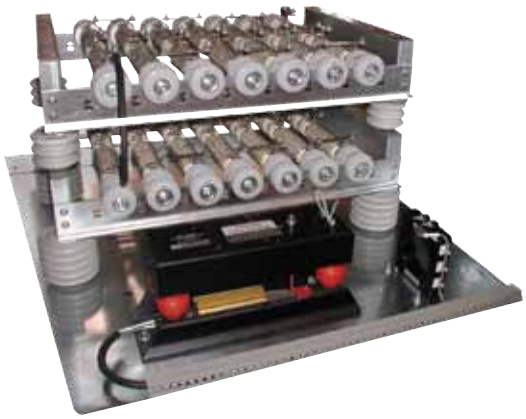
PGN-1000 SERIES

Low-Resistance Grounding System



Description

The PGN-1000 Series Low-Resistance Grounding Systems are used to ground power systems by inserting a resistor between the system neutral and ground. This lowers the potential ground-fault current to a predetermined value.

The PGN-1000 Series Low-Resistance Grounding System includes all necessary components to convert or design a resistance-grounded system. Low-resistance grounding provides benefits over both ungrounded and solidly grounded systems. Because the system is grounded it eliminates transient overvoltages and allows ground-fault current to flow and be detected and measured. However, because a resistor is used to ground the system, the very large and destructive ground-fault currents characteristic of solidly grounded systems can be controlled.

Low-resistance grounding also solves the solidly-grounded system problems of excessive ground-fault damage, and reduces ground-fault Arc-Flash Hazards. Properly sized resistors reduce ground-fault current to an acceptable level. Additional ground-fault relays (PGR-5701) can be installed on feeders to provide selective coordination as well as the ability to locate ground faults.

Applications

Low-Resistance Grounding is typically applied on transformers and generators, and limits the ground-fault current to 25 A and above. Since ground-fault current is above 25 A, the faulted feeder must be de-energized. The reduced ground-fault current allows for an orderly shut-down procedure, typically within 10 seconds.

Features/Benefits

- Available from 480 V – 72 kV
- Available from 5 A – 800 A
- Can convert an existing ungrounded or a 3-wire solidly grounded system to a resistance grounded system; for more information on how to convert, see page 56
- Resistance grounded relay or monitor (PGR-5330 or PGM-8325) is optional to provide ground-fault detection and resistor monitoring

Ordering System Information

	SYS. VOLTAGE	RES. CURRENT	TIME		ENCLOSURE			FEATURES		CUSTOM
PGN – 1	X	X	X	–	X	–	0	X	–	XXX
	0 = Other	0 = Other	0 = Other		0 = Other			0 = Other		000 = Standard
	2 = 480/277 V	1 = 5 A	1 = 10 s		N = No Enclosure			1 = Res. Monitor (PGM-8325)		XXX = Drawing #
	3 = 600/347 V	2 = 10 A	2 = 60 s		F = Outdoor Free Standing			2 = Res. Monitor & GF Relay (PGR-5330)		
	4 = 2400/1390 V	3 = 25 A	3 = Extended		W = Outdoor Wall Mount					
	5 = 4160/2400 V	4 = 50 A	4 = Continuous							
	6 = 13800/8000 V	5 = 100 A								
		6 = 200 A								
		7 = 400 A								
		8 = 600 A								
		9 = 800 A								