UCA International Users Group

DNV

IEC 61850 Certificate Level A[1]

Issued to:

GE Renewable Energy
St. Leonards Building
Harry Kerr Drive
Stafford, ST16 1WT
United Kingdom

For the server product:

P40 Agile Enhanced
P14DL Utility and Industrial Feeder Management Relay
Software version: 02B
Hardware version: E
S/N: P14PSN1

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 2.0.5 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement (PICS) for the IEC 61850 Edition 2 interface in P40 Agile Enhanced Version 1.0", "Model Implementation Conformance Statement (MICS) for the IEC 61850 Edition 2 interface in P40 Agile Enhanced Version 1.0" and "Technical Issues Conformance Statement (TICS) for the IEC 61850 Edition 2 interface in P40 Agile Enhanced Version 1.0" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Edition 2 interface in P40 Agile Enhanced Version 1.1".
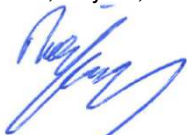
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1	Basic Exchange (22/26)		9a	GOOSE Publish (13/13)
2	Data Sets (4/7)		9b	GOOSE Subscribe (19/20)
5	Unbuffered Reporting (20/23)		12a	Direct Control (7/18)
6	Buffered Reporting (28/33)		12b	SBO Control (13/27)
			12c	Enhanced Direct Control (9/20)
			12d	Enhanced SBO Control (13/28)
			13	Time Synchronization (4/7)
			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 1.8.1 with test suite Ed2_Server_TP_2.0_20210330.1 and UniCA 61850 Analyzer 6.40.01. This document has been issued for information purposes only, and the archived DNV verification report No. 10297397-INC 21-3092 rev 1 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, July 05, 2021

N.A. Heijker
Business Leader
Interoperability of Smart Power Systems

Issued by:

DNV

R. Schimmel
Verification Manager

[1] Level A - Independent test lab with certified ISO 9001 Quality System

Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0.5

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcdf, sSrvN4	sAssN6, sSrv6, sSrv9, sSrv12, sSrvN1e, sSrvN3
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, 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	sBr8, sBr10, sBr11, sBr12, sBr15, sBr17
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop2b, sGop5, sGop6, sGopN1, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos4, sGos6b
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl2, sCtl13, sCtl16
12b: SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl2, sCtl4, sCtl16, sCtl27
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl2, sCtl13, sCtl14, sCtl16, sCtl26
12d: Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl2, sCtl16, sCtl26
13: Time sync	sTm1, sTm2, sTmN1	sTm3
14: File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	