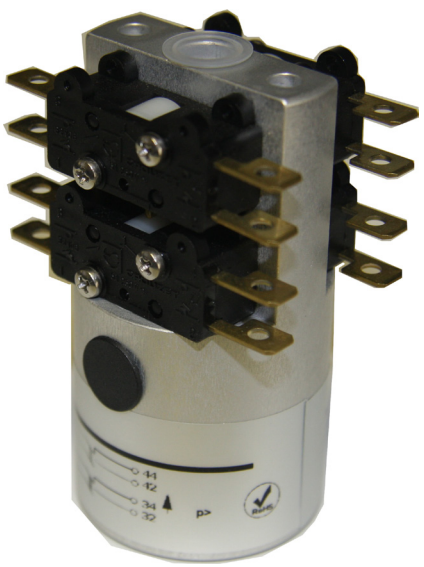
GARD

Unparalleled Protection

PRESSURE ARC DETECTOR

It is well documented that arc flash incidences can produce pressure waves from 20 to 1,000 lb/in2. This is a result of the vaporization of copper in electrical enclosures which expands by a factor of 67,000 times. The arc blast pressure wave travels at the speed of sound and can easily knock any object or individual meters away, typically into dangerous surrounding equipment or at worst off a ledge. The I-Gard Pressure Arc Detector system detects the incipient stages of the pressure wave and sends a trip signal all within 10ms.



During the event of an arc, the air surrounding the arc instantaneously heats to high levels causing surrounding metals to vaporize and subsequently expand.
The result of this phenomenon is a hazardous arc blast. The combination of this arc blast with the excessive temperatures along with flying shrapnel, toxic fumes and a massive pressure wave being propagated out any enclosure opening, which is typically the point at which an operator is working. Any exposure to this arc blast can seriously injure or kill on contact.

- Fast detection of the pressure wave generated by the arc
- Detection time within 10ms
- Limited damage to personnel and facility assets
- Easily integrates with other arc mitigation technology

PRESSURE
ARC DETECTOR

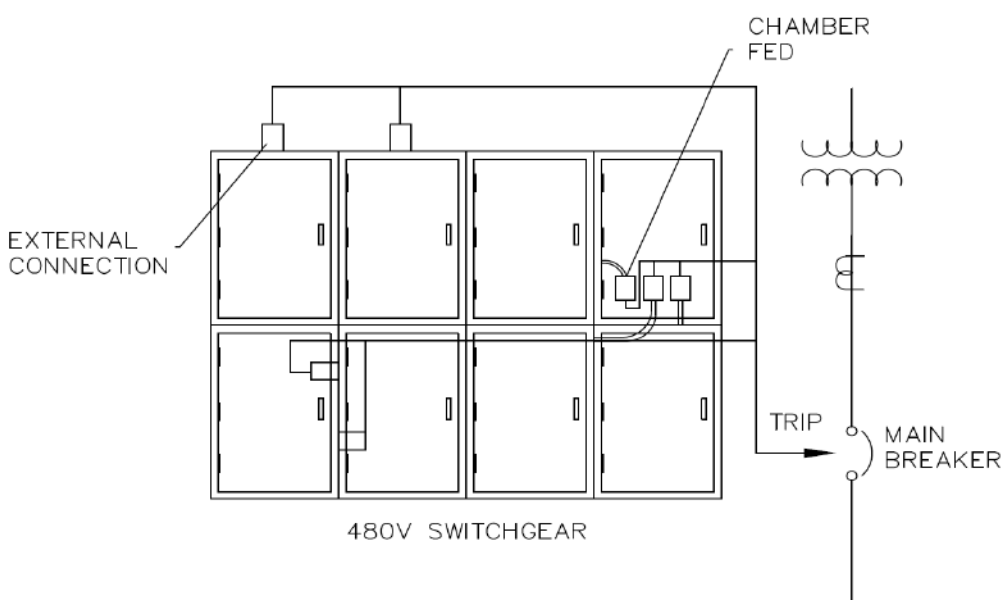
Damages caused by an arc flash event depend on the available energy. The energy discharged is directly proportional to the square of the short circuit current and the time the arc takes to develop (energy = I_2t).

The primary goal of arc mitigation technology is the protection of personnel and facility assets, by reducing the time we immediately reduce the energy. This is achieved by quickly detecting the arc and then isolating the event from any energy source. I-Gard has unparalleled solutions to help you with electrical safety.

PROTECTION SYSTEM	CLEARING TIME (sec)	INCIDENT ENERGY (cal/cm²)
51 Overcurrent	2	211
50 Instantaneous	0.450	47
I-Gard Pressure Sensor	0.093	10

*65kA bolted fault current, 18 inches.
*Assumes breaker clearing time of 5 cycles.

- Direct connection to main breaker shunt trip or relay protection system
- Reliable mechanical actuation
- Chamber fed or direct connectivity mounting options



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