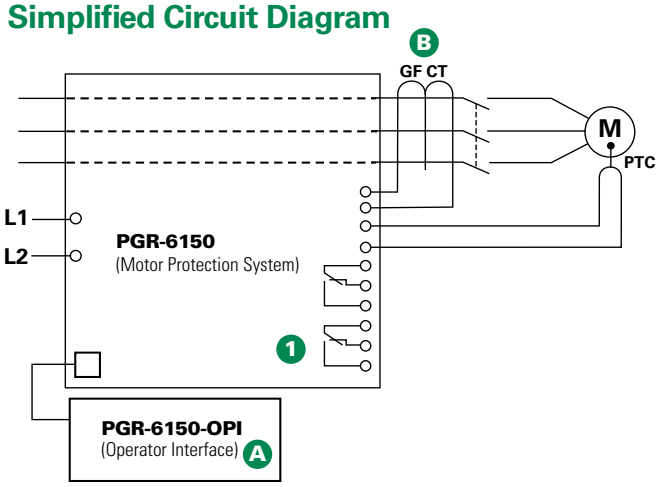
PGR-6150 SERIES

Motor Protection System

1

A

Simplified Circuit Diagram



Ordering Information

ORDERING NUMBER	CONTROL POWER
PGR-6150-24 (Control Unit)	24/48 Vdc
PGR-6150-120 (Control Unit)	120/240 Vac/dc
PGR-6150-OPI (Operator Interface)	Powered by Control Unit

NOTE: External CTs can be used for full-load currents >25 A.

ACCESSORIES	REQUIREMENT
PGC-6000 Series	Optional

Description

The PGR-6150 Motor Protection System provides 13 protective functions by utilizing both current and temperature inputs. It is a modular system consisting of the control unit and an operator interface (PGR-6150-OPI). The OPI allows programming and displays metered values. The PGR-6150 is used to provide current- and temperature-based protection, metering and data logging for three-phase motors used in industrial environments. Current transformers are not required for currents up to 25 A.

1 Control Unit

- Integrated phase CTs (external for applications > 25 A)
- Ground-fault CT input
- One PTC input and one programmable input
- Two programmable output contacts
- Eight status LEDs
- RS-485 Communications
- DIN-rail mountable
- PC interface software

A Operator Interface (optional)

- Large, bright, LCD display (2 x 20 alphanumeric characters)
- Keypad for menu selection (system parameters, measurements, and fault reports)
- Displays metered values
- Six user-programmable LEDs
- Powered by Control Unit
- 1 meter (39-inch) connection cable included

Accessories

A 

PGR-6150-OPI Operator Interface
Optional Operator Interface for displaying metered values and programming

B 

PGC-6000 Series Ground-Fault Transformer
Optional zero-sequence current transformer, used to measure ground-fault current. Required for applications >25 A.

