

IEC 61850 Certificate Level A1

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ABB AG
Kallstadter Str 1
68309, Mannheim
Germany

No. 74101960-MOC/INC 12-02107

For the client system:

RTU560

Hardware: RTU560 Software: Release 10.6

Issued by: KEMA

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 and product's extra information for testing: "IEC 61850 Client, reference; 1KGT 150 590 V003 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 (19/22)
- 2 Data Sets (3/9)
- 5 Unbuffered Reporting (16/18)
- 6 Buffered Reporting (20/22)

- 12a Direct Control (6/7)
- 12b SBO Control (8/9)
- 12c Enhanced Direct Control (6/7)
- 12d Enhanced SBO Control (8/9)
- 13 Time Synchronization (4/4)
- 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 3.26.00 and UniCA 61850 Analyzer 4.25.00. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74101960-MOC/INC 12-02106 will prevail.

The test has been carried out on one single specimen of the client system as referred above and submitted to KEMA by ABB AG. 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, November 2, 2042

M. Adriaensen

Director Intelligent Networks & Communication

Certification Manager

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

² TPCL - Test Procedure Change List

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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, cSrv2, cSrv3, cSrv4, cSrv5, cSrv6, cSrvN3, cSrvN4, cSrvN5, cSrvN6
2:	Data Sets		cDs1, cDs2, cDs5
5:	Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRpN2, cRpN3, cRpN7, cRpN8	cRp1, cRp2, cRp6, cRp7, cRpN1, cRpN4
6:	Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr12, cBrN2, cBrN3, cBrN7, cBrN8, cBrN9	cBr1, cBr2, cBr6, cBr7 cBr13, cBrN1c, BrN4
12a:	Direct control	cCtl4, cCtlN1 cDOns1, cDOns2	cCtl1, cCtl2
12b:	SBO control	cCtl4, cCtlN1 cSBOns1, cSBOns2, cSBOns3	cCtl1, cCtl2 cSBOns4
12c:	Enhanced Direct Control	cCtl4, cCtlN1 cDOes1, cDOes2	cCtl1, cCtl2
12d:	Enhanced SBO control	cCtl4, cCtlN1, cSBOes1, cSBOes2, cSBOes3	cCtl1, cCtl2 cSBOes4
13:	Time sync	cTm1	cTm2, cTmN1, cTmN2
14:	File transfer	cFt1, cFt2, cFt3, cFtN1, cFtN2	