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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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PGR-8800 SERIES (D1000)

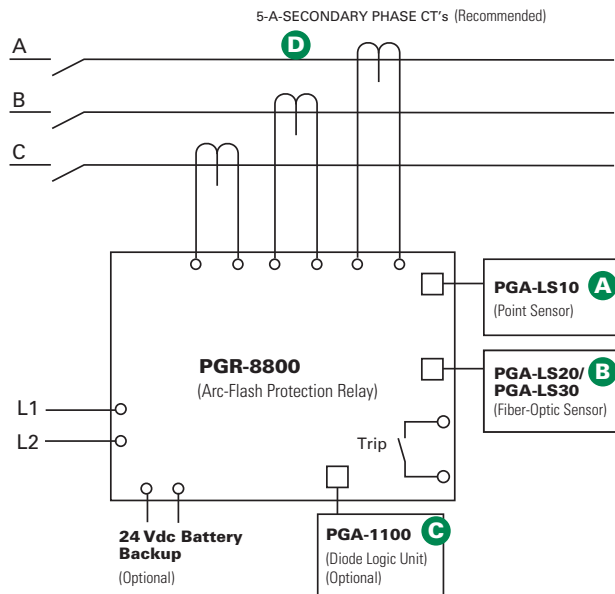
Arc-Flash Relay



Description

The PGR-8800 is a microprocessor-based relay that limits arc-fault damage by detecting the light from an arc flash and rapidly tripping. Phase-current-transformer inputs are provided for current-constrained arc-flash protection and, when so equipped, a programmable definite-time overcurrent function can be enabled. An optical sensor on the PGR-8800 and adjustable trip level reduce the chance of nuisance tripping by setting a threshold for ambient light. Sensors, inputs, and connections are monitored to ensure fail-safe operation. A secondary solid-state trip circuit provides a redundant trip path. A USB port is used for configuration and access to event logs and graphs.

Simplified Circuit Diagram



For detailed wiring diagram, see adjacent page.

Ordering Information

ORDERING NUMBER	DESCRIPTION
PGR-8800-00 (UL, CE, CSA, RCM)	Arc-Flash Relay
PGR-8800-00-CC (UL, CE, CSA, RCM)	Arc-Flash Relay, Conformally Coated
ACCESSORIES	REQUIREMENT
PGA-LS10	Required*
PGA-LS20, PGA-LS30	Required*
PGA-1100	Optional
Current Transformer	Recommended

*At least one sensor is required. However, the exact number of sensors for proper coverage depends on the application.

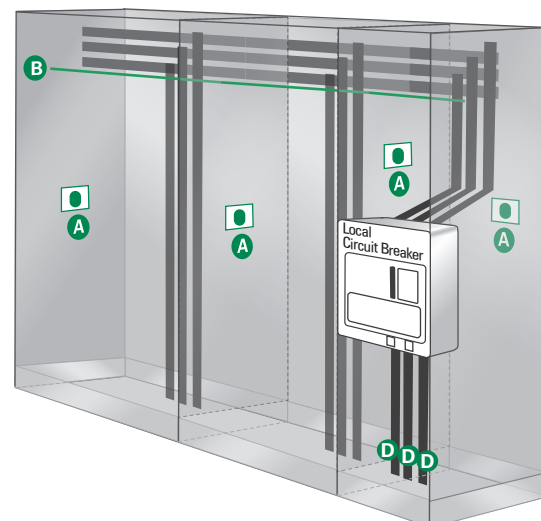
Optical Sensors

The PGR-8800 accepts both PGA-LS10 and PGA-LS20/PGA-LS30 optical sensors, designed to collect light over a wide angle and with high sensitivity. For fast fault location, front-panel and sensor LED's indicate sensor health and which sensor detected an arc fault.

Sensor Placement

The PGR-8800 Arc-Flash Relay and sensors are easily installed in retrofit projects and new switchgear with little or no re-configuration. Even elaborate systems with multiple power sources take minutes to configure using the relay's built-in USB interface software.

Generally, it is recommended to mount 1 or 2 sensors per cubicle to cover all horizontal and vertical bus bars, breaker compartments, drawers, and anywhere that there is potential for an arc-fault. Threading a fiber-optic sensor through the cabinets and in areas where point-sensor coverage is uncertain results in complete coverage and an added level of redundancy. Even if policy is to only work on de-energized systems, all maintenance areas should be monitored to prevent potential damage and additional cost. At least one sensor should have visibility of an arc fault if a person blocks the other sensor(s).

