

CENTRAL POWER RESEARCH INSTITUTE

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UCA
International
Users Group

IEC 61850 Certificate Level A¹



No.: CPRIBLRMUADSASL20TC0002

Issued to:

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

For the server product:

NUMERICAL TRANSFORMER PROTECTION RELAY
Type: : MiCOM AGILE P645
Model No.: P6459CPF6R0220P
Serial No.: 33244774/12/19
Hardware Version: P645-P Hardware
Software Version: 22

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 P645-MC2-EN-2.1", "TICS version P64X-TC2-EN-2.1" and product's extra information for testing: "PIXIT version P64X-PX2-EN-2.1".

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 (6/18)
2 Data Sets (4/7)	12b SBO Control (12/27)
4 Setting Group Selection (4/4)	12c Enhanced Direct Control (7/20)
5 Unbuffered Reporting (18/21)	12d Enhanced SBO Control (12/28)
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 IEC61850Ed2ServerTPCL_1.2.6-v1.0.282 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.: CPRIBLRMUADSASL20T0002; dated 11 February, 2020 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; 11 February, 2020


(Harinath Babu P V)
Joint Director




(Pradish M)
Test Engineer

Test Report Reference No.: CPRIBLRMUADSASL20T0002; dated 11 February, 2020

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

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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, sGos6b
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl13, sCtl15
12b: SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl6, sCtl15, sCtl27
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl13, sCtl14, sCtl15
12d: Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6, sCtl15
13: Time sync	sTm1, sTm2, sTmN1	sTm3
14: File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt2c, sFtN1c


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