

IEC 61850 Certificate Level A¹

No. 10074098-INC 18-2062

Issued to:

Schneider Electric Industries SAS 35 rue Joseph Monier 92500 Rueil Malmaison France

For the server product:

Easergy MiCOM P741 Busbar Protection Relay Software version: B1 Hardware version: M

S/N: 36264289

The server product has not been shown to be non-conforming to:

IEC 61850 Edition 2 Parts 6, 7-1, 7-2, 7-3, 7-4 and 8-1

Communication networks and systems for power utility automation

The conformance test has been performed according to IEC 61850-10 Edition 2, the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL² 1.2.4 with product's protocol, model and technical issue implementation conformance statements: "P74x/EN PC/Pc9, release 10/01/2017", "P74x/EN MC/Pc9, release 09/2017" and "P74x/EN TC/Pc9, release 10/01/2017" and the extra information for testing: "P74x/EN PX/Pc9, release 10/01/2017".

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 (21/26)
- 2 Data Sets (4/7)
- 4 Setting Group Selection (4/4)
- 5 Unbuffered Reporting (19/21)
- 6 Buffered Reporting (28/30)

- 9a GOOSE Publish (12/13)
- 9b GOOSE Subscribe (13/14)
- 12a Direct Control (5/18)
- 12b SBO Control (12/27)
- 12c Enhanced Direct Control (5/20)
- 12d Enhanced SBO Control (12/28)
- 13 Time Synchronization (6/7)
- 14 File Transfer (7/8)

This certificate includes a summary of the test results as carried out at DNV GL in The Netherlands with UniGrid SA 1.4.361.30 with test suite 1.0.55 and UniCA 61850 Analyzer 5.34.01. This document has been issued for information purposes only, and the original paper copy of the DNV GL verification report No. 10074098-INC 18-2061 will prevail.

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

Arnhem, January 24, 2018

Issued by:

DNV-GL

DNV KEMA is now DNV GL

R. Sehimmel Verification Manager

Interoperability of Smart Power Systems

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

² TPCL - Test procedures change list



change this certificate in any manner whatsoever, including but not limited to dividing it into parts.

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Applicable Test Procedures from the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with TPCL 1.2.4

Conformance Block		Mandatory	Conditional
1:	Basic Exchange	sAss1, sAss2, sAss3, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrvN1abcd, sSrvN4	sAssN6, sSrv6, sSrv8, sSrv12, sSrvN1e, sSrvN1f, sSrvN3
2:	Data Sets	sDs1, sDs10a, sDsN1ae	sDs15
4:	Setting Group Selection	sSg1, sSg3, sSgN1	sSg11
5:	Unbuffered Reporting	sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp15, sRpN1, sRpN2, sRpN3, sRpN4, sRpN8	sRp8, sRp10, sRp11, sRp12, sRp13, sRpN5
6:	Buffered Reporting	sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr15, sBr20, sBr21, sBr22, sBr25, sBr26, sBr27, sBr28, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN8	sBr8, sBr10, sBr11, sBr12, sBr13, sBr23, sBr24
9a:	GOOSE publish	sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11	sGop1, sGop5, sGop6, sGop7, sGopN1, sGopN2
9b:	GOOSE subscribe	sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6	sGos6b
12a:	Direct control	sCtl5, sCtl10, sDOns1, sDOns2	sCtl13
12b:	SBO control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6	sCtl4, sCtl6, sCtl27
12c:	Enhanced Direct Control	sCtl5, sCtl10, sDOes1, sDOes2	sCtl13
12d:	Enhanced SBO Control	sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8	sCtl4, sCtl6
13:	Time sync	sTm1, sTm2, sTmN1	sTm3, sTm4, sTm5
14:	File transfer	sFt1, sFt2ab, sFt4, sFt5, sFtN1ab	sFt2c, sFtN1c