



Product Service

IEC 61850 Certificate

Level A¹

No. D 17 05 92391 023

Issued to:

CYG SUNRI CO., LTD.
 No. 13, Keji North 1st Road, North Area of
 Hi-Tech Industrial Park, Nanshan District,
 Shenzhen518057, China

For the server product:

PRS-778
 Transformer Protection Relay
 Software Version: V1.00

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 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 1.0 with TPCL2 version 1.2 with product's protocol, model and technical issue implementation conformance statements: "PRS-778_PICS_Server_Ed2_V1.0.pdf", "PRS-778_MICS_Server_Ed2_V1.0.pdf", "PRS-778_TICS_Server_Ed2_V1.0.pdf" and product's extra information for testing: "PRS-778_PIXIT_Server_Ed2_V1.0.pdf".

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 (10/13) |
| 2 Data Sets (4/7) | 9b GOOSE Subscribe (14/14) |
| 3 Substitution (3/3) | 12a Direct Control (9/18) |
| 4 Setting Group Selection (4/4) | 12c Enhanced Direct Control (9/20) |
| 4+ Setting Group Definition (13/13) | 12d Enhanced SBO Control (16/28) |
| 5 Unbuffered Reporting (21/21) | 13 Time Synchronization (5/7) |
| 6 Buffered Reporting (28/30) | 14 File Transfer (8/8) |
| | 15 Service Tracking (4/17) |

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 2.0 with test suite 1.0-1.2-v0.4 and Wireshark version 1.12.1. This document has been issued for information purposes only, and the original paper copy of the TÜV SÜD report: No. 7482128408-TR705001700403, version V1-0 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to TÜV SÜD by CYG SUNRI 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, May 24, 2017

Qinbo ZHOU

Qinbo ZHOU
 Technical Certifier

Yifan WANG

Yifan WANG
 Test Engineer

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

² Test Procedure Change List



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Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL version 1.2

| Conformance Block | Mandatory | Conditional |
|------------------------------|---|---|
| 1: Basic Exchange | sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4 | sAssN6, sSrv6, sSrv8, sSrv9, sSrv10, sSrv11, sSrv12, sSrvN1e, sSrvN1f, sSrvN2, 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, sSg7, sSg8, sSg10, sSg12, sSgN2, sSgN3, sSgN4, sSgN5 | sSg5, sSg6, sSg9 |
| 5: Unbuffered Reporting | sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8 | sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, sRp13, sRpN5 |
| 6: Buffered Reporting | sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr15, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8 | sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, sBr13 |
| 9a: GOOSE publish | sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11 | sGop2b, sGop5, sGop7, sGopN2 |
| 9b: GOOSE subscribe | sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6 | sGos4, sGos6b |
| 12a Direct control | sCtl5, sCtl10, sDOs1, sDOs2 | sCtl2, sCtl13, sCtl16, sCtl17, sCtl19 |
| 12c Enhanced Direct Control | sCtl5, sCtl10, sDOes1, sDOes2 | sCtl2, sCtl13, sCtl16, sCtl17, sCtl19 |
| 12d Enhanced SBO control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8 | sCtl2, sCtl4, sCtl6, sCtl16, sCtl17, sCtl19 |
| 13 Time sync | sTm1, sTm2, sTmN1 | sTm3, sTm5 |
| 14 File transfer | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab | sFt2c, sFt3, sFtN1c |
| 15 Service tracking | | sTrk1, sTrk2, sTrk7, sTrk8 |

Zertifiziervertrag

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.tuev-sued.de/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

Akkreditierungen / Benennungen (Status 14.10.2013) /
Accreditations / notifications (as of 2013-10-14)

Deutschland / Germany

Produktsicherheitsgesetz (ProdSG) /
Product Safety Act (ProdSG)

Europa / Europe

- Niederspannungsrichtlinie 2006/95/EG
- Spielzeugrichtlinie 2009/48/EG
- Richtlinie für aktive medizinische Implantate 90/385/EWG
- Richtlinie für Medizinprodukte 93/42/EWG
- Richtlinie für In-vitro-Diagnostika 98/79/EG
- Richtlinie für Gasverbrauchseinrichtungen 2009/142/EG
- Richtlinie für persönliche Schutzausrüstungen 89/686/EWG
- EMV-Richtlinie 2004/108/EG
- Richtlinie für Sportboote 94/25/EG + 2003/44/EG
- Richtlinie für Maschinen 2006/42/EG
- Richtlinie für Ex-Schutz Geräte 94/9/EG

- Low Voltage Directive 2006/95/EC
- Toys Directive 2009/48/EC
- Directive for Active Implantable Medical Devices 90/385/EEC
- Directive for Medical Devices 93/42/EEC
- Directive on In Vitro Diagnostic Medical Devices 98/79/EC
- Directive for Gas Appliances 2009/142/EC
- Directive for Personal Protective Equipment 89/686/EEC
- EMC Directive 2004/108/EC
- Directive for Recreational Craft 94/25/EC + 2003/44/EC
- Directive for Machinery 2006/42/EC
- Directive for Ex Safe Equipment 94/9/EC

- ENEC Agreement for luminaires, household and IT equipment

USA

- Nationally Recognized Testing Laboratory (NRTL) to 29 CFR 1910.7 by OSHA
- Accredited for FDA 510(k) Third Party Review
- Conformity Assessment Body to the MRA for Medical Devices; FDA QSR Reg Inspections, FDA 510(k) Third Party Review

Asien-Pazifik Region / Asia Pacific

- Recognized Certification Body to Electrical Products (Safety) Regulation; Hong Kong
- Konformitätsbewertungsstelle / Conformity Assessment Body to the MRA for Medical Devices; Australien / Australia
- Konformitätsbewertungsstelle / Conformity Assessment Body to the MRA for Medical Devices; Neuseeland / New Zealand

Weltweit / Worldwide

- NCB im CB-Scheme des IECEE /
NCB in the CB Scheme of IECEE
- ExCB im IECEx-Scheme des IECEE /
ExCB in the IECEx Scheme of IECEE
- Zertifizierstellen durch DAkkS akkreditiert
DE-ZE-11321-01, DE-ZM-11321-09 und DE-ZM-11321-01.
Certification Bodies accredited by DAkkS
DE-ZE-11321-01, DE-ZM-11321-09 and DE-ZM-11321-01.