PGFM SERIES

ELCI AND GFCI PROTECTION FOR DATA CENTERS AND GENERATOR APPLICATIONS

The LineGard™ PGFM product family – operating in tandem with an an Airpax™ circuit breaker – delivers both equipment leakage and ground fault circuit protection (ELCI and GFCI), helping to ensure equipment is protected from ground faults and that personnel are safeguarded from electric shock in generator, CDU, and other applications.

The combined assembly is recognized as a Class A UL 943 (120V Only) and as UL 1053 (240V Only) rated device. The PGFM constantly monitors the current balance of the conductors (wires / cables) supplying power to the load. When a ground fault occurs, the PGFM uses the circuit breaker's shunt trip coil to signal the breaker to trip.

Regulatory requirements around GFCI applications are largely incorporated into UL 943 (Class A GFCI) – which is designed to protect personnel from potential electric shock - and UL 1053 - which covers both GFCI and Equipment Leakage Circuit Interruption (ELCI)

- For ELCI Applications - the PGFM module can be paired with either a UL489 or a UL1077 Airpax circuit breaker, depending on the level of protection required. For specific ignition-protected environments, the PGFM module can be paired with an IDG or IDL Series circuit breaker, which are also available as standalone circuit breakers for distribution panels. UL 1053 Listed (6mA, 10mA, 20mA, 30mA)
- For GFCI Applications – the PGFM module can be paired with Airpax LEL series UL 489 listed circuit breaker with shunt trip. 6mA UL Listed.

Sensata also provides specific PGFM models for Marine applications designed for integration into standard watercraft panels.



Features

- Power and fault status indicators
- Provides identification of a ground fault vs. short circuit trip
- Chemical and UV resistant enclosure
- Protection range and operating voltage: 0 - 50 Amps, 120 VAC, 120/240 VAC, 240V
- Unit operating temperature is -35°C to +66°C
- Accommodates up to 3 wires, 6 AWG

Applications Coolant Distribution Units

- Data Centers
- Marine
- Generators
- Panel Protection

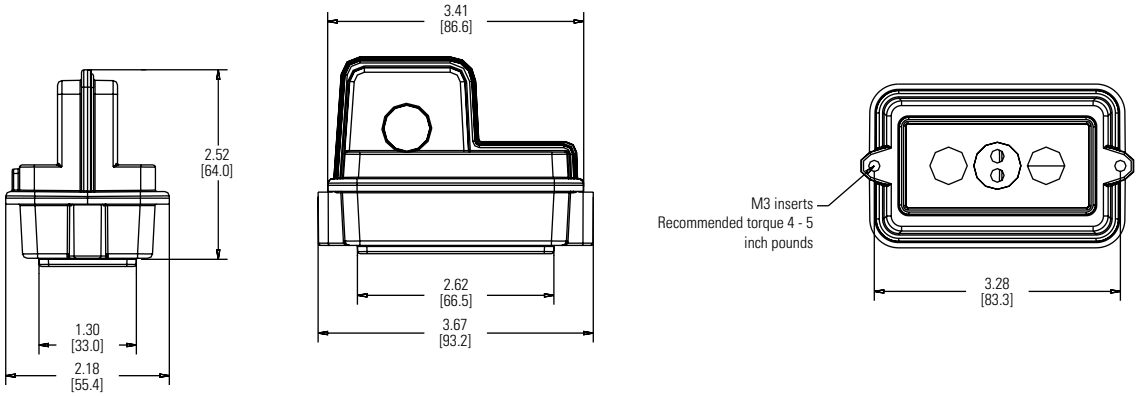
SPECIFICATIONS

Type	GFP - UL 943 (120V Only) Category FTTJ2 when used in tandem with Airpax LEL series (UL 489 listed circuit breaker with shunt trip) ELCI – UL 1053 Category FTTJ2 when used in tandem with Airpax LEL series (UL 489 listed circuit breaker with shunt trip)
Operating Voltage	120 VAC or 120/240 VAC, 50/60 Hz
Interrupting Voltage	Rating of UL 489 listed circuit breaker
Sensing Coil Voltage Limit	400 VAC maximum
Phase Interrupt	Single (120 VAC 3 wire), Split (120/240 VAC 4 wire) , 240VAC 3-wire (L1, L2, N)
Short Circuit	120VAC, 50A 120/240VAC, 50A 240VAC, 50A
Trip Time of Combined Assembly	PGFM: UL943 - 25mS, ELCI: UL1053 - 100mS or less (60mS nominal)
Trip Level	5mA +/- 1mA, 8mA +/- 2mA, 18mA +/-2mA, 27mA +/- 3mA
Operating Temperature	-35°C to +66°C
Reset Type	Automatic on power up (PGFM Only) Note*1
Salt Fog (Corrosion)	ASTM B117
Shock	33CFR183.534 - modified to supply 5,000 shocks @ 25G, instead of test standard of 1,000 shock
Vibration	MIL-STD-810 (random vibe 4G RMS), IEC 6945 (sine sweep 5 to 100 Hz for low frequency)

