

AQ-F205 Feeder protection IED



The AQ-F205 feeder protection IED is suitable for any application that requires directional overcurrent and earth fault protections along with voltage and frequency protections. AQ-F205 comes with complimentary measurement, monitoring, control and communication features. The relay's standard configuration of eleven (11) digital inputs and ten (10) digital outputs along with a large, programmable HMI allow for a variety of adaptations.

Highlights

- Integrated protection, control and measurement
- Price-performance ratio

Technical Data

PROTECTION

Non-directional overcurrent ($I>$; 50/51) - 4 stages (INST, DT or IDMT)

Non-directional earth fault ($I0>$; 50N/51N) - 4 stages (INST, DT or IDMT)

Directional overcurrent ($I_{dir}>$; 67) - 4 stages (INST, DT or IDMT)

Directional earth fault ($I0_{dir}>$; 67N/32N) - 4 stages (INST, DT or IDMT)

Negative sequence overcurrent/ Phase current reversal/ Current unbalance ($I2>$; 46/46R/46L) - 4 stages (INST, DT or IDMT)

Harmonic overcurrent ($I_h>$; 50H/51H/68H) - 4 stages (INST, DT or IDMT)

High-impedance or low-impedance restricted earth fault/ Cable end differential ($I0d>$; 87N)

Overvoltage ($U>$; 59) - 4 stages (INST, DT or IDMT)

Undervoltage ($U<$; 27) - 4 stages (INST, DT or IDMT)

Neutral overvoltage ($U0>$; 59N) - 4 stages (INST, DT or IDMT)

Sequence voltage ($U1/U2>/<$; 47/27P/59PN) - 4 stages (INST, DT or IDMT)

Circuit breaker failure protection (CBFP; 50BF/52BF)

Overpower ($P>$; 320)

Underpower ($P <$; 32U)

Reverse power (P_r ; 32R)

Overfrequency and underfrequency ($f > / <$; 81O/81U) - 8 stages (INST or DT)

Rate-of-change of frequency ($df/dt > / <$; 81R) - 1 stage (DT)

Line thermal overload ($TF >$; 49F)

Voltage memory

CONTROL

Number of objects to control and monitor: 5

Number of indicators to monitor: 5

Number of setting groups: 8

Cold load pick-up

Switch-on-to-fault

Auto-recloser ($0 \rightarrow 1$; 79)

Synchrocheck ($\Delta V / \Delta a / \Delta f$; 25)

MEASURING & MONITORING

Phase, sequence and residual currents (IL1, IL2, IL3, I01, I02)

Phase, sequence and residual voltages (UL1, UL2, UL3, U12, U23, U31, U0)

Power and energy class 0.5

Current transformer supervision

Voltage transformer supervision (60)

Disturbance recorder (max. 15 000 permanent event records)

Circuit breaker wear monitoring

Total harmonic distortion

Fault locator (21FL)

Frequency (f)

Power (P, Q, S, pf) and Energy (E+, E-, Eq+, Eq-)

Measurement recorder

Measurement value recorder

HARDWARE

Current inputs: 5

Voltage inputs: 4

Digital inputs (fixed): 11

Digital outputs (fixed): 10

COMMUNICATION

RJ-45 100 Mbps Ethernet (front panel, fixed)

RJ-45 100 Mbps Ethernet and RS-485 (rear panel, fixed)

Communication protocols

IEC 60870-5-101/104

IEC 60870-5-103

Modbus/RTU and Modbus/TCP

DNP3

SPA

Application Drawing

