

CENTRAL POWER RESEARCH INSTITUTE

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UCA
International
Users Group

IEC 61850 Certificate Level A¹



No.: CPRIBLRMUADSASL22TC0009

Issued to:

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

For the server product:

NUMERICAL BUS BAR PROTECTION RELAY
Type: MiCOM P40 Agile P746
Model No.: P74691TE6S0910M
Serial No.: 36189015/09/22
Hardware Version: M
Software Version: 91A

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 2.0.5 with product's protocol, model and technical issue implementation conformance statements: "PICS version Px4x-PC2-EN-H; dated: 17th December 2020", "MICS version P746-EN-MC2-J43.1; dated: 06th April 2022", "TICS version P746-EN-TC2-J43; dated: 31st January 2022" and product's extra information for testing: "PIXIT version P746-EN-PX2-J43.1; dated: 22nd March 2022".

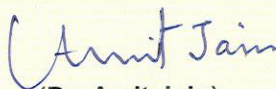
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test):

1 Basic Exchange (24/26)	12a Direct Control (5/19)
2 Data Sets (4/7)	12b SBO Control (11/28)
4 Setting Group Selection (4/4)	12c Enhanced Direct Control (5/21)
5 Unbuffered Reporting (21/23)	12d Enhanced SBO Control (11/29)
6 Buffered Reporting (31/33)	13 Time Synchronization (4/7)
9a GOOSE Publish (12/13)	14 File Transfer (7/8)
9b GOOSE Subscribe (20/20)	


This Certificate includes a summary of the test results as carried out at Central Power Research Institute (CPRI), Bangalore in India with Client Simulator UniGrid SA Simulator version 1.8.0 with test suit version Ed2_Server_TP_2.0_20211006.3 and UniCA 61850 analyzer version 6.41.00.0. This document has been issued for information purposes only, and the original paper copy of the CPRI report No.: CPRIBLRMUADSASL22T0009; dated 05 December, 2022 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to CPRI by M/s. GE T&D INDIA LIMITED, 19/1, G.S.T. ROAD, PALLAVARAM, CHENNAI – 600043, TAMIL NADU, 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; 05 December, 2022


(Dr. Amit Jain)
Joint Director





(Pradish M)
Test Engineer


¹ Level A – Independent Test lab with certified ISO/IEC 17025 Quality System.
UCA International Users Group, P.O. Box 315, Shell Knob, MO 65747, USA

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Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 2.0.5

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcdef, sSrvN4	sAssN6, sSrv6, sSrv9, sSrv10, sSrv12, sSrv13, sSrvN1e, 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, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, sRp13, sRp15, sRp17, sRpN5
6: Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8	sBr8, sBr10, sBr11, sBr12, sBr13, sBr15, sBr17, sBr23, sBr24
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop5, sGop6, sGopN1, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos4, sGos6b, sGos13
12a Direct control	sCtl5, sCtl10, sDOs1, sDOs2	sCtl13
12b SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOs1, sSBOs2, sSBOs6	sCtl6, sCtl27
12c Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl13
12d Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6
13 Time sync	sTm1, sTm2, sTmN1	sTm3
14 File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt2c, sFtN1c


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