

IEC 61850 Certificate Level A<sup>1</sup>

Issued to:FGuodian Nanjing Automation CO.,LTD.PNo. 39 Shuige RoadHJiangning Development Zone6Nanjing 211153FChinaS

## No. 74107091-OPE/INC 15-1464

For the server product: PSL 603U HMI Version: 3.37g6\_b6 61850 Software Version: 5.02.02.08g Firmware Version: 2.52E S/N GDNZ209691022585-Z021400000003

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 2.3 with TPCL<sup>2</sup> version 1.7, the product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in PS6600U series dated: March 18, 2015", "Model Implementation Conformance Statement for the IEC 61850 interface in PS6600U series dated: March 18, 2015" and "TISSUES Implementation Conformance Statement for the IEC 61850 interface in PS6600U series dated: March 18, 2015" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in PS6600U series dated: March 18, 2015".

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) on the station bus network interface:

| 1  | Basic Exchange (20/24)         | 6   | Buffered Reporting (18/21)  |
|----|--------------------------------|-----|-----------------------------|
| 2  | Data Sets (3/6)                | 12a | Direct Control (4/12)       |
| 4  | Setting Group Selection (3/3)  | 12d | Enhanced SBO Control (9/19) |
| 4+ | Setting Group Definition (7/7) | 13  | Time Synchronization (4/5)  |
| 5  | Unbuffered Reporting (16/19)   | 14  | File Transfer (4/7)         |

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) on the process bus network interface:

| 9a GOOSE Publish (7/13) | 9b GOOSE Subscribe (10/11) |
|-------------------------|----------------------------|
|-------------------------|----------------------------|

This certificate includes a summary of the test results as carried out at Guodian Nanjing Automation CO.,LTD. in China with UniCA 61850 Client Simulator 4.29.03 with test suite v3.28.00 and UniCA 61850 Analyzer 5.28.06. This document has been issued for information purposes only, and the original paper copy of the DNV GL report No. 74107091-OPE/INC 15-1463 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Guodian Nanjing Automation 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, 10 June 2015

**M. Adriaensen** Head of Department Operational Excellence



**R. Schimmel** Certification Manager

 $^1$  Level A - Independent test lab with certified ISO 9001 Quality System  $^2$  TPCL - Test procedures change list

Copyright © KEMA Nederland B.V. Arnhem, the Netherlands. All rights reserved. It is prohibited to update or change this certificate in any manner whatsoever, including but not limited to dividing it into parts.

KEMA Nederland B.V. Utrechtseweg 310, 6812 AR Arnhem, P.O. Box 9035, 6800 ET Arnhem, the Netherlands T +31 26 356 2025 F +331 26 351 36 83 salesdesk@dnvgl.com www.dnvgl.com



e car els

IEC 61850 Certificate Level A No. 74107091-OPE/INC 15-1464

Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 2.3 with TPCL 1.7

## Station bus interface

| Conformance Block            | Mandatory  | Conditional                             |
|------------------------------|--|---|
| 1: Basic Exchange            | Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5<br>Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4 | Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN3 |
| 2: Data Sets                 | Dset1, Dset10a, DsetN1ae   |   |
| 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, Rp7, Rp10, Rp12<br>RpN1, RpN2, RpN3, RpN4                                  | Rp5, Rp8, Rp9, RpN5, RpN6               |
| 6: Buffered Reporting        | Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14<br>BrN1, BrN2, BrN3, BrN4, BrN5                  | Br5, Br10, Br11, BrN6                   |
| 12a: Direct Control          | CtIN3, CtIN8<br>DOns1  | DOns3                                   |
| 12d: Enhanced SBO Control    | Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9<br>SBOes1, SBOes2, SBOes3                              |   |
| 13: Time Sync                | Tm1, Tm2, TmN1   | Tm3                                     |
| 14: File Transfer            | Ft1, Ft2ab, Ft4, FtN1ab  |   |

## Process bus interface

| Conformance Block   | Mandatory  | Conditional |
|---------------------|--|-------------|
| 9a: GOOSE Publish   | Gop2, Gop3, Gop4, Gop7, Gop9, Gop10a                           | Gop5        |
| 9b: GOOSE Subscribe | Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3,<br>GosN4, GosN5, GosN6 | Gos1b       |