

IEC 61850 Certificate Level A¹

Issued to:

GE Renewable Energy
650 Markland St. Markham
ON L6C 0M1
Canada

For the server product:

Multilin N60
Network Stability and Synchrophasor Measurement System
Firmware version: 8.51
S/N: AAKC20000120

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: "UR Family IEC 61850 Conformance Statement for PICS, Version 8.51", "UR Family IEC 61850 Ed 2 Conformance Statement for MICS, Version 8.51" and "UR Family IEC 61850 Conformance Statement for TICS, Version 8.51" and the extra information for testing: "UR Family IEC 61850 Conformance Statement for PIXIT, Version 8.51".


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 (23/26)	12a Direct Control (11/18)
2 Data Sets (4/7)	12b SBO Control (18/27)
4 Setting Group Selection (4/4)	12c Enhanced Direct Control (13/20)
5 Unbuffered Reporting (23/23)	12d Enhanced SBO Control (19/28)
6 Buffered Reporting (33/33)	13 Time Synchronization (5/7)
9a GOOSE Publish (12/13)	14 File Transfer (6/8)
9b GOOSE Subscribe (21/21)	15 Service Tracking (6/17)

This certificate includes a summary of the test results as carried out at DNV in The Netherlands with UniGrid SA Simulator 2.2.0 with test suite 20231107 and UniCA 61850 Analyzer 6.41.00. This document has been issued for information purposes only, and the archived DNV verification report No. 10484734-DSO 24-4096 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 GE Renewable Energy. 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 15, 2024



G. Akse
Business Development Manager
Interoperability of Power Systems

Issued by:




R. Schimmel
Verification Manager

¹ Level A - Independent test lab with certified ISO 9001 Quality System
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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, sSrv6, sSrv12, sSrv13, sSrvN1e, sSrvN2, sSrvN3
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
4: Setting Group Selection	sSg1, sSg3, sSgN1	sSg11
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, sRp13, sRp15, sRp17, 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	sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, sBr13, sBr15, sBr17, sBr23, sBr24
9a: GOOSE Publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop5, 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, sGos6b, sGos13
12a: Direct Control	sCtl5, sCtl10, sDOs1, sDOs2	sCtl2, sCtl7, sCtl13, sCtl15, sCtl16, sCtl17, sCtl18
12b: SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOs1, sSBOs2, sSBOs6	sCtl2, sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl17, sCtl18, sCtl27
12c: Enhanced Direct control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl2, sCtl7, sCtl13, sCtl14, sCtl15, sCtl16, sCtl17, sCtl18, sCtl26
12d: Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl2, sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl17, sCtl18, sCtl26
13: Time Synchronization	sTm1, sTm2, sTmN1	sTm3, sTm5
14: File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt3
15: Service tracking		sTrk1, sTrk2, sTrk8, sTrk9, sTrk10, sTrk11

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

- Multilin B30 Low Impedance Busbar Protection
- Multilin F35 Feeder Protection
- Multilin C60 Breaker Monitoring and Control
- Multilin B90 Low Impedance Bus Protection System