

IEC 61850 Certificate Level A¹

No. 10034644-OPE/INC 17-2007

Issued to:

Electro Industries/GaugeTech 1800 Shames Drive Westbury, NY 11590 USA

For the server product:

Nexus 1500+ Power Quality Revenue Meter Software version: 15.6002

S/N: 0000000194099032

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

IEC 61850 Edition 2 Parts 6, 7-1, 7-2, 7-3, 7-4 and 8-1

Communication networks and systems for power utility automation

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL² 1.2 with product's protocol, model and technical issue implementation conformance statements: "Protocol implementation Conformance Statement for the IEC 61850 Ed2 interface in Electro Industries Nexus 1500+ Device, version 3p0", "Model implementation Conformance Statement for the IEC 61850 Ed2 interface in Electro Industries Nexus 1500+ ICD 10-Mar-2017, 3.0" and "TISSUES implementation Conformance Statement for the IEC 61850 Ed2 interface in Electro Industries Nexus 1500+ Device, version 3p0" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Ed2 interface in Electro Industries Nexus 1500+ Device, version 3p3".

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 (16/26) 2 Data Sets (4/7) | 9a GOOSE Publish (10/13) 9b GOOSE Subscribe (12/14) |
|-----------------------------------------------|--------------------------------------------------------|
| 5 Unbuffered Reporting (18/21) | 13 Time Synchronization (3/7) |
| 6 Buffered Reporting (27/30) | 14 File Transfer (5/8) |

This certificate includes a summary of the test results as carried out at DNV GL in The Netherlands with UniGrid SA 61850 Client Simulator 1.0.287.780 with test suite Ed2 1.0.0 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 verification report No. 10034644-OPE/INC 17-2009 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Electro Industries/GaugeTech. 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, March 20, 2017

P. Cióci
Global Service Line Leader
Operational Excellence of Power

Systems

Issued by:



DNV KEMA is now DNV GL

Verification Manager

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

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² TPCL - Test procedures change list



Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL 1.2

| Conformance Block | | Mandatory | Conditional |
|-------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 1: | Basic Exchange | sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4 | sSrv8, sSrvN1f |
| 2: | Data Sets | sDs1, sDs10a, sDsN1ae | sDs15 |
| 5: | Unbuffered Reporting | sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8 | sRp8, sRp10, sRp11, sRp12, sRpN5 |
| 6: | Buffered Reporting | sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr15, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8 | sBr8, sBr10, sBr11, sBr12, sBr23, sBr24 |
| 9a: | GOOSE publish | sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11 | sGop1, sGop2b, sGop7, sGopN2 |
| 9b: | GOOSE subscribe | sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6 | |
| 13: | Time sync | sTm1, sTm2, sTmN1 | |
| 14: | File transfer | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab | |