



4085

IEC 61850 Certificate Level B¹

No. 50745.6660.802

Issued to:
Bitronics, LLC.
261 Brodhead Road
Bethlehem, PA 18017 USA



For the server product:
Bitronics M660
SCADA Measurement IED
Software Version 2.11.0
Hardware Version M3

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 Device Test Procedures version 2.3 with TPCL² version 1.8, the product's protocol, model and technical issue implementation conformance statements: "(PICS) Section 2, Bitronics 60 Series IED IEC61850 Protocol Manual, ML0043", "(MICS) Section 3, Bitronics 60 Series IED IEC61850 Protocol Manual, ML0043", "(TICS) Section 4, Bitronics 60 Series IED IEC61850 Protocol Manual, ML0043" and extra information for testing "(PIXIT) Section 5, Bitronics 60 Series IED IEC61850 Protocol Manual, ML0043".

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


1	Basic Exchange (18/24)	5	Unbuffered Reporting (19/19)
2	Data Sets (3/6)	6	Buffered Reporting (26/28)
		13	Time Synchronization (3/5)

This certificate includes a summary of the test results as carried out at ALSTOM GRID in Stafford, United Kingdom with UniCA 61850 client simulator version 4.29.03 with test suite version 3.29.00 and the UniCA 61850 Analyzer version 5.28. This document has been issued for information purposes only, and the original paper copy of the ALSTOM GRID Automation Products Laboratories report: No. 50745.6660.302 will prevail.

The tests have been carried out on one single specimen of the product as referred above and submitted to Automation Products Laboratories by Bitronics, LLC. The manufacturer's production process has not been assessed. This certificate does not imply Automation Products Laboratories at ALSTOM GRID UK has approved any product other than the specimen tested.

Stafford, 24-03-2016

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Automation Products Laboratories Manager

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¹ Level B - Test lab at least following ISO 9001
² Test Procedure Change List

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

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	AssN3 Srv6, Srv8, Srv9, SrvN1f
2: Data Sets	Dset1, Dset10a, DsetN1ae	
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
13: Time sync	Tm1, Tm2	TmN1

All configuration file and data model tests have been successfully performed for the product variants using the same software version: M661