



# IEC 61850 Certificate Level A<sup>1</sup>

No. 2019PUCA001

Issued to:

**NANJING LITONGDA ELECTRICAL TECHNOLOGY CO., LTD.**

Room 517~520, Building E, 5 Yongzhi Road, Qinhuai District, Nanjing, Jiangsu Province, China

For the product:

HTEC-10 Intelligent Transformer Information Integration Device

Software Version: V1.00

Issued by:



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 3.2, the product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement (PICS) for HTEC-10 Intelligent Transformer Information Integration Device", "Modeling Implementation Conformance Statement (MICS) for HTEC-10 Intelligent Transformer Information Integration Device", "IEC 61850 Tissues Conformance Statement (TICS) for HTEC-10 Intelligent Transformer Information Integration Device", and the extra information for testing: "Protocol implementation extra information (PIXIT) of the IEC 61850 communication interface in HTEC-10 Intelligent Transformer Information Integration Device".

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 (22/24)	9a GOOSE Publish (6/12)
2 Data Sets (3/6)	9b GOOSE Subscribe (10/11)
3 Substitution(4/4)	12a Direct control (3/11)
4 Setting Group Selection (3/3)	12d Enhanced SBO Control (10/19)
4+ Setting Group Definition (7/7)	13 Time sync (4/5)
5 Unbuffered Reporting (17/18)	14 File transfer (4/7)
6 Buffered Reporting (24/27)	

This Certificate includes a summary of the test results as carried out at the KETOP Lab's offices in Xuchang, China with UniCASim 61850 Client Version 4.29.03 with test suite Version 3.31.00, UnicASim 61850 GOOSE Ver2.27.01 with test suite Version 2.27.04 (TPCL1p6) and Ed2, the UniCA 61850 analyzer Version 5.31.00. This document has been issued for information purposes only, and the original paper copy of the KETOP Lab report: No. JW190110 will prevail.

The test have been carried out on one single specimen of the product as referred above and submitted to KETOP Lab by NANJING LITONGDA ELECTRICAL TECHNOLOGY CO., LTD. The manufacturer's production process has not been assessed. This certificate does not imply that KETOP Lab has approved any product other than the specimen tested.

Xuchang, Jau 30<sup>th</sup>, 2019

He Chun  
Director of PRTC Department

Liu Desen  
Test Engineer

<sup>1</sup> Level A - Independent Test lab with ISO 17025 Quality System

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**China KETOP Lab (Xuchang KETOP Testing Research Institute Co.,Ltd )**  
**National Center For Quality Supervision & Testing of Relay Protection and Automation Equipment**

Intersection between Weiwu Avenue and Shangde Road, XuChang, Henan, P.R.China, P.C.461000  
T +86 374 3212841 F +86 374 3212775 www.ketop.cn



Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 3.2

<b>Conformance Block</b>	<b>Mandatory</b>	<b>Conditional</b>
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2 AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, Srv6, Srv7, Srv8, Srv9, Srv10, SrvN1e, SrvN1f, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
3: Substitution	Sub1,Sub2,Sub3,SubN1	
4: Setting Group Selection	Sg1, Sg3, SgN1a	
4+: Setting Group Definition	Sg2, Sg4 SgN1b, SgN2, SgN3, SgN4, SgN5	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp9 RpN1, RpN2, RpN3, RpN4, RpN8	Rp5, Rp6,Rp7,Rp8, 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, Br11, Br12
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop9, Gop10a	Gop7
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtlN3, DOns1	DOns3
12d: Enhanced SBO control	CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl3,CtlN6
13: Time sync	Tm1, Tm2	Tm3,TmN1
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	

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