

DG SERIES

DC Ground Fault Relay

DG Series Ground Fault Sensors keep machinery and their operators safe from accidental shocks. The one-piece, solid-core design allows for installation over wires feeding loads to about fifty amps. The output relay will change state at factory setpoint between 5 and 50 mA of DC current to earth.



Ground Fault Relay Applications

Monitor Photovoltaic Panels

- Detect fault currents before damage can occur. Connect the output to a shunt trip breaker operating solenoid or to the circuit powering a contactor coil.

Water Delivery and Treatment

- Detect moisture ingress in submersible pumps .

Heating Processes

- If an element shorts to ground, the sensor will activate to de-energize the circuit, keeping safety at the forefront.

Communications Towers

- Notification if a battery powered supply is allowing current to earth.

Ground Fault Relay Features

Electromechanical Relay Output

- Auto reset models have both normally open and normally closed contacts.
- Latching models have one normally open and one normally closed contact.
- Compatible with most automation and control systems.

Externally Powered

- A choice of fail safe or standard auto reset operation, or latching contact.

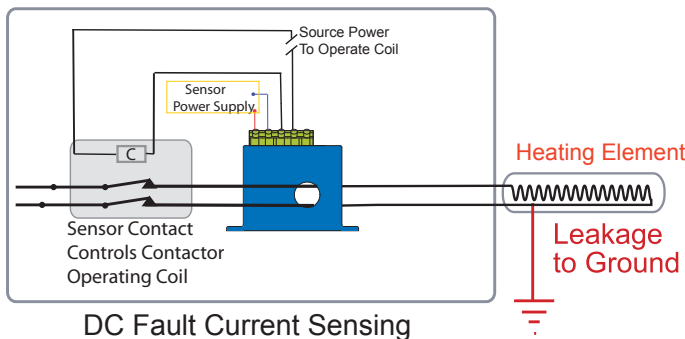
Solid-Core Case

- Sensing window provides ample space for multiple conductors.

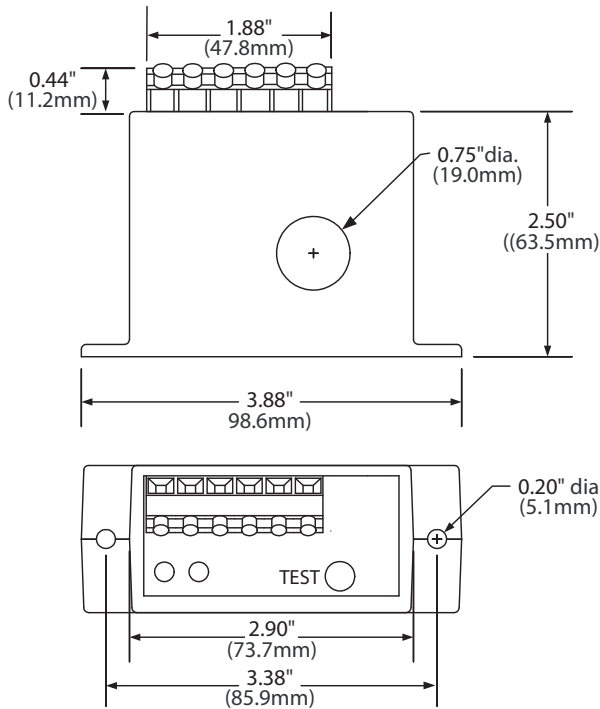
Designed for UL, CUL and CE Approval

- Accepted worldwide.

DC Fault Current Sensing

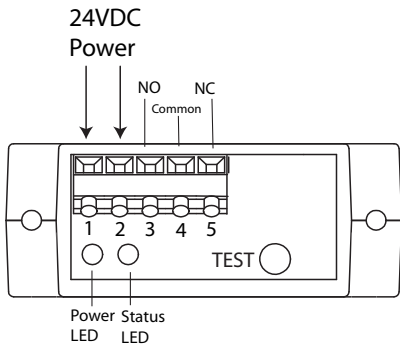


Ground Fault Relay Dimensions

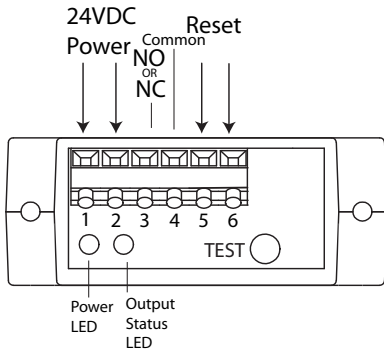


Ground Fault Relay Connections

Auto Reset Connection



Latching Connection

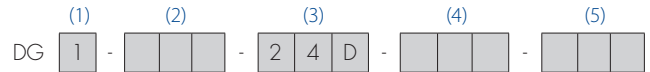


Ground Fault Relay Specifications

| | |
|--------------------------|---|
| Power Supply | 24 VDC (20–26 V) |
| Power Consumption | <4VA |
| Output | Electromechanical relay 1 A @ 120 VAC, 2 A @ 30V DC Max. |
| Output Operation | Normally Energized Normally De-energized Latching |
| Output Range | 5–50 mA |
| Response Time | 55 ms maximum |
| Input Range | Up to 1500 VDC (monitored circuit) |
| Isolation Voltage | tested to 5000 V |
| Frequency Range | DC |
| Case | UL94 V-0 Flammability Rated |
| Environmental | -4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing |
| Listings | Designed to meet UL 508 Industrial Control Equipment (USA & Canada) |

Ordering Information

Sample Model Number: DG1-SDT-24D-ENE-010 DC ground fault sensor, output 5–50 mA SPDT relay output, 24VDC powered, normally energized, 010 factory set trip point.



(1) Range

| | |
|---|---------|
| 1 | 5–50 mA |
|---|---------|

(2) Output Type

| | |
|-----|---|
| SDT | Single pole, double throw relay (Auto Reset Only) |
| NCR | Normally Closed, latching model only |
| NOR | Normally Open, latching model only |

(3) Power Supply

| | |
|-----|--------|
| 24D | 24 VDC |
|-----|--------|

(4) Contact Action

| | |
|-----|------------------------------|
| DEN | Normally de-energized output |
| ENE | Normally energized output |
| LA | Latching output |

(5) Trip Point

| | |
|---------|------------------------|
| 005–050 | Factory set trip point |
|---------|------------------------|

