

CENTRAL POWER RESEARCH INSTITUTE





IEC 61850 Certificate Level A

A STATE OF THE STA

No. UARC/SASL/C005/2013

Issued to: M/s. ALSTOM T&D INDIA LTD. 19/1, PALLAVARAM, CHENNAI - 600043, INDIA For the server product: MiCOM P40 Agile P645 Transformer Protection Relay Hardware Version: K Software Version: 04-H

Serial No.: 32147539

Issued by: CENTRAL POWER RESEARCH INSTITUTE, India

The server product has not shown to be non-conforming to: IEC 61850 First Edition Parts 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 Test Procedures Change List (TPCL) version 1.7, the product's protocol, model and technical issue implementation conformance statements: "PICS version PX4X/ENPC/A", "MICS version P645-MC-EN-C52", "TICS version P64X/ENTC/B52" and the extra information for testing: "PIXIT version P64X/EN/PX/C52".

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):

10			
1	Racio	Exchange	(20/24)
-	130510	EXCHAIRS	1201241

- 2 Data Sets (3/6)
- 4 Setting Group Selection(3/3)
- 5 UnBuffered Reporting (16/19)
- 6 Buffered Reporting (18/21)
- 9a GOOSE Publish (11/13)
- 9b GOOSE Subscribe(10/11)

12a Direct Control (4/12)

12b SBO Control (6/14)

12c Enhanced Direct Control(4/13)

12d Enhanced SBO Control(9/19)

13 Time Synchronization (3/5)

14 File Transfer(6/7)

This Certificate includes a summary of the test results as carried out at CPRI, Bangalore, India with UniCAsim 61850 version 4.27.04 test system running test suit "61850 Conformance Test v3.27.00" and UniCA 61850 analyzer version 5.27.04. This document has been issued for information purposes only and the original paper copy of the CPRI Report No.: UARC/SASL/T005/2013; Dated: 21-Jan-2014 will prevail.

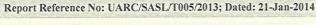
The tests has been carried out on one single specimen of the products as referred above and submitted to CPRI by M/s. ALSTOM T&D INDIA LTD. 19/1, PALLAVARAM, CHENNAI- 600043 INDIA. The manufacturer's production process has not been assessed. This Certificate does not imply that CPRI has certified or approved any product other than the specimen tested.

Bangalore, 21-Jan-2014

(V. Arunachalam) Additional Director



(Pradish M) Test Engineer











Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.3 with TPCL version 1.7

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, SrvN3
2: Data Set	Dset1, Dset10a, DsetN1ae	
4:Setting Group Selection	Sg1, SgN1a, Sg3	
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, Gop9, Gop10a	Gop1, Gop5, Gop6, Gop10b, GopN1
9b: GOOSE Subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a:Direct Control	CtlN3, CtlN8, DOns1	DOns3
12b: SBO Control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOns2	
12c: Enhanced Direct Control	CtlN3, CtlN8, DOes2, DOes5	-
12d: Enhanced SBO Control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, SBOes1, SBOes2, SBOes3	-
13: Time Synchronization	Tm1, Tm2, TmN1	A STATE OF THE STA
14: File Transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c

All configuration file and data model tests have been successfully performed for the product variants using the same hardware version "K" and software version "04-H".

(V. Arunachalam) Additional Director

(Pradish M) Test Engineer

Report Reference No: UARC/SASL/T005/2013; Dated: 21-Jan-2014

