



IEC 61850 Certificate Level A¹

No. 2019PUCA004

Issued to:

QINGDAO HARDHITTER ELECTRIC. CO.,LTD.
No.183 zhuzhou road, laoshan district, Qingdao,
Shandong,China

For the product:

PSY-M Integrated Power System Monitoring Software
Software Version: V2.0

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 Server Device Test Procedures version 3.2, the product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement (PICS) for PSY-M Integrated Power System Monitoring Software", "Modeling Implementation Conformance Statement(MICS) for PSY-M Integrated Power System Monitoring Software", "IEC 61850 Tissues Conformance Statement (TICS) for PSY-M Integrated Power System Monitoring Software", and the extra information for testing: "Protocol implementation extra information (PIXIT) of the IEC 61850 communication interface in PSY-M Integrated Power System Monitoring Software".

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 (10/19)
5 Unbuffered Reporting (17/18)	13 Time sync (3/5)
6 Buffered Reporting (24/27)	14 File transfer (6/7)

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 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. JW190761 will prevail.

The test have been carried out on one single specimen of the product as referred above and submitted to KETOP Lab by QINGDAO HARDHITTER 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, Jul 25th, 2019

He Chun
Director of PRTC Department

Liu Desen
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 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

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	
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 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.