

No. 74107647-OPE/INC 15-3052

**Issued to:**

MITSUBISHI ELECTRIC EUROPE B.V.  
Mitsubishi-Electric-Platz 1  
40882 Ratingen  
Germany

**For the server product:**

Q24DHCCPU-V "C-RTU" Controller  
Station Logic Sequencer  
Software version: IEC61850 Slave V20589  
S/N: 17031617089003-B

The server product 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, the UCA International Users Group Server Device Test Procedures version 2.3 with TPCL<sup>2</sup> version 1.7.8, the product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in Mitsubishi Electric Q24DHCCPU-V, version 2, dated 23/10/2015", "Mitsubishi Electric Q24DHCCPU-V IEC61850 MICS, Version 2 dated 23/10/2015" and "Mitsubishi Electric Q24DHCCPU-V IEC 61850 TICS, version 2 dated 23/10/2015" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in Mitsubishi Electric Q24DHCCPU-V, dated 23/10/2015".

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 (20/24)	12a Direct Control (3/11)
2 Data Sets (3/6)	12b SBO Control (6/14)
5 Unbuffered Reporting (13/18)	12c Enhanced Direct Control (4/13)
6 Buffered Reporting (15/19)	12d Enhanced SBO Control (9/19)
9a GOOSE Publish (11/13)	13 Time Synchronization (2/5)
9b GOOSE Subscribe (11/11)	14 File Transfer (6/7)

This certificate includes a summary of the test results as carried out at DNV GL in The Netherlands with UniCA 61850 Client Simulator v4.29.03 with test suite v3.29.00 and UniCA 61850 Analyzer 5.29.02. This document has been issued for information purposes only, and the original paper copy of the DNV GL verification report No. 74107647-OPE/INC 15-3051 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by MITSUBISHI ELECTRIC. 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, December 2, 2015



**M. Adriaensen**  
Head of Department  
Operational Excellence

Issued by:



DNV KEMA is now DNV GL



**R. Schimmel**  
Verification Manager

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

<sup>2</sup> TPCL - Test procedures change list



Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 2.3 with TPCL 1.7.8

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN2
2: Data Sets	Dset1, Dset10a, DsetN1ae	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, RpN1, RpN2, RpN3, RpN4	Rp7, Rp8, Rp10, Rp12, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br8, Br9, BrN1, BrN2, BrN3, BrN4, BrN5	Br7, Br10, Br12, Br14
9a: GOOSE Publish	Gop2, Gop3, Gop4, Gop7, Gop9, Gop10a	Gop1, Gop6, Gop10b, GopN1, GopN2
9b: GOOSE Subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b, Gos4
12a: Direct Control	CtIN3, DOns1	DOns3
12b: SBO Control	CtI3, CtIN1, CtIN2, CtIN3, CtIN4, SBOs2	
12c: Enhanced Direct Control	CtIN3, DOes2, DOes5	CtIN8
12d: Enhanced SBO Control	CtIN1, CtIN2, CtIN3, CtIN4, CtIN9, SBOes1, SBOes2, SBOes3	CtI3
13: Time Sync	Tm1, Tm2	
14: File Transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, FtN1c