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ZYGOT ARC SPL ARC FLASH PROTECTION

DESCRIPTION

ZYGOT ARC SPL system was designed to provide protection against ARC FLASH, with selectable modularity and various ways of integrating into new or existing arc flash protection systems.

The ZYGOT ARC SPL system detects ultraviolet (UV) radiation at the beginning of the arc, i.e. the pilot path in the first phase of the arc forming. Light sensing technology (Patent PI 0903809-4), for detecting and preventing arc flash events from occurring. ARC SPL sensors detect the formation of an arc in its initial phase and not in the fourth phase, as do other systems detecting light through fiber optics and current through CT's, which only reduce the effect of the arc that has already formed.

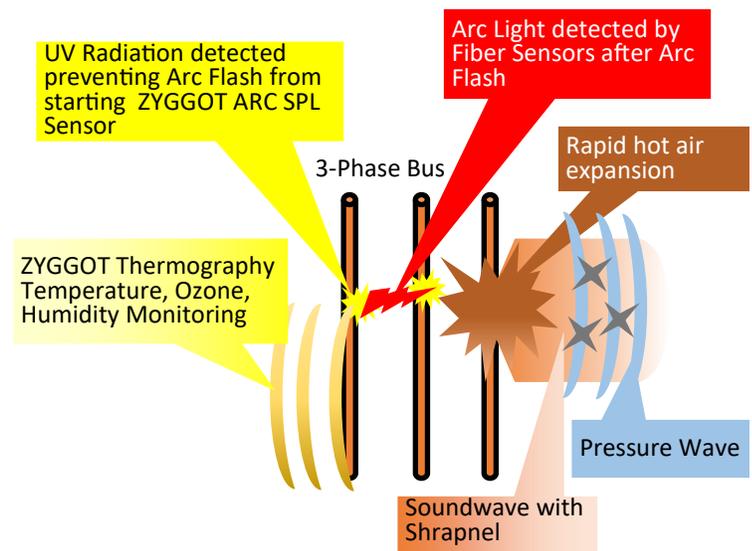
PRINCIPLE OF OPERATION

Each sensor in the system has a high-speed, high-performance ARM CORTEX microprocessor. The firmware embedded in the sensor will operate the communication and other tasks, but if an arc is detected, a high-priority interruption will occur and the arc detection data transmission routine, with the sensor number, will be immediately transmitted to the triggering Gateway. The time from the detection of the arc by the sensor, until the activation of the Gateway's TRIP output, is less than 300 μ s, activating a solid-state contact that supports 12 A continuously and up to 200 Amps peak for 5 cycles, plus a dry contact in parallel, allowing rapid actuation plus a guarantee of permanence through the mechanical contact.

BENEFITS

- ◆ Economical Arc Flash prevention solution for Brownfield and Greenfield installations
- ◆ Applicable to Low and Medium Voltage systems
- ◆ Easily integrated into existing arc flash/mitigation systems
- ◆ Detects Arc in Phase 1 (Pre-Arc)
- ◆ Reduces incident energy by up to 150x
- ◆ 90° Propagated angle measurement for Arc
- ◆ Modular configuration
- ◆ System build up to 50 Sensors with one Gateway
- ◆ Fault History with Timestamp
- ◆ External fault monitoring
- ◆ Sensor status monitoring
- ◆ Non-Contact Technology
- ◆ Proven System

ARC FLASH EXPLAINED



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TECHNICAL INFORMATION



ARC UVA SENSOR	
MODEL: ZSA/90/24/UVA/SPL	
MEASUREMENT ANGLE	90° AT ≥7 METERS (20') WITH 200A/1CM ARC
ARC SENSITIVITY	UP TO 30 METERS (90')
UV WAVELENGTH	200 TO 380 NM
POWER SUPPLY	+24VDC (NETWORK POWERED)
TEMPERATURE RANGE	-20 TO 89°C
STORAGE TEMPERATURE	-40 TO 125°C
DIAMETER	19 mm (0.75")
LENGTH	53 mm (2.086")
MATERIAL OF CONST.	STAINLESS STEEL
AREA OF USE	INSIDE SHELTER



ARC UVA SENSOR	
MODEL: ZSA/90/24/UVB/SPL	
MEASUREMENT ANGLE	90° AT ≥7 METERS (20') WITH 200A/1CM ARC
ARC SENSITIVITY	UP TO 30 METERS (90')
UV WAVELENGTH	200 TO 380 NM
POWER SUPPLY	+24VDC (NETWORK POWERED)
TEMPERATURE RANGE	-20 TO 89°C
STORAGE TEMPERATURE	-40 TO 125°C
DIAMETER	19 mm (0.75")
LENGTH	53 mm (2.086")
MATERIAL OF CONST.	STAINLESS STEEL
AREA OF USE	OUTSIDE SHELTER (SUN)

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ZYGGOT ARC SPL

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ZYGGOT V5F ARC CONTROLLER HMI	
MODEL: V5F/A ARC	
POWER SUPPLY	+24 VDC
HUMIDITY	5 TO 98%
RESOLUTION	1°C
NO OF SENSORS	UP TO 50 SENSORS
INPUTS	4 ANALOG 4 DIGITAL (12 TO 12 VDC)
OUTPUTS	2 ALARM TRIP (NO) 2 PROGRAMMABLE (NO) 1 OUTPUT TO SENSORS
COMMUNICATIONS	SERIAL MODBUS RTU ETHERNET MODBUS DEVICENET
SCREEN	COLOR, TOUCH SCREEN WVGA



SPL GATEWAY	
MODEL: ZAG1R/SPL	
POWER SUPPLY	+24 VDC
HUMIDITY	5 TO 98%
RESOLUTION	1°C
NO OF SENSORS	UP TO 50 SENSORS
DIGITAL INPUTS	1— FOR RESET 1—PROGRAMMABLE
DIGITAL OUTPUTS	1— FOR TRIP 2— PROGRAMMABLE
COMMUNICATIONS	(2) RS-485 MODBUS RTU ETHERNET MODBUS

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