AGF-FM SERIES
Ground Fault Sensor

AGF Series Ground Fault Sensors monitor ground fault conditions in 15 to 100 A branch circuits. The 5 mA or 20 mA fixed trip points, as well as power loss detection, are compatible with key applications and the larger 1.25"aperture monitors current-carrying conductors in grounded, three-phase delta or wye equipment. Ideal ground fault detection for equipment installed under exhaust hoods.

When combined with a breaker (MCB or MCCB) equipped with an appropriate 120 VAC shunt trip accessory, the AGF is for use in ordinary locations in accordance with the National Electrical Code NFPA 70.

Ground Fault Detection Applications

Commercial and industrial building projects that require 5 mA or 20 mA ground fault detection to either outlets or receptacles.

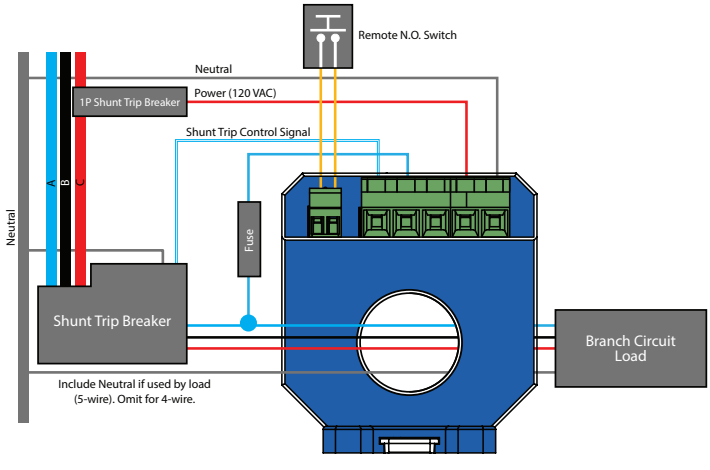
Suitable for panel board and switch gear installations. Types of projects that require ground fault detection:

Project Types:
- Retail/Kitchens
- Education/Cafeteria
- Commercial/Corporate Offices
- Healthcare/Hospital & Offices
- Entertainment/Sporting Venues
- Fueling/Convenience Stores
- Core & Shell
- Mission Critical

Equipment:
- Electric Ovens
- Electric Range/Grill
- Electric Pressure & Open Fryers
- Bone Cutters
- Meat Grinders
- Dishwashers
- Laundry

Regulatory & Safety:
Accepted worldwide

Applications NEC 500/600
- Swimming Pools
- Agriculture Lighting





Ground Fault Detection Features

The AGF Series 1.25" aperture supports typical wire bundles for both single-phase and three-phase branch circuits up to 100 Amps and 600 VAC. See NK Technologies "Ground Fault Considerations: Tech Guide" for further details.

Key Features Maximize Ease of Use
- 5 mA or 20 mA fixed trip point.
- Device trips when ground fault exceeds fixed trip point or power is lost when installed per Install Instructions.
- Outputs are mechanical dry contacts SPDT relay, 120 VAC & 2A rating.
- Compatible with 120 VAC Hood Emergency signal originating from the hood controller system.
- Green "power" LED indicates device powered.
- Red "status" LED indicates fault.
- Manual test button simulates fault to confirm functionality of the ground fault sensor and separate shunt trip breaker.
- Includes terminals for adding a "Remote Test" button.
- Surface or DIN rail mounting.

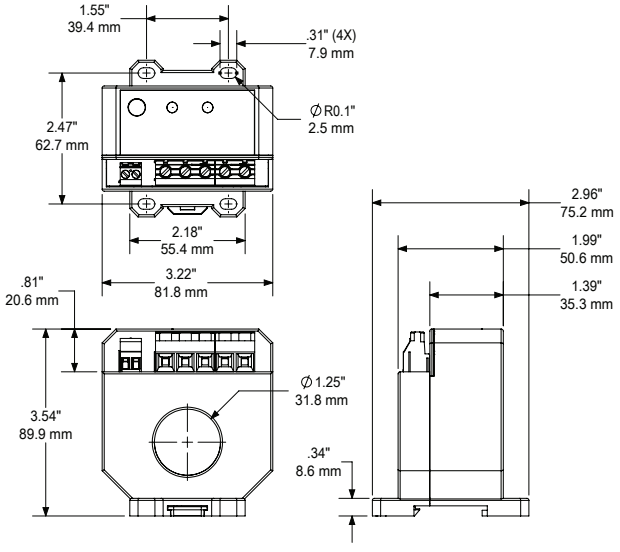
"Zero Sum" Operating Principle:
In single and three-phase AC systems, under normal conditions current flows from the power source to the load and back to the source. As a result, the electromagnetic fields surrounding the conductors cancel, producing a "zero sum current." As soon as current leaks to ground (fault condition) the current becomes imbalanced and a net magnetic field results. AGF Series detectors monitor this field and trip alarm contacts when the leakage rises above the setpoint.

