

IEC 61850 Certificate Level A¹

No. 10087389-INC 18-2647

Issued to:

Siemens AG
Humboldtstr. 59
90459 Nuremberg
Germany

For the server product:

SICAM A8000 CP-8050 Telecontrol and Automation
System with CI-8520 module
Software version: ETI5 Rev. 03.09
Module: HW version: S/N:
CP-8050 6MF28050AA00-BB BF1707033108
CI-8520 6MF28520AA00-BB BF1707025855

The server product 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 Server Test Procedures version 1.0 with TPCL² 1.2.4 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 Ed.2 Server Interface in Siemens SICAM A8000 CP-8050, DC8-076-2.00, 2018-06-13", "Model Implementation Conformance Statement for the IEC 61850 Ed.2 Server Interface in Siemens SICAM A8000 CP-8050, DC8-075-2.00, 2018-06-13" and "TISSUES Implementation Conformance Statement for the IEC 61850 Ed.2 Server Interface in Siemens SICAM A8000 CP-8050, DC8-078-2.00, 2018-06-13" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) the IEC 61850 Ed.2 Server Interface in Siemens SICAM A8000 CP-8050, DC8-077-2.00, 2018-06-13".

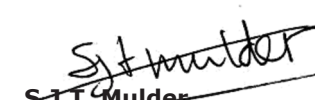
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1 Basic Exchange (23/26)	9a GOOSE Publish (11/13)
2 Data Sets (4/7)	9b GOOSE Subscribe (12/14)
4 Setting Group Selection (3/4)	12a Direct Control (5/18)
5 Unbuffered Reporting (18/21)	12c Enhanced Direct Control (6/20)
6 Buffered Reporting (25/30)	12d Enhanced SBO Control (13/28)
	13 Time Synchronization (3/7)

This certificate includes a summary of the test results as carried out at Siemens in Austria with UniGrid SA 1.4.361 with test suite Ed2 1.0.55 and UniCA 61850 Analyzer 5.34.01. This document has been issued for information purposes only, and the archived DNV GL verification report No. 10087389-INC 18-2646 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, June 13, 2018



S.J.T. Mulder
Business Leader
Interoperability of Smart Power Systems

Issued by:



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 Server Test Procedures version 1.0 with TPCL 1.2.4

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4	sAssN6, sSrv6, sSrv8, sSrv9, sSrv10, sSrv12, sSrvN1e, sSrvN1f, sSrvN3
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
4: Setting Group Selection	sSg1, sSg3, sSgN1	
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, sRpN5
6: Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr15, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8	sBr8, sBr10, sBr11, sBr12
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11	sGop1, sGop6, sGop7, sGopN1, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl15
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl14, sCtl15
12d: Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6, sCtl15, sCtl26
13: Time sync	sTm1, sTm2, sTmN1	