PGR-6150 SERIES

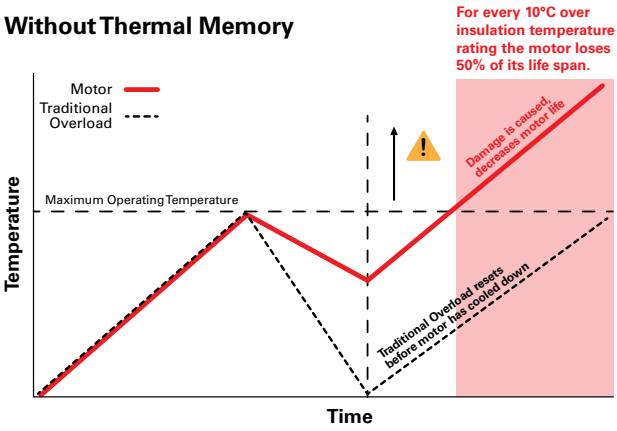
Motor Protection System

Features & Benefits

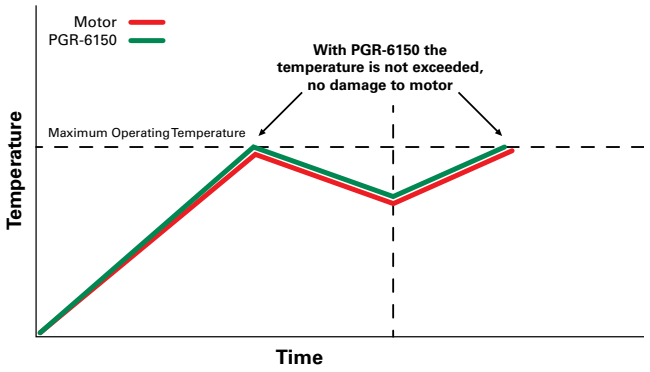
FEATURES	IEEE #	BENEFITS
No CTs required	49, 51	No current transformers are required for currents < 25 A
Adjustable trip settings		Adjustable overload trip class setting from 5 to 45 to match motor characteristics
Digital input		Programmable digital input
Output contacts		Two programmable Form C output contacts for operation of separate annunciation and trip circuits
Overload	49, 51	Extends motor life and prevents insulation failures and fires
Overcurrent/Jam	50, 51	Detects catastrophic failures and fires; extends motor life
Undercurrent	37	Detects low level or no-load conditions
Unbalance (current)	46	Prevents overheating due to unbalanced phases
Phase loss/Phase sequence	46	Detects unhealthy supply conditions
PTC overtemperature	49	Detect high ambient or blocked ventilation and single phasing; prevents shaft/pump damage
Dynamic thermal model		Provides protection through starting, running, overload, and cooling cycles
Communications		RS-485 communications to remotely display metered values

Dynamic Thermal Modeling

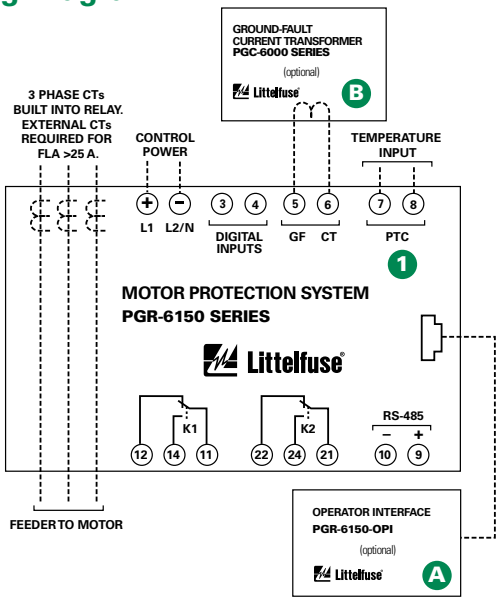
Without Thermal Memory



With Thermal Memory



Wiring Diagram



Specifications

Protective Functions (IEEE Device Numbers)	Overload (49, 51); Phase sequence (46); Overcurrent (50, 51); Jam; Ground fault (50G/N, 51G/N); Undercurrent (37); PTC overtemperature (49); Failure to accelerate; RTD temperature (49); Unbalance (current) (46); Starts per hour (66); Phase loss (current) (46)
Input Voltage	110-230 Vac/Vdc; 24/48 Vdc, 5 W
AC Measurements	RMS, 16 samples/cycle
Frequency	50, 60 Hz
Dimensions	
(Control Unit)	**H** 83 mm (3.3"); **W** 78 mm (3.1"); **D** 99 mm (3.9")
(Operator Interface)	**H** 56 mm (2.2"); **W** 106 mm (4.2"); **D** 22.8 mm (0.9")
Output Contacts	Two Form C
Communications	RS-485 with Modbus® RTU
Approvals	UL Listed (E353735), CE (European Union)
Warranty	5 years
Mounting	DIN (Control Unit); Panel (Operator Interface)