

## IEC 61850 Certificate Level A<sup>1</sup>

**Issued to:**

Mitsubishi Electric Corporation  
1-1-2 Wadasaki-Cho, Hyogo-ku  
652-8555 Kobe  
Japan

**For the server product:**

IED1-E11D1 Intelligent Electronic Device  
Relay software version M-MAIN PGLN06  
IEC 61850 version: 2.0.1.0  
Software version C-MAIN PGLN0812  
Hardware version:102PUA  
S/N: AAAAAB0003

The server product has not been shown to be non-conforming to:

### IEC 61850 Edition 2 Parts 6, 7-1, 7-2, 7-3, 7-4 and 8-1

Communication networks and systems for power utility automation

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Server Test Procedures version 2.0.6 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement (PICS) For the IEC 61850 Edition 2 interface in IED1-E11D1,IPP1-E12D1,IED2-E13D1,ICT1-E14D1", v1.1, "Model Implementation Conformance Statement (MICS)For the IEC 61850 Edition 2 interface in IED1-E11D1", v1.1 and "TISSUES Implementation Conformance Statement(TICS)For the IEC 61850 Edition 2 interface in IED1E11D1,IPP1-E12D1,IED2-E13D,1ICT1-E14D1", v1.1 and the extra information for testing: "Protocol Implementation eXtra Information for Testing(PIXIT) For the IEC 61850 Edition 2 interface in IED1-E11D1,IPP1-E12D1,ICT1-E14D1,IED2-E13D1", v1.2.

The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1 Basic Exchange (19/26)	9a GOOSE Publish (11/13)
2 Data Sets (4/7)	9b GOOSE Subscribe (20/21)
4 Setting Group Selection (4/4)	12a Direct Control (4/18)
4+ Setting Group Definition (12/13)	12d Enhanced SBO Control (14/28)
5 Unbuffered Reporting (19/23)	13 Time Synchronization (5/7)
6 Buffered Reporting (27/33)	14 File Transfer (5/8)

This certificate includes a summary of the test results as carried out at DNV in The Netherlands with UniGrid SA Simulator 2.0.2 with test suite 20230704.1 and UniCA 61850 Analyzer 6.45.01. This document has been issued for information purposes only, and the archived DNV verification report No. 10429929-DSO 24-4075 rev 2 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV by Mitsubishi Electric Corporation. The manufacturer's production process has not been assessed. This certificate does not imply that DNV has approved any product other than the specimen tested.

Arnhem, March 1, 2024



**G. Akse**  
Business Development Manager  
Interoperability of Power Systems

**Issued by:**




**R. Schimmel**  
Verification Manager

<sup>1</sup> Level A - Independent test lab with certified ISO 9001 Quality System

UCA International Users Group P.O. Box 315, Shell Knob, MO 65747 USA

## IEC 61850 Certificate Level A

Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0.6

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcd, sSrvN4	sAssN6, sSrv9, sSrv10
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
4: Setting Group Selection	sSg1, sSg3, sSgN1	sSg11
4+: Setting Group definition	sSg2, sSg4, sSg6, sSg7, sSg8, sSg10, sSg12, sSgN2, sSgN3, sSgN4, sSgN5	sSg9
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, sRp15, sRpN5
6: Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8	sBr8, sBr10, sBr11, sBr12, sBr15
9a: GOOSE Publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop6, sGopN1, sGopN2
9b: GOOSE Subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGos23, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos4, sGos13
12a: Direct Control	sCtl5, sCtl10, sDOns1, sDOns2	
12d: Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl4, sCtl6, sCtl16, sCtl26
13: Time Synchronization	sTm1, sTm2, sTmN1	sTm3, sTmN2
14: File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	

All configuration file and data model tests have been successfully performed for the product variants using the same communication hardware and software version:

- IPP1-E12D1 Intelligent Electronic Device, Relay software version M-MAIN PGLN17  
Software version C-MAIN PGLN0812 IEC 61850 version: 2.0.1.0
- ICT1-E14D1 Intelligent Electronic Device, Relay software version M-MAIN PGLN26  
Software version C-MAIN PGLN0812 IEC 61850 version: 2.0.1.0
- IED2-E13D1 Intelligent Electronic Device, Relay software version M-MAIN PGLN20  
Software version C-MAIN PGLN0812 IEC 61850 version: 2.0.1.0