



IEC 61850 Certificate

Level A¹

No. D 002427 0004 Rev. 00

Issued to:

GUODIAN NANJING AUTOMATION CO., LTD.
NANJING SAC POWER GRID AUTOMATION
CO., LTD.
No.39, Shuige Road, Jiangning Development
Zone, 211153, Nanjing, China

For the server product:

PST 671U Transformer Protection
Software Version: 5.02.02.10h2

Issued by:

TÜV SÜD CERTIFICATION AND TESTING (CHINA) CO., LTD
SHANGHAI BRANCH
Communication Protocols
No.16 Lane 1951 Duhui Road
Shanghai, 201 108,
People's Republic of China

The server product has not been shown to be non-conforming to:
IEC 61850 First Edition Parts 6, 7-1, 7-2, 7-3, 7-4 and 8-1

Communication networks and systems in substations

The conformance test has been performed according to IEC 61850-10, the UCA International Users Group Server Device Test Procedures version 3.3, the product's protocol, model and technical issue implementation conformance statements: "PST 671U_PICS_Server_Ed1_V1.0", "PST 671U_MICS_Server_Ed1_V1.0", "PST 671U_TICS_Server_Ed1_V1.0" and the extra information for testing: "PST 671U_PIXIT_Server_Ed1_V1.0".

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

1 Basic Exchange (24/25)	9a GOOSE Publish (8/12)
2 Data Sets (3/6)	9b GOOSE Subscribe (10/11)
3 Substitution (4/4)	12a Direct Control (4/11)
4 Setting Group Selection (3/3)	12d Enhanced SBO Control (11/19)
4+ Setting Group Definition (7/7)	13 Time Synchronization (4/5)
5 Unbuffered Reporting (16/18)	14 File Transfer (4/7)
6 Buffered Reporting (23/27)	

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.1 version 5.0 with test suite 5.0 and Wireshark version 3.0.0. This document has been issued for information purposes only, and the original paper copy of the TÜV SÜD report: No. 705201920201-00, 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 GUODIAN NANJING AUTOMATION CO., LTD., NANJING SAC POWER GRID AUTOMATION CO., LTD.. The manufacturer's production process has not been assessed. This certificate does not imply that TÜV SÜD has approved any product other than the specimen tested.

Shanghai, November 11, 2019

Cong Wang
Technical Certifier

Yifan 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 Server Device Test Procedures version 3.3

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, AssN6 Srv6, Srv7, Srv8, Srv9, Srv10, Srv12, SrvN1e, SrvN1f, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
3: Substitution	Sub1, Sub2, Sub3, SubN1	
4: Setting Group Selection	Sg1, SgN1a, Sg3	
4+: Setting Group Definition	Sg2, Sg4, SgN1b, SgN2, SgN3, SgN4, SgN5	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp9, RpN1, RpN2, RpN3, RpN4, RpN8	Rp5, Rp8, Rp10, Rp11, Rp12, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br9, Br20, Br21, Br22, Br25, Br26, Br27, Br28 BrN1, BrN2, BrN3, BrN4, BrN5, BrN8	Br5, Br8, Br10, Br11, Br12
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop9, Gop10a	Gop5, Gop7, GopN2
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtlN3, DOns1	CtlN11, DOns3
12d: Enhanced SBO control	CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl3, CtlN6, CtlN11
13: Time sync	Tm1, Tm2	Tm3, TmN1
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	

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Zertifizierungsvertrag

Grundlage für die Zertifikatserteilung ist die Prüf- und Zertifizierungsordnung von TÜV SÜD Product Service.

Mit Erhalt des Zertifikates erkennt der Zertifikatsinhaber die jeweils gültige Fassung der Prüf- und Zertifizierungsordnung an (www.tuev-sued.de/ps_regulations) und wird somit Partner im Zertifiziersystem von TÜV SÜD Product Service.

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 TÜV SÜD Product Service Testing and Certification Regulations. On receipt of the certificate the certificate holder agrees to the current version of the Testing and Certification Regulations (www.tuv-sud.com/ps_regulations) and thus becomes partner in the TÜV SÜD Product Service Certification System.

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 产品服务《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.tuv-sud.com/ps_regulations）并成为 TÜV SÜD 产品服务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

認證契約

認證は TÜV SÜD Product Service 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.tuv-sud.com/ps_regulations)に同意したものとします。その結果、TÜV SÜD Product Service 認証システムのパートナーとなる。

認證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.tuv-sud.com/ps_regulations) e assim, torna-se parceiro no Sistema de Certificação de Produtos e Serviços 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.