

IEC 61850 Certificate Level A¹

Issued to: Grid Solutions SAS

102 avenue de Paris 91300 Massy France No. 84000093-OPE/INC 16-2498

For the server product:

e-terragridcomDIP.net Automation Component with modules TPCOM and TPIO Software version: TPSAfull_1.x.IHR3.5_b183-BSP3.1-run2 S/N: - TPCOM module: LHJ0155AA02151400057

- TPIO module: LHJ0161AB04154702781

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 Ed.2 Server Interface in e-terragridcomDIP.net Teleprotection, 2016-07-22 v1.0", "Model Implementation Conformance Statement for the IEC 61850 Ed.2 Server Interface in e-terragridcomDIP.net Teleprotection, 2016-07-22 v1.0", "Model Implementation Conformance Statement for the IEC 61850 Ed.2 Server Interface in e-terragridcomDIP.net Teleprotection, 2016-07-22 v1.0" and "TISSUES Implementation Conformance Statement for the IEC 61850 Ed.2 Server Interface in e-terragridcomDIP.net Teleprotection, 2016-07-22 v1.0" and the extra information for testing: "Protocol Implementation extra Information for Testing (PIXIT) the IEC 61850 Ed.2 Server Interface in e-terragridcomDIP.net Teleprotection, 2016-07-22 v1.1".

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):

	Basic Exchange (19/26) Data Sets (4/7)	9b	GOOSE Publish (11/13) GOOSE Subscribe (12/14) Time Synchronization (3/7)
		13	Time Synchronization (3/7)

This certificate includes a summary of the test results as carried out at Grid Solutions SAS in France with UniCA 61850 Client Simulator 4.29.03 with test suite Ed2 4.31.03 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. 84000093-OPE/INC 16-2497 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Grid Solutions SAS. 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, August 19, 2016

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

Issued by:





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

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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	sSrv6, sSrv8, SrvN1e, sSrvN1f, sSrvN3
2:	Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
9a:	GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11	sGop1, sGop6, sGop7, sGopN1, sGopN2
9b:	GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	
13:	Time sync	sTm1, sTm2, sTmN1	