

Model Implementation
Conformance Statement
(MICS) for the IEC 61850
Edition 2 server interface in
AQ-B398 product

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1 Introduction

This model implementation conformance statement is applicable for **AQ-300 series** with firmware version **2.10**.

This MICS document specifies the modelling extensions compared to IEC 61850 Edition 2. For the exact details on the standardized model please compare the ICD substation configuration file: "AQ-B398.icd", version 1.0.

The following chapters describe the list of implemented logical nodes and the new and extended logical nodes (if any).

1.1 Logical nodes list

The following table contains the list of logical nodes implemented in the device:

| |
|--|
| L: System Logical Nodes |
| LPHD (Physical device information) |
| LLN0 (Logical node zero) |
| LTRK (Service tracking) |
| P: Logical Nodes for protection functions |
| PTRC (Protection trip) |
| R: Logical nodes for protection related functions |
| RBRF (Breaker failure) |
| G: Logical Nodes for generic references |
| GGIO (Generic process I/O) |
| M: Logical Nodes for metering and measurement |
| MMTR (Metering) |
| MMXU (Measurement) |
| MMXN (Non-phase related meas.) |
| X: Logical Nodes for switchgear |
| XCBR (Circuit breaker) |
| XSWI (Switch) |
| C: Logical Nodes for control |
| CSWI (Switch controller) |
| CILO (Interlocking) |

Logical Node Extensions

The following table use

- M: Data object is mandatory in the IEC 61850-7-4 ED.2.
- O: Data object is optional in the IEC 61850-7-4 ED.2 and is used in the device.
- E: Data object is an extension to the IEC 61850-7-4 ED.2.

1.2 New logical nodes

Newly created logical nodes are listed in this clause, with InNs attribute in the Name plate. There is no new logical node in the configuration.

1.3 Extended logical nodes

The following logical nodes have been extended with extra data. All extra data has been highlighted in the tables and marked as “E” (Extended).

| PDIF class | | | | |
|---------------------------------|-------------------|---------------------------|-------|---------------------|
| Data object name | Common data class | Explanation | M/O/E | Remarks |
| PDIF | | Busbar differential prot. | | Type: EUPP2_B3_PDIF |
| Data objects | | | | |
| Common Logical Node Information | | | | |
| Beh | INS | Behaviour | M | |
| Status Information | | | | |
| Op | ACT | Operate | M | |
| BFPTrip | SPS | Intertrip (BFP) | E | |
| CtFault | SPS | CT supervision error | E | |
| VoltNOk | SPS | Voltage condition not OK | E | |

| MMTR class | | | | |
|---------------------------------|-------------------|-------------------------|-------|--------------------|
| Data object name | Common data class | Explanation | M/O/E | Remarks |
| MMTR | | Metering | | Type: EUPP2_E_MMTR |
| Data objects | | | | |
| Common Logical Node Information | | | | |
| Beh | INS | Behaviour | M | |
| Status Information | | | | |
| DmdVArhPV | MV | Demand value - reactive | E | |
| DmdWhPV | MV | Demand value - active | E | |

| | | | | |
|-----------|----|-------------------------|---|--|
| SupVArhPV | MV | Supply value - reactive | E | |
| SupWhPV | MV | Supply value - active | E | |

| GGIO class | | | | |
|---------------------------------|-------------------|---------------------------|-------|-------------------------|
| Data object name | Common data class | Explanation | M/O/E | Remarks |
| GGIO | | Busbar general statuses | | Type: EUPP2_BUS_GGIO |
| Data objects | | | | |
| Common Logical Node Information | | | | |
| Beh | INS | Behaviour | M | |
| Status Information | | | | |
| Blk | SPS | Busbar protection blocked | E | |
| CommFail | SPS | Communication failure | E | |
| StatErr | SPS | Disconnecter status error | E | |