GARD

Unparalleled Protection

SENTRI

Ground fault protection, zone selective interlocking protection (ZSIP), remote monitoring and arc flash mitigation are all in one relay, the I-Gard Sentri. The Sentri provides a total solution and coordination with 40 trip levels from 100 mA up to 1200 A. This versatile relay can be used in both solidly grounded and resistance grounded systems. Too often, systems are protected with just one relay on the main service breaker, which leads to power interruption of the entire service. Consequently, in an effort to minimize disruptions, the protection on the main breaker is often set to maximum pickup and delay settings, or worse, disconnected entirely. This can lead to substantial equipment damage, due to increased clearing time.

Minimizing damage, downtime and maintaining service, I-Gard provides the Sentri relay with integral zone selective instantaneous protection to protect systems, at LV and MV system levels, with optimized coordination. Maximum protection with minimum service disruption.

- Ground fault protection & arc flash mitigation built into 1 convenient relay
- Made for solidly grounded or resistance grounded systems
- 0.1A to 1200A trip settings
- Connects to 3 self-monitoring arc flash sensors
- Less than 1ms trip time on arc flash
- Solid state relays with mechanical relay backup
- Pre-trip relay for indication prior to main relay tripping
- 1A and 5A CT inputs as well as ZSCZ inputs for sensitive protection
- Monitor current with m-GARD-SYM display
- Modbus capability with m-GARD-SYM display
- ZSIP Zone Selective Instantaneous Protection
- Pressure Arc Detector system detects incipient stages of the pressure wave and sends a trip signal all within 10ms

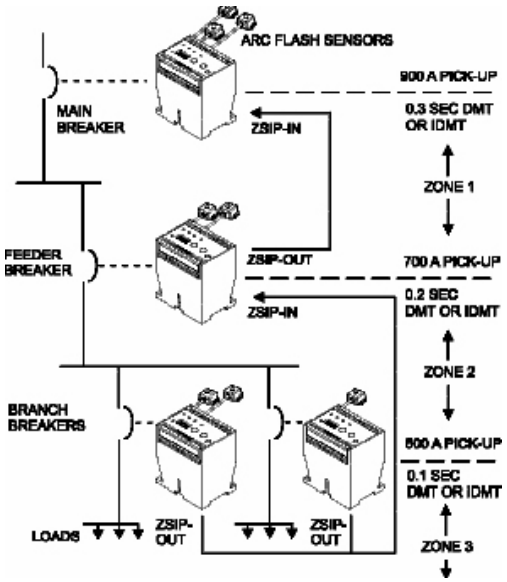

Figure #1: Three level ZSIP

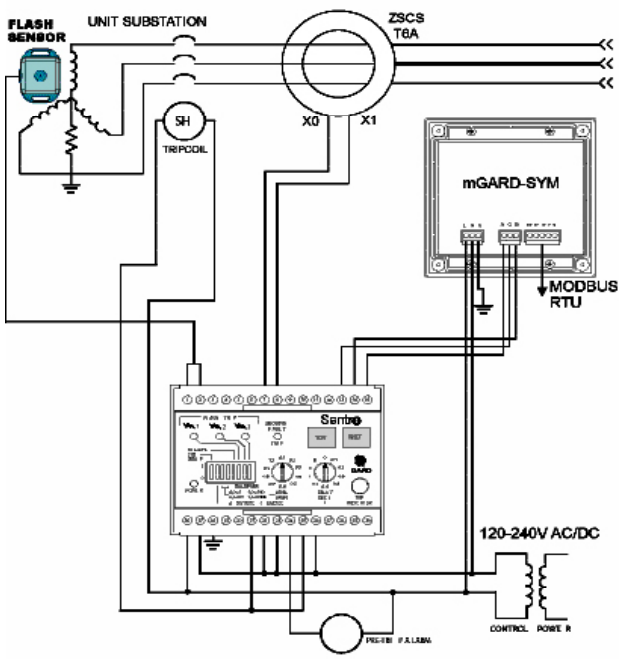

Figure #2: Wiring diagram

In addition to ground fault protection, the Sentri relay provides three optical sensor inputs. Optical inputs monitor for arc flash upon which the relay trips with under 1ms. Three separate trip relays correspond to the three flash sensor inputs. These three relays are a combination of solid state technology which achieves trip speeds of less than 1ms as well as dry contact relays as a backup.

The Sentri is used to monitor leakage current and provides indication when that current exceeds a pre-set level.

The relay connects to an m-GARD-SYM remote indicator (with Modbus connectivity) for remote indication, test, reset, and setup.

When continuity of service is essential, selective ground fault protection should be used. A selective ground fault protection system is one in which each disconnecting means is equipped with a ground fault relay so that only the one nearest the ground fault trips.

Selective ground fault protection systems may either have Time Coordinated Protection (TCP), Zone Selective Instantaneous Protection (ZSIP) or combination of both.

Zone Selective Instantaneous Protection (ZSIP) achieves the objective of instantaneous response to ground faults. Since it is fully coordinated, it minimizes damage and maximizes protection.

If there is a ground fault on a circuit protected by a ZSIP relay and the magnitude of the fault current exceeds the pick-up setting, the relay for that zone will instantly trip.

Selectivity between zones is achieved by an immediate signal generated by the first ground fault relay upstream of the fault. This signal is sent to all relays upstream and restrains them from tripping.

SENTRI

Sentri Light Sensors

I-Gard m-GARD-SYM

Pressure Sensor

Phone: 905-673-1553
Toll Free: 1-888-737-4787
Fax: 905-673-8472
sales@i-gard.com
www.i-gard.com