



IEC 61850 Certificate Level A¹

No. 30710115-Consulting 08-2148

Issued to:
ABB AB
SA Products
S-721 59 Västerås
Sweden

For the product:
IED 670 1.1r10
Software version 1.4_77m_19
Hardware version 1MRK001535-14



The product 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 with product's protocol, model and technical issue implementation conformance statements: "IED670_series_ver_1.1r10_PICS-IEC61850", "IED670_series_ver_1.1r10_MICS-IEC61850", "IED670_series_ver_1.1r10_PIXIT-IEC61850 (Chapter #3)" and product's extra information for testing: "IED670_series_ver_1.1r10_PIXIT-IEC61850".

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 as defined in the UCA International Users Group Device Test procedures v1.1):

1 Basic Exchange (19/23)	9a GOOSE Publish (6/11)
2 Data Sets (2/5)	9b GOOSE Subscribe (9/9)
3 Substitution (3/3)	12a Direct Control (4/11)
4 Setting Group Selection (2/3)	12d Enhanced SBO Control (10/17)
5 Unbuffered Reporting (10/13)	13 Time Synchronization (3/4)
6 Buffered Reporting (13/15)	14 File Transfer (3/6)

This Certificate includes a summary of the test results as carried out at KEMA in The Netherlands with UniCAsim 61850 version 3.17.03 with test suite 3.17.01 and UniCA 61850 analyzer 4.18.01. The test is based on the UCA International Users Group Device Test Procedures version 1.1. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 30710115-Consulting 08-2147 will prevail.

The test has been carried out on one single specimen of the products as referred above and submitted to KEMA by ABB AB. The manufacturer's production process has not been assessed. This Certificate does not imply that KEMA has certified or approved any product other than the specimen tested.

Arnhem, September 30, 2008

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Manager Intelligent Networks and Communication

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

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International
Usersgroup

Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 1.1

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv7, Srv8, SrvN1e, SrvN3
2: Data Sets	Dset1, DsetN1ae	
3: Substitution	Sub1, Sub2, SubN1	
4: Setting Group Selection	Sg1, SgN1	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7 RpN1, RpN2, RpN3, RpN4	Rp5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9 BrN1, BrN2, BrN3, BrN4, BrN5	Br5
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, GopN1
9b: GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a: Direct control	CltN3, CltN8 DOns1, DOns3	
12d: Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl7
13: Time sync	Tm1, Tm2, TmN1	
14: File transfer	Ft1, Ft2ab, FtN1ab	