



IEC 61850 Certificate Level A¹

No. 30107033-Consulting 10-1032

Issued to:
PROTECTA ELECTRONICS Ltd.
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For the product:
IED-EP+ series
Version 2.8



The product has not shown to be non-conforming to:
IEC 61850-6, 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 with product's protocol, model and technical issue implementation conformance statements: "EUROPROT+ IEC61850-10 Protocol Implementation Conformance Statement", "EUROPROT+ IEC61850-10 Model Implementation Conformance Statement", "EUROPROT+ IEC61850-10 Tissues Conformance Statement" and product's extra information for testing: "EUROPROT+ IEC61850-10 Protocol Implementation Extra Information".

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 as defined in the UCA International Users Group Device Test procedures v2.2):

1	Basic Exchange (16/24)	9a	GOOSE Publish (7/12)
2	Data Sets (3/6)	9b	GOOSE Subscribe (9/10)
4	Setting Group Selection (3/3)	12a	Direct Control (8/11)
5	Unbuffered Reporting (14/18)	12c	Enhanced Direct Control (8/13)
6	Buffered Reporting (18/20)	12d	Enhanced SBO Control (13/19)
		13	Time Synchronization (4/4)

This Certificate includes a summary of the test results as carried out at KEMA in the Netherlands with UniCAsim 61850 version 3.20.00 with test suite 3.20.00 and UniCA 61850 analyzer 4.21.03. The test is based on the UCA International Users Group Device Test Procedures version 2.2. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 30107033-Consulting 10-1031 will prevail.

The test has been carried out on one single specimen of the products as referred above and submitted to KEMA by PROTECTA ELECTRONICS Ltd.. The manufacturer's production process has not been assessed. This Certificate does not imply that KEMA has certified or approved any product other than the specimen tested.

Arnhem, May 14, 2010

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Manager Intelligent Networks and Communication

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1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 Quality System

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Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv8
2: Data Sets	Dset1, Dset10a, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1a	Sg3
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10 RpN1, RpN2, RpN3, RpN4	Rp5, Rp8, Rp9, Rp11, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br10, Br11, Br13, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, Gop5, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a: Direct control	CtlN3, CtlN8 DOns1, DOns3	Ctl2, Ctl7, CtlN10, CtlN11
12c: Enhanced Direct Control	CtlN3, CtlN8 DOes2, DOes5	Ctl2, Ctl7, CtlN10, CtlN11
12d: Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl2, Ctl7, CtlN10, CtlN11
13: Time sync	Tm1, Tm2, TmN1	TmN2

The conformance test was executed with following IED-EP+ variants using the same software version and hardware revision.

DTRV, DTVA and DTIVA