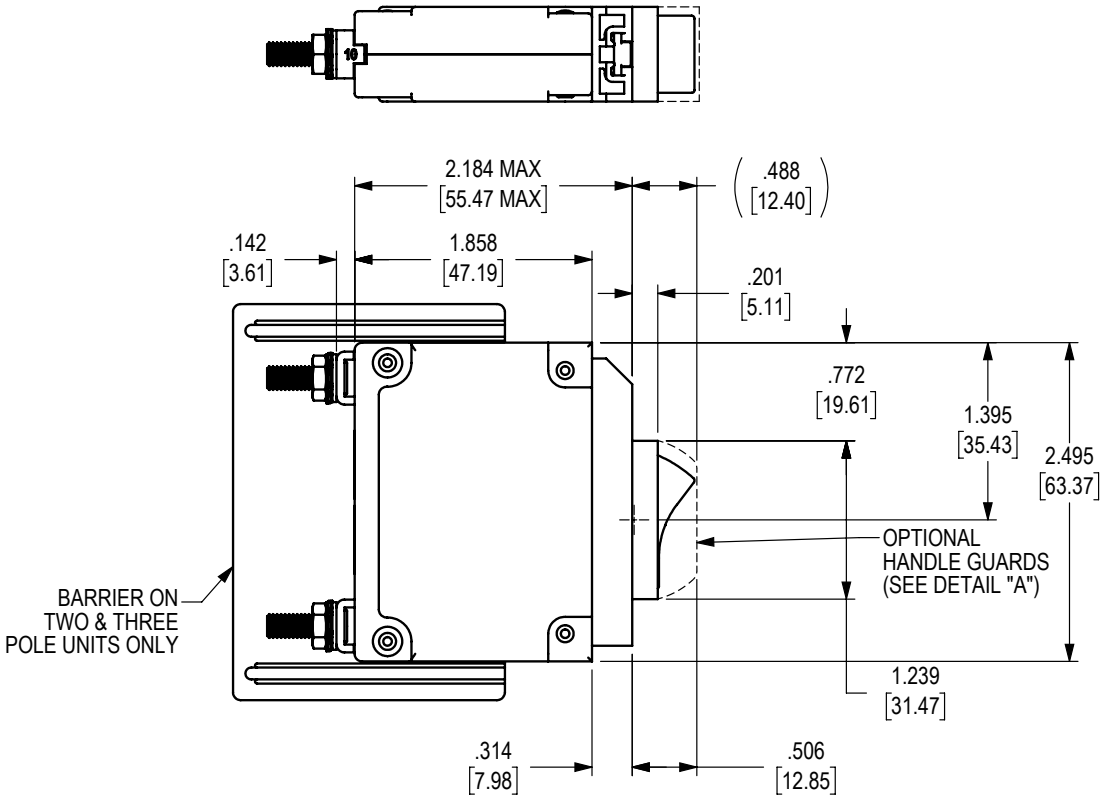
Copyright © 2026 Sensata Technologies, Inc.

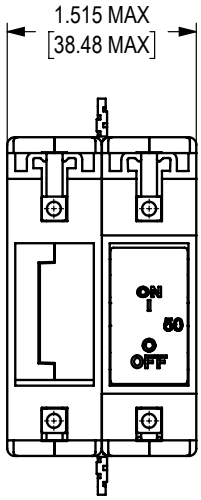
Note:
1. Manual configuration should be specified if automatic start-up after power restoration of circuit power creates an unsafe condition.
2. As per UL 943 requirements, portable devices may require breaking of neutral during ground fault detection. Please contact the factory.
3. Please contact Airpax for optional ELCI, UL 1053 compliant devices.

