



IEC 61850 Certificate Level A¹

No. 74101712-MOC/INC 12-01388

Issued to:
Thytronic SpA
Piazza Mistral, 7
20139 – Milano
Italy

For the product:
PRON NM20
Version 1.30



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, 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: "NM20_PICS, revision 1.0 23-07-2012", "NM20_MICS, revision 1.0 23-07-2012" and "NM20_TICS, revision 1.0 23-07-2012" and the extra information for testing: "NM20_PIXIT, revision 1.0 23-07-2012".

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 (7/13)
2	Data Sets (3/6)	9b	GOOSE Subscribe (10/11)
2+	Data Set Definition (23/23)	12a	Direct Control (4/12)
5	Unbuffered Reporting (17/19)	13	Time Synchronization (4/5)
6	Buffered Reporting (19/21)	14	File Transfer (4/7)

This certificate includes a summary of the test results as carried out at Thytronic SpA in Italy with UniCASim 61850 version 3.23.02 with test suite 3.23.00 and UniCA 61850 analyzer 4.25.00. This document has been issued for information purposes only, and the original paper copy of the KEMA report: No. 74101712-MOC/INC 12-01387 will prevail.

The test has been carried out on one single specimen of the product as referred above and submitted to KEMA by Thytronic SpA. 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, July 24, 2012

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Director Management and Operations Consulting

R. Schimmel
Certification Manager

1 Level A - Independent Test lab with certified ISO 9000 or ISO 17025 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, Srv8, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
2+: Data Set Definition	Dset2, Dset3, Dset4, Dset5, Dset6, Dset7, Dset8, Dset9 DsetN1cd, DsetN2, DsetN3, DsetN4, DsetN5, DsetN6, DsetN7, DsetN8, DsetN9, DsetN10, DsetN11, DsetN12, DsetN13, DsetN14, DsetN15	
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, GopN1
9b: GOOSE subscribe	Gos1a, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	Gos1b
12a: Direct control	CtIN3, CtIN8, DOns1, DOns3	
13: Time sync	Tm1, Tm2, TmN1	Tm3
14: File transfer	Ft1, Ft2ab, Ft4, FtN1ab	