



IEC 61850 Certificate Level A¹

No. 30710079-Consulting 07-1457

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

For the product:
Areva MiCOM P345
Generator protection
Firmware version 32G



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: "MiCOM P345 Generator Protection Relay Versions 32 PIC & MICS" and product's extra information for testing: "MiCOM P34x Generator Protection Relays Versions 32 PIXIT"

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)	9ab Generic Object Oriented Substation Event (16/19)
2 Data Sets (2/5)	13 Time Synchronization (3/4)
5 Unbuffered Reporting (11/17)	14 File Transfer (3/6)

This Certificate includes a summary of the test results as carried out at KEMA in Arnhem, The Netherlands with UniCAsim 61850 version 2.15.00 with test suite 2.15.01 and UniCA 61850 analyzer 4.15.01. 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. 30710079-Consulting 07-1454 will prevail.

The tests have been carried out on one single specimen of the products as referred above and submitted to KEMA by Areva. 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, July 12, 2007

S.J.L.M. Janssen
Managing Director KEMA Consulting

R. Schimmel
Certification Manager

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

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, 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, Gop6, GopN1
9b: GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
13: Time sync	Tm1, Tm2, TmN1	
14: File transfer	Ft1, Ft2ab, FtN1ab	