ATTESTATION OF CONFORMITY

No. 10448913-DSO 23-3105

Issued to:
Schweitzer Engineering Laboratories, Inc.
2350 NE Hopkins Court
Pullman, WA 99163-5603
USA

For the server product:
SEL-851
Feeder Protection Relay
Firmware version: SEL-851-R100-V2
IEC 61850 library ID: 12417EA8
S/N: 3231985545

The server product 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 in substations

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Server Test Procedures version 2.0.6 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in SEL-851, version 1", "Model Implementation Conformance Statement (MICS) for the IEC 61850 Edition 2 server interface in SEL-851, version 1" and "TISSUES Implementation Conformance Statement for the IEC 61850 interface in SEL-851, version 2.1" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Edition 2 server interface in SEL-851, version 1".

The following IEC 61850 conformance blocks have been verified with a positive result:

1	Basic Exchange	12a	Direct Control
2	Data Sets	12c	Enhanced Direct Control
5	Unbuffered Reporting	12d	Enhanced SBO Control
6	Buffered Reporting	13	Time Synchronization
9a	GOOSE Publish	14	File Transfer
9b	GOOSE Subscribe	15	Service Tracking

This attestation includes a summary of the test results as carried out at DNV in The Netherlands with UniGrid SA Simulator 2.2 with test suite 20230820 and UniCA 61850 Analyzer 6.40.05. This document has been issued for information purposes only, and the archived DNV verification report No. 10448913-DSO 23-3103 rev 2 will prevail.

The test has been carried out on one single specimen of the server product as referred above and submitted to DNV by Schweitzer Engineering Laboratories, Inc. The manufacturer's production process has not been assessed. This attestation does not imply that DNV has verified any server product other than the specimen tested.

Arnhem, August 29, 2023

G. Akse
Business Development Manager
Interoperability of Power Systems

Issued by:

R. Schimmel
Verification Manager

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Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0.6

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcdf, sSrvN4	sAssN6, sSrv9, sSrv10, sSrv12, sSrv13
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, sRp15
6: Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8	sBr8, sBr10, sBr11, sBr12, sBr15
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop5, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGos23, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos4, sGos6b, sGos13
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl15, sCtl16
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl14, sCtl15, sCtl16
12d: Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl4, sCtl6, sCtl15, sCtl16, sCtl26
13: Time sync	sTm1, sTm2, sTmN1	sTm3, sTm4, sTm5
14: File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt3
15: Service tracking		sTrk1, sTrk2, sTrk8, sTrk9, sTrk11

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