

AQ-S255 Bay control IED



AQ-S255 bay control IED can be applied to demanding control applications. AQ-S255 comes with full current, voltage, power and energy measurement capabilities, and the relay can be equipped with up to eleven (11) I/O or communication cards, depending on the requirements of your application. The logic programming is powerful and easy to use, and it further expands the unit's application range towards more demanding control needs. The HMI is large and can be freely programmed, and it provides a quick visualization of the status of objects, alarms and events. AQ-S255 communicates using various protocols, including the IEC 61850 substation communication standard.

Highlights

- A bay control unit with extensive I/O
- Synchrocheck for up to three (3) circuit breakers
- Optional power and energy class 0.2S

Technical Data

PROTECTION

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

Programmable stage (PGx>/<; 99)

CONTROL

Number of objects to control and monitor: 10

Number of indicators to monitor: 20

Number of setting groups: 8

Auto-recloser (0 → 1; 79)

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

MEASURING AND 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

Power and energy class 0.2S (optional)

Current transformer supervision

Voltage transformer supervision (60)

Event recorder (max. 15 000 permanent event records)

Disturbance recorder (max. 100 records á 5 seconds at 3.2 kHz sampling)

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): 3

Digital outputs (fixed): 5

Options (11 slots)

Digital inputs: +8/16/24/32/40/48/56/64/72/80/88

Digital outputs: +5/10/15/20/25/30

Milliampere I/O module (4 mA outputs + 1 mA input)

External I/O modules (see "Accessories" tab)

Communication media (specified in the "Communication" tab)

COMMUNICATION

Communication inputs

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

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

2 x RJ-45 100 Mbps Ethernet with an IRIG-B input (optional)

2 x ST 100 Mbps Ethernet with an IRIG-B input (optional)

2 x LC 100 Mbps Ethernet (PRP/HSR) (optional)

RS-232 serial fiber (PP/PG/GP/GG) (optional)

Communication protocols

IEC 61850

IEC 60870-5-101/104

IEC 60870-5-103

Modbus/RTU and Modbus/TCP

DNP3

SPA

ACCESSORIES

AX007 External 6-channel 2-/3-wire RTD input module (pre-configured)

AX008 External 8-channel thermocouple and mA input module (pre-configured)

AX013 Raising frame (120 mm)

AX014 Raising frame (40 mm)

AX015 Wall mounting bracket

Application Drawing

