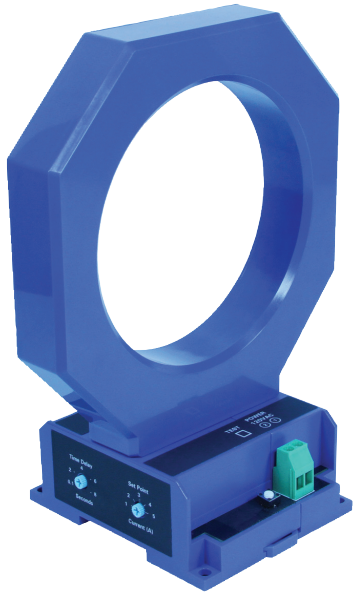
AG-LC SERIES

Ground Fault Sensor - Large Solid-Core



AG-LC series ground fault sensors are the latest design innovation from NK Technologies. The 2011 NEC added section 555.3 to require ground fault protection of the main overcurrent device feeding marinas and boat yards. These services are often carrying up to 800 amps; most sensor designs will not allow the conductors to pass through a single sensing ring. By designing a sensor in a large solid-core housing, the conductors will not have to be passed through a separate sensing device like a zero sequence current transformer. This design makes monitoring of larger circuits a breeze, whether to protect boaters or large equipment like amusement park rides or gantry cranes.

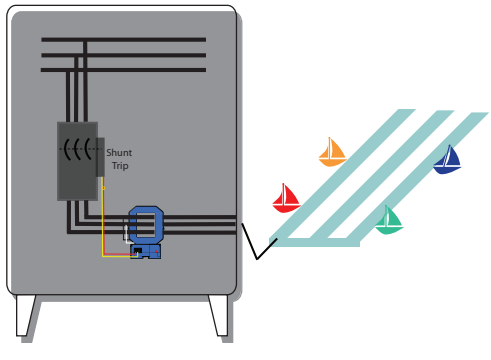
Ground Fault Sensor Applications

Monitor Large Machines
- Detect leakage to earth before the problem can cause damage.

Water Delivery and Treatment
- Keep pumping systems safe and in operation.
- Sense faulting stator windings prior to failure.

Generators
- Shut down equipment when leakage current exceeds hazardous levels.

Sense Current to Earth in Marinas



Equipment on board a vessel can pass current to earth through water, causing a dangerous condition to swimmers and boaters in fresh water marinas and boat docking facilities. Use a ground fault sensor with a shunt trip breaker to shut off the power when excessive current flows to earth.

Ground Fault Sensor Features

Electromechanical Relay Output
- Provides both normally open and normally closed contacts.
- Compatible with most automation and control systems.

Externally Powered
- A choice of fail safe or standard operation.

Simple Field Setpoint Adjustment
- Single turn potentiometer with setpoint shown on label.
- Adjustable delay to mask out nuisance fault current.

Large Solid-Core Case
- Large sensing window provides ample space for multiple conductors.

DIN Rail Mount*
- Simple snap onto DIN rail or attach with screws to a panel for secure mounting.

UL/cUL Approved
- Accepted worldwide.
- Conformally coated circuit boards standard.

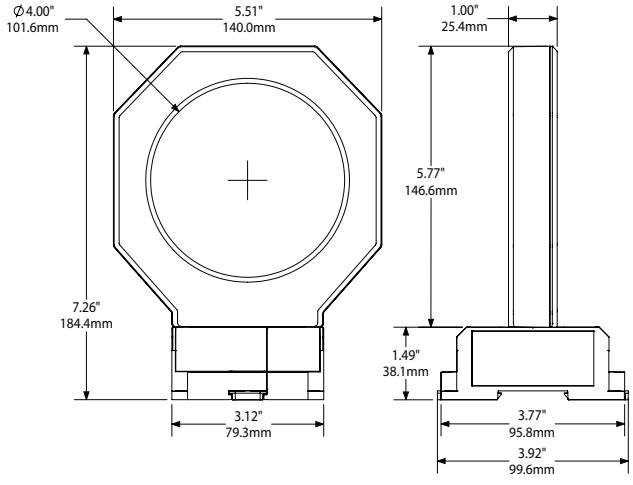
*For information on the DIN rail accessories kit, see page 147.

