

Issued to:
Stucke Elektronik GmbH
Merckurring 26
22143 Hamburg
Germany

No. 74104125-OPE/INC 14-1082

For the server product:
SYMAP-Compact+
IEC61850 Software version: FW1.11.1
Hardware version: v1-2.0



Issued by:

The server product has not been shown to be non-conforming to:
IEC 61850-5 First Edition Performance Class: P1 (10ms)

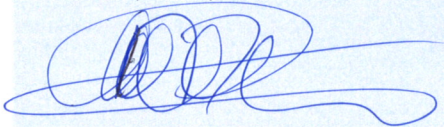
The performance test has been performed according to the UCA International Users Group GOOSE performance Test Procedures version 1.2 with product's protocol implementation conformance statement: "SYMAP Compact Communication IEC 61850 Edition1 Software version FW1.11.1 Appendix, version v1.1" and product's extra information for testing: "SYMAP Compact Communication IEC 61850 Edition1 GOOSE Performance FW: IEC61850 1.11.1".

This certificate summarizes test results as carried out at DNV KEMA in the Netherlands with the Omicron CMC850 GOOSE simulator version 2.41 and UniCA 61850 Analyzer version 5.28.01. This document has been issued for information purposes only, and the original paper copy of the test report: No. 74104125-OPE/INC 14-1081 will prevail.

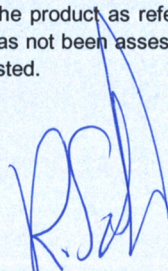
The GOOSE performance has been measured with boolean values.

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

Arnhem, June 9, 2014



M. Adriaensen
Head of Department Operational Excellence



R. Schimmel
Certification Manager

¹ Level A – Independent test lab with certified ISO 9001 Quality System

GOOSE Performance Measured Results

Results of the GOOSE performance benchmark tests as specified in the UCA International Users Group GOOSE performance Test Procedures version 1.2.

Performance class = P1 (10ms)

Goose Performance Benchmark summary results, compensated for scan cycle delays if any.

Test ID	Large dataset	Correlated subscribed	Back-ground	Minimum Transfer time [ms]	Maximum Transfer time [ms]	Average Transfer time [ms]
Gpf1	-	-	-	0,88	1,63	0,91
Gpf2	X	-	-	1,40	2,11	1,44
Gpf3	-	X	-	0,91	2,48	1,30
Gpf4	X	X	-	1,87	3,00	1,99
Gpf5	-	-	X	0,88	1,56	0,92
Gpf6	X	-	X	1,39	2,01	1,44
Gpf7	-	X	X	0,91	2,51	1,30
Gpf8	X	X	X	1,84	3,05	1,98