



IEC 61850 Certificate Level A¹

Ref. No: 2014TS03252

Issued to:

Hyundai Heavy Industries Co., Ltd.
1000, Bangeojinsunhwan-doro, Dong-gu,
Ulsan, 682-792
Republic of Korea

For the server product:

HiPDS-T
Preventive Diagnostic System for
Transformer
HNIC Rev 2.00

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 TPCL² 1.7, product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in HiPDS-T, Rev 1.00", "Model Implementation Conformance Statement for the IEC 61850 interface in HiPDS-T, Rev 1.00", "TISSUES Implementation Conformance Statement for the IEC 61850 interface in HiPDS-T, Rev 1.00" and product's extra information for testing "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in HiPDS-T, Rev 1.00".

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)	9a	GOOSE Publish (9/13)
2	Data Sets (3/6)	9b	GOOSE Subscribe (10/11)
2+	Data Set Definition (23/23)	12a	Direct Control (7/12)
5	Unbuffered Reporting (16/19)	12b	SBO Control (9/14)
6	Buffered Reporting (18/21)	12c	Enhanced Direct Control (7/13)
		12d	Enhanced SBO Control (12/19)
		13	Time Synchronization (4/5)
		14	File Transfer (4/7)

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 3.29.03 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: 2014TS03252 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KERI by Hyundai Heavy Industries Co., Ltd. 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, December 24, 2014

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Executive Director
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J. I. Jeong
Technical Manager

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, Srv10, 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
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br6, Br10, Br11
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop9, Gop10a	Gop1, Gop5, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtlN3, CtlN8 DOs1	Ctl2, Ctl7, CtlN11 DOs3
12b: SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOs2	Ctl2, Ctl7, CtlN11
12c: Enhanced Direct control	CtlN3, CtlN8 DOes2, DOes5	Ctl2, Ctl7, CtlN11
12d: Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl2, Ctl7, CtlN11
13: Time sync	Tm1, Tm2, TmN1	TmN2
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	