

No. 74108408-OPE/INC 15-1915

Issued to:

Engineering Centre "Energoservice", LLC
26 Kotlasskaya
163046 Arkhangelsk
Russia

For the server product:

ENIP-2 multifunctional power meter with
four IO modules ENMV-1
ENIP-2 Software version: 2.0.0.6
ENIP-2 Hardware version: 3.3

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 TPCL² version 1.8, the product's protocol, model and technical issue implementation conformance statements: "Protocol Implementation Conformance Statement for the IEC 61850 interface in ENIP-2, dated July 8 2015", "Model Implementation Conformance Statement for the IEC 61850 interface in ENIP-2, dated July 8 2015" and "TISSUES Implementation Conformance Statement for the IEC 61850 interface in ENIP-2, dated July 8" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in ENIP-2, dated July 8 2015".

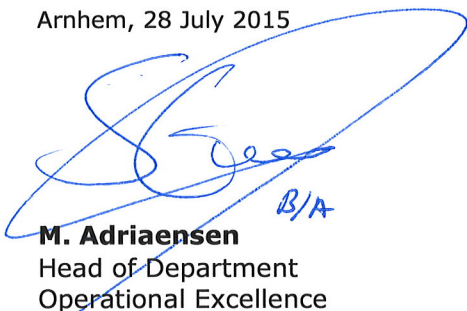
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1 Basic Exchange (16/24)	9a GOOSE Publish (11/12)
2 Data Sets (3/6)	9b GOOSE Subscribe (11/11)
2+ Data Set Definition (23/23)	12a Direct Control (6/12)
5 Unbuffered Reporting (15/19)	12d Enhanced SBO Control (12/19)
6 Buffered Reporting (22/28)	13 Time Synchronization (3/5)

This certificate includes a summary of the test results as carried out at NTC FSK UES in Russia with UniCA 61850 Client Simulator 4.29.03 with test suite 3.29.00 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 report No. 74108408-OPE/INC 15-1916 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by Engineering Centre "Energoservice", LTD. 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, 28 July 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



Applicable Test Procedures from the UCA International Users Group Server Device Test Procedures version 2.3 with TPCL 1.8

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3, Srv8, SrvN1f
2: Data Sets	Dset1, Dset10a, DsetN1ae	
2+: Data Set Definition	Dset2, Dset3, Dset4, Dset5, Dset6, Dset7, Dset8, Dset9 DsetN1cd, DsetN2, DsetN3, DsetN4, DsetN5, DsetN6, DsetN7, DsetN8, DsetN9, DsetN10, DsetN11, DsetN12, DsetN13, DsetN14, DsetN15	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp9, Rp15, RpN1, RpN2, RpN3, RpN4, RpN8	Rp6, Rp7, Rp10, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br9, Br15, Br20, Br21, Br22, Br25, Br26, Br27, Br28, BrN1, BrN2, BrN3, BrN4, BrN5, BrN8	Br6, Br7, Br10
9a: GOOSE Publish	Gop2, Gop3, Gop4, Gop9, Gop10a	Gop1, Gop5, Gop6, Gop7, Gop10b, GopN1
9b: GOOSE Subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b, Gos4
12a: Direct Control	CtlN3, CtlN8, DOns1	Ctl2, CtlN10 DOns3
12d: Enhanced SBO Control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, SBOes1, SBOes2, SBOes3	Ctl2, Ctl7, CtlN10
13: Time Sync	Tm1, Tm2	TmN1