Protection Relays & Controls

Ground-Fault Protection – Grounded/Ungrounded AC Systems



PGR-6101 SERIES (GFR4001)

Ground-Fault & Insulation Monitor



Simplified Circuit Diagram



Ordering Information

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ORDERING NUMBER	CONTROL POWER
PGR-6101-120	120 Vac
ACCESSORIES	REQUIREMENT
PGC-5000 Series	Required
PGH Family	Required >1300 V
PGA-0500	Optional
PGA-0510	Optional

For optional conformal coating please consult factory.

Description



The PGR-6101 combines the features of a ground-fault protection relay and insulation monitor into one unit. It protects against ground faults by monitoring insulation resistance when the motor is de-energized and by monitoring ground-fault current when the motor is energized. The PGR-6101 features two separate analog outputs for optional current and ohm meters, and two separate alarm relays. It operates on one- or three-phase solidly grounded, resistance grounded and ungrounded systems up to 6 kV.

Features & Benefits

FEATURES	BENEFITS
Adjustable GF pickup (30-200 mA)	Trip setting provides a wide range of low-level protection and system coordination
Adjustable insulation pickup (60-600 k Ω)	Customizable insulation resistance setpoints for maximum protection
Adjustable time delay (50-250 ms)	Adjustable trip delay for quick protection and system coordination
Output contacts	Two Form C output contacts for ground fault and insulation-resistance fault
Analog outputs (0-1 mA)	Two analog outputs indicate insulation resistance and ground-fault current
CT-Loop monitoring	Alarms when CT is not connected
Selectable contact operating mode	Selectable fail-safe or non-fail-safe operating modes allows connection to shunt or undervoltage breaker coil

Accessories



PGC-5000 Series Ground-Fault Transformers Required zero-sequence current transformer specifically designed for low level detection. Flux conditioner is included to prevent saturation.



PGA-0500 Analog % Current Meter PGA-0510 Analog Ohm Meter Optional panel-mounted meters display

ground-fault current as a percentage of the set-point and insulation resistance.



PGH Family High Tension Couplers

Required (for systems >1,300 V) PGH Family high-tension coupler must be connected between the phase conductor and the PGR-6101.

Specifications IEEE Device Numbers

Input Voltage Dimensions Response delay Contact Operating Mode Harmonic Filtering Test Button Reset Button CT-Loop Monitoring Output Contacts Analog Output Approvals Warranty Mounting Ground Fault (50G/N, 51G/N), Ground detector (64), Alarm Relay (74) See ordering information H 75 mm (3"); W 100 mm (3.9"); D 115 mm (4.5") < 50 ms Selectable fail-safe or non-fail-safe Standard feature Standard feature Standard feature Standard feature Two Form C 0-1 mA UL Listed (E183688) 5 years DIN, Surface