

IEC 61850 Certificate Level A¹

No. 10246185-INC 20-2654

Issued to:

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

For the server product:

MiCOM P40 Agile P14DL
Feeder Protection IED - Directional
Software version: 62 E
Hardware version: A

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

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

Communication networks and systems in substations

The conformance test has been performed according to IEC 61850-10, the UCA International Users Group Server Device Test Procedures version 3.3, the product's protocol, model and technical issue implementation conformance statements: "MiCOM P40 Agile P14DL PICS Protocol Implementation Conformance – IEC 61850 Edition 1, ref. P14DL-PC-EN-10.1", "MiCOM P40 Agile P14DL MICS Feeder Management IED, P14DL-MC-EN-10.1" and "MiCOM P40 Agile P14D, P14N & P94V TICS Tissues Implementation Conformance Statement, ref. P40Agile-TC-EN-10.1" and the extra information for testing: "MiCOM P40 Agile P14D, P14N & P94V PIXIT Protocol Implementation eXtra Information for Testing, ref. P40Agile-PX-EN-10.1".

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 (22/25)
- 2 Data Sets (3/6)
- 4 Setting Group Selection (3/3)
- 5 Unbuffered Reporting (16/18)
- 6 Buffered Reporting (23/27)

- 9a GOOSE Publish (11/12)
- 9b GOOSE Subscribe (11/11)
- 12a Direct Control (5/11)
- 12b SBO Control (8/14)
- 12c Enhanced Direct Control (7/13)
- 12d Enhanced SBO Control (12/19)
- 13 Time Synchronization (4/5)
- 14 File Transfer (6/7)

This certificate includes a summary of the test results as carried out at DNV GL in the Netherlands with UniCA 61850 Client Simulator 4.31.02 with test suite 3.31.00 and UniCA 61850 Analyzer 5.34.02. This document has been issued for information purposes only, and the original DNV GL report No. 10246185-INC 20-2653 will prevail.

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

Arnhem, July 17, 2020

N.A. Heijker Business Leader

Interoperability of smart power systems

Issued by:



DNV KEMA is now DNV GL

R. Schimmel Verification Manager

Copyright © DNV GL Netherlands B.V. Arnhem, the Netherlands. All rights reserved. It is prohibited to update or change this certificate in any manner whatsoever, including but not limited to dividing it into parts.

 $^{^{\}rm 1}\,\text{Level}\,\text{A}$ - Independent test lab with certified ISO 9001 Quality System



IEC 61850 Certificate Level A

No. 10246185-INC 20-2653

Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 3.3

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, AssN6, Srv6, Srv7, Srv8, Srv12, SrvN1e, SrvN1f, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
4: Setting Group Selection	Sg1, Sg3, SgN1a	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp9, RpN1, RpN2, RpN3, RpN4, RpN8	Rp5, Rp8, Rp10, Rp11, Rp12, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br9, Br20, Br21, Br22, Br25, Br26, Br27, Br28, BrN1, BrN2, BrN3, BrN4, BrN5, BrN8	Br5, Br8, Br10, Br11, Br12
9a: GOOSE Publish	Gop2, Gop3, Gop4, Gop9, Gop10a	Gop1, Gop5, Gop6, Gop10b, GopN1, GopN2
9b: GOOSE Subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b, Gos4
12a: Direct Control	CtlN3, DOns1	Ctl7, CtlN11, DOns3
12b: SBO Control	CtIN1, CtIN2, CtIN3, CtIN4, SBOns2	Cti3, Cti7, CtiN11
12c: Enhanced Direct Control	CtlN3, DOes2, DOes5	Ctl7, CtlN6, CtlN8, CtlN11
12d: Enhanced SBO Control	CtIN1, CtIN2, CtIN3, CtIN4, CtIN9, SBOes1, SBOes2, SBOes3	Cti3, Cti7, CtiN6, CtiN11
13: Time Sync	Tm1, Tm2	Tm3, TmN1
14: File Transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c