AGK-FM SERIES
Ground Fault Sensor



AGK Series Ground Fault Sensor monitors ground fault conditions in 15 to 100 A branch circuits, tripping at 5 mA. The larger 1.25" aperture monitors current-carrying conductors in grounded, three-phase delta or wye equipment and features a remote test terminal and 2 A relay.

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

Ground Fault Detection Applications

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
- Dishwashers
- Electric Pressure & Open Fryers
- Bone Cutters
- Meat Grinders
- Laundry
- Mixers
- Boat Hoists
- Agricultural Lighting

Regulatory & Safety:

c UL us LISTED CE Accepted worldwide

Ground Fault Detection Features

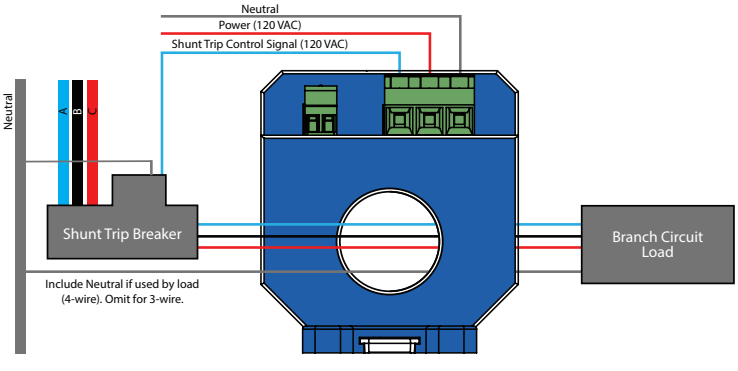
The AGK Series 1.25" aperture supports typical wire bundles for single-phase and three-phase branch circuits up to 100 Amps and 600 VAC. See NK Technologies "Ground Fault Considerations: Tech Guide" for further details.

Simplified installation wiring powers the shunt trip circuit.

Key Features Maximize Ease of Use
- 5 mA fixed trip point.
- Output is N.O. mechanical wet contact relay (120 VAC & 2A Rating), compatible with 120 VAC shunt trip accessory.
- Reduced number of wire connections for easier installation. AGK line power internally ties to the wet contact relay (output).
- 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:

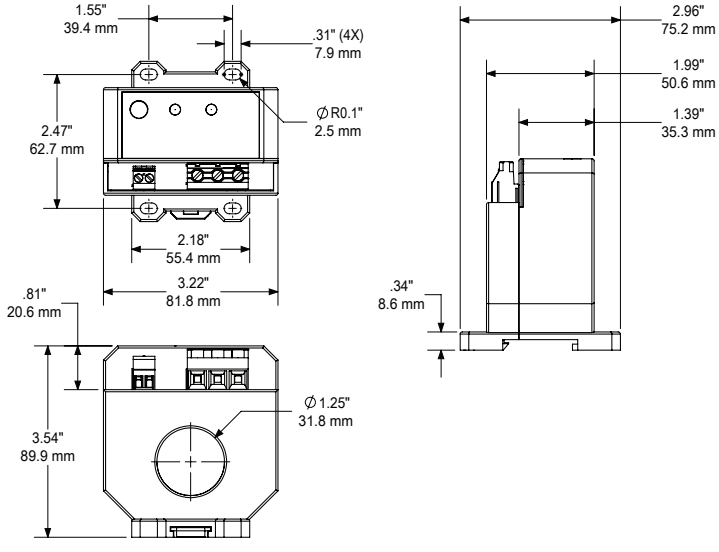
In single and three-phase AC systems, under normal conditions current flows from the power source to the load and back to the source. As a result, the electromagnetic fields surrounding the conductors cancel, producing a "zero sum current." As soon as current leaks to ground (fault condition) the current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



NK Technologies

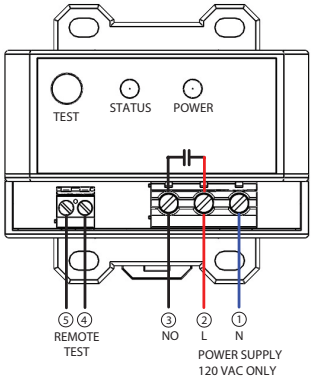
FIVE YEAR 5 WARRANTY RoHS Compliant

Ground Fault Sensor Dimensions

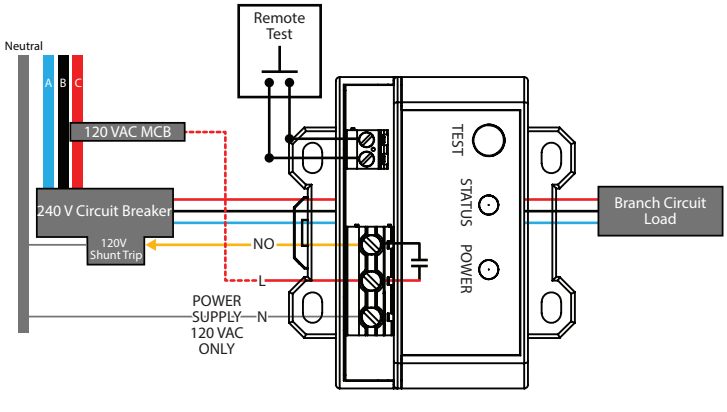


With Remote TEST Terminal (SSTPR)

Ground Fault Sensor Connections



With Remote TEST Terminal (SSTPR)



Ground Fault Sensor Specifications

Power Supply	120 VAC (±10%), (Line Polarity Sensitive)
Power Consumption	2.3 VA max.
Setpoint	5.0 mA, ±5%
Output	SPST Wet Contact Relay (Form A – NO) non-latching/auto-reset
Output Rating	2 A @ 120 VAC general use (wet contact)
Response Time	150 ms @ 5% above setpoint See Figure 1, Response Time Curve
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

ESTABLISHED PERIOD OF TIME
AGK SERIES -VS- UL943

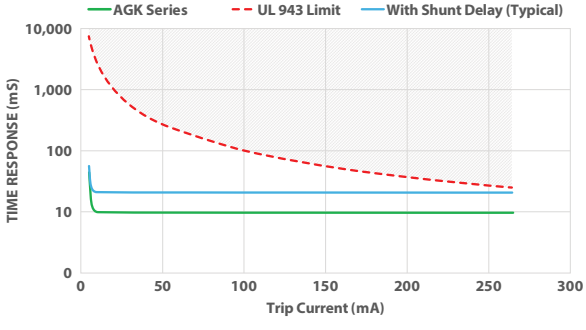


Figure 1: Response Time Curve

Ground Fault Sensor Output Tables

Normally open wet contact Model (-DEN)

Protection from faults only when power is applied.	Control Power Applied		
	No Power	**No Fault**	**Fault**
Output	open	open	120 VAC

Ground Fault Sensor Ordering Information

Mechanical Output Models

Sample Model Number: AGK-SSTPR-120-DEN-005-FM

Ground fault sensor with SPST normally open non-latching auto-reset wet 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)
AGK	SSTPR	120	DEN	005	FM

(2) Output Type

SSTPR	SPST Wet Contact Relay (Form A - NO) with remote TEST Terminals