

IEC 61850 Certificate Level A¹

Issued to:

ENTELS LLC (ООО "ЭНТЕЛС")
Ryabinovaya st, house 69, building 5
Moscow
Russian Federation

For the server product:

ENTEK E2R2(G)-1 (ЭНТЕК E2R2(G)-1)
Gateway for collecting, storing and transmitting data
Firmware version: ENLOGIC E2R2-G build 20.07.2021-VQd
S/N: 2001-3836

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 2.0.4 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in KM ЭНТЕК E2R2(G) (ru) ENTEK E2R2(G) (en), Date: 19.11.2021 Version: 1.6", "Model Implementation Conformance Statement for the IEC 61850 interface in KM ЭНТЕК E2R2(G) (ru) ENTEK E2R2(G) (en), Date: 19.11.2021 Version: 1.6" and "TISSUES Implementation Conformance Statement for the IEC 61850 Ed2 interface in KM ЭНТЕК E2R2(G) (ru) ENTEK E2R2(G) (en), Date: 19.11.2021 Version: 1.6" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Edition 2 server interface in Контроллер многофункциональный ЭНТЕК E2R2(G), Version: 1.6 Date: 19.11.2021".

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)	12a	Direct Control (4/18)
2	Data Sets (4/7)	12b	SBO Control (9/27)
5	Unbuffered Reporting (19/23)	13	Time Synchronization (3/7)
6	Buffered Reporting (27/33)		

This certificate includes a summary of the test results as carried out at NTC FSK UES in Moscow, Russia with UniGrid SA Simulator 2.0.0 with test suite 20211110.1 and UniCA 61850 Analyzer 6.40.01. This document has been issued for information purposes only, and the archived DNV verification report No. 10320627-DSO 21-3536 rev 2 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV by ENTELS LLC. The manufacturer's production process has not been assessed. This certificate does not imply that DNV has approved any product other than the specimen tested.

Arnhem, November 23, 2021



N.A. Heijker
Business Leader
Interoperability of Smart Power Systems

Issued by:




R. Schimmel
Verification Manager

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

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Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0.4

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcd, sSrvN4	sAssN6
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, 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	sBr8, sBr10, sBr11, sBr12, sBr15
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	
12b: SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	
13: Time sync	sTm1, sTm2, sTmN1	