

No. 10012256-OPE/INC 15-2720

Issued to:

"NPP Bresler" LLC
Afanasiev street 13
428000 Cheboksary
Russian Federation

For the server product:

Bresler-0107.511 (Бреслер-0107.511)
Zone-selective protection for 110-220 kV line and
circuit breaker automatic control
Software version: 3
S/N: T511.1

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 Bresler-0107.511, 1 oct 2015", "Model Implementation Conformance Statement for the IEC 61850 interface in Bresler-0107.511, 1 oct 2015" and "Technical Issues Implementation Conformance statement for the IEC 61850 interface in Bresler-0107.511, 1 oct 2015" and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in Bresler-0107.511, 1 oct 2015".

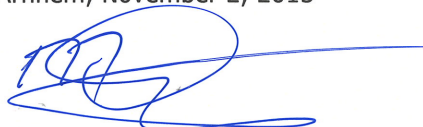
The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test cases):

1 Basic Exchange (21/24)	9a GOOSE Publish (12/12)
2 Data Sets (3/6)	9b GOOSE Subscribe (11/11)
2+ Data Set Definition (23/23)	12a Direct Control (6/12)
4 Setting Group Selection (3/3)	12b SBO Control (9/14)
5 Unbuffered Reporting (19/19)	12c Enhanced Direct Control (6/13)
6 Buffered Reporting (26/28)	12d Enhanced SBO Control (12/19)
	13 Time Synchronization (5/5)
	14 File Transfer (7/7)

This certificate includes a summary of the test results as carried out at NTC FSK UES in Russia with UniCA 61850 Client Simulator 4.29.02 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. 10012256-OPE/INC 15-2719 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to DNV GL by NPP Bresler 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, November 2, 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, Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN2, SrvN3
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	
4: Setting Group Selection	Sg1, SgN1a, Sg3	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp9, Rp15, RpN1, RpN2, RpN3, RpN4, RpN8	Rp5, Rp6, Rp7, Rp8, Rp10, Rp11, Rp12, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br9, Br15, Br20, Br21, Br22, Br25, Br26, Br27, Br28, BrN1, BrN2, BrN3, BrN4, BrN5, BrN8	Br5, Br6, Br7, Br8, Br10, Br11, Br12
9a: GOOSE Publish	Gop2, Gop3, Gop4, Gop9, Gop10a	Gop1, Gop5, Gop6, Gop7, Gop10b, GopN1, GopN2
9b: GOOSE Subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b, Gos4
12a: Direct Control	CtlN3, CtlN8, DOns1	Ctl2, CtlN11, DOns3
12b: SBO Control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOns2	Ctl2, CtlN11, SBOns4
12c: Enhanced Direct Control	CtlN3, CtlN8, DOes2, DOes5	Ctl2, CtlN11
12d: Enhanced SBO Control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, CtlN9, SBOes1, SBOes2, SBOes3	Ctl2, CtlN11, SBOes6
13: Time Sync	Tm1, Tm2	Tm3, TmN1, TmN2
14: File Transfer	Ft1, Ft2ab, Ft4, FtN1ab	Ft2c, Ft3, FtN1c