

IEC 61850 Certificate Level A¹

Issued to:

Controles S.A.
Av. Rivera 3314
CP 11300 Montevideo
Uruguay

For the client system:

Mirage Servidor IEC 61850
SCADA/HMI acquisition module
Software version: 2.12.0.0
Hardware version: HP 240 G7 Notebook PC
S/N: SCG0465N4V

The client system 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 in substations

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.2 with client system's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 client interface in Mirage Servidor IEC 61850. V1.4; May 10, 2022.", "Model Implementation Conformance Statement for the IEC 61850 client interface in Mirage Servidor IEC 61850. V1.3; April 22, 2022." and "TISSUES Implementation Conformance Statement for the IEC 61850 Edition 2 client interface in Mirage Servidor IEC 61850. V1.1; April 22, 2022" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 client interface in Mirage Servidor IEC 61850. V1.6; April 22, 2022."

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 (17/24)	12a Direct Control (5/9)
2 Data Sets (6/10)	12b SBO Control (6/11)
5 Unbuffered Reporting (19/24)	12c Enhanced Direct Control (5/9)
6 Buffered Reporting (21/28)	12d Enhanced SBO Control (6/11)
9 GOOSE Control Block (1/2)	13 Time Synchronization (3/4)

This certificate includes a summary of the test results as carried out at DNV in Spain with UniCA 61850 IED Simulator version 6.1.31 and UniCA 61850 Analyzer 6.40.01. This document has been issued for information purposes only, and the archived DNV verification report No. 10271907-DSO 22-2861 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 Controles S.A. 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, April 22, 2022



G. Akse
Business Development Manager
Interoperability of Smart Power Systems

Issued by:




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
Copyright © DNV Netherlands B.V. Arnhem, the Netherlands. All rights reserved. It is prohibited to update or change this certificate in any manner whatsoever, including but not limited to dividing it into parts.

IEC 61850 Certificate Level A

Applicable Test Procedures from the UCA International Users Group Edition 2 Client Conformance Test Procedures version 1.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAssN1, cAssN4, cAssN5, cAssN6	cAssN7 cSrv4, cSrv5, cSrv6, cSrv7, cSrv10, cSrvN1, cSrvN3, cSrvN4, cSrvN5
2: Data Sets		cDs2, cDs3, cDs5, cDs6, cDsN1b, cDsN1c
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRp11, cRp13a, cRp14, cRp15, cRp19, cRpN2, cRpN5, cRpN6	cRp2, cRp6, cRp7, cRp16, cRp18
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr13a, cBr14, cBr15, cBr19, cBr30, cBr31, cBrN2, cBrN5, cBrN6	cBr2, cBr6, cBr7, cBr16, cBr18
9: GOOSE control block		cGcb1
12a: Direct Control	cCtl4, cCtl5, cDOns1, cDOns2	cCtl2
12b: SBO Control	cCtl4, cCtl5, cSBOns1, cSBOns2, cSBOns3	cCtl2
12c: Enhanced Direct Control	cCtl4, cCtl5, cDOes1, cDOes2	cCtl2
12d: Enhanced SBO Control	cCtl4, cCtl5, cSBOes1, cSBOes2, cSBOes3	cCtl2
13: Time sync	cTm1, cTmN1	cTm2