IEC 61850 Certificate Level A[1]

Issued to:

LK Eleven Co., Ltd
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124, Sagimakgol-ro, Jungwon-gu,
Seongnam-Si, Gyeonggi-do, 13207,
Republic of Korea

Issued by: **Korea Testing Laboratory**

For the server product:

SA Information Monitoring & Diagnosis
Device ; SA-IMD
LK_SAIMD
Software Version 1.0
HW : LK_SAIMD
OS : Windows Server 2016
S/N : LKSAIMD-2010001

The server product has not been 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 Device Test Procedures version 3.3, the product's protocol, model and technical issue implementation conformance statements: "LK11_LK_SAIMD_PICS_v.1", "LK11_LK_SAIMD_MICS_v.1", "LK11_LK_SAIMD_TICS_v.1" and the extra information for testing: "LK11_LK_SAIMD_PIXIT_v.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 cases):

1	Basic Exchange (22/25)	12a	Direct Control (3/11)
2	Data Sets (3/6)	12c	Enhanced Direct Control (4/13)
2+	Data Set Definition(24/24)	12d	Enhanced SBO Control (10/19)
5	Unbuffered Reporting (18/18)	13	Time Synchronization (4/5)
6	Buffered Reporting (25/27)	14	File Transfer (4/7)

This Certificate includes a summary of the test results as carried out at KTL in Republic of Korea with IEC 61850 KTL Testing Tool with test suite IEC 61850 Server Conformance Test V.1.0 and IEC 61850 KTL Trace Manager V.1.0. This document has been issued for information purposes only, and the original paper copy of the KTL report: No. TR- 20-075828-03-5 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KTL by LK Eleven Co., Ltd. The manufacturer's production process has not been assessed. This certificate does not imply that KTL has approved any product other than the specimen tested.

Seoul, Sep. 15, 2021

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1 Level A - Independent Test lab with accredited ISO/IEC 17025 Quality System

Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 3.3.

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5, Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, AssN6, Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN2, 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	DsetN15a, DsetN15b
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp9, RpN1, RpN2, RpN3, RpN4, RpN8	Rp5, Rp6, Rp7, Rp8, Rp10, Rp11, Rp12, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br9, Br20, Br21, Br22, Br25, Br26, Br27, Br28, BrN1, BrN2, BrN3, BrN4, BrN5, BrN8	Br5, Br6, Br7, Br8, Br10, Br11, Br12
12a: Direct control	CtlN3a, DOns1	DOns3
12c: Enhanced Direct control	CtlN3c, DOes2, DOes5	CtlN6c
12d: Enhanced SBO control	CtlN1d, CtlN2d, CtlN3d, CtlN4d, CtlN9d, SBOes1, SBOes2, SBOes3	Ctl3d, CtlN6d
13: Time sync	Tm1, Tm2	TmN1, TmN2
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	