

# CENTRAL POWER RESEARCH INSTITUTE

Prof. Sir CV Raman Road, PO Box 8066, Sadashivanagar PO,  
BANGALORE – 560 080. I N D I A



## IEC 61850 Certificate <sup>Level A</sup>



No. UARC/PL/C0099/2012

**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 Generator Protection Relay  
Type: MiCOM P345  
Hardware Version: K  
Software Version: 36  
Serial No.: 36120523/05/12

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 L96", "MICS version L96", "TICS version K96" and the extra information for testing: "PIXIT version K96".


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 (5/12)         |
| 2 Data Sets (3/6)              | 12b SBO Control (7/15)            |
| 4 Setting Group Selection(2/3) | 12c Enhanced Direct Control(5/13) |
| 5 UnBuffered Reporting (15/19) | 12d Enhanced SBO Control(10/19)   |
| 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/T0099/2012; Dated: 23-Nov-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, 23-Nov-2012

  
(V. Arunachalam)  
Additional Director




  
(Pradish M)  
Test Engineer

Report Reference No: UARC/PL/T0099/2012; Dated: 23-Nov-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   | Ctl2   |
| 12b: SBO Control             | Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOs2  | Ctl2   |
| 12c: Enhanced Direct Control | CtlN3, CtlN8, DOes2, DOes5   | Ctl2   |
| 12d: Enhanced SBO Control    | Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, Sboes1, SbOes2, SbOes3                              | Ctl2   |
| 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 "36".

  
(V. Arunachalam)  
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