IEC 61850 Certificate Level A[1]

UCA International Users Group

No. 10270573-INC 20-3215

Issued to:

Radius Avtomatica
Panfilovsky Prospekt 10-3
124489 Zelenograd, Moscow
Russian Federation

For the server product:

Sirius-2ML-02 (Сириус-2МЛ-02)
Protection and Automation Relay
Firmware version: 1.11
S/N: 20120001

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 2.0_rev5 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in Sirius-2ML-02 Version 1.11", "Model Implementation Conformance Statement for the IEC 61850 interface in Sirius-2ML-02 Version 1.11" and "TISSUEs Implementation Conformance Statement (TICS) for the IEC Edition 2 61850 Server interface in Sirius-2ML-02 Version 1.11" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in Sirius-2ML-02 Version 1.11".

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 (23/28)		9a	GOOSE Publish (11/13)
2	Data Sets (4/7)		9b	GOOSE Subscribe (16/18)
2+	Data Set Definition (24/24)		12a	Direct Control (6/17)
4	Setting Group Selection (4/4)		12b	SBO Control (13/26)
4+	Setting Group Definition (13/13)		12c	Enhanced Direct Control (7/19)
5	Unbuffered Reporting (22/22)		12d	Enhanced SBO Control (12/27)
6	Buffered Reporting (30/32)		13	Time Synchronization (6/7)
			14	File Transfer (8/8)

This certificate includes a summary of the test results as carried out at NTC FSK UES in the Russian Federation with UniGrid SA Simulator 1.7.0 with test suite Ed2_Server_TP_2.0_20201005.1 and UniCA 61850 Analyzer 5.31.00. This document has been issued for information purposes only, and the archived DNV GL verification report No. 10270573-INC 20-3214 rev 1 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Radius Avtomatica. 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, January 26, 2021

N.A. Heijker
Business Leader
Interoperability of Smart 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

Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0_rev5

Conformance Block		Mandatory	Conditional
1:	Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4	sAssN6, sSrv6, sSrv8, sSrv12, sSrvN1e, sSrvN1f, sSrvN2, sSrvN3
2:	Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
2+:	Data Set Definition	sDs2, sDs3, sDs4, sDs5, sDs6, sDs7, sDs8, sDs9, sDs13, sDs14, sDsN1cd, sDsN2, sDsN3, sDsN4, sDsN5, sDsN6, sDsN7, sDsN8, sDsN9, sDsN10	sDs11, sDs12, sDsN11, sDsN12
4:	Setting Group Selection	sSg1, sSg3, sSgN1	sSg11
4+:	Setting Group Definition	sSg2, sSg4, sSg6, sSg7, sSg8, sSg10, sSg12, sSgN2, sSgN3, sSgN4, sSgN5	sSg5, sSg9
5:	Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, sRp13, sRp15, sRpN5
6:	Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8	sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, sBr13, sBr15
9a:	GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop6, sGopN1, sGopN2
9b:	GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	
12a:	Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl13, sCtl15
12b:	SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl4, sCtl6, sCtl15, sCtl27
12c:	Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl13, sCtl14, sCtl15
12d:	Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl4, sCtl15
13:	Time sync	sTm1, sTm2, sTmN1	sTm3, sTm5, sTmN2
14:	File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt2c, sFt3, sFtN1c