

## IEC 61850 Certificate Level A<sup>1</sup>

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Issued to:

Invensys Operations Management 5601 Granite Parkway III, Suite 1000 Plano, Texas 75024 U.S.A. No. 30107062-Consulting 11-0099rev2

For the client system: SCD5200

SY-1101205\_B1

Hardware: Invensys Station Computing Device SCD5200 and Invensys Remote

Terminal Unit RTU50

Issued by:



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

IEC 61850-6, 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 with client system's protocol, model and technical issue implementation conformance statements: "IEC 61850 interface in IA SCADA Remote Devices Protocol Implementation Conformance Statement (PICS)", "IEC 61850 interface in IA SCADA Remote Devices Model Implementation Conformance Statement (MICS)", "IEC 61850 interface in IA SCADA Remote Devices TISSUE Implementation Conformance Statement (TICS)" and product's extra information for testing: "IEC 61850 interface in IA SCADA Remote Devices Protocol Implementation eXtra Information for Testing (PIXIT)".

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 as defined in the UCA IUG Client Test procedures version 1.1):

1 Basic Exchange (12/22)

Unbuffered Reporting (13/18)

6 Buffered Reporting (16/22)

12a Direct Control (6/7)

12b SBO Control (8/9)

12c Enhanced Direct Control (6/7)

12d Enhanced SBO Control (8/9)

13 Time Synchronization (3/4)

This Certificate includes a summary of the test results as carried out at KEMA in the Netherlands with UniCA Multi IED simulator v1.21.0.5 and UniCA 61850 analyzer v4.21.03. The test is based on the UCA IUG "Conformance Test Procedures for Client System with IEC 61850-8-1 interface, version 1.1". This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 30107062-Consulting 11-0098rev2 will prevail.

The test has been carried out on one single specimen of the client system as referred above and submitted to KEMA by Invensys. The manufacturer's production process has not been assessed. This Certificate does not imply that KEMA has certified or approved any product other than the specimen tested.

Arnhem, January 13, 2011

M. Adriaensen

Manager Intelligent Networks and Communication

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Test Engineer

1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 Quality System

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Applicable Test Procedures from the UCA IUG "Conformance Test Procedures for Client System with IEC 61850-8-1 interface, version 1.1"

	Conformance Block	Mandatory	Conditional
1:	Basic Exchange	cAss1, cAss2, cAss3, cAss4, cAssN1, cAssN4, cAssN5, cAssN6 cSrv5, cSrvN3	cSrvN5, cSrvN6
5:	Unbuffered Reporting	cRp2, cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRpN2, cRpN3, cRpN7, cRpN8	cRp6, cRpN4
6:	Buffered Reporting	cBr2, cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr12, cBrN2, cBrN3, cBrN7, cBrN8, cBrN9	cBr6, cBrN4
12a:	Direct control	cCtl4, cCtlN1 cDOns1, cDOns2	cCtl1, cCtl2
12b:	SBO control	cCtl4, cCtlN1 cSBOns1, cSBOns2, cSBOns3	cCtl1, cCtl2, cSBOns4
12c:	Enhanced Direct Control	cCtl4, cCtlN1 cDOes1, cDOes2	cCtl1, cCtl2
12d:	Enhanced SBO control	cCtl4, cCtlN1, cSBOes1, cSBOes2, cSBOes3	cCtl1, cCtl2 cSBOes4
13:	Time sync	cTm1	cTm2, cTmN1