

Issued to:

GE Power Management, S.L.
Grid Solutions
Avda. Pinoa, 10
48170 Zamudio, Bizkaia
Spain

For the client system:

GE POWER GATEWAY (CCU1000 ENHANCED)
Software version: GE POWER v1.1.1
Hardware version: GPGAT1XXXXXXHI
S/N: L2U0REL31F002

The client system 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 Client Conformance Test Procedures version 1.0 with TPCL² 1.0 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in GPG: GE POWER GATEWAY (CCU1000 ENHANCED), 13 may 2016", "Model Implementation Conformance Statement for the IEC 61850 Client Interface in GPG: GE POWER GATEWAY (CCU1000 ENHANCED), 13 may 2016" and "TISSUES Implementation Conformance Statement for the IEC 61850 Client Interface in GPG: GE POWER GATEWAY (CCU1000 ENHANCED), 13 may 2016" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Client Interface in GPG: GE POWER GATEWAY (CCU1000 ENHANCED), 13 may 2016".

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 (17/24)	12b SBO Control (6/11)
2 Data Sets (4/10)	12c Enhanced Direct Control (5/9)
5 Unbuffered Reporting (16/23)	12d Enhanced SBO Control (6/11)
6 Buffered Reporting (19/28)	13 Time Synchronization (4/4)
12a Direct Control (5/9)	14 File Transfer (3/8)

This certificate includes a summary of the test results as carried out at DNV GL in Spain with UniCA 61850 IED simulator 5.31.00 and UniCA 61850 Analyzer 5.29.02. This document has been issued for information purposes only, and the original paper copy of the DNV GL verification report No. 84000067-OPE/INC 16-2009 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. 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



P. Cioci
Global Service Line Leader
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DNV-GL
DNV KEMA is now DNV GL



R. Schimmel
Verification Manager

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

² TPCL - Test procedures change list

Applicable Test Procedures from the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.0 with TPCL 1.0

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAssN1, cAssN4, cAssN5, cAssN6	cAssN7, cSrv1, cSrv4, cSrv5, cSrv6, cSrv7, cSrvN1, cSrvN3, cSrvN4, cSrvN5
2: Data Sets		cDs2, cDs5, cDs6, cDsN1b
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRpN2, cRpN5, cRpN6	cRp2, cRp7, cRp16
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr30, cBr31, cBrN2, cBrN5, cBrN6, cBrN20	cBr2, cBr7, cBr16
12a: Direct Control	cCtl4, cCtl5, cDOns1, cDOns2	cCtl2
12b: SBO Control	cCtl4, cCtl5, cSBOns1, cSBOns2, cSBOns3	cCtl2
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	cCtl2
12d: Enhanced SBO Control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	cCtl2
13: Time Synchronization	cTm1, cTmN1	cTm2, cTmN2
14: File Transfer	cFt1, cFt3, cFtN1	