NK Technologies

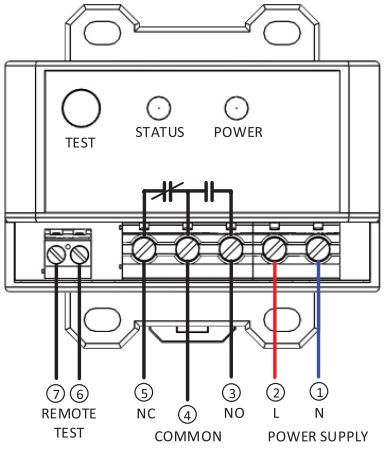
FIVE YEAR 5 WARRANTY

RoHS Compliant

Ground Fault Sensor Dimensions



Ground Fault Sensor Connections



Ground Fault Sensor Specifications

Power Supply		120 VAC ±10%, (Not Polarity Sensitive)
Power Consumption		2.3 VA max.
Setpoint	**"-005"** **"-020"**	5 mA, ±5% 20 mA, +0% / -10%
Output		SPDT Dry Contact Relay (Form C) non-latching, auto-reset
Output Rating		2 A @ 120 VAC, 2A @ 30 VDC general use
Response Time		Refer to figure 1 below
Monitored Circuit		Up to 600 VAC, 50/60 Hz
Isolation Voltage		2200 VAC
Remote Test Terminals		Use dry contact test button (rated ≥5 V, 50 mA), <100 Ω loop resistance
Case		UL94 V-0 Flammability Rated
Environmental		-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings		UL Listed to UL 508 as an industrial control switch (NRNT.E129625), CE

Ground Fault Sensor Output Tables

Output Terminal	**Power Supply, 0 VAC**	***Power Applied, 120 VAC nom**	
		No Fault Present	**Fault Present**
N.O. (pin 3)	open	closed	open
N.C. (pin 5)	closed	open	closed

Ground Fault Sensor Ordering Information

Sample Model Number: AGF-SDTR-120-ENE-005-FM

Ground fault sensor with SPDT non-latching auto-reset dry contact relay output, 120 VAC input voltage and 5 mA ground fault current trip point in a solid-core FM case with remote test terminals.

(1)	(2)	(3)	(4)	(5)	(6)
AGF	SDTR	120	ENE		FM

(5) Setpoint

005	5 mA fixed factory setpoint
020	20 mA fixed factory setpoint

ESTABLISHED PERIOD OF TIME (5 mA)
AGF SERIES -VS- UL943

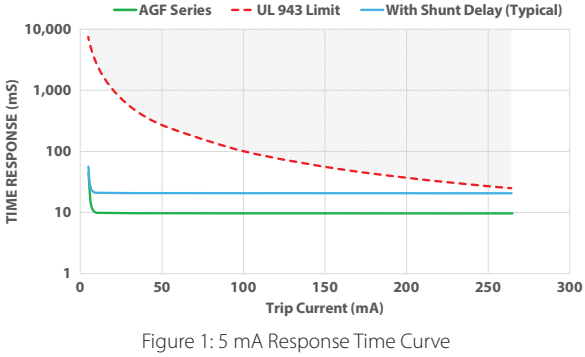


Figure 1: 5 mA Response Time Curve

ESTABLISHED PERIOD OF TIME (20 mA)
AGF SERIES -VS- UL943

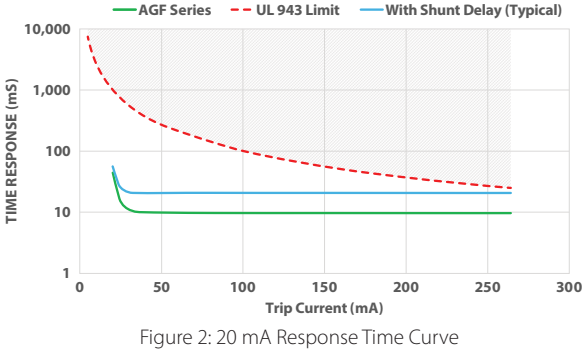


Figure 2: 20 mA Response Time Curve

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