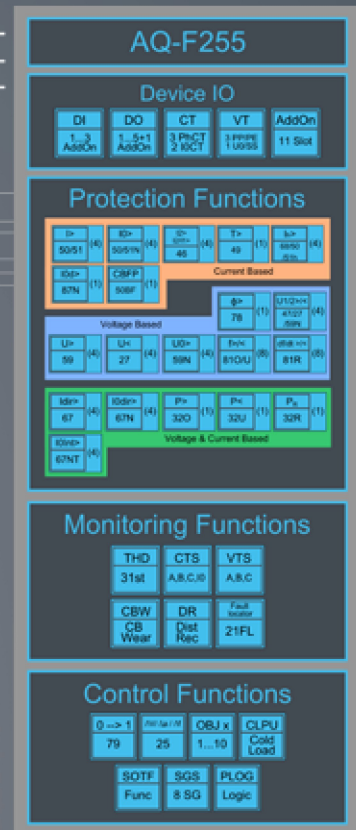
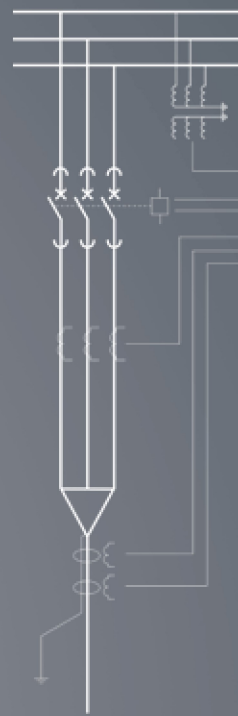


AQ-F255 Feeder protection IED

The AQ-F255 offers a modular feeder protection and control solution for applications requiring large I/O capacity. Up to 11 optional I/O or communication cards are available for extensive monitoring and control applications. The AQ-F255 communicates using various protocols including IEC 61850 substation communication standard.



- Large I/O capability
- Directional and voltage protection
- Cable end differential protection
- Low-impedance REF protection
- Harmonics protection and control
- 5-shot scheme controlled autorecloser
- Up to class 0.2S power and energy measurement

PROTECTION FUNCTIONS

- Three-phase overcurrent, 4 stages INST, DT or IDMT (50/51)
- Earth-fault (sensitive), 4 stages INST, DT or IDMT (50/51N)
- Directional overcurrent, 4 stages INST, DT or IDMT (67)
- Directional earth-fault, 4 stages INST, DT or IDMT (67N)
- Transient earth-fault (67NT)
- 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)
- Cable thermal protection (49L)
- Overvoltage, 4 stages INST, DT or IDMT (59)
- Undervoltage, 4 stages INST, DT or IDMT (27)
- Zero sequence overvoltage, 4 stages INST, DT or IDMT (59N)
- Negative/positive sequence overvoltage, 4 stages INST, DT or IDMT (47)
- Vector jump, 1 stage (78) Over/under frequency, 8 stages INST or DT (810/81U)
- Rate of change of frequency, 8 stages INST or DT or IDMT (81R)
- Over/Under/Reverse power (32/37/32R)
- Breaker failure protection (50BF/52BF)
- Arc protection (option) (50ARC/50NARC)

MEASURING AND MONITORING

- Phase and residual currents (IL1, IL2, IL3, I01, I02)
- Voltage measurements (UL1-UL3, U12-U31, U0, SS)
- Current and voltage THD and harmonics (up to 31st)
- Frequency (f)
- Power (P, Q, S, pf)
- Energy (E+, E-, Eq+, Eq-)
- Circuit breaker wear (CBW)
- Energy (E+, E-, Eq+, Eq-)

- Disturbance recorder (3.2 kHz)
- Current transformer supervision (CTS)
- Fuse failure (VTS)
- Trip circuit supervision (TCS)

CONTROL

- Controllable objects: 10
- Synchro-check (25)
- Autorecloser (79)
- Cold-load pick-up block
- Switch onto fault logic
- 8 setting groups

HARDWARE

- Current inputs: 5
- Voltage inputs: 4
- Digital inputs: 3 (standard)
- Output relays: 5+1 (standard)

OPTIONS (11 SLOTS)

- Digital inputs optional: +8/16/24/32/40/48/56/64/72/80/88
- Digital outputs optional: +5/10/15/20/25
- Arc protection (12 sensors +2xHSO +BI)

- 2mA in + 4xRTD in OR 8xRTD in
- 4mA out+1mA in
- Communication media (specified below)

EVENT RECORDING

- Non-volatile disturbance records: 100
- Non-volatile event records: 15000

COMMUNICATION MEDIA

- RJ 45 Ethernet 100Mb (front standard)
- RJ 45 Ethernet 100Mb and RS 485 (rear standard)
- Double LC Ethernet 100Mb (option)
- RS232 + serial fibre PP/PG/GP/GG (option)

COMMUNICATION PROTOCOLS STANDARD

- IEC 61850
- IEC 60870-5-103/101/104
- Modbus RTU, Modbus TCP/IP
- DNP 3.0, DNP 3.0 over TCP/IP
- SPA