Model Implementation Conformance Statement (MICS) for the IEC 61850 Edition 2 server interface in AQ-T393 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-T393.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
PIOC (Instantaneous overcurrent)
PTOC (Time overcurrent)
PTOF (Overfrequency)
PTOV (Overvoltage)
PTUV (Undervoltage)
PTUF (Underfrequency)
PFRC (ROCOF)
PDIF (Differential)
PTTR (Thermal overload)
PDOP (Overpower)
PDUP (Underpower)
PTRC (Protection trip)
PHAR (Harmonic restraint)
R: Logical nodes for protection related functions
RREC (Autoreclosing)
RSYN (Synchronizm-check)

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 lnNs 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		Transformer differential prot.			Type: EUPP2_TR_PDIF
Data objects					
Common Logical Node Information					

Beh	INS	Behaviour	M	
Status Information				
Str	ACD	Start	O	
Op	ACT	Operate	M	
OpUnr	ACT	Operate unrestrained	E	

RSYN class				
Data object name	Common data class	Explanation	M/O/E	Remarks
RSYN		Synchrocheck with synchroswitch		Type: EUPP2_SYN_RSYN
Data objects				
Common Logical Node Information				
Beh	INS	Behaviour	M	
Status Information				
Rel	SPS	Release	M	
SynPrg	SPC	Start synchrocheck	O	status only
SynOp	ACT	Operate synchroswitch	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	