



IEC 61850 Certificate Level A¹

Issued to:
Mikronika
60-001 Poznan
Wykopy 2/4
Poland

No. 74101901-MOC/INC 12-01513

For the product:
SO-52v11
Firmware version: 1.4
Substation controller

Issued by:



The product has not shown to be non-conforming to:
IEC 61850-6, 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 1.5, the product's protocol, model and technical issue implementation conformance statements: Protocol Implementation Conformance Statement for the IEC 61850 Interface of SO-52-V11, Model Implementation Conformance Statement for the IEC 61850 Interface of SO-52-V11 and Tissues Implementation Conformance Statement for the IEC 61850 Interface of SO-52-V11 and the extra information for testing: Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Interface of SO-52-V11.

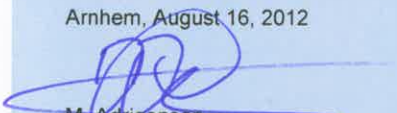
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):


1	Basic Exchange (19/24)	9a	GOOSE Publish (8/13)
2	Data Sets (3/6)	9b	GOOSE Subscribe (10/11)
3	Substitution (4/4)	12a	Direct Control (5/12)
5	Unbuffered Reporting (13/19)	12b	SBO Control (8/14)
6	Buffered Reporting (15/21)	13	Time Synchronization (3/5)
		14	File Transfer (7/7)

This certificate includes a summary of the test results as carried out at Mikronika in Poland with UniCA 61850 Client simulator 3.25.02 with test suite 3.24.02b and UniCA 61850 Analyzer 3.24.02. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74101901-MOC/INC 12-01512 will prevail.

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

Arnhem, August 16, 2012


M. Adriaansen
Director Intelligent Networks & Communication


R. Schimmel
Certification Manager

1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 Quality System
2 TPCL - test procedures change list

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Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.3 with TPCL version 1.5

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv7, SrvN1e, SrvN2, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
3: Substitution	Sub1, Sub2, Sub3, SubN1	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12 RpN1, RpN2, RpN3, RpN4	Rp5, Rp6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5	BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop10a	Gop1, Gop6, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtIN3, CtIN8 DOns1, DOns3	CtI2
12b: SBO control	CtI3, CtIN1, CtIN2, CtIN3, CtIN4, SBOns2	CtI2 SBOns4
13: Time sync	Tm1, Tm2, TmN1	
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, Ft3, FtN1c