



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

No. 30610048-Consulting 2006-0810

Issued to:  
GE MULTILIN  
Avda. Pinoa 10  
48170 Zamudio  
Spain

For the product:  
F650 Bay Controller  
Hardware Rev. 1  
Firmware version 3.44 boot 4.10



The product has not shown to be non-conforming to:

## IEC 61850-6, 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 with product's protocol and model implementation conformance statements: "PICS for 650 family of relays v1\_6 firm3\_44" and "MICS for 650 family rev1.3 firm3\_44" and technical issue (TICS) and extra information for testing (PIXIT): "TICS for 650 family of relays v1\_6 firm3\_44" and "PIXIT for 650 family of relays v1\_14 firm3\_44".

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 UCA International Users Group Device Test procedures):

1	Basic Exchange (21/23)	12a	Direct Control (4/11)
2	Data Sets (2/5)	12b	SBO Control (5/13)
5	Unbuffered Reports (12/13)	12c	Enhanced Direct Control (4/11)
6	Buffered Reports (14/15)	12d	Enhanced SBO Control (9/17)
9ab	Generic Object Oriented Substation Event (15/20)	13	Time Synchronization (4/4)
		14	File transfer (3/6)

This Certificate includes a summary of the test results as carried out at KEMA Arnhem, the Netherlands with UniCasim 61850 version 2.14.01 test system running test suite "61850 Conformance Test v2.14.02", UniCA 61850 analyzer version 4.14.01. The test is based on the UCA International Users Group Device Test Procedures version 1.1. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 30610048-Consulting 2006-0811 will prevail.

The test have been carried out on one single specimen of the products as referred above and submitted to KEMA by GE Multilin. 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, September 26, 2006

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1) Level A – Independent Test Lab with certified ISO 9000 or ISO 17025 Quality System

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## Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 1.1

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv7, Srv8, SrvN1e, SrvN1f, SrvN2, SrvN3
2: Data Sets	Dset1, DsetN1ae	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7 RpN1, RpN2, RpN3, RpN4	Rp5, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, GopN1
9b: GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a Direct control	CltN3, CltN8, DOns1, DOns3	
12b SBO control	Clt3, CltN1, CltN2, CltN4, SBOs2	
12c Enhanced Direct control	CltN3, CltN8, DOes2, DOes5	
12d Enhanced SBO control	Clt3, CltN1, CltN2, CltN3, CltN4, CltN9, SBOes1, SBOes2, SBOes3	
13 Time sync	Tm1, Tm2, TmN1	TmN2
14 File transfer	Ft1, Ft2ab, FtN1ab	