION 4

Specifications updated.

REVISION 2-A-073115

SECTION 2

Fig. 1 updated.

SECTION 3

PMA-55 and PMA-60 added.

SECTION 5

Ordering information updated.

SECTION 7

Fig. 7 updated.

APPENDIX A

Revision history added.

PRODUCT REVISION HISTORY

PRODUCT REVISION 00

UL Certification.