AGL SERIES

Large Aperture Ground Fault Sensor

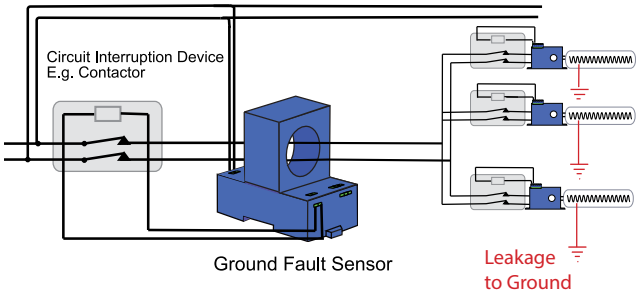


AGL Series Large Aperture Ground Fault Sensors offer one of the largest aperture diameters in the industry while maintaining a compact overall profile. Intended for sensing earth leakage, the AGL Series offers a choice of N.O. or N.C. latching relays or an SPDT Form C relay with auto-reset. Case features integral DIN rail mounting as standard and optional noise immunity coatings for applications in harsh EMI/RFI environments.

Ground Fault Sensor Applications

- Replace bulky two-piece sensor solutions which require separate CTs or relay modules.
- Use with shunt trip breakers to provide total ground fault protection to sensitive machine electronics.
- Detect ground faults in resistance/impedance heating, industrial automation and control, theatrical lighting, portable power distribution, and snow melt/heat trace applications.
- Sense progressive levels of ground fault in motors or heating systems to detect deterioration prior to catastrophic failure.

Moisture Ingress on a Submersible Pump Motor



Ground Fault Sensor Features

Setpoint Options Maximize Ease-of-Use

- Setpoint options include factory-adjustable setpoint from 5 mA –950 mA or "TR3 Tri-Set" models with field-selectable 5/10/30 mA settings.
- Finger-safe terminals for worry-free installation and operation.
- Aperture orientation is perpendicular to DIN rail, allowing for clean and efficient wiring and minimizing space between multiple components.
- Choice of dependable latching SPST or auto-reset SPDT (form C) electromechanical relay outputs.
- Uses "Zero Sum" operating principle to reliably sense imbalance in magnetic fields associated with current leakage to ground.
- Typical response times from 50 ms to 150 ms.
- Integral "push-to-test" button with LED indication of contact status.

DIN Rail Mount*

- Snap case onto a DIN rail. Integral DIN rail mount with spring loaded mounting clips.
- Need a DIN Rail? The optional DIN Rail Kit (DINKIT) includes a 175 mm wide DIN rail and two end stops.

UL/cUL and CE Certified

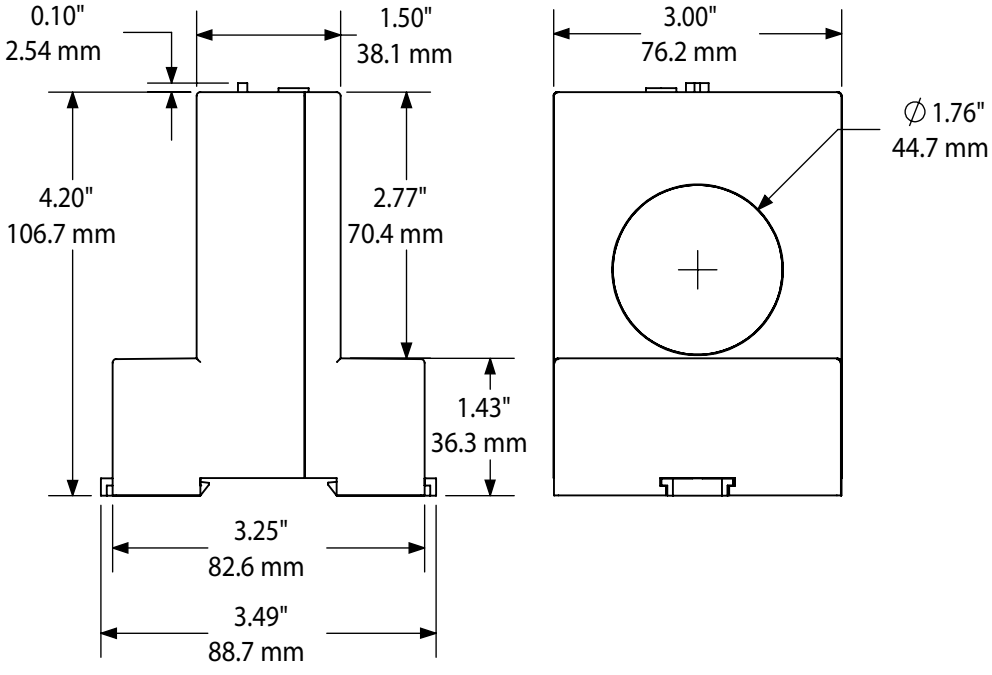
- UL Listed to UL 508
- Accepted worldwide.

*For information on the DIN rail accessories kit, see page 154.

