

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

**Issued to:**

Higeco Srl  
HW R&D  
Viale Europa 71  
32100 Belluno  
Italy

**For the server product:**

HSC  
RTU for Industrial Automation and Control Systems  
IEC 61850 version: HSC 110C V5.1  
Hardware version: HSC 110 C  
S/N: HSCIEC61850DNV

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: "Protocol Implementation Conformance Statement for the IEC 61850 interface in Higeco HSC-110-C, V1.0, Date 13/01/2023", "Model Implementation Conformance Statement for the IEC 61850 interface in Higeco HSC-110-C 1.0, V1.0, Date 10/01/2023" and "TISSUES Implementation Conformance Statement for the IEC 61850 Ed2 interface in Higeco HSC-110-C 1.0, V1.0, Date 13/01/2023" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Edition 2 server interface in Higeco HSC-110-C 1.0, V1.0, Date 13/01/2023".

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 (22/26)	12a Direct Control (4/18)
2 Data Sets (4/7)	12b SBO Control (10/27)
2+ Data Set Definition (24/24)	12c Enhanced Direct Control (4/20)
4 Setting Group Selection (4/4)	12d Enhanced SBO Control (11/28)
5 Unbuffered Reporting (22/23)	13 Time Synchronization (4/7)
6 Buffered Reporting (32/33)	14 File Transfer (8/8)

This certificate includes a summary of the test results as carried out at DNV in Spain with UniGrid SA Simulator 2.0.1 with test suite 20211209 and UniCA 61850 Analyzer 6.40.01. This document has been issued for information purposes only, and the archived DNV verification report No. 10373575-DSO 23-2656 rev 2 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV by Higeco. The manufacturer's production process has not been assessed. This certificate does not imply that DNV has approved any product other than the specimen tested.

Arnhem, January 12, 2023

**Issued by:**

**G. Akse**

Business Development Manager  
Interoperability of Smart Power Systems



**R. Schimmel**

Verification Manager

<sup>1</sup> Level A - Independent test lab with certified ISO 9001 Quality System

UCA International Users Group P.O. Box 315, Shell Knob, MO 65747 USA

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Applicable Test Procedures from the UCA International Users Group Edition 2 Server 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, sSrvN1abcd, sSrvN4	sAssN6, sSrv6, sSrv9, sSrv10, sSrvN1e, 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
4: Setting Group Selection	sSg1, sSg3, sSgN1	sSg11
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	sCtl5, sCtl10, sDOns1, sDOns2	
12b: SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl6
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	
12d: Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl6
13: Time sync	sTm1, sTm2, sTmN1	sTmN2
14: File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt2c, sFt3, sFtN1c