UCA International Users Group

DNV

IEC 61850 Certificate Level A[1]

Issued to:

Efacec Energia

Máquinas e Equipamentos Eléctricos, S.A.

Via de Francisco Sá Carneiro

4471-907 Moreira da Maia

Portugal

For the client system:

UC 500 Station Server

Firmware version: 10.1.3

IEC 61850 version: 3.1.7

S/N: 954434

The client system has not been shown to be non-conforming to:

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

Communication networks and systems in substations

The conformance test has been performed according to IEC 61850-10 Edition 2 with Amendment 1, the UCA International Users Group Edition 2 with Amendment 1 Client Conformance Test Procedures version 1.0 with client system's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in UC 500, AS24000798, version 01.01 date 2024-03-26", "Model Implementation Conformance Statement (MICS) for the IEC 61850 Edition 2 Amendment 1 Client Interface, AS24000797, Rev. 00, March 2024" and "Tissues Implementation Conformance Statement (TICS) for the IEC 61850 Edition 2 Amendment 1 Client, AS24000800, Rev. 00, March 2024" and product's extra information for testing: "Protocol Implementation Extra Information for Testing (PIXIT) for the IEC 61850 Edition 2 Amendment 1 Client Interface, AS24000799, Rev. 03, May 2024".

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 (23/31)		12a	Direct Control (5/9)
2	Data Sets (4/10)		12b	SBO Control (8/12)
4	Setting Group Selection (3/4)		12c	Enhanced Direct Control (5/9)
4+	Setting Group Definition (4/5)		12d	Enhanced SBO Control (7/11)
5	Unbuffered Reporting (29/34)		13a	Time Synchronization SNTP (3/4)
6	Buffered Reporting (26/31)			

This certificate includes a summary of the test results as carried out at DNV in The Netherlands with UniGrid SA Simulator version 3.0 with test suite 20240426, and UniCA 61850 Analyzer 6.45.01. This document has been issued for information purposes only, and the archived DNV verification report No. 10488037-DSO 24-4186 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 Efacec Energia. 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, August 23, 2024

M. Plouvier
Test Engineer

Issued by:

DNV

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 with Amendment 1 Client Conformance Test Procedures version 1.0

Conformance Block	Mandatory	Conditional
1a: Basic Exchange	cAss1, cAss2, cAss3, cAssN1, cAssN4, cAssN5, cAssN6, cAssN8	cAssN7, cSrv4, cSrv5, cSrv6, cSrv7, cSrv9, cSrv10 cSrvN1, cSrvN3, cSrvN4, cSrvN5, cSrvN6, cSrvN7, cSrvN8, cSrvN9
2: Data Sets		cDs2, cDs5, cDs6, cDsN1b
4: Setting Group Selection	cSg2, cSg46, cSgN1	
4+: Setting Group Definition	cSg11, cSg14	cSg10, cSg12
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRp18, cRp19, cRp20, cRp21, cRp22, cRp40, cRp41, cRp42, cRp43, cRp44, cRp45, cRp46, cRpN2, cRpN5, cRpN6	cRp2, cRp7, cRp16, cRpN1
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr18, cBr19, cBr20, cBr21, cBr22, cBr30, cBr31, cBr46, cBrN2, cBrN5, cBrN6	cBr2, cBr7, cBr16, cBr32, cBrN1
12a: Direct Control	cCtl4, cCtl5, cDOns1, cDOns2	cCt2
12b: SBO Control	cCtl4, cCtl5, cSBOns1, cSBOns2, cSBOns3, cSBOns10	cCtl2, cSBOns4
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	cCtl2
12d: Enhanced SBO Control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	cCtl2, cSBOes4
13a: Time sync SNTP	cTm1, cTmN1	cTm2

Test case	Comments
cSBOns4	Performed according to Redmine #6776