



IEC 61850 Certificate

Level A¹



Product Service

No. ZE 14 11 90467 001B

Issued to:

Thytronic S.p.A
Piazza Mistral 7
20139 Milano
Italy

For the server product:

PRO-NVA100X-B
Protection Device
1.30

Issued by:

TÜV SÜD Product Service GmbH
Communication Protocols
Barthstrasse 16
D-80339 Munich
Germany

Certification Mark:



This certification mark can only be used for the product defined above.

The server product has not 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.

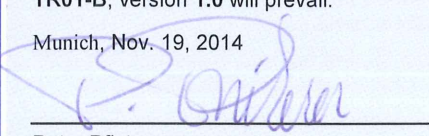
The conformance test has been performed according to IEC 61850-10, the UCA International Users Group Server Test Procedures version 2.3 with TPCL² version 1.7.1, the product's protocol, model and technical issue implementation conformance statements: "PICS for the IEC 61850 interface in <PRO-NVA100X-B>", "MICS for the IEC 61850 interface in <PRO-NVA100X-B>", "TICS for the IEC 61850 interface in <PRO-NVA100X-B>" and the extra information for testing: "PIXIT for the IEC 61850 interface in <PRO-NVA100X-B>".

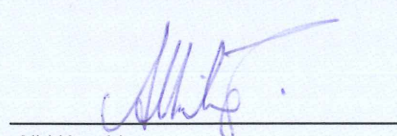
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

| | |
|--------------------------------|----------------------------------|
| 1 Basic Exchange (23/24) | 9a GOOSE Publish (8/13) |
| 2 Data Sets(3/6) | 9b GOOSE Subscribe (11/11) |
| 2+ Data Set Definition (23/23) | 12a Direct Control (4/12) |
| 5 Unbuffered Reporting (16/19) | 12b SBO Control (6/14) |
| 6 Buffered Reporting (18/21) | 12d Enhanced SBO Control (10/19) |
| | 13 Time Synchronization (4/5) |
| | 14 File Transfer (4/7) |

This certificate includes a summary of the test results as carried out at TÜV SÜD Product Service GmbH in Germany with SimFlex CS version 3.1 with test suite version 3.0.t10 and Wireshark version 1.10.7. This document has been issued for information purposes only, and the original paper copy of the TÜV SÜD Product Service GmbH test report: No. **713037428-TR01-B**, version **1.0** will prevail.

Munich, Nov. 19, 2014


Peter Pfisterer
Technical Certifier


Albi Kospiri
Test Engineer

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1 Level A - Independent Test lab with certified ISO 17025 Quality System
2 TPCL - Test procedures change list



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Applicable Test Procedures from the UCA International Users Group Server Test Procedures version 2.3 with TPCL version 1.7.1:

| Conformance Block | Mandatory | Conditional |
|---------------------------|--|---|
| 1: Basic Exchange | Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4 | AssN6 Srv6, Srv7, Srv8, Srv9, Srv10, SrvN1e, SrvN1f, SrvN3 |
| 2: Data Sets | Dset1, Dset10a, DsetN1ae | |
| 2+: Data Set Definition | Dset2, Dset3, Dset4, Dset5, Dset6, Dset7, Dset8, Dset9 DsetN1cd, DsetN2, DsetN3, DsetN4, DsetN5, DsetN6, DsetN7, DsetN8, DsetN9, DsetN10, DsetN11, DsetN12, DsetN13, DsetN14, DsetN15 | |
| 5: Unbuffered Reporting | Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12 RpN1, RpN2, RpN3, RpN4 | Rp5, Rp6, Rp8, Rp9, RpN5, |
| 6: Buffered Reporting | Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5 | Br5, Br6, Br10, Br11 |
| 9a: GOOSE publish | Gop2, Gop3, Gop4, Gop7, Gop9, Gop10a | Gop1, Gop10b |
| 9b: GOOSE subscribe | Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6 | Gos1b, Gos4 |
| 12a: Direct control | CtlN3, CtlN8 DOns1 | DOns3 |
| 12b: SBO control | Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOs2 | |
| 12d: Enhanced SBO control | Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3 | CtlN6 |
| 13: Time sync | Tm1, Tm2 | Tm3, TmN1 |
| 14: File transfer | Ft1, Ft2ab, Ft4, FtN1ab | |

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