

IEC 61850 Certificate Level A¹

Issued to:

Kalki Communication Technologies
Pvt Ltd. (Kalkitech)
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Bangalore 560103
India

For the client system:

SYNC 3000
Substation Data Concentrator/ Secure Substation
Gateway
Software version: GPC 4.17.1
S/N: BKB000043000020

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: "Protocol Implementation Conformance Statement for the IEC 61850 Client interface in SYNC3000, Date: 17-June-2022", "Model Implementation Conformance Statement for the IEC 61850 Client Interface in SYNC 3000 with firmware version GPC 4.17.1, Date: 17-June-2022" and "TISSUES Implementation Conformance Statement for the IEC 61850 Edition 2 Client Interface in SYNC3000, Date: 17-June-2022" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Client interface in SYNC3000, Date: 17-June-2022".

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 (15/24)	12a Direct Control (4/9)
2 Data Sets (4/10)	12b SBO Control (5/11)
2+ Data Set Definition (5/8)	12c Enhanced Direct Control (4/9)
5 Unbuffered Reporting (20/24)	12d Enhanced SBO Control (5/11)
6 Buffered Reporting (24/28)	13 Time Synchronization (3/4)
9 GOOSE Control Block (1/2)	14 File Transfer (4/8)

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 6.41.0. This document has been issued for information purposes only, and the archived DNV verification report No. 10366543-DSO 22-2982 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 Kalki Communication Technologies Pvt Ltd. (Kalkitech). 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 17, 2022



G. Akse
Business Development Manager
Interoperability of Smart Power Systems

Issued by:



DNV



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

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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, cSrv4, cSrv5, cSrv7, cSrvN1, cSrvN3, cSrvN5, cSrvN6
2: Data Sets		cDs2, cDs5, cDs6, cDsN1b
2+: Data Set Definition		cDs10, cDs12, cDs13, cDsN10a, cDsN11
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRp19, cRpN2, cRpN5, cRpN6	cRp2, cRp7, cRp12, cRp13b, cRp16, cRpN1
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr19, cBr30, cBr31, cBrN2, cBrN5, cBrN6	cBr2, cBr7, cBr12, cBr13b, cBr16, cBr32, cBr33, cBrN1
9: GOOSE control block		cGcb1
12a: Direct Control	cCtl4, cCtl5, cDOs1, cDOs2	
12b: SBO Control	cCtl4, cCtl5, cSBOs1, cSBOs2, cSBOs3	
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	
12d: Enhanced SBO Control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	
13: Time sync	cTm1, cTmN1	cTm2
14: File transfer	cFt1, cFt3, cFtN1	cFt5