



Arcing Ground Fault Relay
Cat. No. 1409-DOBD



Arcing Ground Fault Sensor
Cat. No. 1409-N2

The Bulletin 1409 Arcing Ground Fault Detection Systems are intended for equipment protection only. **These systems are not Ground-Fault Circuit-Interrupters for personnel protection as defined in Article 100 of the U.S. National Electric Code.**

Bulletin 1409 is available in two designs, Class I and Class II. The Class I systems are intended for use with shunt-trip circuit breakers or medium voltage controllers. These Class I systems **do not** contain a high-current inhibit circuit.

The Class II Systems are designed for use with motor starters or contactors to interrupt low-level ground faults. They incorporate a high-current inhibit circuit that guards against the controller opening when the fault current exceeds the controller interrupting capacity. Ground fault currents exceeding the interrupting rating of the controllers are designed to be cleared by the short circuit protection device (fuse or circuit breaker).

Both Class I and Class II Systems consist of two parts — a relay and a sensor. The relay contains all the detection, adjustment and output circuitry. The sensor is a special two-winding current transformer. Operation of the ground fault detection system is indicated by the relay toggle.

Standards Compliance

CSA C22.2, No. 144
UL 1053

Certifications

CSA Certified (LR49901)
UL Listed (File E53935, Guide KDAX)

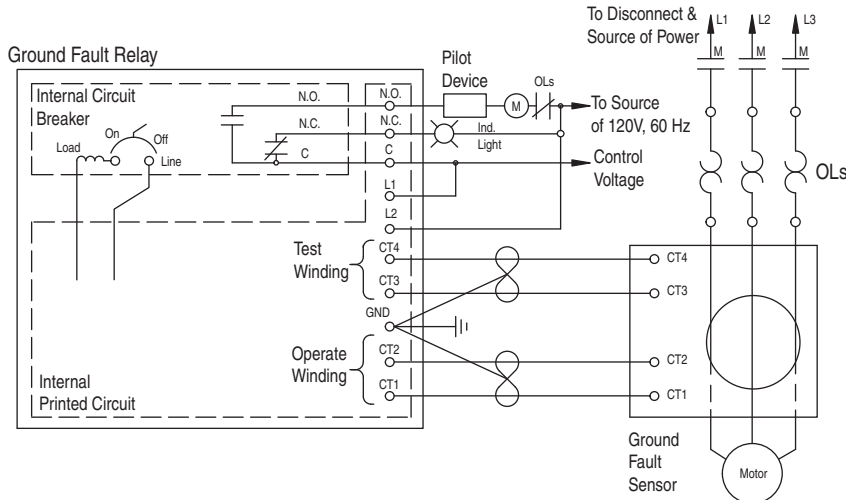
Specifications

Response Time	50 ms nominal plus the controller drop-out time
Supply Voltage	120V AC, 60 Hz
Power Input	3 VA
Temperature Range	The operating ambient temperature range for the sensor is -40...+85 °C (-40...+184 °F) and for the relay is 0...+65 °C (32...149 °F)
Output Contact Rating	Make 30 A; Break 3 A; Continuous carrying current 5 A at 120V

Typical Wiring Diagrams

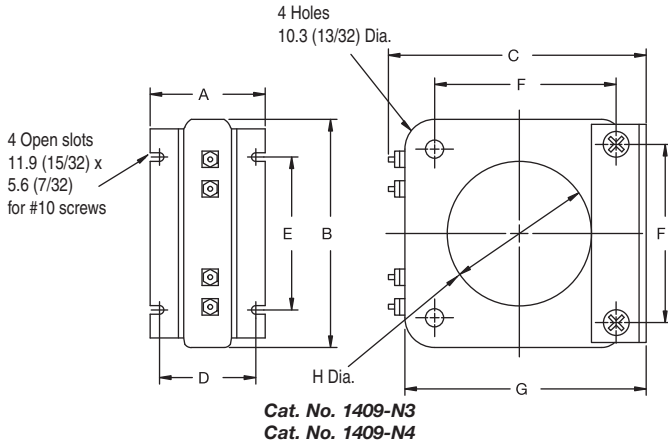
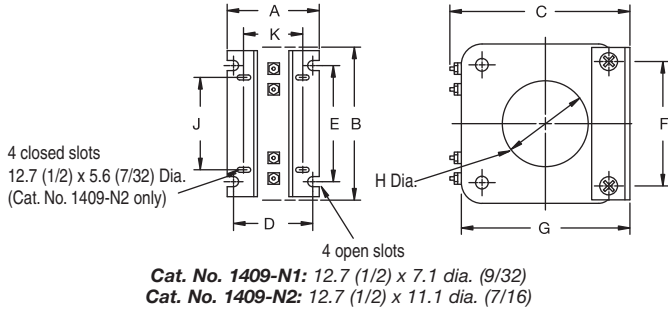
See Applicable Codes and Laws.

Class II with High Current Inhibit Circuit★



Dimensions are shown in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

Arcing Ground Fault Sensors



Cat. No.	A	B	C	D	E	F	G	H	J	K
1409-N1	92.6 (3-21/32)	88.9 (3-1/2)	104 (4-3/32)	74 (2-15/16)	67.3 (2-21/32)	56.4 (2-7/32)	92.9 (3-21/32)	39.6 (1-9/16)	—	—
1409-N2	91.4 (3-19/32)	115.8 (4-9/16)	131.8 (5-3/16)	77 (3-1/32)	88.9 (3-1/2)	88.9 (3-1/2)	120.6 (4-3/4)	63.5 (2-1/2)	69.8 (2-3/4)	54.9 (2-5/32)
1409-N3	73.2 (2-7/8)	144 (5-11/16)	157.2 (6-3/16)	54.9 (2-5/32)	96.8 (3-13/16)	119.4 (4-23/32)	146.1 (5-3/4)	82.6 (3-1/4)	—	—
1409-N4	77.2 (3-1/32)	169.9 (6-11/16)	182.6 (7-3/16)	59.5 (2-11/32)	123.7 (4-7/8)	138.2 (5-7/16)	171.5 (6-3/4)	108 (4-1/4)	—	—