

No. 10032567-OPE/INC 17-1727

Issued to:

Nanjing Intelligent Apparatus Co., Ltd.
52#, East Tianyuan Road
Nanjing, Jiangsu Province
China

For the server product:

PA620-L4
Line Current Differential Protection Relay
Software version: V3.0
S/N: 21012000022520160614002

The server product has not been shown to be non-conforming to:

IEC 61850 First Edition Parts 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 Server Device Test Procedures version 3.03, the product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in PA620-L4, version 1.00", "Model Implementation Conformance Statement for the IEC 61850 interface in PA620-L4, version 1.00" and "Tissues Implementation Conformance Statement for the IEC 61850 Ed1 interface in PA620-L4, version 1.00" and the extra information for testing: "Protocol Implementation extra Information for Testing (PIXIT) for the IEC 61850 interface in PA620-L4, version 1.00".

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)	5 Unbuffered Reporting (17/18)
2 Data Sets (3/6)	6 Buffered Reporting (24/27)
2+ Data Set Definition (24/24)	12a Direct Control (4/11)
3 Substitution (4/4)	12d Enhanced SBO Control (10/19)
4 Setting Group Selection (3/3)	13 Time Synchronization (3/5)
4+ Setting Group Definition (7/7)	14 File Transfer (4/7)

This certificate includes a summary of the test results as carried out at Nanjing Intelligent Apparatus Co., Ltd. in China with UniCA 61850 Client Simulator 4.31.02 with test suite 3.31.00 and UniCA 61850 Analyzer 5.31.00. This document has been issued for information purposes only, and the original paper copy of the DNV GL report No. 10032567-OPE/INC 17-1726 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Nanjing Intelligent Apparatus Co., Ltd. The manufacturer's production process has not been assessed. This certificate does not imply that DNV GL has approved any product other than the specimen tested.

Arnhem, January 20, 2017



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R. Schimmel
Verification Manager

¹ Level A - Independent test lab with certified ISO 9001 Quality System

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Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 3.03

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, Srv6, Srv7, Srv8, SrvN1e, SrvN1f, 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	DsetN15a, DsetN15b
3: Substitution	Sub1, Sub2, Sub3, SubN1	
4: Setting Group Selection	Sg1, Sg3, SgN1a	
4+: Setting Group Definition	Sg2, Sg4, SgN1b, SgN2, SgN3, SgN4, SgN5	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp9, RpN1, RpN2, RpN3, RpN4, RpN8	Rp6, Rp7, Rp8, Rp10, Rp11, Rp12, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br9, Br20, Br21, Br22, Br25, Br26, Br27, Br28, BrN1, BrN2, BrN3, BrN4, BrN5, BrN8	Br6, Br7, Br8, Br10, Br11, Br12
12a: Direct Control	CtIN3, DOns1	CtIN11 DOns3
12d: Enhanced SBO Control	CtIN1, CtIN2, CtIN3, CtIN4, CtIN9, SBOes1, SBOes2, SBOes3	CtI3, CtIN11
13: Time Sync	Tm1, Tm2	TmN1
14: File Transfer	Ft1, Ft2ab, Ft4, FtN1ab	