

IEC 61850 Certificate Level A¹

Issued to:

Trench Austria GmbH
Paschinger Straße 49
4060 Leonding
Austria

For the server product:

EFC60s Earth-Fault Compensation Controller
EFC60 Software version: E-EFC V2.00 (2021-02-04)
S/N: 1215614001

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 for power utility automation

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Server Test Procedures version 2.0.4 with product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in EFC60, released 2021-03-19", "Model Implementation Conformance Statement for the IEC 61850 interface in EFC60, date 2021-03-19" and "TISSUES Implementation Conformance Statement (TICS) for the IEC Edition 2 61850 Server interface in EFC60, date 2021-03-19" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Edition 2 server interface in EFC60m / EFC60s, date 2021-03-19".


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 (21/26)	12a Direct Control (8/19)
2 Data Sets (4/7)	12b SBO Control (14/28)
5 Unbuffered Reporting (19/23)	12c Enhanced Direct Control (10/21)
6 Buffered Reporting (27/33)	12d Enhanced SBO Control (15/29)
	13 Time Synchronization (3/7)

This certificate includes a summary of the test results as carried out at DNV in The Netherlands with UniGrid SA Simulator 1.7.2 with test suite 20210312.1 and UniCA 61850 Analyzer 6.40.01. This document has been issued for information purposes only, and the archived DNV verification report No. 10283658-INC 21-2726 rev 2 will prevail.

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

Arnhem, March 22, 2021



N.A. Heijker
Business Leader
Interoperability of Smart Power Systems

Issued by:




R. Schimmel
Verification Manager

¹ Level A - Independent test lab with certified ISO 9001 Quality System
Copyright © DNV GL Netherlands B.V. Arnhem, the Netherlands. All rights reserved. It is prohibited to update or change this certificate in any manner whatsoever, including but not limited to dividing it into parts.

IEC 61850 Certificate Level A

Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0.4

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcd, sSrvN4	sAssN6, sSrv6, sSrvN1e, sSrvN2, sSrvN3
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, sRpN5
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
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl2, sCtl13, sCtl16, sCtl21
12b: SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl2, sCtl6, sCtl16, sCtl21, sCtl27
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl2, sCtl13, sCtl14, sCtl16, sCtl21, sCtl26
12d: Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl2, sCtl6, sCtl16, sCtl21, sCtl26
13: Time sync	sTm1, sTm2, sTmN1	