

No. D 093550 0001 Rev. 01

Issued to:

Dongfang Electronics Co., Ltd.
2 JiChang Road 264000 Yantai,
Shangdong Province
PEOPLE'S REPUBLIC OF CHINA

For the CLIENT:

DF1331 Remote Terminal Unit
IEC 61850 software version: 1331MCB-V4.00
Hardware version: DF1331 V1.1

Issued by:

TÜV SÜD CERTIFICATION AND TESTING (CHINA) CO., LTD.
SHANGHAI BRANCH TESTING CENTER
Building D, No.2059, Duhui Road, Minhang District,
Shanghai, 201108, PEOPLE'S REPUBLIC OF CHINA

The CLIENT has not been shown to be non-conforming to:
IEC 61850 Edition 2 with Amendment 1 Parts 6, 7-1, 7-2, 7-3, 7-4, 8-1
Communication networks and systems for power utility automation

The conformance test has been performed according to IEC 61850-10, the UCA International Users Group Edition 2 with Amendment 1 Client Test Procedures version 1.0 with product's protocol, model, technical issue, SCL tool implementation conformance statements: "PICS for the IEC61850 Ed2Amd1 interface in DF1331 V1331MCB-V4.0", "MICS for the IEC61850 Ed2Amd1 interface in DF1331 V1331MCB-V4.0", "TICS for the IEC61850 Ed2Amd1 interface in DF1331 V1331MCB-V4.0", "SICS for the IEC61850 Ed2Amd1 interface in DF1331 V1331MCB-V4.0" and product's extra information for testing: "PIXIT for the IEC61850 Ed2Amd1 interface in DF1331 V1331MCB-V4.0".

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

1a Basic Exchange (17/31)	12a Direct Control (6/9)
2 Data Sets (2/10)	12b SBO Control (9/12)
5 Unbuffered Reporting (30/34)	12c Enhanced Direct Control (6/9)
6 Buffered Reporting (26/31)	12d Enhanced SBO Control (8/11)
	13a Time Synchronization with SNTP (4/4)

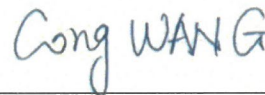
This Certificate includes a summary of the test results as carried out at Shanghai in P.R. China with 61850 Test Suite Pro version 4.7 with test suite version 1.0 and Wireshark version 4.2.4. This document has been issued for information purposes only, and the original paper copy of the TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch Testing Center report: No. 705002321701-01 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to TÜV SÜD by Dongfang Electronics 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, 2025-04-22



Yifan WANG
Technical Certifier



Cong WANG
Test Engineer

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

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Applicable Test Procedures from the UCA International Users Group Edition 2 Amendment 1 Client
 Test Procedures version 1.0

Conformance Block	Mandatory	Conditional
1a: Basic Exchange	cAss1, cAss2, cAss3, cAssN1, cAssN4, cAssN5, cAssN6, cAssN8	cAssN7, cSrv5, cSrv7, cSrv8, cSrvN2, cSrvN3, cSrvN5, cSrvN6, cSrvN7
2: Data Sets		cDs3, cDsN1c
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRp18, cRp19, cRp20, cRp21, cRp22, cRp40, cRp41, cRp42, cRp43, cRp44, cRp45, cRp46, cRpN2, cRpN5, cRpN6	cRp2, cRp6, cRp7, cRp16, cRp17
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr18, cBr19, cBr20, cBr21, cBr22, cBr30, cBr31, cBr46, cBrN2, cBrN5, cBrN6	cBr2, cBr6, cBr7, cBr16, cBr17
12a Direct control	cCtl4, cCtl5, cDOns1, cDOns2	cCtl1, cCtl2
12b: SBO control	cCtl4, cCtl5, cSBOns1, cSBOns2, cSBOns3, cSBOns10	cCtl1, cCtl2, cSBOns4
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	cCtl1, cCtl2,
12d Enhanced SBO control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	cCtl1, cCtl2, cSBOes4
13a Time sync SNTP	cTm1, cTmN1	cTm2, cTmN2

Zertifizierungsvertrag

Grundlage für die Zertifikatserteilung ist die Prüf- und Zertifizierungsordnung der TÜV SÜD Gruppe. Mit Erhalt des Zertifikates erkennt der Zertifikatsinhaber die jeweils gültige Fassung der Prüf- und Zertifizierungsordnung an (www.tuvsud.com/ps-zert) und wird somit Partner im Zertifiziersystem der TÜV SÜD Gruppe.

Prinzipielle Voraussetzung für die Gültigkeit des Zertifikates:

- Gültigkeit der zitierten normativen Prüfgrundlage(n) ist gegeben und zusätzlich bei Zertifikaten mit Berechtigung zur Verwendung eines Prüfzeichens bzw. bei Zertifikaten für QM-Systeme:
- Voraussetzungen für vorschriftsmäßige Fertigung werden eingehalten.
- Die Fertigungs- bzw. Betriebsstätten werden regelmäßig überwacht.

Certification contract

Certification is based on the Testing and Certification Regulations of TÜV SÜD Group. On receipt of the certificate the certificate holder agrees to the current version of the Testing and Certification Regulations (www.tuvsud.com/ps-cert) and thus becomes partner in the Certification System of TÜV SÜD Group.

Requirements for the validity of the certificate in principle:

- Validity of the quoted test standard(s) In addition, for certificates with the right to use a certification mark and for QM certificates:
- Conditions for an adequate manufacturing are maintained
- Regular surveillance of the facility is performed

认证合约

认证基于 TÜV SÜD 集团《测试及认证准则》。获得证书即表明证书持有者接受当前版本的《测试及认证准则》（见 www.tuvsud.com/ps-cert）并成为 TÜV SÜD 集团认证系统内的合作伙伴。

维持证书有效性的原则要求:

- 认证所依据标准的有效性
- 此外，对于授权可使用认证标志的证书和质量管理体系证书:
- 保持充分的生产条件
 - 生产场地通过定期的监督

認証契約

認証は TÜV SÜD Group の試験認証規約に基づく。認証書保持者は認証書を受領することにより最新の試験認証規約(www.tuvsud.com/ps-cert)に同意したものとします。その結果、TÜV SÜD Group 認証システムのパートナーとなる。

認証書の有効性に関する原則的な要求事項

- 引用している試験規格が有効である
- さらに認証マークの使用を許諾された認証書や品質マネジメント認証書は:
- 適切な製造の条件を維持している
 - 定期的な工場監査を実施している

Contrato de certificação

A certificação se baseia nos Regulamentos de Testes e Certificação do Grupo TÜV SÜD. Ao receber o certificado, o Fornecedor, titular do certificado concorda com a versão atual dos Regulamentos de Testes e Certificação do Grupo TÜV SÜD (www.tuvsud.com/ps-cert) e assim, torna-se parceiro no Sistema de Certificação do Grupo TÜV SÜD.

Requisitos para a validade do certificado (em princípio):

- Validade da(s) norma(s) de ensaio(s) referenciada(s).
- Adicionalmente, para os certificados com o direito ao uso da marca de certificação e para certificados de SG:
- Condições de fabricação adequada estão mantidas.
 - Auditoria de monitoração realizada regularmente.