

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

Issued to:  
YOUHO Electric Ind CO., Ltd.  
39-42, 1253 BEON-GIL,  
GWONYUL-RO, BAEKSEOK-EUP,  
YANGJU-SI, GYEONGGI-DO,  
Republic of Korea

For the server product:  
SA ICD (Substation Automation Information  
Connecting Device)  
YH-HSA-ICD  
Software Version 1.0  
HW : ADVANTECH ECU-4784  
OS : Windows Server 2019  
S/N : YH-HSA-ICD-24001

Issued by: **Korea Testing Laboratory**

**The server product has not been shown to be non-conforming to:  
IEC 61850 Edition 2 Parts 6, 7-1, 7-2, 7-3, 7-4 and 8-1  
Communication networks and systems for power utility automation**

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Server Test Procedures version 2.0.6 with product's protocol, model and technical issue implementation conformance statements: "[GW]YOUHO\_YH-HSA-ICD\_PICS\_v.1.0", "[GW]YOUHO\_YH-HSA-ICD\_MICS\_v.1.0", "[GW]YOUHO\_YH-HSA-ICD\_TICS\_v.1.0" and the extra information for testing: "[GW]YOUHO\_YH-HSA-ICD\_PIXIT\_v.1.0".

The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test):

|    |                              |     |                              |
|----|------------------------------|-----|------------------------------|
| 1  | Basic Exchange (23/26)       | 12a | Direct Control (7/19)        |
| 2  | Data Sets (4/7)              | 12d | Enhanced SBO Control (13/29) |
| 2+ | Data Set Definition (24/24)  | 13  | Time Sync (4/7)              |
| 5  | Unbuffered Reporting (22/23) | 14  | File Transfer (7/8)          |
| 6  | Buffered Reporting (32/33)   | 15  | Service Tracking (4/17)      |

This Certificate includes a summary of the test results as carried out at Korea Testing Laboratory in Republic of Korea with IEC 61850 Ed2 KTL Testing Tool 1.0 with test suite IEC 61850 Ed2 Server Conformance Test V.1.0 and IEC 61850 Ed2 KTL Trace Manager V.1.0. This document has been issued for information purposes only, and the original paper copy of the KTL report: No. TR-24-001371-01-2 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KTL by YOUHO Electric Ind CO, Ltd. The manufacturer's production process has not been assessed. This certificate does not imply that KTL has certified or approved any product other than the specimen tested.

Seoul, Apr. 08, 2024

*A. Han*

Ah Han  
Principal Engineer  
IT Convergence Technology Center

*Kim*

Dongmin Kim  
Engineer  
IT Convergence Technology Center

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

Applicable Test Procedures from the UCA International Users Group Edition 2 Server Device Test Procedures version 2.0.6

| Conformance Block         | Mandatory  | Conditional   |
|---------------------------|--|---|
| 1: Basic Exchange         | sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcdef, sSrvN4                         | sAssN6, sSrv6, sSrv9, sSrv10, sSrvN1e, sSrvN2, sSrvN3             |
| 2: Data Sets              | sDs1, sDs10a, sDsN1ae  | sDs15   |
| 2+: Data Set Definition   | sDs2, sDs3, sDs4, sDs5, sDs6, sDs7, sDs8, sDs9, sDs13, sDs14, sDsN1cd, sDsN2, sDsN3, sDsN4, sDsN5, sDsN6, sDsN7, sDsN8, sDsN9, sDsN10              | sDs11, sDs12, sDsN11, sDsN12                                      |
| 5: Unbuffered Reporting   | sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8  | sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, sRp13, sRp15, sRpN5        |
| 6: Buffered Reporting     | sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8 | sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, sBr13, sBr15, sBr23, sBr24 |
| 12a: Direct Control       | sCtl5a, sCtl10a, sDOs1, sDOs2  | sCtl2a, sCtl13a, sCtl16a  |
| 12d: Enhanced SBO Control | sCtl5d, sCtl8d, sCtl9d, sCtl10d, sCtl11d, sCtl25d, sSBOes1, sSBOes2, sSBOes6, sSBOes8  | sCtl2d, sCtl6d, sCtl16d   |
| 13: Time Sync             | sTm1, sTm2, sTmN1  | sTmN2   |
| 14: File Transfer         | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab  | sFt2c, sFtN1c   |
| 15: Service Tracking      |  | sTrk1, sTrk2, sTrk8, sTrk9  |