IEC 61850 Certificate Level A[1]

No. 2016PUCA0040

Issued to:

BAODING UNT ELECTRIC CO., LTD.
No.2777, Xiangyang North Street, Baoding, Hebei,
P.R.China

For the product:

UNT-EAP Main Unit of Arc Protection
Software Version: V1.00

Issued by: **KETOP 开普**

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 Device Test Procedures version 3.03, the product's protocol, model and technical issue implementation conformance statements: " Protocol Implementation Conformance Statement (PICS) for UNT-EAP Main Unit of Arc Protection", " Modeling Implementation Conformance Statement(MICS) for UNT-EAP Main Unit of Arc Protection" , " IEC 61850 Tissues Conformance Statement (TICS) for UNT-EAP Main Unit of Arc Protection" and the extra information for testing :" Protocol implementation extra information (PIXIT) of the IEC 61850 communication interface in UNT-EAP Main Unit of Arc 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):

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

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 and 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. JW162453 will prevail.

The test have been carried out on one single specimen of the product as referred above and submitted to KETOP Lab by BAODING UNT ELECTRIC 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, Dec 05th, 2016

He Chun
Director of PRTC Department

Yin Qingwei
Test Engineer

---

[1] Level A - Independent Test lab with ISO 17025 Quality System

China KETOP Lab (Xuchang KETOP Testing Technology CO.LTD)
National Center For Quality Supervision & Testing of Relay Protection and Automation Equipment
1706#, Xuji Avenue, 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 3.03

Conformance Block	Mandatory	Conditional
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, SgN1a, Sg3	
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
12a: Direct control	CtlN3, DOns1	DOns3
12d: Enhanced SBO control	CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl3, CtlN6
13: Time Synchronization	Tm1, Tm2	TmN1
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	