IEC 61850 Certificate Level A[1]

No. 74101693-MOC/INC 13-2024

Issued to:
SEL, Inc.
2350 NE Hopkins Court
Pullman, WA 99163
USA

For the server product:
SEL-3505 Real-Time Automation
Controller
Version R122

Issued by: **KEMA**

The server product has not 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 Device Test Procedures version 2.3 with TPCL[2] version 1.6, the product's protocol and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement (PICS) for IEC 61850 interface for the SEL-3505 Real-time Automation Controller, February 22, 2013", and "Technical Issues Implementation Conformance Statement (TICS) for IEC 61850 for the SEL-3505 Automation Controller, February 22, 2013" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for IEC 61850 for the SEL-3505 Automation Controller, February 22, 2013".

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):

9a GOOSE Publish (7/13) 9b GOOSE Subscribe (10/11)	13 Time synchronization (3/5)

This certificate includes a summary of the test results as carried out at SEL in the USA with UniCA Client simulator 3.26.04 with Test Suite 3.24.02 and UniCA 61850 Analyzer 4.25.00. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74101693-MOC/INC 13-2023 will prevail.

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

Arnhem, May 28, 2013

M. Adriaensen
Director Intelligent Networks & Communication

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 Device Test Procedures version 2.3 with TPCL version 1.6

Conformance Block	Mandatory	Conditional
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop9, Gop10a	Gop5
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
13: Time sync	Tm1, Tm2, TmN1	