IEC 61850 Certificate Level B

NO. NR3201001-Testing 09-0004

Issued to:

NARI-RELAYS

69 Suyuan Avenue

Jiangning,

Nanjing 211102, China

For the product:

PCS-915

Busbar Protection

Firmware version R1.00

Issued by:

NR Conformance Test Laboratory (NRCTL)

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-915 Busbar Protection - IEC 61850 Protocol Implementation Conformance Statement (PICS), 2009-10-15", "PCS-915 Busbar Protection - IEC 61850 Model Implementation Conformance Statement (MICS), 2009-10-15" and "PCS-915 Busbar Protection - IEC 61850 Tissues Conformance Statement (TICS), 2009-10-15" and product's extra information for testing: "PCS-915 Busbar Protection - Protocol implementation extra information for testing (PIXIT) of the IEC 61850 communication interface, 2009-10-15".

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 v2.2):

1	Basic Exchange(19/22)	9a	GOOSE Publish(7/11)
2	Data Sets(2/4)	9b	GOOSE Subscribe(9/9)
3	Substitution (4/4)	12a	Direct Control (6/12)
4+	Setting Group Selection(8/9)	12d	Enhanced SBO Control(13/19)
5	Unbuffered Reporting(16/18)	13	Time Synchronization(3/5)
6	Buffered Reporting(17/20)	14	File Transfer(4/5)

This Certificate includes a summary of the test results as carried out at in with UniCAsim 61850 version 3.19.02 with test suite version 3.19.00 and UniCA 61850 analyzer version 4.20.01 and UniCAsim GOOSE v2.14.01 with test suite V2.12.05. The test is based on the UCA International Users Group Device Test Procedures v2.2. This document has been issued for information purposes only, and the original paper copy of the NR report: NR3201001-Testing 09-0004 will prevail.

The test have been carried out on one single specimen of the products as referred above and submitted to NR Conformance Test Laboratory (NRCTL). This Certificate does not imply that NR Conformance Test Laboratory (NRCTL) has certified or approved any product other than the specimen tested.

Nanjing, Nov 9, 2009

Wenlong Wang
Director
NR Conformance Test Laboratory (NRCTL)

Zhongan Li
Test Engineer
NR Conformance Test Laboratory (NRCTL)

Applicable Test Procedures from the UCA International Users Group Device Test Procedures v2.2

	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, DsetN1ae	
3:	Substitution	Sub1,Sub2,Sub3,SubN1	
4:	Setting Group Selection	Sg1, SgN1a	
4+:	Setting Group Selection	Sg2, Sg3, Sg4, SgN1b SgN2, SgN3, SgN4	
5:	Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7,Rp10, RpN1, RpN2, RpN3, RpN4,	Rp5, Rp9, Rp11, RpN5, RpN6, RpN7
6:	Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, BrN1, BrN2, BrN3, BrN4, BrN5,	Br5, Br13, BrN6, BrN7
9a:	GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, Gop6, GopN1
9b:	GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a:	Direct control	CtlN3, CtlN8, Dons1, Dons3	Ctl2, CtlN11
12d:	Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, SBOes1, SBOes2, SBOes3	Ctl2, Ctl7, CtlN10, CtlN11
13:	Time sync	Tm1, Tm2, TmN1	
14:	File transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c