



IEC 61850 Certificate Level B ¹

No. 50745.6545.801

Issued by:



AREVA T&D UK LTD
Automation Products Laboratories

For the product:

Areva MiCOM P545
Current Differential Relay
Software Version 57A
Hardware Version K

Issued to:

AREVA T&D UK LTD
St. Leonards Avenue
Stafford, ST17 4LX
United Kingdom

The product has not shown to be non-conforming to:

IEC 61850-7-1, 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 TISSUE implementation conformance statements: "MiCOM P543&5 Current Differential Relay ver. 57 PICS and MICS", "MiCOM P54X Current Differential Relay ver. 47/57 TICS" and extra information for testing "MiCOM P54X Current Differential Relay ver. 47/57 PIXIT".

The following IEC 61850 conformance blocks are 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 version 2.2):

1	Basic Exchange (23/24)	12a	Direct Control (5/12)
2	Data Sets (3/6)	12b	SBO Control (8/16)
4	Setting Group Selection (2/3)	12c	Enhanced Direct Control (5/13)
5	Unbuffered Reports (14/18)	12d	Enhanced SBO Control (10/20)
6	Buffered Reports (16/20)	13	Time Synchronization (3/5)
9a	GOOSE Publish (9/11)	14	File Transfer (6/7)
9b	GOOSE Subscribe (9/10)		

AREVA T&D grants this Certificate on account of tests performed at the AREVA T&D's laboratories in Stafford, UK with UniCASim 61850 ver. 3.19.02 with test suite 3.19.02 simulating an IEC 61850 client and the UniCA 61850 analyzer version 4.18. The tests are based on the UCA International Users Group Device Test Procedures Version 2.2. This certificate has been issued for information purposes only and the original copy of the AREVA T&D report: No. 50745.6545.301 will prevail.

The tests have been carried out on one single specimen of the above mentioned product(s), submitted by AREVA T&D. The certificate does not include an assessment of the manufacturer's production process. This certificate is valid for the product specified only, which has been tested by Automation Products Laboratories at AREVA T&D.

Stafford, 26-10-2009

Ben Caunce
Automation Products Laboratories Director

Marcin Wycinka
Test Engineer

¹ Level B – Tester with ISO 9000 or ISO 17025 Quality System



Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5, Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN6, Srv6, Srv7, Srv8, Srv9, Srv10, SrvN1e, SrvN1f, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1a	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, RpN1, RpN2, RpN3, RpN4	Rp5, Rp8, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br10, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, Gop5, Gop6, Gop9, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a: Direct control	CtlN3, CtlN8, DOns1, DOns3	CtlN11
12b: SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOs1, SBOs2	CtlN11
12c: Enhanced Direct control	CtlN3, CtlN8, DOes2, DOes5	CtlN11
12d: Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, SBOes1, SBOes2, SBOes3	CtlN11
13: Time sync	Tm1, Tm2, TmN1	
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c