

## AQ-M210 Motor protection IED



The AQ-M210 offers a modular motor protection and control solution for small and medium size motors. Up to four optional I/O or communication cards are available for more comprehensive monitoring and control applications. Up to 12 RTD signals can be connected for thermal alarming and tripping. The AQ-M210 communicates using various protocols including IEC 61850 substation communication standard.

### Highlights

- 5 time constant accurate thermal model
- Softstart protection starting from 6Hz
- Stardelta started motor supervision
- 2 speed motor protection

## Technical Data

### PROTECTION

Three-phase overcurrent, 4 stages INST, DT or IDMT (50/51)

Earth-fault (sensitive), 4 stages INST, DT or IDMT (50/51N)

Harmonic overcurrent / inrush blocking, 4 stages INST, DT or IDMT (50/51H, 68)

Current unbalance / broken conductor, 4 stages INST, DT or IDMT (46/46R/46L)

High/low impedance restricted earth fault / cable end differential (87N)

Motor thermal overload (49M)

Motor start-up / locked rotor supervision with speed switch (48, 14)

Restart inhibit / frequent starts (66/86)

Undercurrent/loss of load (37)

Mechanical jam (51M)

Breaker failure protection (50BF/52BF)

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Arc protection (option) (50ARC/50NARC)

## CONTROL

Controllable objects: 5

8 setting groups

## MEASURING AND MONITORING

### Event recording

Non-volatile disturbance records: 100

Non-volatile event records: 15000

## I/O

Current inputs: 5

Digital inputs: 3 (standard)

Output relays: 5+1 (standard)

### Options (4 slots)

Digital inputs optional: +8/16/24/32

Digital outputs optional: +5/10/15

Arc protection (12 sensors +2xHSO +BI)

2 x mA input + 68 x RTD input

Communication media (specified below)

## COMMUNICATION

RJ 45 Ethernet 100Mb (front standard)

RJ 45 Ethernet 100Mb and RS 485 (rear standard)

Double LC Ethernet 100Mb (option)

RS232 + serial bre PP/PG/GP/GG (option)

### Communication protocols

IEC 61850

IEC 608705103/101/104

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Modbus RTU, Modbus TCP/IP

DNP 3.0, DNP 3.0 over TCP/IP

SPA

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Application Drawing

