IEC 61850 Certificate Level A[1]

No. 30620245-Consulting 2006-1131

Issued to:
Schweitzer Engineering Laboratories
2440 N.E. Hopkins CT
Pullman, WA 99163
USA

For the product:
SEL-311L
Line Current Differential Protection
and Automation System
Firmware R403
Ethernet Interface R103

Issued by: KEMA

The product 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 product's Protocol and Model Implementation Conformance Statements: "SEL-311L-1, -7 Relay - Protection and Automation System - Instruction Manual; 20060829" and Technical Issues Conformance Statement: "IEC 61850 Tissues conformance statement for the SEL-311L; 101306" and extra information for testing: "Protocol implementation extra information for testing (PIXIT) of the IEC 61850 communication interface in the SEL-311L; 11082006".

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 International Users Group Device Test procedures v1.1):

1	Basic Exchange (16/23)	9ab	Generic Object Oriented Substation Event (13/20)
2	Data Sets (2/5)	12a	Direct Control (4/11)
5	Unbuffered Reporting (11/13)	13	Time Synchronization (4/4)

This Certificate includes a summary of the test results as carried out at AEP/Dolan laboratories in Columbus OH, U.S.A. with UniCAsim 61850 version 2.14.02 test system running test suite "61850 Conformance Test v2.14.03" and UniCA 61850 analyzer version 4.14.01. The test is based on the UCA International Users Group Device Test Procedures version 1.1. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 30620245-Consulting 2006-1130 will prevail.

The test have been carried out on one single specimen of the products as referred above and submitted to KEMA by Schweitzer Engineering Laboratories. 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, November 21, 2006

S.J.L.M. Janssen
Managing Director KEMA Consulting

S.J.T. Mulder
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 International Users Group Device Test Procedures version 1.1

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abd, SrvN4	Srv6, Srv8
2: Data Sets	Dset1, DsetN1a	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7 RpN1, RpN2, RpN3, RpN4	Rp5, RpN5
9a: GOOSE publish	Gop2, Gop4, Gop7	Gop1, GopN1
9b: GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5	
12a: Direct control	CltN3, CtlN8, DOns1	Ctl2
13: Time sync	Tm1, Tm2, TmN1	TmN2

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