

AQ-101 Arc flash protection



AQ 101 is a sophisticated micro-processor based arc flash protection unit for arc light detection. It is designed to minimize the damage caused by an arcing fault (arc flash) by tripping the circuit breaker sourcing the fault current. The AQ 101 complete system self-supervision function provides the highest level of dependability by continuously monitoring all internal system functions along with external connections.

AQ 101 can be used as a stand-alone unit or as a part of a more complex arc protection system through the binary bus.

Features:

- Wide range power supply (18-72Vdc or 80-265Vac/dc)
- Max 12 arc light point sensors
- Max 1 fiber loop sensor (option)
- 4 trip relays (7ms trip time)
- 1 system failure relay
- 1 fast binary output
- 2 fast binary inputs
- 1 push button
- Non-volatile memory
- 12 indication LEDs

Technical Data

PROTECTION

ARC

Light L>

Light and Pressure L>/P>

Circuit Breaker Failure Protection 50BF

Trip time using mechanical trip relays: 7 ms

Reset time (arc light stage): 2 ms

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Protection operational after power up: 88 ms

I/O

Applicable sensors

AQ 01 a,b,c **light sensor

AQ 01M portable sensor kit

AQ 02 light and pressure sensor

AQ 06 plastic fiber sensor (5-50m length) (option)

AQ 07 glass fiber sensor (5-60m length) (option)

Trip Relays T1, T2, T3, T4

Number: 3 NO + 1 NC or 4 NO

Rated voltage: 250V ac/dc

Continuous carry 5A

Make and carry for 0.5s: 30A

Make and carry for 3s: 16A

Breaking capacity DC, when time constant L/R=40ms: 40W; 0.36A at 110 Vdc

Contact material: AgNi 90/10

Binary Output

Rated voltage: +24V dc

Rated current: 20mA (max)

Number of outputs: 1

Binary linputs BI1, BI2

Threshold Voltage voltage : 24 or 110 or 220Vdc

Rated voltage: 250V ac/dc

Rated current: 3 mA

Number of inputs: 2

Power supply

Us: 80...265Vac/dc (option 18...72Vdc)

Maximum interruption: 100ms

Maximum power consumption: 5W

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Standby current: 90mA

HMI

12 Indication LED's

Multifunction push button

Autoconfiguration

Indication reset

System check

SELF SUPERVISION

Sensors and wiring

Binary I/O

Trip coil

Power supply

Internal voltages

Settings

SYSTEM CONNECTIVITY

AQ 200 series

AQ 300 series

AQ 100 series

[Link to AQ SAS manual](#)

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Application Drawing

