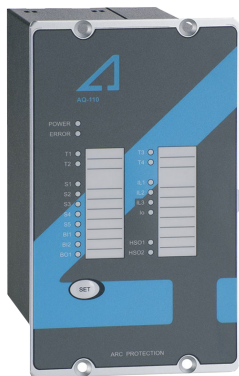


## AQ-110F Arc fiber sensor unit with overcurrent



AQ-110F is a sophisticated microprocessor-based arc flash protection unit with combined current and arc sensing, which provides two (2) integrated trip criteria. It is designed to minimize 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-110F provides the highest level of dependability by continuously monitoring all internal system functions as well as external connections.

AQ-110F is a multipurpose arc flash protection unit and can be applied for a variety of applications. AQ-110F can be used as a stand-alone unit or as a main unit of a more complex arc protection system via a binary bus.

### Features:

- A wide range for the power supply (18...72 V DC or 92...265 V AC/DC)
- Three-phase current detection
- Residual current detection
- A maximum of 3 fiber loop sensors
- Connectivity to the AQ-2000 and AQ-1000 arc quenching systems
- 2 high-speed outputs (HSOs, 2 ms trip time)
- 4 trip relays (with 7 ms trip time)
- 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>)

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-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-200 series

AQ-300 series

AQ-100 series

## ACCESSORIES

AX006 Wall mounting bracket

Application Drawing

