

No. 74108398-OPE/INC 15-2648

Issued to:

Emerson Process Management
Power & Water Solutions
200 Beta Drive
PITTSBURGH, PA 15238
United States of America

For the client system:

Emerson Ovation DCS with ELC communication module
Software version: 3.5.1
Hardware version: Dell Poweredge T320 with Windows Server 2008 SP1 (64 bit)
ELC software version 1.3.0
ELC module s/n: 2891253777

The client system 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 and UCAIug Conformance Test Procedures for Client System with IEC 61850-8-1 interface, revision 1.1 with TPCL² version 1.2 with client system's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in Ovation Control System with ELC", v1, "Model Implementation Conformance Statement (MICS) for the IEC 61850 interface in Ovation Control System with ELC", v1, and "TISSUES Implementation Conformance Statement for the IEC 61850 interface in Ovation Control System with ELC", v1, and product's extra information for testing: "Protocol Implementation extra Information for Testing (PIXIT) for the IEC 61850 interface in Ovation Control System with ELC", v1.

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 (13/22)	12a Direct Control (4/7)
5 Unbuffered Reporting (11/18)	12d Enhanced SBO Control (5/9)
6 Buffered Reporting (14/22)	13 Time Synchronization (1/4)

This certificate includes a summary of the test results as carried out at DNV GL in the Netherlands with UniCA IED Simulator version 3.26.01 and UniCA 61850 Analyzer version 5.29.02 This document has been issued for information purposes only, and the original paper copy of the DNV GL report No. 74108398-OPE/INC 15-2647 will prevail.

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

Arnhem, August 28, 2015



M. Adriaensen
Head of Department
Operational Excellence

Issued by:



DNV KEMA is now DNV GL



R. Schimmel
Verification Manager

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

² TPCL - Test procedures change list

this certificate in any manner whatsoever, including but not limited to dividing it into parts.



UCA
International
Users Group

IEC 61850 Certificate Level A No. 74108398-OPE/INC 15-2648

Applicable Test Procedures from the UCAIug Conformance Test Procedures for Client System with IEC 61850-8-1 interface, revision 1.1 with TPCL version 1.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	cAss1, cAss2, cAss3, cAss4, cAssN1, cAssN4, cAssN5, cAssN6	cSrv5, cSrv6, cSrvN3, cSrvN4, cSrvN5
5: Unbuffered Reporting	cRp3, cRp4, cRp5, cRp8, cRp9, cRp10, cRpN2, cRpN3, cRpN7, cRpN8	cRp7
6: Buffered Reporting	cBr3, cBr4, cBr5, cBr8, cBr9, cBr10, cBr11, cBr12, cBrN2, cBrN3, cBrN7, cBrN8, cBrN9	cBr7
12a: Direct Control	cCtl4, cCtlN1 cDOs1, cDOs2	
12d: Enhanced SBO Control	cCtl4, cCtlN1, cSBOes1, cSBOes2, cSBOes3	
13: Time sync	cTm1	