IEC 61850 Certificate Level A[1]

No. 74101158-MOC/INC 12-00465

Issued to:
Siemens A.G., IC SG EA
Protection and Substation Control Systems
Wernerwerkdamm 5
D-13623 Berlin
Germany

For the product:
SIPROTEC V5
7VK87 Circuit-Breaker Management Device
Version 1.10

Issued by: KEMA

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, the UCA International Users Group Device Test Procedures version 2.3 with TPCL[2] version 1.5, the product's protocol, model and technical issue implementation conformance statements and the extra information for testing: "SIPROTEC 5 IEC 61850 PIXIT, PICS, TICS, V1.00" and "SIPROTEC Model Implementation Conformance Statement (MICS) According to IEC 61850, Product code 7VK87, Mapping version V01.10".

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 (20/24)	9a	GOOSE Publish (8/13)
2	Data Sets (3/6)	9b	GOOSE Subscribe (10/11)
2+	Data Set Definition (23/23)	12a	Direct Control (7/12)
3	Substitution (4/4)	12b	SBO Control (9/14)
4	Setting Group Selection (3/3)	12c	Enhanced Direct Control (7/13)
4+	Setting Group Definition (7/7)	12d	Enhanced SBO Control (12/19)
5	Unbuffered Reporting (17/19)	13	Time Synchronization (4/5)
6	Buffered Reporting (19/21)	14	File Transfer (4/7)
6+	Enhanced buffered reporting (12/12)		

This certificate includes a summary of the test results as carried out at Siemens in Germany with UniCA 61850 Client simulator version 3.23.02 with test suite 3.24.00 and UniCA 61850 analyzer 4.24.03. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74101158-MOC/INC 12-00464 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KEMA by Siemens. 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, March 9, 2012

M. Adriaensen
Regional Director Management & Operations Consulting

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1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 Quality System
2 TPCL - test procedures change list

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Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.3 with TPCL version 1.5

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, SrvN2, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
2+: Data Set Definition	Dset2, Dset3, Dset4, Dset5, Dset6, Dset7, Dset8, Dset9 DsetN1cd, DsetN2, DsetN3, DsetN4, DsetN5, DsetN6, DsetN7, DsetN8, DsetN9, DsetN10, DsetN11, DsetN12, DsetN13, DsetN14, DsetN15	
3: Substitution	Sub1, Sub2, Sub3, SubN1	
4: Setting Group Selection	Sg1, SgN1a	Sg3
4+: Setting Group Definition	Sg2, Sg4, SgN1b, SgN2, SgN3, SgN4, SgN5	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12 RpN1, RpN2, RpN3, RpN4	Rp5, Rp6, Rp8, Rp9, Rp11, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br6, Br10, Br11, Br13
6+: Enhanced buffered reporting	BrE1, BrE2, BrE3, BrE6, BrE7, BrE8, BrE9, BrE10, BrE11	BrE4, BrE5, BrE12
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop10a	Gop1, Gop6, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtlN3, CtlN8, DOns1, DOns3	Ctl2, Ctl7, CtlN11
12b: SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOns2	Ctl2, Ctl7, CtlN11
12c: Enhanced Direct Control	CtlN3, CtlN8, DOes2, DOes5	Ctl2, Ctl7, CtlN11
12d: Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl2, Ctl7, CtlN11
13: Time sync	Tm1, Tm2, TmN1	Tm3
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	