IEC 61850 Certificate Level A[1]

No. 30920478-Consuling 09-2103

Issued to:
VITZROTECH Co.,LTD
Gwang Jin-Gu
Seoul, 143-837
Korea

For the product:
ViPAM5000
Multifunction Protection
Firmware version: 1.0

Issued by: KEMA

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: "Protocol Implementation Conformance Statement for the IEC 61850 interface in <ViPAM5000-Multifunction Protection>", "MODEL IMPLEMENTATION CONFORMANCE STATEMENT FOR <VIPAM5000 – Multifunction Protection>", "IEC 61850 TISSUES CONFORMANCE STATEMENT (TICS) FOR <VIPAM5000 – Multifunction Protection>" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in <ViPAM5000 – Multifunction Protection>".

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 (20/24)	9a	GOOSE Publish (7/12)
2+	Data Set Definition (26/29)	9b	GOOSE Subscribe (9/10)
5	Unbuffered Reporting (15/18)	12a	Direct Control (7/11)
6	Buffered Reporting (17/20)	12d	Enhanced SBO Control (11/19)
		13	Time Synchronization (3/4)
		14	File Transfer (4/7)

This Certificate includes a summary of the test results as carried out at KEMA in the Netherlands with UniCAsim 61850 version 3.19.02 with test suite version 3.19.00 and UniCA 61850 analyzer 4.19.00. 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. 30920478 Consulting 09-2102 will prevail.

The test has been carried out on one single specimen of the products as referred above and submitted to KEMA by VITZROTECH. 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, October 7, 2009

W. Strabbing
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T. Xu
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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, Srv7, Srv8, SrvN1e, SrvN2, SrvN3
2+: Data Set Definition	Dset1, Dset2, Dset3, Dset4, Dset5, Dset6, Dset7, Dset8, Dset9, Dset10a, DsetN1ae DsetN1cd, DsetN2, DsetN3, DsetN4, DsetN5, (DsetN6), (DsetN7), DsetN8, DsetN9, DsetN10, DsetN11, DsetN12, DsetN13, DsetN14, DsetN15	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10 RpN1, RpN2, RpN3, RpN4	Rp5, Rp6, Rp8, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br6, Br10, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, Gop6, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a: Direct control	CltN3, CtlN8 DOns1, DOns3	Ctl2, Ctl7, CtlN11
12d: Enhanced SBO control	Ctl3, CltN1, CltN2, CltN3, CltN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl7, CtlN11
13: Time sync	Tm1, Tm2, TmN1	
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	

Note: The results of test cases DsetN6 and DsetN7 are inconclusive since the maximum number of data elements in one dataset depends on the amount of available free memory of ViPAM5000 (Recommended number is 100)