DIMENSIONAL DRAWINGS



Dimensional Drawings (Example Of LEL Breaker, Typical 2-Pole Configuration)





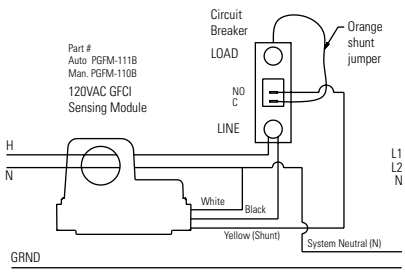
TWO POLE
(OPTIONAL: HANDLE MAY BE
IN POLE 2 INSTEAD OF POLE 1)

Panel Mounting Detail
Tolerance ±.005 [.13] unless noted.

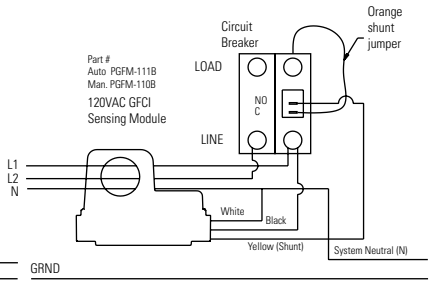
Copyright © 2026 Sensata Technologies, Inc.

WIRING DIAGRAM INSTRUCTIONS

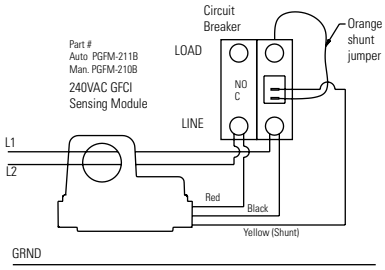
Single Phase 120VAC (Hot, Neutral, GRND)



Split Phase 120/240VAC (L1, L2, Neutral, GRND)

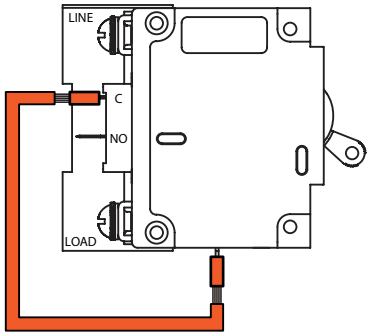


Single Phase 240VAC (L1, L2, GRND)



Notice: Current carrying wires must be twisted together as they pass through the sensing module

Wiring Diagram (Orange Jumper Wire For Circuit Breaker)



DANGER!

Hazard of electrical shock, burn or explosion.
Disconnect power at main power feed before you start installation. Failure to do so may cause severe shock, personal injury, or death.

Installation Instructions

1. Read and follow all instructions
2. Identify all the features and wires (see drawings)
3. Identify line wires and load wires
4. Verify that the ratings on the device, including the circuit breaker, match your field line ratings
5. Strip wires to 5/8", or as recommended for your connections (module may include field terminations)
6. Choose the right wiring application (120VAC or 120/240VAC split phase) and connect wires according to diagrams
7. Place supplied test instruction label in close proximity to the ground fault sensing module mounting location.

NOTE: The ground wire should be connected externally. The Ground wire does not enter or exit the ground fault sensing module. Although the PGFM does not monitor ground leads or require ground to operate, ground connection is recommended and should be made at junction box.

Testing And Troubleshooting

In the normal operating state, the PGFM green LED is "ON" and circuit breaker is in the "ON" position.

1. Press "TEST" button: Green LED should go "OFF" and red LED should come "ON" and circuit breaker should trigger to "OFF" position
2. If sensing device red LED does not illuminate or breaker does not trip or change state, DO NOT USE and consult an electrician for assistance
3. Press "RESET" button: Red LED should turn "OFF" and green LED should turn "ON"
4. Manually reset (switch) the circuit breaker to the "ON" position to restore circuit power

WARNING: If the test fails, do not use this ELCI. Consult a qualified electrician for repair or replacement

ORDERING OPTIONS

Part Number	Construction	Current	Voltage	Trip Level	Tolerance	Value Proposition	Typical Applications
PGFM-111-B-A1	w/ shunt trip	0-50A max	120V	5mA	+/- 1mA	Ground Fault	Generators
PGFM-211-B-A1-291	w/ shunt trip	0-50A max	240V	18mA	+/- 3mA	Balanced Ground Fault and Equipment Leakage	Generators, Power Distribution Units, Data Center Equipment
PGFM-111-B-A1-187	Potted w/ shunt trip	0-50A max	120V	27mA	+/- 3mA	Equipment Leakage	Generators, Marine
PGFM-211-B-A1-187	Potted w/ shunt trip	0-50A max	240V	27mA	+/- 3mA	Equipment Leakage	Generators, Marine
PGFM-211-B-A1-98	w/ shunt trip	0-50A max	240V	8mA	+/- 2mA	Equipment Leakage	Generators, Power Distribution Units, Data Center Equipment
PGFM-211-B-A1	w/ shunt trip	0-50A max	240V	5mA	+/- 1mA	Ground Fault	Generators, Marine
PGFM-111-B-A1-138	w/ shunt trip	0-50A max	120V	27mA	+/- 3mA	Equipment Leakage	Generators, Power Distribution Units, Data Center Equipment
PGFM-111-B-A1-138	w/ shunt trip	0-50A max	240V	5mA	+/- 3mA	Equipment Leakage	Generators, Power Distribution Units, Data Center Equipment

