

No. 10010242-OPE/INC 16-2154

**Issued to:**

UK Grid Solutions Limited  
St. Leonards Avenue  
Stafford ST17 4LX  
United Kingdom

**For the server product:**

MiCOM P40 Agile P14DZ  
Feeder Management Protection IED - Directional  
Software version: 56B  
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 2.3 with TPCL<sup>2</sup> version 1.8, the product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement, P40Agile-PC-EN-7", "Model Implementation Conformance Statement, P14DZ-MC-EN-6.2" and "Tissues Implementation Conformance Statement, P40Agile-TC-EN-6.2" and the extra information for testing: "Protocol Implementation eXtra Information for Testing, P40Agile-PX-EN-6.2".

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 (20/24)	12a Direct Control (5/12)
2 Data Sets (3/6)	12b SBO Control (7/14)
4 Setting Group Selection (3/3)	12c Enhanced Direct Control (6/13)
5 Unbuffered Reporting (17/19)	12d Enhanced SBO Control (11/19)
6 Buffered Reporting (24/28)	13 Time Synchronization (3/5)
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 UK Grid Solutions in the United Kingdom with UniCA 61850 Client Simulator version 4.29.03 with test suite version 3.29.00 and UniCA 61850 Analyzer 5.31.00. This document has been issued for information purposes only, and the original paper copy of the DNV GL report No. 10010242-OPE/INC 16-2153 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by UK Grid Solutions. 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 13, 2016



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Global Service Line Leader  
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**Issued by:**




**R. Schimmel**  
Verification Manager

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

<sup>2</sup> TPCL - Test procedures change list



Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 2.3 with TPCL 1.8

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1a, Sg3	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp9, Rp15, RpN1, RpN2, RpN3, RpN4, RpN8	Rp5, Rp8, Rp10, Rp11, Rp12, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br9, Br15, Br20, Br21, Br22, Br25, Br26, Br27, Br28, BrN1, BrN2, BrN3, BrN4, BrN5, BrN8	Br5, Br8, Br10, Br11, Br12
9a: GOOSE Publish	Gop2, Gop3, Gop4, Gop7, 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	CtIN3, CtIN8, DOs1	CtIN11, DOs3
12b: SBO Control	CtI3, CtIN1, CtIN2, CtIN3, CtIN4, SBOs2	CtIN11
12c: Enhanced Direct Control	CtIN3, CtIN8, DOes2, DOes5	CtIN6, CtIN11
12d: Enhanced SBO Control	CtI3, CtIN1, CtIN2, CtIN3, CtIN4, CtIN9, SBOes1, SBOes2, SBOes3	CtIN6, CtIN11
13: Time Sync	Tm1, Tm2	TmN1
14: File Transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c

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

- P14DB Feeder Management Protection IED - Directional (Base)
- P14DG Feeder Management Protection IED - Directional (Small Generator)
- P14DH Feeder Management Protection IED - Directional (Wattmetric Directional Earthfault)
- P14DL Feeder Management Protection IED - Directional (Load / Line Management)
- P14NB Feeder Management Protection IED - Non Directional (Base)
- P14NZ Feeder Management Protection IED - Non Directional (Autoreclose plus HIF when used with SEF CT)
- P94VB Voltage/Frequency Protection IED - Voltage (Base)
- P94VP Voltage/Frequency Protection IED - Voltage (Check Synch)
- P94VR Voltage/Frequency Protection IED - Voltage (Auto Reclose)