IEC 61850 Certificate Level B[1]

Issued to:

Shanghai Sunrise Power Tech (Group) Co., Ltd.
1881, Laiyin Road, SongJiang Hi-tech Park,
Shanghai, China

For the product:

DEP-500N Protection and Control Device
Software Version 2.0

Issued by: **KETOP开普**

The product has not shown to be non-conforming to:

IEC 61850-7-1, 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 with product's protocol, model and TISSUE implementation conformance statements: "DEP-500N Protection and Control Device PICS", "DEP-500N Protection and Control Device MICS", "DEP-500N Protection and Control Device TICS", and extra information "DEP-500N Protection and Control Device PIXIT" for testing.

The following IEC 61850 conformance blocks are tested with a positive result (number of relevant and executed test cases / total number of test cases as defined in the UCA International Users Group Device Test Procedures):

1	Basic Exchange (21/24)		12a	Direct control（5/11）
2	Data Sets（4/6）		12c	Enhanced Direct Control（5/13）
2+	Data Set Definition（23/23）		12d	Enhanced SBO control（10/19）
4	Setting Group Selection (3/3)		13	Time sync（3/5）
4+	Setting Group Definition（6/6）		14	File transfer（6/7）
5	Unbuffered Reports (14/18)			
6	Buffered Reporting（16/20）			

KETOP Lab grants this Certificate on account of tests performed at the KETOP Lab's offices in Xuchang, China, with UniCAsim 61850 version 3.16.00 test system with test suite 3.16.03 simulating an IEC 61850 client and the UniCA 61850 analyzer Version 4.17.01. The tests are based on the UCA International Users Group Device Test Procedure Version 2.2. This certificate has been issued for information purposes only and the original copy of the KETOP Lab report: No. JW090010 will prevail.

The tests have been carried out on one single specimen of the above-mentioned products, submitted by Shanghai Sunrise. The certificate does not include an assessment of the manufacturer's production process. Conformity of his production process or any other product than the specimen tested by KETOP Lab is not the responsibility of KETOP Lab.

Xuchang, December 18, 2009

He Chun
General Engineer KETOP Lab

Zhang Ran
Test Engineer

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[1] Level B – Tester with ISO 9000 or ISO 17025 Quality System

Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv9, Srv10, Srv8, SrvN1f Srv6, SrvN1e, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	Dset10b
2+: Data Set Definition (SCL-DynDataSet)	Dset2, Dset3, Dset4, Dset5, Dset6, Dset7, Dset8, Dset9 DsetN1cd, DsetN2, DsetN3, DsetN4, DsetN5, DsetN6, DsetN7, DsetN8, DsetN9, DsetN10, DsetN11, DsetN12, DsetN13, DsetN14, DsetN15	
4: Setting Group Selection (SCL-ConfSG)	Sg1, SgN1a	Sg3
4+: Setting Group Definition (SCL-SGEdit)	Sg2, Sg4 SgN1b, SgN2, SgN3, SgN4	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10 RpN1, RpN2, RpN3, RpN4	Rp6, RpN5 Rp8, Rp9
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12 BrN1, BrN2, BrN3, BrN4, BrN5	Br6, Br10 Br11
12a Direct control	CtlN3, CtlN8 DOns1, DOns3	CtlN11
12c Enhanced Direct Control	CtlN3, CtlN8 DOes2, DOes5	CtlN11
12d Enhanced SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	CtlN11
13 Time sync	Tm1，Tm2，TmN1	
14 File transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c