



IEC 61850 Certificate Level A¹

No. 30630033-Consulting 2006-0386

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

For the product:
Siprotec V4
7SJ61 Multifunction Protection
Firmware V04.63.02
EN100 V03.07.01



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: "SIPROTEC 4 Ethernet Module EN100 IEC 61850 Electrical / Optical Interface 100 MBit Manual, version 1.5.1, Edition February 2006, C53000-G1140-C167-6", "MICS, Mapping family 7SJ6XX, Mappingversion 1 revision 65" and product's extra information for testing: "SIPROTEC Multi-Functional Protectiv Relays 7SJ61...7SJ64 V4.6 IEC 61850 PIXIT, Edition 21-06-06, C53000-G1176-C180-2".

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

1	Basic Exchange	(19/23)	12a	Direct Control	(6/11)
2+	Data Set Definition	(25/28)	12c	Enhanced Direct Control	(4/11)
4	Setting Group Selection	(2/3)	12d	Enhanced SBO Control	(11/17)
5	Unbuffered Reporting	(12/13)	13	Time Synchronization	(3/4)
9a	GOOSE Publish	(5/11)	14	File Transfer	(3/6)
9b	GOOSE Subscribe	(9/9)			

This Certificate includes a summary of the test results as carried out at the KEMA laboratory at Arnhem, The Netherlands, with UniCAsim 61850 version 2.14.00 test system running test suite "61850 Conformance Test 2.13.10", UniCAsim GOOSE version 2.13.00 with test suite "GOOSE conformance Test version 2.12.05" and UniCA 61850 analyzer version 4.13.02. 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. 30630033-Consulting 2006-0387 will prevail.

The tests have been carried out on one single specimen of the products as referred above and submitted to KEMA by Siemens. 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, May 18, 2006

S.J.L.M. Janssen
Managing Director KEMA Consulting

E.F. Melenhorst
Senior Test Engineer

1 Level A – Independent Test Lab with certified ISO 9000 or ISO 17025 Quality System

Copyright © KEMA Nederland B.V., Arnhem, the Netherlands. All rights reserved. Please note that any electronic version of this KEMA certificate is provided to KEMA's customer for convenience purposes only. It is prohibited to update or change it in any manner whatsoever, including but not limited to dividing it into parts. In case of a conflict between the electronic version and the original version, the original paper version issued by KEMA will prevail.

KEMA Nederland B.V.

Utrechtseweg 310, 6812 AR Arnhem; P.O. Box 9035, 6800 ET Arnhem, The Netherlands.
Telephone + 31 26 356 6142, Telefax + 31 26 515 456, Email sales@kema.com

Performed test cases:

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	
2+: Data Set Definition (SCL-DynDataSet)	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 (SCL-ConfSG)	Sg1, SgN1	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, RpN1, RpN2, RpN3, RpN4	Rp5, Rp6, RpN5
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1
9b: GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a Direct control	CtlN3, CtlN8, DOns1, DOns3	Ctl2, Ctl7
12c Enhanced Direct Control	CtlN3, CtlN8, DOes2	Ctl2
12d Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, SBOes1, SBOes2, SBOes3	Ctl2, Ctl7
13 Time sync	Tm1, Tm2, TmN1	
14 File transfer	Ft1, Ft2ab, FtN1ab	

Copyright © KEMA Nederland B.V., Arnhem, the Netherlands. All rights reserved. Please note that any electronic version of this KEMA certificate is provided to KEMA's customer for convenience purposes only. It is prohibited to update or change it in any manner whatsoever, including but not limited to dividing it into parts. In case of a conflict between the electronic version and the original version, the original paper version issued by KEMA will prevail.

KEMA Nederland B.V.

Utrechtseweg 310, 6812 AR Arnhem; P.O. Box 9035, 6800 ET Arnhem, The Netherlands.
Telephone + 31 26 356 6142, Telefax + 31 26 515 456, Email sales@kema.com