



4085

IEC 61850 Certificate Level B¹

No. 50745.6UR.801

Page 1/2

Issued to:
 GE Grid Automation
 650 Markland St.
 Markham, ON L6C 0M1, Canada



For the product:
 UR N60 Network Stability and
 Synchrophasor Measurement Relay
 IEC 61850 Firmware Version 7.41

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 version 1.2 with product's protocol, model and technical issue implementation conformance statements: "UR Family Version 7.41 IEC 61850 Conformance Statement for PICS", "UR Family Version 7.41 IEC 61850 Conformance Statement for MICS", "UR Family Version 7.41 IEC 61850 Conformance Statement for TICS" and extra information for testing "UR Family Version 7.41 IEC 61850 Conformance Statement for PIXIT".

The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of tests):

| | | | |
|----|-------------------------------|-----|---------------------------------|
| 1 | Basic Exchange (24/26) | 12a | Direct Control (9/18) |
| 2 | Data Sets (4/7) | 12b | SBO Control (16/27) |
| 4 | Setting Group Selection (4/4) | 12c | Enhanced Direct Control (11/20) |
| 5 | Unbuffered Reporting (18/21) | 12d | Enhanced SBO Control (17/28) |
| 6 | Buffered Reporting (25/30) | 13 | Time Synchronization (5/7) |
| 9a | GOOSE Publish (12/13) | 14 | File Transfer (6/8) |
| 9b | GOOSE Subscribe (14/14) | | |

This certificate includes a summary of the test results as carried out at Grid Automation Laboratories in UK Grid Solutions Limited in Stafford, United Kingdom with UniCA 61850 client simulator version 4.29.03 with test suite version 3.29.04 and the UniCA 61850 Analyzer version 5.28.03. This document has been issued for information purposes only, and the original paper copy of the Grid Automation Laboratories report: No. 50745.6UR.301 will prevail.

The tests have been carried out on one single specimen of the product as referred and submitted to Grid Automation Laboratories by GE Grid Automation. The manufacturer's production process has not been assessed. This certificate does not imply Grid Automation Laboratories at UK Grid Solutions Limited has certified or approved any other product other than the specimen tested.

Stafford, 06-02-2017

Allen Millard
 Grid Automation Laboratories Manager

Hua Qin
 Grid Automation Laboratories Test Engineer

¹ Level B - Test lab following ISO 9001 Quality System

² Test Procedure Change List



IEC 61850 Certificate Level B

No. 50745.6UR.801

Page 2/2

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

| Conformance Block | Mandatory | Conditional |
|------------------------------|---|---|
| 1: Basic Exchange | sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4 | sSrv6, sSrv8, sSrv9, sSrv10, sSrv12, sSrv13, sSrvN1e, sSrvN1f, sSrvN2, sSrvN3 |
| 2: Data Sets | sDs1, sDs10a, sDsN1ae | SDs15 |
| 4: Setting Group Selection | sSg1, sSg3, sSgN1 | SSg11 |
| 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 |
| 9a: GOOSE publish | sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11 | sGop1, sGop5, sGop6, sGop7, sGopN1, sGopN2 |
| 9b: GOOSE subscribe | sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6 | sGos4, sGos6b |
| 12a: Direct control | sCtl5, sCtl10, sDOns1, sDOns2 | SCtl2, sCtl7, sCtl13, sCtl15, sCtl16 |
| 12b: SBO control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6 | SCtl2, sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl27 |
| 12c: Enhanced Direct Control | sCtl5, sCtl10, sDOes1, sDOes2 | SCtl2, sCtl7, sCtl13, sCtl14, sCtl15, sCtl16, sCtl26 |
| 12d: Enhanced SBO Control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8 | SCtl2, sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl26 |
| 13: Time sync | sTm1, sTm2, sTmN1 | sTm3, sTm5 |
| 14: File transfer | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab | sFt3 |

All configuration file and data model tests have been successfully performed for the product variants using the same software and hardware version:

UR B30, UR B90, UR C30, UR C60, UR C70, UR D30, UR D60, UR F35, UR F60, UR G30, UR G60, UR L30, UR L60, UR L90, UR M60, UR T35, UR T60