For additional Application Examples,

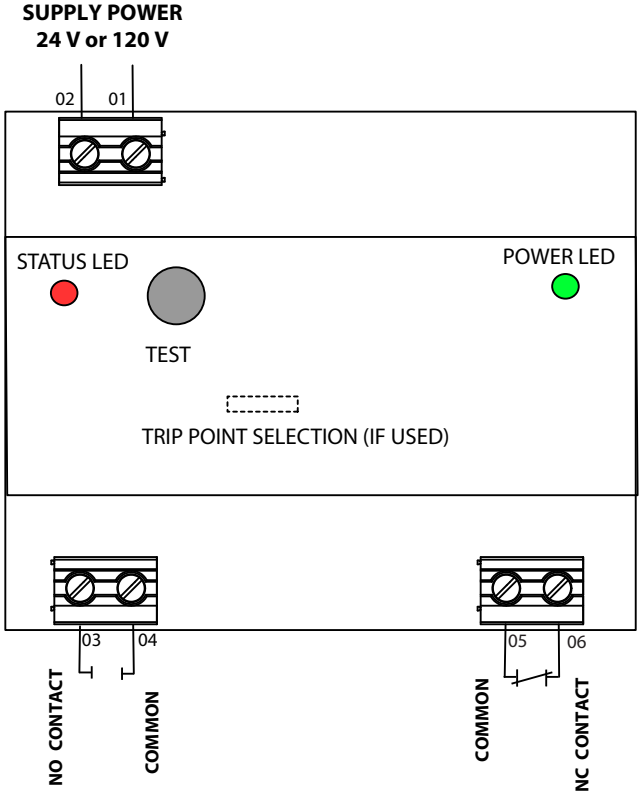
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Ground Fault Sensor Dimensions

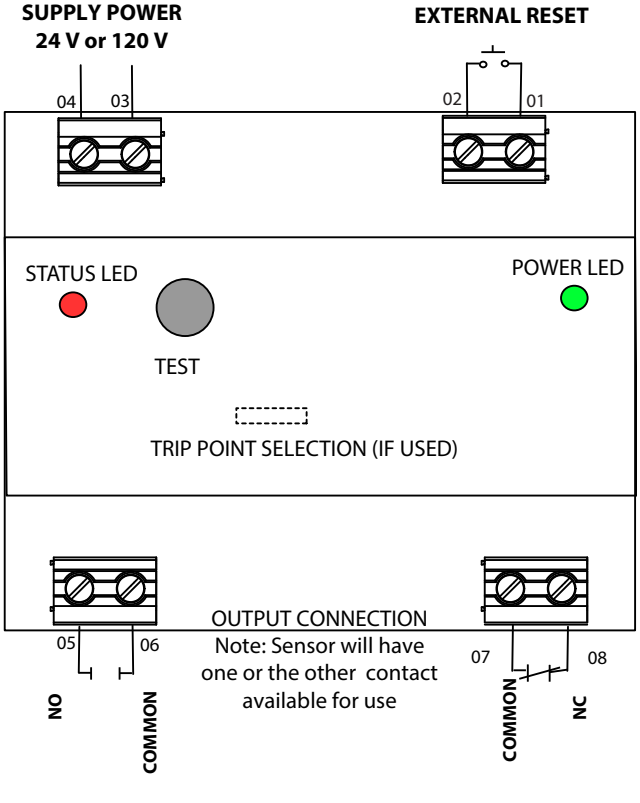


Ground Fault Sensor Connections

Auto-Reset



Latching



Ground Fault Sensor Specifications

Power Supply	• 120 VAC (66–132 V) • 24 VAC/VDC (19–29 V)
Power Consumption	2.5 VA
Monitored Circuit	600 VAC max, 50/60 Hz
Setpoint Range	Factory-calibrated models (specify when ordering): • AGL1: 5–100 mA (005–100) • AGL2: 80–950 mA (080–950)
	TR3 "Tri-set" models (field jumper select): • AGL3: 5, 10, or 30 mA (defaults to lowest setpoint, 5 mA, when jumper is removed)
Output Switch	Electromechanical SPDT relay
Output Rating	1 A @ 120 VAC, 2 A @ 30 VDC resistive
LED Display	• Green LED = Power On indication • Red LED = Tripped Output Relay indication
Response Time	• 150 ms @ 5% over setpoint • 100 ms @ 50% over setpoint • 50 ms @ 500% over setpoint
Time Delay	None
Noise Immunity	• EMI/RFI Shielding • Power supply noise filtering
Isolation Voltage	2200 VAC
Frequency Range	50–60 Hz (monitored circuit)
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 (E129625), CE

Ground Fault Sensor Output Tables

Normally Energized Models (-ENE Option)

Protection from faults and control power loss.

		Control Power Applied	
	No Power	**No Fault**	**Fault**
N.C. Normally Closed	closed	open	closed
N.O. Normally Open	open	closed	open

Normally De-energized Models (-DEN Options)

Protection from faults only when power is applied.

		Control Power Applied	
	No Power	**No Fault**	**Fault**
N.C. Normally Closed	closed	closed	open
N.O. Normally Open	open	open	closed

Ground Fault Sensor Ordering Information

Sample Model Number: AGL1-NOR1-120-LA-005
Ground fault sensor with normally open SPST latching relay output, 120 VAC power supply and 5 mA trip point.

AGL (1) – (2) – (3) – (4) – (5) – (6)

(1) Setpoint Range

1	5–100 mA factory set
2	80–950 mA factory set
3	5/10/30 mA jumper set

(2) Output Type

NCR1	Normally Closed SPST Relay Form B (Available only with -LA option)
NOR1	Normally Open SPST Relay Form A (Available only with -LA option)
SDT1	SPDT Relay (Form C) with auto-reset (Available only with -DEN and -ENE options)

(3) Power Supply

120	120 VAC
24U	24 VAC/VDC

(4) Options

ENE	Normally energized, auto-reset (SDT1 output only)
DEN	Normally de-energized, auto-reset (SDT1 output only)
LA	Latching (NOR1 and NCR1)

(5) Setpoint

TR3	Tri-set (AGL3 only)
005 to 950	Factory set trip point in mA (AGL1 and AGL2 only)

(6) Noise Immunity

N	Noise immunity
	None (blank)

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