Model Implementation Conformance Statement
for the IEC 61850 interface in SEL-387E

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1. Introduction

This model implementation conformance statement is applicable for SEL-387E, SEL-387E-0 and SEL-387E-1, with firmware R704 on the host and R109 on the E3 card:

This MICS document specifies the modelling extensions compared to IEC 61850 edition 1. For the exact details on the standardized model please compare the ICD substation configuration file: “0387E 004.ICD”, version R104.

Clause 2 contains the list of implemented logical nodes.
Clause 3 describes the new and extended logical nodes.

2. 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)
P: Logical Nodes for protection functions
PIOC (Instantaneous overcurrent)
PTOC (Time overcurrent)
PDIF (Differential)
PHAR (Harmonic restraint)
PTRC (Protection trip conditioning)
PTUV (Undervoltage)
PTOV (Overvoltage)
PVPH (Volts per Hz)
G: Logical Nodes for generic references
GGIO (Generic process I/O)
M: Logical Nodes for metering and measurement
MMXU (Measurement)
MSQI (Sequence and imbalance)
C: Logical Nodes for control
CSWI (Switch controller)
X: Logical Nodes for switchgear
XCBR (Circuit breaker)

3. Logical Node Extensions

The following table use

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

3.1. 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), these data contains the “dataNs” attribute.

3.1.1 LN MMXU

MMXU class				
Attribute Name	**Attribute Type**	**Explanation**	**M/O/E**	**Remarks**
Measured Values				
A1	WYE	Winding 1 Phase Current	E	
A2	WYE	Winding 2 Phase Current	E	
A12	WYE	Combined Windings 1 & 2 Phase Current	E	
A3	WYE	Winding 3 Phase Current	E	

3.1.2 LN MSQI

MSQI class				
Attribute Name	**Attribute Type**	**Explanation**	**M/O/E**	**Remarks**
Measured Values				
SeqA1	SEQ	Winding 1 Positive, Negative & Zero Sequence Current	E	
SeqA2	SEQ	Winding 2 Positive, Negative & Zero Sequence Current	E	
SeqA3	SEQ	Winding 3 Positive, Negative & Zero Sequence Current	E	