

CENTRAL POWER RESEARCH INSTITUTE

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UCA
International
Users Group

IEC 61850 Certificate Level A¹



No.: CPRI BLMUADSASL19TC0008

Issued to:

M/s. GE T&D INDIA LIMITED
19/1, G.S.T. ROAD, PALLAVARAM,
CHENNAI - 600043
INDIA

For the server product:

NUMERICAL CURRENT DIFFERENTIAL
PROTECTION RELAY
Type: : MiCOM AGILE P546
Model No.: P5469C6A6R0860P
Serial No.: 33557311/12/19
Hardware Version: P546-P Hardware
Software Version: 86

Issued by: CENTRAL POWER RESEARCH INSTITUTE, India

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

IEC 61850 Edition 2 Parts 6, 7-1, 7-2, 7-3, 7-4 and 8-1

Communication networks and systems for power utility automation

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL² version 1.2.6 with product's protocol, model and technical issue implementation conformance statements: "PICS version PX4X-PC2-EN-1", "MICS version P546-MC2-EN-1.1", "TICS version P546-TC2-EN-1" and product's extra information for testing: "PIXIT version P546-PX2-EN-1".

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

| | |
|---------------------------------|------------------------------------|
| 1 Basic Exchange (24/26) | 12a Direct Control (7/18) |
| 2 Data Sets (4/7) | 12b SBO Control (13/27) |
| 4 Setting Group Selection (4/4) | 12c Enhanced Direct Control (9/20) |
| 5 Unbuffered Reporting (18/21) | 12d Enhanced SBO Control (14/28) |
| 6 Buffered Reporting (25/30) | 13 Time Synchronization (4/7) |
| 9a GOOSE Publish (12/13) | 14 File Transfer (7/8) |
| 9b GOOSE Subscribe (14/14) | |

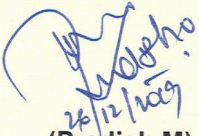
This Certificate includes a summary of the test results as carried out at Central Power Research Institute (CPRI), Bangalore in India with Client Simulator UniCasim version 4.31.02.5461 and UniGrid SA Simulator version 1.6.7.0 with test suit version IEC61850Ed2Server1.2.6-v1.0.143 and UniCA 61850 analyzer version 5.34.02.0. This document has been issued for information purposes only, and the original paper copy of the CPRI report No.: CPRI BLMUADSASL19T0008; dated 26 December, 2019 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to CPRI by GE T&D India Limited, 19/1, G.S.T. Road, 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, 26 December, 2019


(Harinath Babu P V)
Joint Director




(Pradish M)
Test Engineer


Test Report Reference No.: CPRI BLMUADSASL19T0008; dated 26 December, 2019


1 Level A – Independent Test lab with certified ISO/IEC 17025 Quality System.
2 Test Procedure Change List .

No.: CPRI BLRMUADSASL19TC0008

Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL version 1.2.6

| Conformance Block | Mandatory | Conditional |
|------------------------------|---|---|
| 1: Basic Exchange | sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4 | sAssN6, sSrv6, sSrv8, sSrv9, sSrv10, sSrv12, sSrv13, sSrvN1e, sSrvN1f, sSrvN3 |
| 2: Data Sets | sDs1, sDs10a, sDsN1ae | sDs15 |
| 4: Setting Group Selection | sSg1, sSg3, sSgN1 | sSg11 |
| 5: Unbuffered Reporting | sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8 | sRp8, sRp10, sRp11, sRp12, sRpN5 |
| 6: Buffered Reporting | sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr15, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8 | sBr8, sBr10, sBr11, sBr12 |
| 9a: GOOSE publish | sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11 | sGop1, sGop5, sGop6, sGop7, sGopN1, sGopN2 |
| 9b: GOOSE subscribe | sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6 | sGos4, sGop6b |
| 12a: Direct control | sCtl5, sCtl10, sDOns1, sDOns2 | sCtl13, sCtl15, sCtl16 |
| 12b: SBO control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6 | sCtl6, sCtl15, sCtl16, sCtl27 |
| 12c: Enhanced Direct Control | sCtl5, sCtl10, sDOes1, sDOes2 | sCtl13, sCtl14, sCtl15, sCtl16, sCtl26 |
| 12d: Enhanced SBO control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8 | sCtl6, sCtl15, sCtl16, sCtl26 |
| 13: Time sync | sTm1, sTm2, sTmN1 | sTm3 |
| 14: File transfer | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab | sFt2c, sFtN1c |


26-12-19
(Harinath Babu P V)
Joint Director


26/12/19
(Pradish M)
Test Engineer