



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

International  
Usersgroup

No. 30920376-Consulting 09-1003

Issued to:  
EFACEC  
Rua Eng. Frederico Ulrich, Guardieiras  
4470-605 MAIA  
Portugal

For the product:  
TPU S420  
Version TPU S420-Ed1-S-V7.3



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: "X420 - Indicação de Conformidade com IEC 61850 (PICS) UK (1.2)", "S420 - Model Implementation Conformance Statement (MICS) UK (1.0)", "X420 - 61850 Tissues Conformance Statement (TICS) UK (1.1)" and product's extra information for testing: "X420 - Protocol Implementation eXtra Information for Testing (PIXIT) UK (1.2)".

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 (19/23)	9a	GOOSE Publish (7/11)
2	Data Sets (3/5)	9b	GOOSE Subscribe (9/9)
5	Unbuffered Reporting (14/18)	12a	Direct Control (6/11)
6	Buffered Reporting (16/20)	12b	SBO Control (7/15)
		13	Time Synchronization (3/4)

This Certificate includes a summary of the test results as carried out at Efacec in Portugal with UniCASim 61850 version 3.19.01 with test suite 3.19.00 and UniCA 61850 analyzer 4.17.01. 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. 30920376-Consulting 09-1002 will prevail.

The test has been carried out on one single specimen of the products as referred above and submitted to KEMA by Efacec. 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, May 20, 2009

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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	Srv6, Srv7, Srv8, SrvN1e, SrvN3
2: Data Sets	Dset1, Dset10a, DsetN1ae	
5: Unbuffered Reporting	Rp1, Rp2, Rp3, Rp4, Rp7, Rp10 RpN1, RpN2, RpN3, RpN4	Rp8, Rp9, RpN5, RpN6
6: Buffered Reporting	Br1, Br2, Br3, Br4, Br7, Br8, Br9, Br12 BrN1, BrN2, BrN3, BrN4, BrN5	Br10, Br1, BrN6
9a: GOOSE publish	Gop2, Gop3, Gop4, Gop7	Gop1, Gop6, GopN1
9b: GOOSE subscribe	Gos1, Gos2, Gos3, GosN1, GosN2, GosN3, GosN4, GosN5, GosN6	
12a: Direct control	CtlN3, CtlN8, DOns1, DOns3	Ctl2, CtlN11
12b: SBO control	Ctl3, CtlN1, CtlN2, CtlN4, SBOs2	Ctl2, CtlN11
13: Time sync	Tm1, Tm2, (TmN1)	

Note: TmN1: timequality bits are supported but are never set.