Output Contact Action

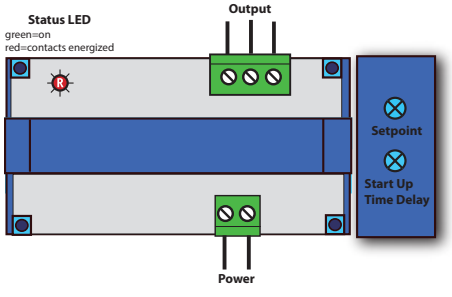
Contact Action	No Power Applied	Power Applied	Fault Detected
DEN (Powered)	NO = Open	NO = Open	NO = Closed
	NC = Closed	NC = Closed	NC = Open
ENE (Fail Safe)	NO = Open	NO = Closed	NO = Open
	NC = Closed	NC = Open	NC = Closed
LA (Powered)	NO = Open	NO = Open	NO = Closed
	NC = Closed	NC = Closed	NC = Open
ELA (Fail Safe)	NO = Open	NO = Closed	NO = Open
	NC = Closed	NC = Open	NC = Closed

OEMs **Test & Evaluation Units for OEMs**
Free program expedites evaluation process. See page 3 for details.

Ground Fault Sensor Dimensions



Ground Fault Sensor Connections



Ground Fault Sensor Specifications

Power Supply		120 VAC (108-132 V) or 24 VAC/VDC (22-28 V)
Power Consumption		<4 VA
Output Rating		Electromechanical relay 1 A @ 120 VAC, 2 A @ 30 VDC resistive
Indicating Bi-color LED		• Green: Power on, fault current below setpoint • Orange: Power on, fault current over setpoint • Off: Power off
Response Time		100 ms (current 90% over setpoint)
Output Operation		Normally de-energized, energized or latching
Manual Buttons		Test: Test to simulate a fault (hold longer than time delay settings) Reset: Press to unlatch (or add an external button)
Trip Delay		0.1 to 8 seconds
Setpoint Range	**1**	30–150 mA
	2	80–400 mA
	3	300–1500 mA
	4	1.0–5.0 A
Isolation Voltage		UL Listed to 2200 VAC
Frequency Range		40–60 Hz
Environmental		-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings		UL/cUL

Ground Fault Sensor Ordering Information

Sample Model Number: AG3-SDT-24U-DEN-LC

AC ground fault sensor, 300–1500 mA, SPDT relay output, 24 VAC/VDC powered, normally de-energized, solid-core case, DIN rail or panel mount.

	(1)		(2)		(3)		(4)		(5)
AG		-	S D T	-		-		-	L C

(1) Range - Field Adjustable

1	30–150 mA
2	80–400 mA
3	300–1500 mA
4	1.0–5.0 A

(2) Output Type

SDT	Single pole, double throw relay

(3) Power Supply

24U	24 VAC/VDC
120	120 VAC

(4) Contact Action

DEN	Normally de-energized
ENE	Normally energized
LA	Latching normally de-energized
ELA	Latching normally energized

(5) Case

LC	Large solid-core, panel or DIN Rail mounting

Sample Model Number-Factory Set: AGC-SDT-24U-DEN-100-LC

AC ground fault sensor, 100 mA factory set, SPDT relay output, 24 VAC/VDC powered, normally de-energized, solid-core case, DIN rail or panel mount.

	(1)		(2)		(3)		(4)		(5)		(6)
AG		-	S D T	-		-		-		-	L C

(1) Model

C	30–150 mA Factory Set
D	80-400 mA Factory Set

(2) Output Type

SDT	Single pole, double throw relay

(3) Power Supply

24U	24 VAC/VDC
120	120 VAC

(4) Contact Action

DEN	Normally de-energized (Only works with sensor powered)
ENE	Normally energized (Loss of sensor power causes output change - Fail safe operation)
LA	Latching normally de-energized
ELA	Latching normally energized (Fail safe operation)

(5) Trip Point

XXX	030–400 (30–400 mA)

(6) Case

LC	Large solid-core, panel or DIN Rail mounting