UCA International Users Group

DNV

IEC 61850 Certificate Level A[1]

Issued to:
Mikronika SP. z.o.o.
Wykopy 2/4
60-001 Poznan
Poland

For the server product:
SO-52 Controller
Firmware version: 0.5.0
S/N: 20423797

The server product has not been shown to be non-conforming to:

IEC 61850 Edition 2 with Amendment 1 Parts 6, 7-1, 7-2, 7-3, 7-4, 8-1

Communication networks and systems for power utility automation

The conformance test has been performed according to IEC 61850-10 and the UCA International Users Group Edition 2 with Amendment 1 Server Test Procedures version 1.2 with product's protocol, model and tissues implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in SO-52 CONTROLLER, Version 1.0" ,"MODEL IMPLEMENTATION CONFORMANCE STATEMENT FOR THE IEC 61850 EDITION 2 AMENDMENT 1 SERVER INTERFACE IN SO-52 CONTROLLER, document number DM.OKP.SO52MICS.0224.01.EN", "TISSUES IMPLEMENTATION CONFORMANCE STATEMENT (TICS) FOR THE IEC 61850 EDITION 2 AMENDMENT 1 SERVER INTERFACE IN SO-52 CONTROLLER, document number DM.OKP.SO52TICS.0224.01.EN" and the extra information for testing: "PROTOCOL IMPLEMENTATION EXTRA INFORMATION FOR TESTING (PIXIT) FOR THE IEC 61850 EDITION 2 AMENDMENT 1 SERVER INTERFACE IN SO-52 CONTROLLER, document number DM.OKP.SO52SPIXIT.0224.03.EN".

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):
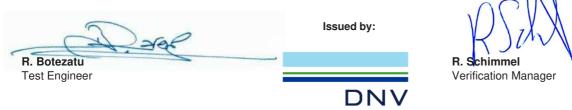
1a Basic Exchange (20/29)	12a Direct Control (4/18)
2 Data Sets (4/7)	12b SBO Control (12/28)
2+ Data Set Definition (24/24)	12c Enhanced Direct Control (4/20)
5 Unbuffered Reporting (25/26)	12d Enhanced SBO Control (12/28)
6 Buffered Reporting (35/36)	13a Time Synchronization with SNTP (4/8)
9a GOOSE publish (9/13)	14 File Transfer (7/8)
9b GOOSE subscribe (25/27)	

This certificate includes a summary of the test results as carried out at DNV in The Netherlands with UniGrid SA Simulator 2.2.1 with test suite 20240606 and UniCA 61850 Analyzer 6.41.00. This document has been issued for information purposes only, and the archived DNV verification report No. 10488483-DSO 24-4221 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 Mikronika SP. z.o.o.. 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, June 21, 2024

Issued by:

DNV

R. Botezatu
Test Engineer

R. Schimmel
Verification Manager

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

UCA International Users Group P.O. Box 315, Shell Knob, MO 65747 USA

IEC 61850 Certificate Level A

Applicable Server Test Procedures from the UCA International Users Group Edition 2 with Amendment 1 Server Test Procedures version 1.2

Conformance Block	Mandatory	Conditional
1a: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcdf, sSrvN4	sAssN6, sSrv9, sSrv10, sSrv15
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
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRp23, sRpN1, sRpN2, sRpN3, sRpN4, sRpN5, sRpN7, sRpN8, sRpN9	sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, sRp13, sRp15
6: Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr23, sBr24, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN7, sBrN8, sBrN9, sBrN10	sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, sBr13, sBr15
9a: GOOSE Publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGopN2
9b: GOOSE Subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGos14, sGos15, sGos20, sGos21, sGos22, sGos23, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6, sGosN7	sGos13
12a: Direct Control	sCtl5, sCtl10, sDOns1, sDOns2	
12b: SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6, sSBOns8	sCtl4, sCtl6
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	
12d: Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl4, sCtl6
13a: Time Sync SNTP	sTm1, sTm2, sTm7, sTmN1	
14: File Transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt2c, sFtN1c