



# IEC 61850 Certificate Level A<sup>1</sup>

International  
Usersgroup

No. 30107083-Consulting 11-0242

Issued to:  
Bharat Heavy Electricals Ltd.  
Corporate Research And Development  
Vikasnagar  
Hyderabad – 500 093  
India

For the 92LE publisher:  
BHEL-MU Merging Unit  
Firmware K0.01  
Supporting:  
4 phase voltage and current

Issued by: 

**The product has not shown to be non-conforming to:**  
**IEC 61850-6, 7-2 and 9-2**  
**Communication networks and systems in substations**

The conformance test has been performed according to IEC 61850-10 with 92LE publisher's protocol implementation conformance statement: "Protocol Implementation Conformance Statement (PICS) for IEC 61850 interface in BHEL-MU, version 1.0" and product's extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for IEC 61850 interface in BHEL-MU, version 1.01"

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 as defined in the UCAIUG Test procedures for Sampled Values Publishers according to the "Implementation Guideline for Digital Interface to Instrument Transformers using IEC 61850-9-2" (9-2LE), version 1.1):

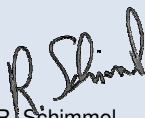
11a Sampled Value publish (12/17)	50Hz with 80 samples per cycle
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This Certificate includes a summary of the test results as carried out at KEMA in the Netherlands with UniCA 61850 Analyzer 61850 version 4.21.02. The test is based on the UCAIUG "Test procedures for Sampled Values Publishers according to the "Implementation Guideline for Digital Interface to Instrument Transformers using IEC 61850-9-2" (9-2LE), version 1.1". This document has been issued for information purposes only, and the original paper copy of the test report: No. 30107083-Consulting 11-0241 will prevail.

The test has been carried out on one single specimen of the client system as referred above and submitted to KEMA by BHEL. The manufacturer's production process has not been assessed. This Certificate does not imply that KEMA has certified or approved any product other than the specimen tested.

Arnhem, 2 February 2011

  
M. Adriaansen  
Regional director Management & Operations Consulting

  
R. Schimmel  
Senior Test Engineer

1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 Quality System

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Applicable Test Procedures from the UCAIUG "Test procedures for Sampled Values Publishers according to the "Implementation Guideline for Digital Interface to Instrument Transformers using IEC 61850-9-2" (9-2LE), version 1.1"

<b>Conformance Block</b>	<b>Mandatory</b>	<b>Conditional</b>
Configuration	Cnf1, Cnf2, Cnf3, Cnf4, Cnf5, Cnf6, Cnf7, Cnf8	
11a Sampled Value Publish: 50Hz, 80samples per cycle	Svp1, Svp2, Svp3, Svp6, Svp10, Svp11, Svp14, Svp15	Svp4, Svp8, Svp12, Svp13