



4085

IEC 61850 Certificate Level B¹

No. 50745.644T.801

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Issued to:

ALSTOM Grid UK LTD
St. Leonards Avenue
Stafford, ST17 4LX United Kingdom

For the product:

ALSTOM MiCOM P44T (80TE)
Railway Distance Protection Relay
Software Version 01D
Hardware Version M

Issued by:

ALSTOM Grid UK LTD
Automation Products Laboratories



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, the UCA International Users Group Device Test Procedures version 2.3 with TPCL² version 1.5, with product's protocol, model and technical issue implementation conformance statements: " MiCOM Px4x PICS- Protocol Implementation Conformance Statement, Version A", "MiCOM P44T MICS- Model Implementation Conformance Statement, Version A", "MiCOM P44T TICS- Tissues Implementation Conformance Statement, Version A" and extra information for testing "MiCOM P44T PIXIT- Protocol Implementation eXtra Information for Testing for the IEC 61850 Interface in MiCOM P44T with Software Version 01".

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

1 Basic Exchange (19/24)	12a Direct Control (5/12)
2 Data Sets (3/6)	12b SBO Control (7/14)
4 Setting Group Selection (2/3)	12c Enhanced Direct Control (5/13)
5 Unbuffered Reports (16/19)	12d Enhanced SBO Control (10/19)
6 Buffered Reports (18/21)	13 Time Synchronization (3/5)
9a GOOSE Publish (13/13)	14 File Transfer (6/7)
9b GOOSE Subscribe (10/11)	

This certificate includes a summary of the test results as carried out at ALSTOM's laboratories in Stafford, UK with UniCA 61850 client simulator version 3.25.02 with test suite 3.24.00 and the UniCA 61850 analyzer version 4.24.02. This document has been issued for information purposes only, and the original copy of the ALSTOM report: No. 50745.644T.301 will prevail.

The tests have been carried out on one single specimen of the above mentioned product(s), submitted by ALSTOM. 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 ALSTOM.

Stafford, 31-01-2013

Allen Millard
Automation Products Laboratories Manager

Rakesh Kumar Bali
Test Engineer

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

² TPCL – Test Procedure Change List

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, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1a	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12, RpN1, RpN2, RpN3, RpN4	Rp5, Rp8, Rp9, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14, BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br10, Br11, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop10a	Gop1, Gop5, Gop6, Gop8, Gop9, Gop10b, GopN1, GopN2
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtlN3, CtlN8, DOns1, DOns3	CtlN11
12b: SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOns2	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