IEC 61850 Certificate Level A[1]

Ref. No: 2014TS02596

Issued to:

Korea Electric Power Corporation
#512, Yeongdong-daero, Gangnam-gu, Seoul
Republic of Korea, 135-791

For the server product:

OWFarm WTE
Off-Shore Wind Farm Simulator
Software version 1.0
Samsung DM-Z650
Window 7 Ultimate K

Issued by:

Korea Electrotechnology Research Institute

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, UCA International Users Group Device Test Procedures version 2.3 with TPCL[2] 1.7, product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in OWFarm WTE v1.0", "Model Implementation Conformance Statement for the IEC 61850 interface in OWFarm WTE v1.0", "TISSUES Implementation Conformance Statement for the IEC 61850 interface in OWFarm WTE v1.0" and product's extra information for testing "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in OWFarm WTE v1.0".

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

1	Basic Exchange (22/24)		12a	Direct Control (7/12)
2	Data Sets (3/6)		12b	SBO Control (9/14)
2+	Data Set Definition (23/23)		12c	Enhanced Direct Control (7/13)
5	Unbuffered Reporting (17/19)		12d	Enhanced SBO Control (12/19)
6	Buffered Reporting (19/21)		13	Time Synchronization (3/5)

This Certificate includes a summary of the test results as carried out at KERI in Republic of Korea with UniCA 61850 Client simulator version 4.28.04 with test suite version 3.29.02 and UniCA 61850 analyzer version 5.28.03. This document has been issued for information purposes only, and the original paper copy of the KERI report: 2014TS02596 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KERI by Korea Electric Power Corporation. The manufacturer's production process has not been assessed. This Certificate does not imply that KERI has approved any product other than the specimen tested.

Republic of Korea, September 29, 2014

park chamock

N. O. Park
Executive Director
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[1] Level A – Independent Tester with certified ISO 17025 Quality System
[2] TPCL - Test procedures change list

Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.3 with TPCL 1.7

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv7, Srv8, Srv9, SrvN1e, SrvN1f, SrvN2, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
2+: Data Sets 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, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br6, Br10, Br11, BrN6
12a: Direct control	CltN3, CtlN8 DOns1	Ctl2, Ctl7, CtlN11 DOns3
12b: SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOns2	Ctl2, Ctl7, CtlN11
12c: Enhanced Direct control	CltN3, CtlN8 DOes2, DOes5	Ctl2, Ctl7, CtlN11
12d: Enhanced SBO control	Ctl3, CltN1, CltN2, CltN3, CltN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl2, Ctl7, CtlN11
13: Time sync	Tm1, Tm2, TmN1	