

No. 10016209-OPE/INC 16-2430

Issued to:

GE Grid Solutions
Parc Eurêka
81, rue Euclide – CS 11140
34060 Montpellier cedex 2
France

For the server product:

DS Agile C264
Modular Substation / Bay Controller
Software version: DS Agile V7
Hardware version: CPUv4

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 1.2.2 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement (PICS) PICS for Server Test Procedures for Edition 2, revision 1.1", "Model Implementation Conformance Statement for Testing MICS for Server Test Procedures for Edition 2, revision 1.0" and "TISSUES Implementation Conformance Statement TICS for Server Test Procedures for Edition 2, revision 1.0" and the extra information for testing: "Protocol Implementation Conformance Extra Information for Testing PIXIT for Server Test Procedures for Edition 2, revision 1.1".


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 (17/26) | 9a GOOSE Publish (11/13) |
| 2 Data Sets (4/7) | 9b GOOSE Subscribe (12/14) |
| 3 Substitution (3/3) | 12a Direct Control (9/18) |
| 5 Unbuffered Reporting (19/21) | 12c Enhanced Direct Control (11/20) |
| 6 Buffered Reporting (28/30) | 12d Enhanced SBO Control (18/28) |
| | 13 Time Synchronization (4/7) |
| | 14 File Transfer (8/8) |

This certificate includes a summary of the test results as carried out at GE Grid Solutions in France with UniCA 61850 Client Simulator 4.29.03 with test suite Ed2 4.31.05 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. 10016209-OPE/INC 16-2429 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by GE Grid Solutions. 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, October 21, 2016



P. Cioci
Global Service Line Leader
Operational Excellence of Power
Systems

Issued by:



DNV-GL
DNV KEMA is now DNV GL



R. Schimmel
Verification Manager

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

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 1.2.2

| Conformance Block | Mandatory | Conditional |
|------------------------------|---|--|
| 1: Basic Exchange | sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4 | sSrv8, sSrv12, sSrvN1f |
| 2: Data Sets | sDs1, sDs10a, sDsN1ae | sDs15 |
| 3: Substitution | sSub1, sSub2, sSub3 | |
| 5: Unbuffered Reporting | sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8 | sRp8, sRp10, sRp11, sRp12, sRp13, 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, sBr13, sBr23, sBr24 |
| 9a: GOOSE publish | sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11 | sGop1, sGop2b, sGop6, sGop7, sGopN1 |
| 9b: GOOSE subscribe | sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6 | |
| 12a: Direct control | sCtl5, sCtl10, sDOns1, sDOns2 | sCtl7, sCtl15, sCtl16, sCtl23, sCtl24 |
| 12c: Enhanced Direct Control | sCtl5, sCtl10, sDOes1, sDOes2 | sCtl7, sCtl14, sCtl15, sCtl16, sCtl21, sCtl23, sCtl24 |
| 12d: Enhanced SBO Control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8 | sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl21, sCtl26, sSBOes7 |
| 13: Time sync | sTm1, sTm2, sTmN1 | sTm3 |
| 14: File transfer | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab | sFt2c, sFt3, sFtN1c |