

CENTRAL POWER RESEARCH INSTITUTE

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UCA
International
Users Group

IEC 61850 Certificate Level A¹



No.: CPRI BLRSGRL23TC0002

Issued to:

M/s. SIEMENS LTD.,
Verna Plot No - L6,
Verna Industrial Estate,
Opp. Goa - Mumbai highway, Verna,
South Goa - 403722 INDIA

For the server product:

TRANSFORMER DIFFERENTIAL PROTECTION
Type / Model No : 7UT86 (SIP 5)
Product Code.: P1F561158
Serial No.: BM2212008888
Hardware Version: 7UT86 with CP300
Software Version: V09.40

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 2.0.6 with product's protocol, model and technical issue implementation conformance statements: "PICS V9.40 and higher; dated: 24 January 2023", "MICS V09.40.01; dated: 13 February 2023", "TICS V9.40 and higher; dated: 24 January 2023" and product's extra information for testing: "PIXIT V9.40 and higher; dated: 24 January 2023".


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 (25/26)	9a GOOSE Publish (11/13)
2 Data Sets (4/7)	9b GOOSE Subscribe (21/21)
2+ Data Set Definition (24/24)	12a Direct Control (12/18)
3 Substitution (3/3)	12b SBO Control (19/27)
4 Setting Group Selection (4/4)	12c Enhanced Direct Control (14/20)
4+ Setting Group Definition (13/13)	12d Enhanced SBO Control (20/28)
5 Unbuffered Reporting (22/23)	13 Time Synchronization (6/7)
6 Buffered Reporting (32/33)	14 File Transfer (5/8)


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 2.1.0 with test suit version Ed2_Server_TP2.0.5_Amd1TP1.1_v2.1.0 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.: CPRI BLRSGRL23T0002; dated 15 March, 2023 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. SIEMENS LTD., Verna Plot No - L6, Verna Industrial Estate, Opp. Goa - Mumbai highway, Verna, South Goa - 403722, 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; 15 March, 2023


(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 2.0.6

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcdf, sSrvN4	sAssN6, sSrv6, sSrv9, sSrv10, sSrv11, sSrv12, sSrv13, sSrvN1e, sSrvN3
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
2+: Data Set Definition	sDs2, sDs3, sDs4, sDs5, sDs6, sDs7, sDs8, sDs9, sDs13, sDs14, sDsN1cd, sDsN2, sDsN3, sDsN4, sDsN5, sDsN6, sDsN7, sDsN8, sDsN9, sDsN10	sDs11, sDs12, sDsN11, sDsN12
3: Substitution	sSub1, sSub2, sSub3	
4: Setting Group Selection	sSg1, sSg3, sSgN1	sSg11
4+: Setting Group Definition	sSg2, sSg4, sSg6, sSg7, sSg8, sSg10, sSg12, sSgN2, sSgN3, sSgN4, sSgN5	sSg5, sSg9
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, 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	sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, sBr15, sBr17, sBr23, sBr24
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop6, sGopN1, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGos23, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos4, sGos6b, sGos13
12a Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl2, sCtl7, sCtl13, sCtl15, sCtl16, sCtl17, sCtl21, sCtl28
12b SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl2, sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl17, sCtl21, sCtl27, sCtl28
12c Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl2, sCtl7, sCtl13, sCtl14, sCtl15, sCtl16, sCtl17, sCtl21, sCtl26, sCtl28
12d Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl2, sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl17, sCtl21, sCtl26, sCtl28
13 Time sync	sTm1, sTm2, sTmN1	sTm3, sTm4, sTm5
14 File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	

Amit Jain

(Dr.Amit Jain)
Joint Director

Pradish M

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Test Engineer