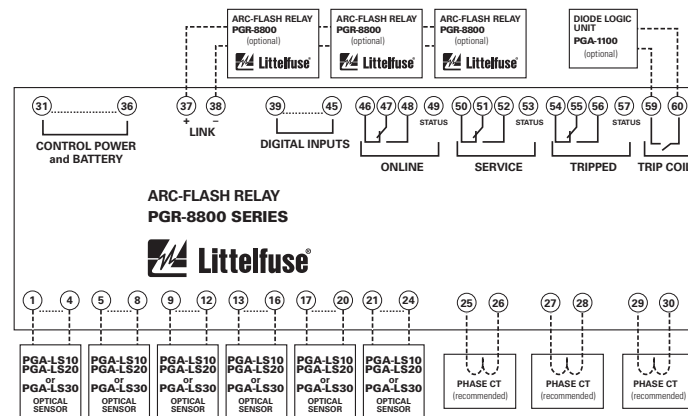


PGR-8800 SERIES (D1000)





Features & Benefits

FEATURES	BENEFITS
Arc-Flash trip time <1 ms	Limits arc-flash damage and risk of injury
Multiple sensors (up to 24)	Single module can monitor 6 sensors. Up to 4 PGR-8800 units can be linked into one system
Fail-safe system	Continuous monitoring of optical sensors and inputs ensures protection
Redundant trip circuit	Solid-state backup arc-detection circuit adds a second layer of safety
Adjustable light sensitivity	Allows for operation in bright environments and maximum sensitivity in dark environments
LED indication (on unit and each sensor)	18 LEDs provide at-a-glance status for module and I/O state
Current detection	Phase-CT inputs provide overcurrent protection and prevent nuisance trips
Optical detection	Point and fiber-optic sensors provide wide detection area with sensor health trip indication
Digital inputs (6)	Two each: remote trip, inhibit, and reset inputs
Service mode	Allows for system test without tripping
Trip coil contact	Solid-state 24-300 Vdc/24-300 Vac IGBT
Indication contacts	Form C and status outputs
USB interface	Data logging and configuration software uses a USB interface with no drivers or software installation
Built-in sensor	Can be used in single-sensor systems, as a seventh sensor, and for calibration
Universal power supply/Battery backup	100-240 Vac, 14-48 Vdc, or 110-250 Vdc supply accepted. Ability to charge and run off an external, user-supplied 24 Vdc battery.
Data logging	On-board event recorder helps with system diagnostics
Modbus	Remotely view measured values, event records & reset trips
Upstream Tripping	Ability to trip upstream device if the local breaker fails to clear the fault

Wiring Diagram



Accessories

- A**  **PGA-LS10 Point Sensor**
Line-of-sight light sensor detects an arc as small as 3 kA within a 2-m half-sphere. Sensor health and trip indication. Dimensions: See PGR-8800 Manual
- B**  **PGA-LS20/PGA-LS30 Fiber-Optic Sensor**
360° light sensor for tricky installations with many shadows or to run along bus bars. Sensor health and trip indication. Dimensions: See PGR-8800 Manual
- C**  **PGA-1100 Diode Logic Unit**
This module allows multiple PGR-8800 relays to trip the same breaker, for example an upstream or a tie-breaker. Dimensions: **H** 80mm (3.15") **W** 20mm (0.79") **D** 70mm (2.76")
- D**  **Current Transformers**
Eliminate nuisance arc-flash trips and use for overcurrent protection.

Specifications

IEEE Device Numbers	Overcurrent (50), Arc Flash (AFD)
Input Voltage	100-240 Vac, 14-48 Vdc, and 110-250 Vdc
Dimensions	H 130 mm (5.1"); W 200 mm (7.9"); D 54 mm (2.1")
Optical Trip Settings	9-25 klux, 800 μs-20 s
Current Trip Setting (A)	Programmable
Indication Contact Mode	Fail-safe
Trip Coil Voltage⁽¹⁾	24-300 Vdc, 24-300 Vac
Trip Coil Contact Mode	Selectable fail-safe or non-fail-safe
Redundant Trip Circuit	Standard feature
Input Monitoring	Standard feature
USB Interface	Standard feature
Trip, Reset, Service Buttons	Standard feature
Expandable System	Link up to 4 PGR-8800 units
Warranty	5 years
Mounting	Surface, DIN (with D0050 adapter clips)
Approvals	UL, CE, CSA, RCM, FCC, DNV type approval, ABS type approval

NOTE (1) - Contact Littelfuse for trip coil voltages higher than 300 Vdc/Vac.

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