UCA International Users Group

DNV

IEC 61850 Certificate Level A[1]

Issued to:

SAE IT-systems GmbH & Co. KG
Im Gewerbegebiet Pesch 14
50767 Köln
Germany

For the client system:

BCU-50-M
RTU
Software version: 07.002.00B
Hardware version: 3

The client system 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 in substations

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.2 with client system's protocol, model and technical issue implementation conformance statements and product's extra information for testing: "IEC 61850 Interoperability Telecontrol Substation Automation starting with setIT V7.0 from series5e devices, revision 1.00".

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 (18/24)	9	GOOSE Control Block (1/2)
2	Data Sets (6/10)	12a	Direct Control (5/9)
2+	Data Set Definition (8/8)	12b	SBO Control (7/11)
4	Setting Group Selection (3/3)	12c	Enhanced Direct Control (5/9)
5	Unbuffered Reporting (23/24)	12d	Enhanced SBO Control (7/11)
6	Buffered Reporting (26/28)	13	Time Synchronization (4/4)
		14	File Transfer (3/8)

This certificate includes a summary of the test results as carried out at DNV in The Netherlands with UniCA 61850 IED Simulator version 6.1.31 and UniCA 61850 Analyzer 6.40.1. This document has been issued for information purposes only, and the archived DNV verification report No. 10331039-DSO 22-2795 rev2 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV by SAE IT-systems GmbH & Co. KG. 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, April 12, 2022

G. Akse
Business Development Manager
Interoperability of Smart Power Systems

Issued by:

DNV

R. Schimmel
Verification Manager

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Applicable Test Procedures from the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAssN1, cAssN4, cAssN5, cAssN6	cAssN7, cSrv1, cSrv2, cSrv4, cSrv5, cSrv7, cSrv10, cSrvN1, cSrvN3, cSrvN5, cSrvN6
2: Data Sets		cDs1, cDs2, cDs5, cDs6, cDsN1a, cDsN1b
2+: Data Set Definition		cDs10, cDs11, cDs12, cDs13, cDs14, cDsN10a, cDsN10b, cDsN11
4: Setting Group Selection	cSg2, cSgN1	cSg1
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRp19, cRpN2, cRpN5, cRpN6	cRp1, cRp2, cRp6, cRp7, cRp12, cRp13b, cRp16, cRp18, cRpN1
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr19, cBr30, cBr31, cBrN2, cBrN5, cBrN6	cBr1, cBr2, cBr6, cBr7, cBr12, cBr13b, cBr16, cBr18, cBr33, cBrN1
9: GOOSE control block		cGcb1
12a: Direct Control	cCtl4, cCtl5, cDOns1, cDOns2	cCtl2
12b: SBO Control	cCtl4, cCtl5, cSBOns1, cSBOns2, cSBOns3	cCtl2, cSBOns4
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	cCtl2
12d: Enhanced SBO Control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	cCtl2, cSBOes4
13: Time sync	cTm1, cTmN1	cTm2, cTmN2
14: File transfer	cFt1, cFt3, cFtN1	