

# IEC 61850 Certificate

## Level A<sup>1</sup>

### No. D 111195 0006 Rev. 00

Issued to:

XJ Electric Co., Ltd.  
No. 1298 Xuji Avenue,  
461000 Xuchang, Henan Province,  
People's Republic of China

For the server product:

WCB-822C  
Protection Measurement & Control Device  
Software Version: 1.0

Issued by:

TÜV SÜD CERTIFICATION AND TESTING (CHINA) CO., LTD  
SHANGHAI BRANCH  
*Communication Protocols*  
No.1999, Duhui Road, Minhang District,  
Shanghai, 201 108,  
People's Republic of China

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\_Server\_Ed2\_WCB-822C", "MICS\_Server\_Ed2\_WCB-822C", "TICS\_Server\_Ed2\_WCB-822C" and product's extra information for testing: "PIXIT\_Server\_Ed2\_WCB-822C".

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 (20/26)	12a Direct Control (4/19)
2 Data Sets (4/7)	12d Enhanced SBO Control (12/29)
3 Substitution (3/3)	13 Time Synchronization (4/7)
4 Setting Group Selection (4/4)	14 File Transfer (5/8)
4+ Setting Group Definition (12/13)	
5 Unbuffered Reporting (19/23)	
6 Buffered Reporting (27/33)	
7 Logging (13/14)	

This Certificate includes a summary of the test results as carried out at TÜV SÜD Certification and Testing (China) Co., Ltd Shanghai Branch in P.R. China with SimFlex CS Ed.2 version 3.16 with test suite 3.16 and Wireshark version 3.0.6. This document has been issued for information purposes only, and the original paper copy of the TÜV SÜD report: No. 705002113102-00, version 1.0 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to TÜV SÜD by XJ Electric Co., Ltd.. The manufacturer's production process has not been assessed. This certificate does not imply that TÜV SÜD has certified or approved any product other than the specimen tested.

Shanghai, November 19, 2021

*Yifan WANG*

Yifan WANG  
Technical Certifier

*Cong WANG*

Cong WANG  
Test Engineer

<sup>1</sup> Level A - Independent Test lab with certified ISO/IEC 17025 Quality System

## No. D 111195 0006 Rev. 00

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, sSrvN1e, sSrvN3
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
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	sSg9
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, sRp15, 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, sBr15
7: Logging	sLog2, sLog3, sLog4, sLog5, sLog6, sLog7, sLog8, sLog9, sLog11, sLog12, sLog13, sLogN1, sLogN2	
12a Direct control	sCtl5, sCtl10, sDOns1, sDOns2	
12d Enhanced SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6, sCtl26
13 Time sync	sTm1, sTm2, sTmN1	sTm3
14 File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	

All configuration file and data model tests have been successfully performed for the product variants using the same communication hardware and software version: WXH-822C