



IEC 61850 Certificate Level A¹

No. 74100681-MOC/INC 12-01140

Issued to:
GE Digital Energy
Av. Pinoa, 10
48170 Zamudio
Spain

For the client system:
CCU 1000 Central Control Unit
Firmware version 1.0
Hardware version 1.6

Issued by:



The client system has not shown to be non-conforming to:
IEC 61850-6, 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 and UCA IUG Conformance Test Procedures for Client System with IEC 61850-8-1 interface, revision 1.1 with TPCL² version 1.2 with client system's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in CCU1000, 14 June 2012", "Model Implementation Conformance Statement for the IEC 61850 interface in CCU1000, 14 June 2012", "TISSUES Implementation Conformance Statement for the IEC 61850 interface in CCU1000, 14 June 2012" and product's extra information for testing: "Protocol Implementation Extra Information for the IEC 61850 interface in CCU1000, 14 June 2012".

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 (16/22)	12a	Direct Control (5/7)
2	Data Sets (3/9)	12b	SBO Control (6/9)
5	Unbuffered Reporting (13/18)	12c	Enhanced Direct Control (5/7)
6	Buffered Reporting (15/22)	12d	Enhanced SBO Control (6/9)
		14	File Transfer (5/8)

This certificate includes a summary of the test results as carried out at KEMA in the Netherlands with UniCA Multi IED Simulator version 2.0.0.5 and UniCA 61850 Analyzer version 4.25.00. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74100681-MOC/INC 12-01139 will prevail.

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

Arnhem, June 14, 2012

M. Adriaansen
Director Intelligent Networks & Communication

R. Schimmel
Certification Manager

¹ Level A - Independent test lab with certified ISO 9000 or ISO 17025 Quality System

² TPCL - Test Procedure Change List



Applicable Test Procedures from the UCA IUG Conformance Test Procedures for Client System with IEC 61850-8-1 interface, revision 1.1 with TPCL version 1.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAss4, cAssN1, cAssN4, cAssN5, cAssN6	cAssN7 cSrv1, cSrv4, cSrv5, cSrv6, cSrvN1, cSrvN3, cSrvN4,
2: Data Sets		cDs2, cDs5, cDsN1b
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRpN2, cRpN3, cRpN7, cRpN8	cRp2, cRp7, cRpN4
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr12, cBrN2, cBrN3, cBrN7, cBrN8, cBrN9	cBr2, cBr7
12a: Direct control	cCtl4, cCtlN1 cDOns1, cDOns2	cCtl2
12b: SBO control	cCtl4, cCtlN1 cSBOns1, cSBOns2, cSBOns3	cCtl2
12c: Enhanced Direct Control	cCtl4, cCtlN1 cDOes1, cDOes2	cCtl2
12d: Enhanced SBO control	cCtl4, cCtlN1 cSBOes1, cSBOes2, cSBOes3	cCtl2
14: File transfer	cFt1, cFt2, cFt3, cFtN1, cFtN2	