



# IEC 61850 Certificate Level A<sup>1</sup>

International  
Usersgroup

No. 30820213-Consulting 08-2152

Issued to:  
Areva T&D  
St. Leonards Avenue  
Stafford  
ST17 4LX  
United Kingdom

For the product:  
Areva MiCOM P645  
Transformer Protection Relay  
Software Version 01A  
Hardware Version K



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 with product's protocol, model and technical issue implementation conformance statements: "PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT (PICS), version 01A", "MODEL IMPLEMENTATION CONFORMANCE STATEMENT (MICS), version 01A", "IEC61850 TISSUES CONFORMANCE STATEMENT (TICS), version 01A" and product's extra information for testing: "PROTOCOL IMPLEMENTATION EXTRA INFORMATION FOR TESTING, version 01A".

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 UCA International Users Group Device Test procedures v1.1):

1 Basic Exchange (19/23)	9a GOOSE Publish (5/11)
2 Data Sets (2/5)	9b GOOSE Subscribe (9/9)
5 Unbuffered Reporting (11/13)	13 Time Synchronization (3/4)
	14 File Transfer (5/6)

This Certificate includes a summary of the test results as carried out at KEMA in the Netherlands with UniCAsim 61850 version 3.17.01 with test suite 3.17.02 and UniCA 61850 analyzer 4.17.01. The test is based on the UCA International Users Group Device Test Procedures version 1.1. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 30820213-Consulting 08-2151 will prevail.

The test has been carried out on one single specimen of the products as referred above and submitted to KEMA by Areva T&D. The manufacturer's production process has not been assessed. This Certificate does not imply that KEMA has certified or approved any product other than the specimen tested.

Arnhem, Oktober 1, 2008

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Manager Intelligent Networks and Communication

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Senior Test engineer

1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 Quality System

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Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 1.1

<b>Conformance Block</b>	<b>Mandatory</b>	<b>Conditional</b>
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv7, Srv8, SrvN1e, SrvN3
2: Data Sets	Dset1, DsetN1ae	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7 RpN1, RpN2, RpN3, RpN4	Rp5, RpN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1
9b: GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
13: Time sync	Tm1, Tm2, (TmN1)	
14: File transfer	Ft1, Ft2ab, FtN1ab	FtN1c, Ft2c

Note: TmN1 is not applicable because the time quality bits have a fixed value of 0.