# IEC 61850 Certificate Level A[1]

**International Usersgroup**

No. 74106066-OPE/INC 14-3323

Issued to:
Phoenix Contact GmbH & Co. KG
Flachsmarktstraße 8
32825 Blomberg
Germany

For the server product:
AXL F BK SAS with I/O modules:
DO16/3 2F, DI16/4 2F, DI16/1 1H,
DO16/1 1H, DI8/2 110/220 DC 1F,
DOR4/2 AC/220DC 1F, AI8 1F, AO8 1F,
RTD4 1H, UTH4 1H.
Monitoring module
Firmware version 1.10
Hardware version 03 (21062013)

**KEMA** / DNV

Issued by:

## 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 TPCL[2] version 1.7, the product's protocol, model and technical issue implementation conformance statements: Protocol Implementation Conformance Statement (PICS) for the IEC 61850 interface in AXL F BK SAS with FW version 1.10, Model Implementation Conformance Statement (MICS) for the IEC 61850 interface in AXL F BK SAS with FW version 1.10 and TISSUES Implementation Conformance Statement (TICS) for the IEC 61850 interface in AXL F BK SAS with FW version 1.10 and the extra information for testing: Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in AXL F BK SAS with FW version 1.10.

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 (21/24) | | 12a | Direct Control (3/12) |
| 2 | Data Sets (3/6) | | 13 | Time Synchronization (4/5) |
| 5 | Unbuffered Reporting (15/19) | | | |
| 6 | Buffered Reporting (18/21) | | | |

This certificate includes a summary of the test results as carried out at Phoenix Contact in Germany with UniCA 61850 Client simulator 4.28.04 with test suite 3.28.00 and UniCA 61850 Analyzer 5.28.03. This document has been issued for information purposes only, and the original paper copy of the DNV KEMA report No. 74106066-OPE/INC 14-3324 will prevail.

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

Arnhem, November 12, 2014

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 1.7

| Conformance Block | Mandatory | Conditional |
|---|---|---|
| 1: Basic Exchange | Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5<br><br>Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4 | Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN2, SrvN3 |
| 2: Data Sets | Dset1, Dset10a, DsetN1ae | |
| 5: Unbuffered Reporting | Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12<br><br>RpN1, RpN2, RpN3, RpN4 | Rp5, Rp6, Rp8, Rp9 |
| 6: Buffered Reporting | Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14<br><br>BrN1, BrN2, BrN3, BrN4, BrN5 | Br5, Br6, Br10, Br11 |
| 12a: Direct control | CtlN3, CtlN8<br><br>DOns1 | |
| 13: Time sync | Tm1, Tm2, TmN1 | TmN2 |