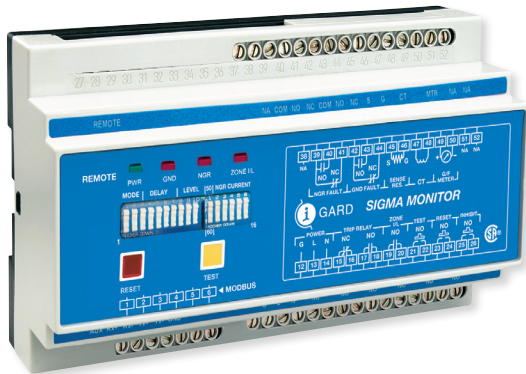




Unparalleled Protection



- Ground faults cause havoc on plant production processes, shutting down power and equipment and critical loads.
- Ground faults disrupt the flow of products through manufacturing processes and cause data loss in computer centers leading to hours or even days of lost productivity.
- Ground faults pose potential health and safety risks to personnel, creating hazards such as equipment malfunctions, fire and electric shock.

SIGMA

The I-Gard Sigma Monitor Relay is a combination neutral grounding resistor (NGR) monitor and ground fault relay. In distribution systems employing resistance grounding the Sigma Monitor Relay protects against ground faults and abnormal resistance values of the neutral grounding resistor (NGR).

The Sigma Monitor Relay measures the current through the NGR, the transformer neutral-to-ground voltage and the NGR resistance. The relay compares the measured values against the field settings of the relay and provides relay outputs and LED indications when an abnormal condition is detected.

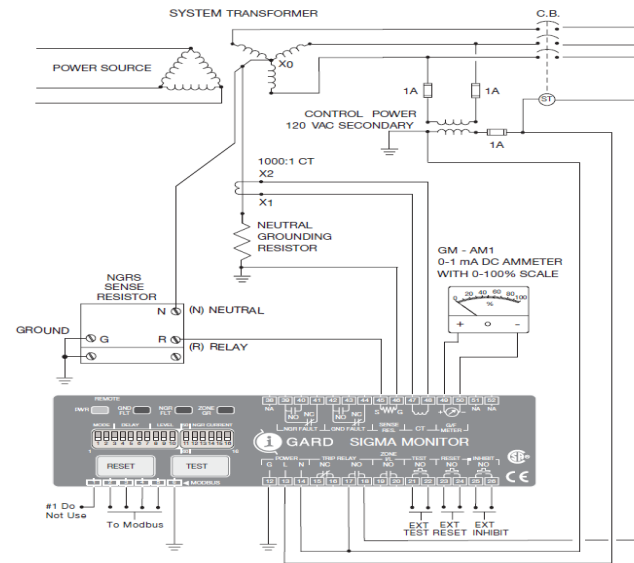


Combination ground fault relay with neutral grounding resistor monitoring relay

MODBUS communication available

Measurement module and continuity mode of operation

Indicates failure if NGR circuit is opened or shortened



TECHNICAL SPECIFICATIONS

Electrical Ratings	Control Power:	110-240V AC/DC 50/60Hz 5V AC or 5W DC		
	Maximum:	-45% to +10% (60-264V AC/DC)		
Output Relay Contacts	Main Trip Relay:	Type:	Form Z (NO and NC pair)	
		Rating:	10A@240V AC, 10A@30V DC, 1/2HP@240V AC	
	Auxiliary Ground Fault Relay:	Type:	1 Form C (NO/NC)	
		Rating:	10A@240V AC, 8A@24V AC, 1/2HP@240V AC	
	Auxiliary NGR Fault Relay:	Type:	1 Form C (NO/NC)	
		Rating:	10A@240V AC, 8A@24V AC, 1/2HP@240V AC	
Electrical Tests	Surge test: @ 3kV		Dielectric test: @ 2kV for 1 minute	
Temperature Range	Operating: -40°C to +60°C		Storage: -50°C to +70°C	
Physical	Dimensions	Length:	157 mm (6.18 in.)	Width: 86 mm (3.39 in.)
		Width:	58 mm (2.28in.)	Weight: 344 g
Ground Fault Circuit	CT Input: Non-Isolated. One side of the CT input, terminal 22, is internally grounded.			
	CT Ratio: T2A, T3A or equivalent 1000:1			
DIP Switch Settings	Trip Level:	8 settings: 5%, 10%, 15%, 20%, 25%, 30%, 40%, and 50% of the set		
NGR Current Setting	Trip Time:	32 settings, 0-60 msec.		
		150 msec. to 3.15 sec. in 100 msec. steps		
	Accuracy:	Repeatability: ±1%	Trip Time: ±10%, ±10 msec.	
	Trip Current: ±10%		Meter Output: ±2% at full scale.	
	Thermal Characteristics: Short Time Withstand 400A for 1 sec.			

High-resistance grounding (HRG) is becoming more prevalent in industrial and commercial electrical power systems because it eliminates un-scheduled downtime due to ground faults, and improves personnel safety by

preventing ground faults from escalating into arc-flash incidents. Resistance grounding is highly recommended for generators, to protect them from damage due to excessive ground fault currents.