IEC 61850 Certificate Level A[1]

No. 74101670-MOC/INC 12-00858

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

For the product:
SIPROTEC V4
7RW80 Voltage and Frequency Protection
Firmware V04.61
EN100 V04.08

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: SIPROTEC 4 Ethernet Module EN100 for IEC 61850 Electrical/Optical 100MBit Interface Manual, Edition July 2011, C53000-G1140-C167-9", "MICS, Mapping family 7RW80X, Mapping version 1 Revision 0" and the product's extra information for testing: "SIPROTEC Voltage and Frequency Protection 7RW80 V4.6 IEC 61850 PIXIT, C53000-G1140-C234-2".

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 (19/24)	9a	GOOSE Publish (8/13)
2	Data Sets (3/6)	9b	GOOSE Subscribe (10/11)
2+	Data Set Definition (23/23)	12a	Direct Control (4/12)
4	Setting Group Selection (2/3)	12c	Enhanced Direct Control (4/13)
5	Unbuffered Reporting (16/19)	13	Time Synchronization (3/5)
6	Buffered Reporting (18/21)	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 Berlin with UniCA 61850 Client simulator version 3.25.00 with test suite 3.24.02 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. 74101670-MOC/INC 12-00857 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, April 26, 2012

M. Adriaensen
Regional Director Management & Operations Consulting

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Certification Manager

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

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, 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	
4: Setting Group Selection	Sg1, SgN1a	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12 RpN1, RpN2, RpN3, RpN4	Rp5, Rp6, Rp8, Rp9, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br6, Br10, Br11
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	
12c: Enhanced Direct Control	CtlN3, CtlN8, DOes2, DOes5	
13: Time Sync	Tm1, Tm2, TmN1	
14: File Transfer	Ft1, Ft2ab, Ft4, FtN1ab	