



IEC 61850 Certificate Level A¹

No. 2016PUCA0039

Issued to:

SIFANG TBEA Intelligent Electric Co., Ltd.NO.32
Kaifa Blvd, ETDZ, Shenyang City, Liaoning Province,
China

For the product:

TBRT750D-M Transformer Differential Protection
Device
Software Version: V2.0.8598

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 TBRT750D-M Transformer Differential Protection Device", " Modeling Implementation Conformance Statement(MICS) for TBRT750D-M Transformer Differential Protection Device", " IEC 61850 Tissues Conformance Statement (TICS) for TBRT750D-M Transformer Differential Protection Device" and the extra information for testing : " Protocol implementation extra information (PIXIT) of the IEC 61850 communication interface in TBRT750D-M Transformer Differential Protection 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)	12a Direct control (3/11)
2 Data Sets (3/6)	12d Enhanced SBO control(11/19)
4 Setting Group Selection (3/3)	13 Time sync (3/5)
4+ Setting Group Definition (7/7)	14 File transfer (6/7)
6 Buffered Reporting (22/27)	

This Certificate includes a summary of the test results as carried out at Xuchang KETOP Testing Technology Co., Ltd 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. JW161583 will prevail.

The test have been carried out on one single specimen of the product as referred above and submitted to KETOP Lab by SIFANG TBEA Intelligent 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, Sep 5th, 2016

He Chun
Director of PRTC Department

Yin Qingwei
Test Engineer

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

This certificate is issued in accordance with the laboratory accreditation requirements of the UCA International Users Group. This certificate shall only be reproduced in full and with the express permission of KETOP lab.

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	
4: Setting Group Selection	Sg1, SgN1a	Sg3
4+: Setting Group Definition	Sg2, Sg4 SgN1b, SgN2, SgN3, SgN4, SgN5	
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br9, Br20, Br21, Br22, Br25, Br26, Br27, Br28 BrN1, BrN2, BrN3, BrN4, BrN5, BrN8	Br5, Br8, Br11, Br12
12a: Direct control	CtlN3, DOns1	DOns3
12d: Enhanced SBO control	CtlN1, CtlN2, CtlN3, CtlN4, CtlN9 SBOes1, SBOes2, SBOes3	Ctl3, CtlN6, CtlN11
13: Time sync	Tm1, Tm2	TmN1
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c

This certificate is issued in accordance with the laboratory accreditation requirements of the UCA International Users Group. This certificate shall only be reproduced in full and with the express permission of KETOP lab.

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