

IEC 61850 Conformance Certificate Level B¹

Issued to:
ABB SACE Division
A division of ABB S.p.A.
L.V. Breakers
L.V. Products Division Italy
24123 Bergamo

For the server product:

Air circuit-breaker Emax2 with Ekup
IEC61850 module SW version 2.10

SN: 429011219010W010

Issued by: ABB Switzerland Ltd, Power Systems, SVC Baden

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 Device Test Procedures version 2.3 with TPCL² version 1.7.7, the product's protocol, model and technical issue implementation conformance statements: "(PICS) for ABB SACE Emax2 Based on IEC 61850-8-1, V1.3 and (PICS) for ABB SACE Emax2 Based on IEC 61850-7-2, V1.5", "(MICS) for ABB SACE Emax2 Based on IEC 61850-6, V1.7", "(TICS) Ed. 1 v1.1" and the extra information for testing: "(PIXIT) for ABB SACE Emax2 Based on IEC 61850-10, V1.7"

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 (18/24)	9a	GOOSE Publish (6/13)
2	Data Sets (3/6)	12c	Enhanced Direct Control (5/13)
5	Unbuffered Reporting (13/18)	13	Time Synchronization (4/5)

This Certificate includes a summary of the test results as carried out at the SVC Baden in Switzerland with UniCASim 61850 version 4.27.04 with test suite 3.27.00 and UniCA Analyzer 5.27.04. This document has been issued for information purposes only, and the original paper copy of the SVC Baden report: No. 1KHL050069 will prevail. The test has been carried out on one single specimen of the product as referred above and submitted to SVC Baden by ABB AB, SA Products. The manufacturer's production process has not been assessed. This certificate does not imply that SVC Baden has approved any product other than the specimen tested.

Baden, 2015-08-06



S. Gerspach
Certification Manager



C. Zehnder
Test engineer

¹ Level B - Tester with 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 1.7.7

Conformance Block	Mandatory	Conditional
1 Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, Srv6, Srv8, SrvN1e,SrvN1f
2 Data Sets	Dset1, Dset10a, DsetN1ae	
5 Unbuffered Reports	Rp1, Rp2, Rp3, Rp4 RpN1, RpN2, RpN3, RpN4	Rp7, Rp8, Rp10, Rp12 RpN5
9a GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop9, Gop10a	
12c: Enhanced Direct Control	CtIN3, CtIN8 DOes2, DOes5	CtIN11
13 Time Synchronization	Tm1, Tm2,	TmN1, Tm3