

CENTRAL POWER RESEARCH INSTITUTE

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IEC 61850 Certificate ^{Level A}

No. UARC/PL/C0095/2012

Issued to:

Schneider Electric
No.3/86-E, Ambattur Industrial Estate,
Ambattur, Chennai-58, India
A Subsidiary of
Schneider Electric
35, Rue Joseph Monier, 92500,
Rueil Malmaison, France.

For the product:

Numerical Transformer Protection Relay
Type: MiCOM P645
Hardware Version: K
Software Version: 04
Serial No.: 36129803/07/12

Issued by: CENTRAL POWER RESEARCH INSTITUTE, India

**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, the UCA International Users Group Device Test Procedures version 2.3 with Test Procedures Change List (TPCL) version 1.5, the product's protocol, model and technical issue implementation conformance statements: "PICS version D31", "MICS version D31", "TICS version D31" and extra information for testing: "PIXIT version D31".


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):

1 Basic Exchange (19/24)	12a Direct Control (4/12)
2 Data Sets (3/6)	12b SBO Control (6/15)
4 Setting Group Selection(2/3)	12c Enhanced Direct Control(4/13)
5 UnBuffered Reporting (15/19)	12d Enhanced SBO Control(9/19)
6 Buffered Reporting (17/21)	13 Time Synchronization (3/5)
9a GOOSE Publish (12/13)	14 File Transfer(6/7)
9b GOOSE Subscribe(10/11)	

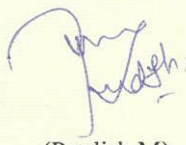
This Certificate includes a summary of the test results as carried out at CPRI, Bangalore, India with UniCAsim 61850 version 3.25.02 test system running test suit "61850 Conformance Test v3.24.00" and UniCAsim 61850 analyzer version 4.25.00. This document has been issued for information purposes only and the original paper copy of the CPRI Report No.: UARC/PL/T0095/2012; Dated: 18-Oct-2012 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. Schneider Electric. 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, 18-Oct-2012


(V. Arunachalam)
Additional Director




(Pradish M)
Test Engineer

Report Reference No: UARC/PL/T0095/2012; Dated: 18-Oct-2012

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, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14, BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br10, BrN6
9a: GOOSE Publish	Gop2, Gop3, Gop4, Gop7, Gop10a	Gop1, 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	--
12b: SBO Control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOs2	--
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	--
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".

(V. Arunachalam)
Additional Director



(Pradish M)
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