

IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX DEK 13.0010X	Issue No: 5	Certificate history:
Status:	Current	Page 1 of 4	Issue No. 5 (2014-03-28)
Date of Issue:	2014-03-28		Issue No. 4 (2014-03-05)
Applicant:	Siemens AG Werner-von-Siemens-Straße 50 92224 Amberg Germany		Issue No. 3 (2013-11-21)
Electrical Apparatus:	Programmable Logic Controller Systems SIMATIC ET 200MP and S7-1500, Modules Type 6ES7 ...		Issue No. 2 (2013-10-14)
Optional accessory:			Issue No. 1 (2013-06-28)
Type of Protection:	Ex nA		Issue No. 0 (2013-05-28)
Marking:	Ex nA IIC T4 Gc		

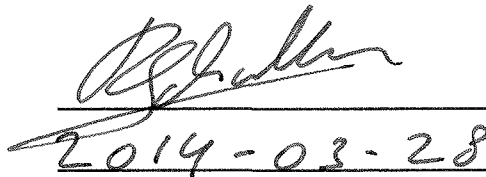
Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)



2014-03-28

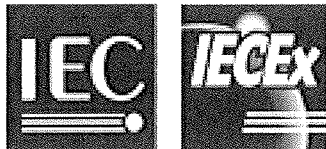
Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA Certification B.V.
Meander 1051,
6825 MJ Arnhem
The Netherlands





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Manufacturer: **Siemens AG**
Werner-von-Siemens-Straße 50
92224 Amberg
Germany

Additional Manufacturing
location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0
IEC 60079-15 : 2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

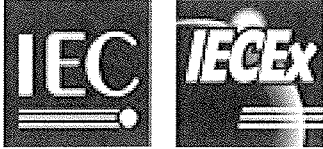
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NL/DEK/ExTR13.0016/00	NL/DEK/ExTR13.0016/01	NL/DEK/ExTR13.0016/02
NL/DEK/ExTR13.0016/03	NL/DEK/ExTR13.0016/04	NL/DEK/ExTR13.0016/05

Quality Assessment Report:

NL/DEK/QAR12.0079/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Modules Type 6ES7 ... for use in SIMATIC ET 200MP and S7-1500 Programmable Logic Controller Systems.

The type code, the ambient temperature range and the temperature class of the modules shall be taken from Table 1, see Annex.

Electrical data

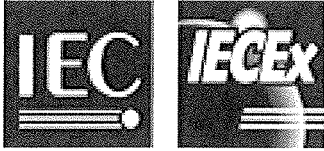
The electrical data of the supply and the input and output circuits shall be taken from Table 1, see Annex.

CONDITIONS OF CERTIFICATION: YES as shown below:

The equipment shall be installed in a suitable enclosure that provides a degree of protection of at least IP54 according to IEC 60079-15.

When the temperature under rated conditions exceeds 70 °C at the cable or conduit entry point, or 80 °C at the branching point of the conductors, the temperature specification of the selected cable shall be in compliance with the actual measured temperature values.

Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Addition of Model 6ES7 515-2AM00-a, 6ES7 515-2FM00-a, 6ES7 518-4AP00-a and 6ES7 518-4FP00-a to the range of SIMATIC ET 200MP and S7-1500 Programmable Logic Controller Systems.

Annex:

