

Section Overview

Our comprehensive line of single- and multi-function protection relays safeguard equipment and personnel in order to prevent expensive damage, downtime or injury due to electrical faults.

The features and flexibility within the products and the software allow you to select the appropriate protection for each part of your electrical system.



PROTECTION RELAYS AND CONTROLS

Table of Contents

Feature Comparisons	146
Ground-Fault Protection	148
Trailing Cable Protection.....	151
Resistance Grounding and NGR Monitoring	152
Motor Protection	154
Pump and Feeder Protection	156
Arc-Flash Protection.....	157
Industrial GFCI (Shock-Block™)	157
Generator and Single-Function Protection	158
Generator Control.....	163
Engine Control and Diagnostics	167
Alarm Monitoring	168
Custom-Engineered Electrical Equipment	170
Accessories.....	171



Download our Complete Relay and Controls Catalog

For more information on relays and controls or to download our full-line relay catalog (PF130N), Visit:

littelfuse.com/RelaysControls

A Full Range of **PROTECTION RELAYS &**

Why are Protection Relays Necessary?

Protection relays safeguard critical components of an electrical circuit from damage. When the relay detects a potentially damaging or unsafe condition, the relay will send an alarm or trip signal in order to notify personnel or prevent the condition from continuing.

Protection relays increase the uptime of critical systems and enhance the safety of people and equipment during fault situations.



We Improve Electrical Safety and Increase Uptime

For decades, Littelfuse has been helping customers improve their electrical systems. In addition to well-designed products, our technical expertise brings years of experience and product design support to your application.

We can provide immediate access to specialized technical resources, online references or field application support. This catalog outlines the Littelfuse line of protection relays, custom-engineered electrical equipment, generator and engine controls, and alarm and annunciator systems, plus the technical capabilities we offer for your application.



Safety

- Shock Hazard
- Injury to Personnel
- Arc-Flash Hazards
- Open-CT Hazards
- Failed Resistors



Cost

- Fault Damage
- Equipment Replacement
- Calibration Costs
- Compliance Citations
- Motor Rewinds



Downtime

- Replacement Time
- Nuisance Tripping
- Intermittent Faults
- Unreliable Protection
- Calibration Time

For All Harsh Environments

- Petrochemical, Oil and Gas
- Pipelines and Transportation
- Aggregate and Cement
- Mining
- Pulp and Paper
- Water and Waste Water
- Shore-to-Ship Power
- Marine
- Data Centers
- Semiconductor Equipment
- Hospitals
- Alternative Energy
- Power Generators

CONTROLS for the Harshest Environments



GENERATOR PROTECTION & CONTROL

Our line of generator protection and control equipment offers synchronizing, frequency control, load sharing, power management, engine control and more for marine, emergency or power generation applications.



ENGINE CONTROL & MONITORING

These monitors can be configured from the front panel, a PC, or via an SD card, and support both digital and analog sensor inputs. Common alarms and shut-downs have large, user-friendly LED displays.



ARC-FLASH DETECTION

Our Arc-Flash relays can rapidly detect developing Arc-Flash incidents and send a trip signal to interrupt power before significant damage occurs.



GROUND-FAULT PROTECTION RELAYS

Improve the safety of workers and reduce incidents of Arc-Flash without affecting the uptime of critical operations. Sensitive ground-fault relays with advanced filtering will detect the breakdown in insulation resistance caused by moisture, vibration, chemicals and dust without nuisance trips.



FEEDER PROTECTION RELAYS

Protect feeder circuits from overcurrents, ground faults, phase loss or other detrimental conditions in critical applications and processes. They provide essential data for predictive and preventive maintenance—extending the life of equipment, enhancing safety and maximizing efficiency.



GENERAL PROTECTION RELAYS

These single-function, compact and cost-efficient relays are typically used on low-voltage applications. Most are DIN-rail mountable, easy to operate, install and commission. The wide-range power supply for AC and DC make these relays universal.



ENGINE DIAGNOSTICS

The EngineEye diagnostic unit can improve the efficiency and performance of combustion engines by measuring and analyzing the engine combustion process. It utilizes a unique handheld high-precision indicator of cylinder pressure.



ALARM & ANNUNCIATOR PANELS

These panels monitor instantaneous current, temperature or pressure, and include local indication, alarm and event logging.



MOTOR & PUMP PROTECTION RELAYS

Prevent expensive damage to motors caused by overloads, jams, phase loss or unbalance, heat from non-electric sources, heavy start-ups or excessive operational cycles. Dynamic thermal curves, integrated protection, metering, and data-logging functions extend motor life and maximize process efficiency.



RESISTANCE GROUNDING & MONITORING

Overcome many of the issues experienced with solidly-grounded and ungrounded systems. High-Resistance Grounding eliminates Arc-Flash Hazards associated with ground faults and transient overvoltages, and allows for continuous operation during a ground fault.