

No. 10116412-INC 18-2748

Issued to:

GE Power
St. Leonards Building
Redhill Business Park
Stafford ST16 1WT
United Kingdom

For the server product:

MiCOM Agile P546
Line Differential Protection Relay
Software version: 79
Hardware version: M
S/N: 32868213/03/14

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 3.2, the product's protocol, model and technical issue implementation conformance statements: "MiCOM P40 Agile Px4x Protocol Implementation Conformance - IEC 61850 Edition 1, Px4x-EN-PC1-D", "MiCOM P40 Agile P544, P546 Model Implementation Conformance Statement, P544&6/EN MC/N" and "MiCOM P40 Agile P543, P544, P545, P546 Tissues Implementation Conformance, P54x/EN TC/N" and the extra information for testing: "MiCOM P40 Agile P543, P544, P545, P546 Protocol Implementation eXtra Information for Testing, P54x/EN PX/N.1".

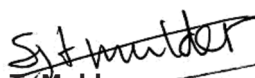
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1 Basic Exchange (22/25)	12a Direct Control (6/11)
2 Data Sets (3/6)	12b SBO Control (9/14)
4 Setting Group Selection (3/3)	12c Enhanced Direct Control (7/13)
5 Unbuffered Reporting (16/18)	12d Enhanced SBO Control (12/19)
6 Buffered Reporting (23/27)	13 Time Synchronization (4/5)
9a GOOSE Publish (12/12)	14 File Transfer (6/7)
9b GOOSE Subscribe (11/11)	

This certificate includes a summary of the test results as carried out at GE grid Solutions in the United Kingdom with UniCA 61850 Client Simulator 4.32.01 with test suite 3.31.00 and UniCA 61850 Analyzer 5.34.01. This document has been issued for information purposes only, and the archived DNV GL report No. 10116412-INC 18-2747 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 Power. 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 30, 2018


S.J.T. Mulder
Business Leader
Interoperability of Smart Power Systems

Issued by:



DNV KEMA is now DNV GL


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 Server Device Test Procedures version 3.2

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, Gop7, Gop10b, GopN1, GopN2
9b: GOOSE Subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b, Gos4
12a: Direct Control	CtIN3, DOs1	CtI7, CtIN10, CtIN11, DOs3
12b: SBO Control	CtIN1, CtIN2, CtIN3, CtIN4, SBOs2	CtI3, CtI7, CtIN10, CtIN11
12c: Enhanced Direct Control	CtIN3, DOes2, DOes5	CtI7, CtIN8, CtIN10, CtIN11
12d: Enhanced SBO Control	CtIN1, CtIN2, CtIN3, CtIN4, CtIN9, SBOes1, SBOes2, SBOes3	CtI3, CtI7, CtIN10, CtIN11
13: Time Sync	Tm1, Tm2	Tm3, TmN1
14: File Transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c