UCA International Users Group

DNV

IEC 61850 Certificate Level A[1]

Issued to:

WAGO GmbH & Co. KG
Hansastraße 27
32423 Minden
Germany

For the server product:

WAGO 750-8212/0040-0001
Remote Terminal Unit
Software version: 1.4.11.3
S/N: 37SUN31564010260494977+0000000000005630

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 WAGO 750-8212/0040-0001, Dated 12 Feb 2024", "Model Implementation Conformance Statement for the WAGO IEC 61850 interface in the 750-8212/025-001, Dated 2024-02-12" and "TISSUES Implementation Conformance Statement for the IEC 61850 Edition 2 server interface in 750-8212/040-001, Dated 2024-02-12" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 Edition 2 server interface in 750-8212/040-001, Dated 2024-02-12".

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 (25/26)		9a	GOOSE Publish (10/13)
2	Data Sets (4/7)		9b	GOOSE Subscribe (19/21)
2+	Data Set Definition (22/24)		12a	Direct Control (7/18)
5	Unbuffered Reporting (20/23)		12b	SBO Control (14/27)
6	Buffered Reporting (30/33)		12c	Enhanced Direct Control (8/20)
			12d	Enhanced SBO Control (14/28)
			13	Time Synchronization (4/7)

This certificate includes a summary of the test results as carried out at DNV in The Netherlands with UniGrid SA Simulator 2.2 with test suite 20240208 and UniCA 61850 Analyzer 6.45. This document has been issued for information purposes only, and the archived DNV verification report No. 10458416-DSO 24-4053 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 WAGO GmbH & Co. KG. 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, February 16, 2024

G. Akse
Business Development Manager
Interoperability of Power Systems

Issued by:

DNV

R. Schimmel
Verification Manager

[1] Level A - Independent test lab with certified ISO 9001 Quality System

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

IEC 61850 Certificate Level A

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, sSrvN1abcdf, sSrvN4	sAssN6, sSrv6, sSrv9, sSrv10, sSrv11, sSrv12, 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
5: Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	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	sBr8, sBr10, sBr11, sBr12, sBr13, sBr15, sBr23, sBr24
9a: GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12	sGop1, sGop6, sGopN1
9b: GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGos23, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos13
12a: Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl2, sCtl3, sCtl15
12b: SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl2, sCtl4, sCtl6, sCtl15, sCtl27
12c: Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl2, sCtl13, sCtl14, sCtl15
12d: Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl2, sCtl4, sCtl6, sCtl15
13: Time sync	sTm1, sTm2, sTmN1	sTm5