



IEC 61850 Certificate

Level A¹



Product Service

No. D 16 11 90121 003

Issued to:
 ABB AB, Power Transformers
 Valhallavägen 2, Ludvika,
 771 80 Sweden

For the server product:
 CoreTec
 Transformer Monitoring Unit
 Software Version: V2.4

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 3.03, the product's protocol, model and technical issue implementation conformance statements: "CoreTec_Pics_TP3.03_v2.1", "CoreTec_Mics_TP3.03_v2.3", "CoreTec_Tics_TP3.03_v2.1" and the extra information for testing: "CoreTec_Pixit_TP3.03_v2.3".

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 (24/24) 2 Data Sets (3/6) 5 Unbuffered Reporting (16/18) 6 Buffered Reporting (23/27)	9a GOOSE Publish (11/12) 9b GOOSE Subscribe (10/11) 12a Direct Control (4/11) 13 Time Synchronization (3/5)
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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: 4.0 with test suite 3.0.t11.EA06 and Wireshark version 1.12.2. This document has been issued for information purposes only, and the original paper copy of the TÜV SÜD report: No. 7482097408-TR705001600601, 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. 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 10, 2016



 Qinbo ZHOU
 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 3.03

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, SrvN1e, SrvN1f, SrvN2, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
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	Gop1, Gop6, Gop7, Gop10b, GopN1, GopN2
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtlN3, DOns1	Ctl2, Dons3
13: Time sync	Tm1, Tm2	TmN1

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.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 25.02.2010) /
Accreditations / notifications (as of 2010-02-25)

Deutschland / Germany

Geräte- und Produktsicherheitsgesetz (GPSG) /
Equipment and Product Safety Act (GPSG)

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 90/396/EWG
- 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 90/396/EEC
- 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 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
- TÜV SÜD Product Service Mark für Produkte / TÜV SÜD
Product Service Mark for products DAP-ZE-1213.00
- Zertifizierung von QMS / Certification of
QMS TGA-ZM-08-93-00
- Zertifizierung von QMS gemäß / Certification of QMS according to
(DIN) EN ISO 13485 / ISO 13485