IEC 61850 Certificate Level A[1]

No. 74100349-MOC/INC 11-2070

Issued to:
NR Electric Co., Ltd
No.69 Suyuan Avenue
Jiangning District, Nanjing City
P.R. China, 211102

For the product:
PCS-9705 Bay Control Unit
Hardware version PCS-9000-HW-V1.06
Software version PCS-9000-SW-V2.12

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 with product's protocol, model and technical issue implementation conformance statements: "PCS-9000 Platform Series IEC 61850 Protocol Implementation Conformance Statement (PICS)", "PCS-9705 Bay Control Unit IEC 61850 Model Implementation Conformance Statement (MICS)", "TISSUES Implementation Conformance Statement for the IEC 61850 interface in PCS-9000 Platform Series" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in PCS-9000 Platform".

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 v2.2b):

1	Basic Exchange (19/24)	9a	GOOSE Publish (7/12)
2	Data Sets (3/6)	9b	GOOSE Subscribe (10/10)
3	Substitution (4/4)	12a	Direct Control (7/11)
4	Setting Group Selection (3/3)	12d	Enhanced SBO Control (12/19)
4+	Setting Group Definition (7/7)	13	Time Synchronization (4/5)
5	Unbuffered Reporting (15/18)	14	File Transfer (6/7)
6	Buffered Reporting (17/20)		

This Certificate includes a summary of the test results as carried out at KEMA in The Netherlands with UniCAsim 61850 version 3.23.02 with test suite 3.23.00 and UniCA 61850 analyzer 4.22.05. The test is based on the UCA International Users Group Device Test Procedures version 2.2b. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74100349-MOC/INC 11-2069 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KEMA by NR Electric Co., Ltd.. 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, August 23, 2011

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

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Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.2b

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	
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 RpN1, RpN2, RpN3, RpN4	Rp5, Rp8, Rp9, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br10, Br11, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	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
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	Ft2c, FtN1cd

All configuration file and data model tests have been successfully performed for the product variants using the same hardware and software version: PCS-9611, PCS-9612, PCS-9613, PCS-9631, PCS-9641, PCS-9651, PCS-9658 and PCS-9671.