IEC 61850 Certificate Level A[1]

UCA International Users Group

No. 74106941-OPE/INC 15-0950_rev1

Issued to:

Invensys Systems, Inc.
38 Neponset Avenue
Foxborough MA 02035
U.S.A.

For the server product:

Foxboro Evo SCD6000
Firmware version: SY-1101207_B
Hardware version: SY-60399002R

The server product has not been shown to be non-conforming to:

IEC 61850 First Edition 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, the UCA International Users Group Server Device Test Procedures version 2.3 with TPCL[2] version 1.7.7, the product's protocol, model and technical issue implementation conformance statements: "IEC 61850 Protocol Implementation Conformance Statement (PICS) Foxboro Evo Remote Devices; B0780EA Rev B", "IEC 61850 Model Implementation Conformance Statement (MICS) Foxboro Evo Remote Devices; Rev B" and "IEC 61850 TISSUE Implementation Conformance Statement (TICS) Foxboro Evo Remote Devices; B0780EB Rev B" and the extra information for testing: "IEC 61850 Protocol Implementation eXtra Information for Testing (PIXIT) Foxboro Evo Remote Devices; B0780ED Rev B".

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 (21/24)	9a	GOOSE Publish (9/13)
2	Data Sets (3/6)	9b	GOOSE Subscribe (11/11)
3	Substitution (4/4)	12a	Direct Control (7/11)
5	Unbuffered Reporting (16/18)	12b	SBO Control (10/14)
6	Buffered Reporting (18/19)	12c	Enhanced Direct Control (8/13)
		12d	Enhanced SBO Control (13/19)
		13	Time Synchronization (3/5)

This certificate includes a summary of the test results as carried out at Invensys Systems, Inc in India with UniCA 61850 Client Simulator 4.29.02 with test suite 3.28.00 and UniCA 61850 Analyzer 5.29.02. This document has been issued for information purposes only, and the original paper copy of the DNV GL report No. 74106941-OPE/INC 15-0951_rev1 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Invensys Systems, Inc. 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.
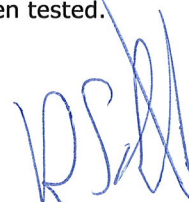
Arnhem, February 24, 2015

M. Adriaensen
Head of Department
Operational Excellence

Issued by:

DNV·GL

DNV KEMA is now DNV GL

R. Schimmel
Certification Manager

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

Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 2.3 with TPCL 1.7.7

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3 Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN2, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
3: Substitution	Sub1, Sub2, Sub3, SubN1	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, RpN1, RpN2, RpN3, RpN4	Rp5, Rp7, Rp8, Rp9, Rp10, Rp11, Rp12, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br8, Br9, BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br7, Br10, Br11, Br12, Br13, Br14
9a: GOOSE Publish	Gop2, Gop3, Gop4, Gop7, Gop9, Gop10a	Gop1, Gop5, Gop10b
9b: GOOSE Subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b, Gos4
12a: Direct Control	CtlN3, DOns1	Ctl2, Ctl7, CtlN10, CtlN11 DOns3
12b: SBO Control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOns2	Ctl2, Ctl7, CtlN10, CtlN11
12c: Enhanced Direct Control	CtlN3, CtlN8, DOes2, DOes5	Ctl2, Ctl7, CtlN10, CtlN11
12d: Enhanced SBO Control	CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, SBOes1, SBOes2, SBOes3	Ctl2, Ctl3, Ctl7, CtlN10, CtlN11
13: Time Sync	Tm1, Tm2	TmN1