IEC 61850 Certificate Level A[1]

No. 84000136-OPE/INC 17-1743

Issued to:

Siemens AG
IC SG EA PRO
Humboldtstr. 59
90459 Nuremberg
Germany

For the client system:

SICAM AK 3 Automation Component with modules
CP-2016 and CP-2019
Software version: ET25 Rev. 03.04

Module:	HW version:	S/N:
CP-2016	BC2-016--.03	BF1512032572
CP-2019	BC2-019--.03	BF1601022478

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 TPCL[2] 1.0 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 Ed.2 Client Interface in Siemens SICAM AK 3, DC0-163-2.00, 2016-12-22", "Model Implementation Conformance Statement for the IEC 61850 Ed.2 Client Interface in Siemens SICAM AK 3, DC0-162-2.00, 2016-12-22", " and "TISSUES Implementation Conformance Statement for the IEC 61850 Ed.2 Client Interface in Siemens SICAM AK 3, DC0-165-2.00, 2016-12-22", " and the extra information for testing: "Protocol Implementation extra Information for Testing (PIXIT) the IEC 61850 Ed.2 Client Interface in Siemens SICAM AK 3, DC0-164-2.00, 2016-12-22".
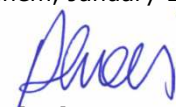
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1	Basic Exchange (21/24)		12a	Direct Control (6/9)	
2	Data Sets (6/10)		12c	Enhanced Direct Control (6/9)	
2+	Data Set Definition (5/8)		12d	Enhanced SBO Control (8/11)	
4	Setting Group Selection (3/3)		13	Time Synchronization (3/4)	
5	Unbuffered Reporting (22/23)		14	File Transfer (3/8)	
6	Buffered Reporting (27/28)				

This certificate includes a summary of the test results as carried out at Siemens in Austria with UniCA 61850 IED simulator 5.31.00 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 verification report No. 84000136-OPE/INC 17-1744 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Siemens. 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, January 13, 2017

P. Cioci
Global Service Line Leader
Operational Excellence of Power
Systems

Issued by:

DNV·GL
DNV KEMA is now DNV GL

R. Schimmel
Verification Manager

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[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, cSrv2, cSrv3, cSrv4, cSrv5, cSrv6, cSrv7, cSrv10, cSrvN1, cSrvN3, cSrvN4, cSrvN5, cSrvN6
2: Data Sets		cDs1, cDs2, cDs5, cDs6, cDsN1a, cDsN1b
2+: Data Set Definition		cDs10, cDs12, cDs13, cDsN10a, cDsN11
4: Setting Group	cSg2, cSgN1	cSg1
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRpN2, cRpN5, cRpN6	cRp1, cRp2, cRp6, cRp7, cRp12, cRp13b, cRp16, cRp18, cRpN1
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr30, cBr31, cBrN2, cBrN5, cBrN6, cBrN20	cBr1, cBr2, cBr6, cBr7, cBr12, cBr13b, cBr16, cBr18, cBr32, cBr33, cBrN1
12a: Direct Control	cCtl4, cCtl5, cDOns1, cDOns2	cCtl1, cCtl2
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	cCtl1, cCtl2
12d: Enhanced SBO Control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	cCtl1, cCtl2, cSBOes4
13: Time Synchronization	cTm1, cTmN1	cTm2
14: File Transfer	cFt1, cFt3, cFtN1	