

## AQ-110PLV Arc point sensor unit with overcurrent



AQ-110PLV is a sophisticated microprocessor-based arc flash protection unit with combined current and arc sensing, which provides two (2) integrated trip criteria. When AQ-110PLV detects an overcurrent in the incoming feeder as well as a light signal from a sub-unit or from a direct light sensor, it minimizes the damage caused by an arcing fault (arc flash) by tripping the circuit breaker that sources the fault current. The complete system self-supervision function of AQ-110P provides the highest level of dependability by continuously monitoring all internal system functions as well as external connections.

### Features:

- A wide range for the power supply (18...72 V DC or 92...265 V AC/DC)
- Three-phase current detection
- A maximum of 12 point sensors (3 point sensors per channel)
- A maximum of 1 fiber loop sensor (optional)
- Connectivity to the AQ-2000 and AQ-1000 arc quenching systems
- 1 high-speed outputs (HSO)
- 1 high-speed semiconductor trip output (HST)
- 4 trip relays
- 1 system failure relay
- 1 fast binary output
- 2 fast binary inputs
- 1 multifunction push button
- Non-volatile memory
- 19 indication LEDs

## Technical Data

### PROTECTION

Overcurrent (50Arc)

Earth fault (50NArc)

Light (L>)

Light and pressure (L> / P>)

Circuit breaker failure protection (50BF/52BF)

Trip time when using mechanical trip relays: 7 ms\*

Reset time (arc light stage): 2 ms

Protection operational after power up: 88 ms

\*) total trip time when using arc light (L>) or when using arc light (L>) and phase/earth overcurrent (I>) from an AQ-110x unit

## I/O

### Applicable sensors

AQ-01 light sensor\*

AQ-02 light and pressure sensor\*

AQ-06 plastic fiber sensor (3...40 m) (optional)

AQ-07 glass fiber sensor (3-50 m length) (optional)

AQ-08 glass fiber sensor (3...15 m) (optional)

### Trip relays (T1, T2, T3, T4)

3 NO + 1 NC or 4 NO

Rated voltage: 250 V AC/DC

Continuous carry: 5 A

Make-and-carry for 3 s: 16 A

Make-and-carry for 0.5 s: 30 A

Breaking capacity DC (when L/R = 40 ms): 40 W; 0.36 A at 110 V DC

Contact material: AgNi 90/10

### Binary output (BO1)

Number of outputs: 1

Rated voltage: +24 V DC

Maximum rated current: 20 mA

### Binary inputs (BI1, BI2)

Number of inputs: 2

Threshold voltage: 24 V DC

Rated voltage: 250 V

Rated current: 3 mA

### Power supply

Auxiliary power supply: 92...265 V AC/DC

Auxiliary power supply: 18...72 V DC (optional)

Maximum interruption: 100 ms

Maximum power consumption: 5 W

Standby current: 90 mA

### HMI

19 indication LEDs

Multifunction push button (SET)

Autoconfiguration

Indication reset

System check

### SELF-SUPERVISION

Sensors and wiring

Binary I/O

Trip coil

Power supply

Internal voltages

Settings

CT connections

### SYSTEM CONNECTIVITY

AQ-1000 Quenching device

AQ-2000 Quenching device

AQ-100 series

AQ-200 series

AQ-300 series

### ACCESSORIES

AX006 Wall mounting bracket

Application Drawing

