

IEC 61850 Certificate Level A¹

No. 37C001-20180108

Issued to:

ZPrAE Sp. z o.o.
ul. Konopnickiej 13
PL-41-100 Siemianowice Śląskie

For the server product: TSL-9r
Version: TSL-9r MGB-9F.1
Firmware Version: 6.2-4936

Issued by: AMA-CERT-Lab GMBH

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

Conformance test has been performed according to **IEC 61850-10 Edition 2**, of the **UCA International Users Group Edition 2 Server Test Procedures version 1.0** with **TPCL² version 1.2.3** with product's protocol, model and technical issue implementation conformance statements: "PICS, version: v4.0", "MICS, Version: v4.0" and "TICS, version: v4.1" and the product's extra information for testing: "PIXIT, version: v4.1".

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 (21/26)	9a	GOOSE Publish (11/13)
2	Data Sets (4/7)	9b	GOOSE Subscribe (12/14)
2+	Data Set Definition (24/24)	12a	Direct Control (5/18)
5	Unbuffered Reporting (20/21)	13	Time Synchronization (3/7)
6	Buffered Reporting (27/30)	14	File Transfer (5/8)

This certificate includes a summary of the test results as carried out at **AMA-CERT-Lab GmbH** in Germany with the **AMA-61850-TestKiT version 2.2.4** with test suite **Ed2** and skunkworks 2-9. This document has been issued for information purposes only, and the original paper copy of the **AMA-CERT-Lab report No. 37C001-20180108** will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to **AMA-CERT-Lab** by company **ZPrAE Sp. Z o.o.** The manufacturer's production process has not been assessed. This certificate does not imply that **AMA-CERT-Lab** has certified or approved any product other than the specimen tested.

Pforzheim, May 15th 2018

AMA-CERT-Lab GmbH


Irmhild Maschka
CEO


Ivan Enchev
Senior Systems Engineer

¹ Level A - Independent Test lab with certified ISO 9001 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 1.2.3:

Conformance Block	Mandatory	Conditional
1: Basic Exchange	sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4	sAssN6, sSrv8, sSrv10, sSrv12, sSrvN1e, sSrvN1f, sSrvN3
2: Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
2+: Data Set Definition	sDs2, sDs3, sDs4, sDs5, sDs6, sDs7, sDs8, sDs9, sDs11, sDs13, sDs14, sDsN1cd sDsN2, sDsN3, sDsN4, sDsN5, sDsN6, sDsN7, sDsN8, sDsN9, sDsN10	sDs12, sDsN11, sDsN12
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, 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
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11	sGop1, sGop6, sGop7, sGopN1, sGopN2
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	
12a Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl15
13 Time sync	sTm1, sTm2, sTmN1	
14 File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	

gma