IEC 61850 Certificate Level A[1]

Issued to:

Synergy Systems & Solutions
A 1526, Green Fields Colony
Faridadad, Haryana 121001
India

For the client system:

HUSKY RTU 6049-E70 Remote Terminal Unit
Firmware version 5.1
S/N: 9010003801008

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 for power utility automation

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 1.0 with TPCL[2] 1.0_rev3 with product's protocol, model and technical issue implementation conformance statements: "HUSKY RTU 6049-E70 - Protocol Implementation Conformance Statement (PICS) for the IEC61850 Ed. 2 Client interface, Revision 1", "HUSKY RTU 6049-E70 - Model Implementation Conformance Statement for IEC 61850 Ed2 Client interface, Revision 1" and "HUSKY RTU 6049-E70 - TISSUES Implementation Conformance Statement for IEC 61850 Ed2 Client interface, Revision 1" and the extra information for testing: "HUSKY RTU 6049-E70 - Protocol Implementation eXtra Information for Testing (PIXIT) for IEC 61850 Ed2 Client interface, Revision 1".

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 (16/24)		12a	Direct Control (5/9)
2	Data Sets (4/10)		12b	SBO Control (7/11)
2+	Data Set Definition (5/8)		12c	Enhanced Direct Control (5/9)
5	Unbuffered Reporting (21/23)		12d	Enhanced SBO Control (7/11)
6	Buffered Reporting (26/28)		13	Time Synchronization (3/4)
			14	File Transfer (3/8)

This certificate includes a summary of the test results as carried out at DNV GL in The Netherlands with UniCA 61850 IED simulator 6.1 and UniCA 61850 Analyzer 5.32.02. This document has been issued for information purposes only, and the original paper copy of the DNV GL verification report No. 10050571-INC 17-2300 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Synergy Systems & Solutions. The manufacturer's production process has not been assessed. This certificate does not imply that DNV GL has approved any product other than the specimen tested.

Arnhem, June 12, 2017

P. Cioci
Business Director
Intelligent Networks and Communication

Issued by:

DNV·GL
DNV KEMA is now DNV GL

R. Schimmel
Verification Manager

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[1] Level A - Independent test lab with certified ISO 9001 Quality System
[2] TPCL - Test procedures change list

UCA International Users Group

Applicable Test Procedures from the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.0 with TPCL 1.0_rev3

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAssN1, cAssN4, cAssN5, cAssN6	cAssN7, cSrv4, cSrv5, cSrv7, cSrv10, 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, cRpN2, cRpN5, cRpN6	cRp2, cRp6, cRp7, cRp12, cRp13b, cRp16, cRp18, cRpN1
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr30, cBr31, cBrN2, cBrN5, cBrN6, cBrN20	cBr2, cBr6, cBr7, cBr12, cBr13b, cBr16, cBr18, cBr32, cBr33, cBrN1
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 Synchronization	cTm1, cTmN1	cTm2
14: File Transfer	cFt1, cFt3, cFtN1	