



IEC 61850 Certificate Level A¹

No. 74102109-MOC/INC 13-0939

Issued to:
TOSHIBA Corporation
Power Systems Protection and Control
Fuchu Complex 1, TOSHIBA-Cho
Fuchu-shi, Tokyo, 183-8511
Japan

For the server product:
GRE110 Over-current and earth fault
protection and control
Hardware: GRE110
Main software: GS1EM1-01-E
IEC 61850 firmware: MVM850-01-A

Issued by:



The server product has not 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 1.5, the product's protocol, model and technical issue implementation conformance statements: "IEC61850 ACSI Conformance Statement for GRE series IED" version 0.3 reference 6F2T0184, "IEC61850 Model Implementation Conformance Statement (MICS) GRE110" version 0.1 reference 6F2T0182 and "IEC61850 Tissues conformance statement (TICS) of the IEC 61850 communication interface in GRE series IED" version 0.1 reference 6F2T0190, and the extra information for testing: "Protocol Implementation eXtra Information for Testing (PIXIT) for the IEC 61850 interface in GRE series" version 0.2 reference 6F2T0189.

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 (18/24)	9a	GOOSE Publish (8/13)
2	Data Sets (3/6)	9b	GOOSE Subscribe (10/11)
4	Setting Group Selection (3/3)	12a	Direct Control (7/12)
5	Unbuffered Reporting (17/19)	12b	SBO Control (9/14)
6	Buffered Reporting (19/21)	13	Time Synchronization (3/5)

This certificate includes a summary of the test results as carried out at Toshiba in Japan with UniCA 61850 Client simulator 3.26.04 with test suite 3.26.00 and UniCA 61850 Analyzer 5.26.03. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74102109-MOC/INC 13-0940 will prevail.

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

Arnhem, March 15, 2013

M. Adriaensen
Director Intelligent Networks & Communication

R. Schimmel
Certification Manager

- 1 Level A - Independent test lab with certified ISO 9001 quality system
- 2 TPCL - Test procedures change list

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Applicable Test Procedures from the UCA International Users Group Device Test Procedures version 2.3 with TPCL version 1.5

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv6, Srv7, SrvN1e, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1a	Sg3
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10, Rp12 RpN1, RpN2, RpN3, RpN4	Rp5, Rp6, Rp8, Rp9, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12, Br14 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br6, Br10, Br11, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7, Gop10a	Gop1, Gop6, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtlN3, CtlN8 DOns1, DOns3	Ctl2, Ctl7, CtlN11
12b: SBO control	Ctl3, CtlN1, CtlN2, CtlN3, CtlN4, SBOs2	Ctl2, Ctl7, CtlN11
13: Time sync	Tm1, Tm2, TmN1	