



IEC 61850 Certificate Level A¹

No. 74101682-MOC/INC 12-01682

Issued to:
RoCon PLC
56A, 21 Vek Str.
1700 Sofia
Bulgaria

For the product:
RFI 401 D3
Firmware version 1.030

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 in RFI 401 D3, RBP 401 D3, RLI 401 D3, RMI 401 D3, RTI 401 D3, RTU 401 D3, 1.030", "MICS for RFI 401 D3 of relays Model Implementation Conformance Statement Ref. MICS for RFI 401 D3, 1.030" and "TISSUES Implementation Conformance Statement for the IEC 61850 interface in RFI 401 D3, RBP 401 D3, RLI 401 D3, RMI 401 D3, RTI 401 D3, RTU 401 D3, 1.030" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in RFI 401 D3, RBP 401 D3, RLI 401 D3, RMI 401 D3, RTI 401 D3, RTU 401 D3, 1.030".

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)	9a	GOOSE Publish (8/13)
2	Data Sets (3/6)	9b	GOOSE Subscribe (10/11)
4	Setting Group Selection (3/3)	12a	Direct Control (5/12)
4+	Setting Group Definition (7/7)	12b	SBO Control (7/14)
5	Unbuffered Reporting (15/19)	12d	Enhanced SBO Control (10/19)
6	Buffered Reporting (17/21)	13	Time Synchronization (3/5)

This certificate includes a summary of the test results as carried out at KEMA in the Netherlands with UniCA 61850 Client simulator 3.25.02 with test suite 3.24.02b and UniCA 61850 Analyzer 4.25.00. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74101682-MOC/INC 12-01681 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KEMA by RoCon. 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, September 12, 2012

M. Adriaansen
Director Intelligent Networks & Communication

R. Schimme
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, Srv8, SrvN1e, SrvN1f, SrvN2, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1a	Sg3
4+: Setting Group Definition	Sg2, Sg4, SgN1b, SgN2, SgN3, SgN4, SgN5	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12 RpN1, RpN2, RpN3, RpN4	Rp6, Rp8, Rp9, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5	Br6, Br10, Br11
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop10a	Gop1, Gop10b, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtiN3, CtiN8 DOns1, DOns3	CtiN11
12b: SBO control	Cti3, CtiN1, CtiN2, CtiN3, CtiN4, SBOs2	CtiN11
12d: Enhanced SBO control	Cti3, CtiN1, CtiN2, CtiN3, CtiN4, CtiN9 SBOes1, SBOes2, SBOes3	CtiN11
13: Time sync	Tm1, Tm2, TmN1	

All configuration file and data model tests have been successfully performed for the product variants using the same hardware and software version: RBP 401 D3, RLI 401 D3, RMI 401 D3, RTI 401 D3 and RTU 401 D3.