IEC 61850 Certificate Level A[1]

Issued to:

SYSTEL LLC
Kashirskoye Highway 22, K.3
115201 Moscow
Russian Federation

For the server product:

USPD 248.M2
Software version: 2.7
S/N: 2472150199

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 Edition 2 interface in USPD_248_M2, Version USPD_248_M2 2.7 Date 20/07/2020", "Model Implementation Conformance Statement for the IEC 61850 Edition 2 server interface in USPD_248_M2, Version USPD_248_M2 2.7 Date 20/07/2020" and "TISSUEs Implementation Conformance Statement (TICS) For the IEC 61850 Edition 2 Server interface in USPD_248_M2, Version USPD_248_M2 2.7 Date 20/07/2020" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Edition 2 server interface in USPD_248_M2, Version USPD_248_M2 2.7 Date 20/07/2020".

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 (19/26)	9a	GOOSE Publish (11/13)
2	Data Sets (4/7)	9b	GOOSE Subscribe (17/20)
2+	Data Set Definition (24/24)	12a	Direct Control (4/18)
5	Unbuffered Reporting (21/23)	12b	SBO Control (10/27)
6	Buffered Reporting (29/33)	12c	Enhanced Direct Control (5/20)
		12d	Enhanced SBO Control (12/28)
		13	Time Synchronization (3/7)
		14	File Transfer (8/8)

This certificate includes a summary of the test results as carried out at NTC FSK UES in Moscow, Russia with UniGrid SA Simulator 1.8.1 with test suite 20211022.1 and UniCA 61850 Analyzer 6.40.01. This attestation has been issued for information purposes only, and the archived DNV verification report No. 10320627-INC 21-3519 rev 2 will prevail.

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

Arnhem, November 17, 2021

Issued by:

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

R. Schimmel
Verification Manager

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

IEC 61850 Certificate Level A

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, sSrvN1abcdf, sSrvN4	sAssN6, sSrv9, sSrv10
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, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp6, sRp7, 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	sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, 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, sGos12, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	
12a:	Direct control	sCtl5, sCtl10, sDOns1, sDOns2	
12b:	SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl6
12c:	Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl26
12d:	Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6, sCtl26
13:	Time sync	sTm1, sTm2, sTmN1	
14:	File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt2c, sFt3, sFtN1c