



IEC 61850 Certificate Level A¹

No. 30920532-Consulting 10-1049

Issued to:
Mitsubishi Electric Corporation
Protection & Control Systems
Transmission & Distribution Systems
Center Kobe,
Japan

For the product:
Current Differential Relay MCD-HA
Version:
MM-CPU = PGHN01 A
MR-CPU = PGJA02 A



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, model and technical issue implementation conformance statements: "PICS4HAHSAseries v1.01", "MICS_MCD v1.1" and product's extra information for testing: "PIXIT4HAHSAseries v1.02".

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 v2.2):

1 Basic Exchange (15/24)	9a GOOSE Publish (7/12)
2 Data Sets (3/6)	9b GOOSE Subscribe (10/10)
4 Setting Group Selection (3/3)	12a Direct Control (4/11)
4+ Setting Group Definition (7/7)	13 Time Synchronization (4/4)
5 Unbuffered Reporting (14/18)	14 File Transfer (5/7)
6 Buffered Reporting (16/20)	

This Certificate includes a summary of the test results as carried out at Mitsubishi Electric Corporation in Japan with UniCASim 61850 version 3.21.01 with test suite 3.20.00 and UniCA 61850 analyzer 4.21.02. The test is based on the UCA International Users Group Device Test Procedures version 2.2. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No 10-1048 will prevail.

The test has been carried out on one single specimen of the products as referred above and submitted to KEMA by Mitsubishi Electric Corporation. 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, 18 May 2010

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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 2.2

Conformance Block	Mandatory	Conditional
1: Basic Exchange	Ass1, Ass2, Ass3, AssN2, AssN3, AssN4, AssN5 Srv1, Srv2, Srv3, Srv4, Srv5, SrvN1abcd, SrvN4	Srv8
2: Data Sets	Dset1, Dset10a, DsetN1ae	
4: Setting Group Selection	Sg1, SgN1a	Sg3
4+: Setting Group Definition	Sg2, Sg4, SgN1b, SgN2, SgN3, SgN4, SgN5	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10 RpN1, RpN2, RpN3, RpN4	Rp5, Rp8, Rp9, RpN5
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12 BrN1, BrN2, BrN3, BrN4, BrN5	Br5, Br10, Br11
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, Gop6, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a: Direct control	CltN3, CtIN8, DOns1, DOns3	
13: Time sync	Tm1, Tm2, TmN1	Tm3
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	FtN1c