

## IEC 61850 Conformance Certificate Level B<sup>1</sup>

*Issued to:*

ABB Schweiz AG  
Mr. Sergio Marchese  
Jurastrasse 45  
5430 Wettingen  
Switzerland

*For the product:*

FOCS-LTB420 Fiber optic current sensor  
Firmware version 1.0.0.4  
S/N: 1HCACG2B93  
*Supporting:*  
3 phase current (Neutral calculated)

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

**The server product has not shown to be non-conforming to:**

### IEC 61850-6, 7-2 and 9-2

#### Communication networks and systems in substations

The conformance test has been performed according to IEC 61850-10 and the UCAIUG: Test procedures version 1.1 for Sampled Values Publishers according to the "Implementation Guideline for Digital Interface to Instrument Transformers using IEC 61850-9-2 (9-2LE version 2.1)" with TPCL version 1.1 with 9-2LE publisher's protocol implementation conformance statement: "1HC0096004 FOCS G2 PICS PIXIT Document" and extra information for testing: "1HC0096004 FOCS G2 PICS PIXIT Document".

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 UCAIUG Test procedures for Sampled Values Publishers according to the "Implementation Guideline for Digital Interface to Instrument Transformers using IEC 61850-9-2" (9-2LE), version 1.1):

11a Sampled Value publish (14/17)	50 Hz with 80 samples per cycle
11a Sampled Value publish (14/17)	60 Hz with 80 samples per cycle
11a Sampled Value publish (14/17)	50 Hz with 256 samples per cycle
11a Sampled Value publish (14/17)	60 Hz with 256 samples per cycle

This Certificate includes a summary of the test results as carried out at SVC, Baden, Switzerland with Wireshark v.2.2.4, ITT600 v.2.0.2.1. The test is based on the UCAIUG "Test procedures for Sampled Values Publishers according to the "Implementation Guideline for Digital Interface to Instrument Transformers using IEC 61850-9-2" (9-2LE), version 1.1". This document has been issued for information purposes only, and the original paper copy of the test report: No. 1KHL050109 will prevail.

The test has been carried out on one single specimen of the client system as referred above and submitted to SVC by ABB Switzerland PTHA-F. The manufacturer's production process has not been assessed. This Certificate does not imply that SVC has certified or approved any product other than the specimen tested.

Baden, 2017-04-13



S. Gerspach  
Certification Manager



C. Vottis  
Test engineer

1 Level B - Tester with ISO 9001 Quality System  
2 TPCL - Test procedures change list



Applicable Test Procedures from the UCAIUG "Test procedures for Sampled Values Publishers according to the "Implementation Guideline for Digital Interface to Instrument Transformers using IEC 61850-9-2 (9-2LE)", version 1.1"

Conformance Block	Mandatory	Conditional
Configuration	Cnf1, Cnf2, Cnf3, Cnf4, Cnf5, Cnf6, Cnf7, Cnf8	Cnf9
11a Sampled Value Publishing 50 Hz, 80 samples/cycle	Svp1, Svp2, Svp3, Svp6, Svp10, Svp11, Svp14, Svp15	Svp4, Svp7, Svp5, Svp8, Svp9, Svp17
11a Sampled Value Publishing 60Hz, 256 samples/cycle	Svp1, Svp2, Svp3, Svp6, Svp10, Svp11, Svp14, Svp15	Svp4, Svp7, Svp5, Svp8, Svp9, Svp17
11a Sampled Value Publishing 50 Hz, 256 samples/cycle	Svp1, Svp2, Svp3, Svp6, Svp10, Svp11, Svp14, Svp15	Svp4, Svp7, Svp5, Svp8, Svp9, Svp17
11a Sampled Value Publishing 60Hz, 256 samples/cycle	Svp1, Svp2, Svp3, Svp6, Svp10, Svp11, Svp14, Svp15	Svp4, Svp7, Svp5, Svp8, Svp9, Svp17