Pow-R-Line 1aF and Pow-R-Line 2aF fusible panelboards

Eaton's Cutler-Hammer® Pow-R-Line 1aF (PRL1aF) and Pow-R-Line 2aF (PRL2aF) lighting panelboards are designed principally for selectively coordinated system applications where high fault current levels are present.

Easy Access to CC Fuse from Deadfront

Powering Business Worldwide

Pow-R-Line 1aF and 2aF

Selective coordination is mandated by the National Electrical Code® (NEC®) in Articles 700.27 (Emergency Systems), 701.18 (Legally Required Standby Systems) and 708.54 (Critical Operations Power Systems).

Coordination is defined by the NEC as the localization of an overcurrent condition to restrict outages to the circuit or equipment affected, accomplished by the choice of overcurrent protective devices and their ratings or settings.

In order to achieve high fault current ratings, the PRL1aF and PRL2aF panelboards incorporate "Class CC" fuses for branch circuit protection. When applied with the appropriate upstream fuses, selective coordination ratings may be achieved for available fault currents at the panel of up to 200,000 AIC.

The fuses are coupled with breakers on the line side of the fuse. The fuse is enclosed in a fuse holder that is factory connected from the line-side breaker. Both the fuse holder and the breaker disconnect handle are accessible from the panelboard deadfront, as on any typical lighting panel.

Standard features

- Neutral bar
- Complete assembly (box, trim and chassis are shipped together)
- All circuits include factory-installed breaker and fuse holder
- 28"-wide enclosures
- Neon fuse status indicator

Optional features

- Copper bus
- Copper neutral
- Copper ground bar
- Branch "Class CC" fuses factory installed (factory-selected fuse manufacturer only)

Specifications

Listing:	UL® 67 chassis, UL 50 enclosure
Voltages:	120/240 Vac, single-phase, three-wire
	208Y/120 Vac, three-phase, four-wire
	480Y/277 Vac, three-phase, four-wire
Circuits:	12-, 18-, 24-, 30- and 42-circuit chassis
Bus ratings:	100A, 225A and 400A
Bus material:	Aluminum (standard) Copper (optional)
Branch circuit amperages:	0.2A–30A with the appropriate Class CC fuse
Short circuit current ratings:	Up to 200 kAIC

Selection recommendations

Proper selection of upstream main and feeder overcurrent devices is critical. Systems requiring selective coordination should be carefully designed. Overcurrent devices should be selected by professionals based on the characteristics of each overcurrent device at the appropriate fault current at the panel and by location.

For proper selection of the branch fuse, consult the specific fuse manufacturer's information with respect to selective coordination. Selection of the correct combination of overcurrent devices is essential for selective coordination. Fuses throughout the distribution system must be from the same manufacturer for both the initial installation and all replacement fuses in the future, as fuse characteristics vary from manufacturer to manufacturer.

These choices should be confirmed by a licensed professional engineer to ensure compliance with selective coordination mandates.

Both the Pow-R-Line 1aF and Pow-R-Line 2aF are enclosed in 28"-wide enclosures. The oversized boxes allow ample wiring room for field electricians to connect branch load conductors.

Other considerations

There are other factors, such as elevator distribution systems, that should also be addressed. Regardless of whether the electrical distribution system or part of the electrical distribution system requires selective coordination, any elevator within a facility is required to be selectively coordinated. Several different codes, including NFPA 70 (National Electrical Code), NFPA 72 (National Fire Alarm Code), ANSI/ASME A17.1 (Safety Code for Elevators and Escalators) and NFPA 13 (Installation of Sprinkler Systems), determine electrical system requirements for elevators. A combination of all four codes typically applies for every installation.

Eaton provides two different offerings to achieve compliance with these codes. The elevator control switch is offered for individual elevator feeds. The elevator control panelboard is offered for elevator banks where several elevators are fed from a central location. For more information on these products, please consult our Web site at www.eaton.com.

The PRL1aF and PRL2aF may also be used for other critical power loads. These include loads such as UPS and inverter applications.

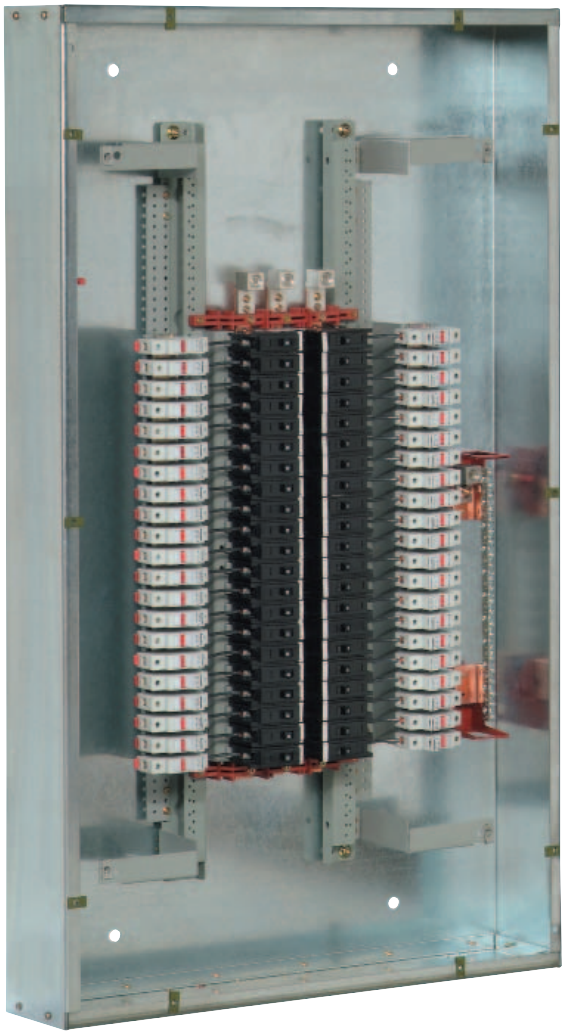
Beyond selective coordination

In applications where there is a need for circuit limitation below 15A (the minimum overcurrent device allowed by UL® 67), the PRL1aF and PRL2aF are an ideal solution. This is accomplished with the upstream Cutler-Hammer breaker immediately ahead of the fuse, conforming to the UL standard. The fuse on the load side of the breaker can be selected with lower ratings than the upstream breaker disconnect for that circuit.

These applications include test facilities and other applications where customers require overcurrent devices below 15A. Typically, for these applications, the fuse device is placed in another enclosure. Class CC fuse offerings provide amperage ratings down to 0.2A.

Tell me more

The Pow-R-Line 1aF and Pow-R-Line 2aF are available exclusively from Eaton's Satellite operations. Call or visit your local Satellite plant or see us on the Web at www.eaton.com.



28"-Wide Boxes Ensure Ample Wiring Space

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