Copyright © 2026 Sensata Technologies, Inc.

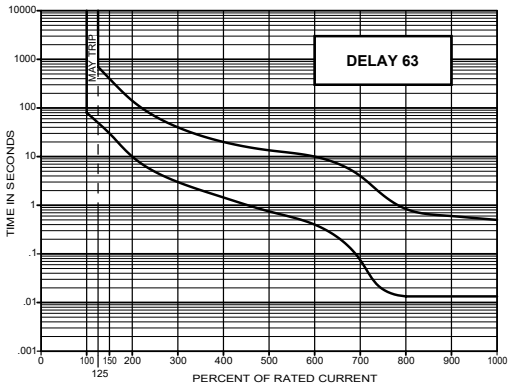
AIRPAX™ LEL & IDLNK SERIES CIRCUIT BREAKER RATINGS (PER UL489)

Voltage	Current	Frequency	Short Circuit	Poles
120VAC	0.05 to 50 amps	50/60 Hz	5,000 amps	1 to 3
120/240VAC	.05 to 50 amps	50/60 Hz	5,000 amps	2 to 3

AIRPAX™ LEL & IDLNK SERIES CIRCUIT BREAKER SPECIFICATIONS

Moisture Resistance	MIL-STD-202, Method 106
Salt Spray (Corrosion)	MIL-STD-202, Method 101
Shock	MIL-STD-202, Method 213, Test Condition I with 100% rated current applied
Vibration	MIL-STD-202, Method 204, Test Condition A with 100% rated current applied
LEL Agency Approvals	UL489 Listed, CSA Certified, VDE Approved, CCC Approved, CE Compliant
IDLNK Agency Approvals	UL 1077 Recognized, C22.2 No. 235 complaint to UL 1500 or SAE J1171 ignition protection

Compatible Airpax™ Circuit Breakers - UL 489 Listed; Vde Per En 60934 (Non-Ignition Protected)

Amps	Poles	Part Number	Voltage	Trip Coil	Short Circuit	Delay Curve
30	2	LEL12-1REC5-37583-30-G1-V	120V	120V	5000A	
30	2	LEL12-1REC5-37583-30-G2-V	240V	240V	5000A	
30	3	LEL121-1REC5-37275-30-G1-V	120/240V	120V	5000A	
50	2	LELK12-1REC5-37583-50-G1-V	120V	120V	5000A	
50	2	LELK12-1REC5-37583-50-G2-V	240V	240V	5000A	
50	3	LELK121-1REC5-37275-50-G1-V	120/240V	120V	5000A	

WARNINGS



RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE
- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH
- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

Failure to follow these instructions can result in death or serious injury.

Datasheets provided by Sensata Technologies, Inc., its subsidiaries and/or affiliates ("Sensata") are solely intended to assist third parties ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, valuation, and judgment in designing Buyer's systems and products. Sensata datasheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular datasheet. Sensata may make corrections, enhancements, improvements, and other changes to its datasheets or components without notice.
Buyers are authorized to use Sensata datasheets with the Sensata component(s) identified in each particular datasheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATASHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATASHEETS OR USE OF THE DATASHEETS, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATASHEETS OR USE THEREOF.
All products are sold subject to Sensata's terms and conditions of sale supplied at www.sensata.com. SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY, AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS- RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.
Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

Copyright © 2026 Sensata Technologies, Inc.

Revised 06/16/26

CONTACT US

Americas
508-236-2551
electrical-protection-sales@sensata.com
Europe, Middle East & Africa
+31743578156
info-sse@list.sensata.com
Asia Pacific
sales.isasia@list.sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7117
Korea +82 (31) 601 2004
India +91 (80) 67920890
Rest of Asia +886 (2) 27602006 ext 2808