IECEX - Annex to CoC - English.pdf

**Annex 1 to Certificate of Conformity IECEx DEK 13.0010X, issue 5 /
NL/DEK/ExTR13.0016/05**

Table 1

Description	Type/MLFB No.	Temp. code	Ambient Range	Technical Data	Supply Volt.
Front Connector	6ES7 592-1AM00-a	T4	0...+60°C	-	Max. 230V
Interface Module IM 155-5 PN	6ES7 155-5AA00-aaBa	T4	0...+60°C	supply 24 Vdc, 1.0 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Digital Input Module 16 DI, DC 24V	6ES7 521-1BH00-a	T4	0...+60°C	supply 24 Vdc, 20 mA Inputs 24 Vdc, 16 channels at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Digital Input Module 32 DI, DC 24V	6ES7 521-1BL00-a	T4	0...+60°C	supply 24 Vdc, 20 mA per group Inputs 24 Vdc, 32 channels (2 groups of 16) at 40°C 32 channels horizontally / vertically at 60°C 16 channels horizontally	24Vdc
Digital Output Module 16 DQ, DC 24V / 0.5A	6ES7 522-1BH00-a	T4	0...+60°C	supply 24 Vdc, 4 A per group Outputs 24 Vdc, 16 channels (2 groups of 8) 0.5 A p.d. / 0.5 A res. / 5 W tung. at 40°C to 60 °C: 4A to 3A per group, horizontally at 40°C: 2 A per group, vertically	24Vdc
Digital Output Module 32 DQ, DC 24V / 0.5A	6ES7 522-1BL00-a	T4	0...+60°C	supply 24 Vdc, 4 A per group Outputs 24 Vdc, 32 channels (4 groups of 8) 0.5 A p.d. / 0.5 A res. / 5 W tung. at 40°C to 60 °C: 4A to 3A per group, horizontally at 40°C: 2 A per group, vertically	24Vdc
Analog Input Module 8 AI, U, I, R, RTD, TC	6ES7 531-7KF00-a	T4	0...+60°C	supply 24 Vdc, 220 mA 8 Input channels at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Analog Output Module 4 AQ, U, I	6ES7 532-5HD00-a	T4	0...+60°C	supply 24 Vdc, 140 mA 4 Output channels at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Power Supply Module Input 24Vdc / 1.3A	6ES7 505-0KA00-a	T4	0...+60°C	supply 24 Vdc, 1.3 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Power Supply Module Input 24V/48V/60Vdc / 3.0A/1.5A/1.2A	6ES7 505-0RA00-a	T4	0...+60°C	supply 24V/48V/60Vdc / 3.0A/1.5A/1.2A at 40°C vertically mounted at 60°C horizontally mounted	24V/48V/ 60Vdc
Communication Module PtP RS232 BA	6ES7 540-1AD00-a	T4	0...+60°C	Supplied by limited voltage circuit of the Bus at 40°C vertically mounted at 60°C horizontally mounted	-
Communication Module PtP RS232 HF	6ES7 541-1AD00-a	T4	0...+60°C	Supplied by limited voltage circuit of the Bus at 40°C vertically mounted at 60°C horizontally mounted	-
Communication Module PtP RS422 BA	6ES7 540-1AB00-a	T4	0...+60°C	Supplied by limited voltage circuit of the Bus at 40°C vertically mounted at 60°C horizontally mounted	-
Communication Module PtP RS422 HF	6ES7 541-1AB00-a	T4	0...+60°C	Supplied by limited voltage circuit of the Bus at 40°C vertically mounted at 60°C horizontally mounted	-
Central processing unit CPU 1516 - 3PN/DP	6ES7 516-3AN00-a	T4	0...+60°C	supply 24 Vdc, 0.85 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Central processing unit CPU 1513 - 1PN	6ES7 513-1AL00-a	T4	0...+60°C	supply 24 Vdc, 0.7 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Central processing unit CPU 1511 - 1PN	6ES7 511-1AK00-a	T4	0...+60°C	supply 24 Vdc, 0.7 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc

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Digital Output Module 8 DQ, DC 24V / 2A HF	6ES7 522-1BF00-a	T4	0...+60°C	supply 24 Vdc, 8 A per group Outputs 24 Vdc, 8 channels (2 groups of 4) 2 A p.d. / 2 A res. / 5 W tung. at 25°C to 40°C: 8 A to 3.5 A per group, vertically mounted at 40°C to 60°C: 8 A to 4.5 A per group, horizontally mounted	24Vdc
Digital Input Module 16 DI, DC 24V / SRC BA	6ES7 521-1BH50-a	T4	0...+60°C	Source Inputs 24 Vdc, 72mA, 16 channels at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Analog Input Module 8 AI, U/I HS	6ES7 531-7NF10-a	T4	0...+60°C	supply 24 Vdc, 240 mA 8 Input channels at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Analog Output Module 8 AQ, U/I HS Taktsync., 16Bit, 0.3%	6ES7 532-5HF00-a	T4	0...+60°C	Supply 24 Vdc, 200 mA , 8 Output channels At 40°C vertically, at 60°C horizontally: 8 channels (V), Load impedance > 5 kΩ At 25°C to 40°C vertically, at 40°C to 60°C horizontally: 8 channels (V) to 4 channels (V), Load impedance > 1 kΩ < 5 kΩ At 25°C to 40°C vertically, at 40°C to 60°C horizontally: 8 channels (I) to 4 channels (I)	24Vdc
Technology Module Count 2x 24V	6ES7 550-1AA00-a	T4	0...+60°C	supply 24 Vdc, Inputs 24 Vdc, 6 channels Outputs 24 Vdc, 4 channels 0.5 A res. / 5 W tung. Enc.Supply Output 24Vdc/1A	-
Central processing unit CPU 1511F - 1PN	6ES7 511-1FK00-a	T4	0...+60°C	supply 24 Vdc, 0.7 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Central processing unit CPU 1513F - 1PN	6ES7 513-1FL00-a	T4	0...+60°C	supply 24 Vdc, 0.7 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Central processing unit CPU 1516F - 3PN/DP	6ES7 516-3FN00-a	T4	0...+60°C	supply 24 Vdc, 0.85 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Interface Module IM 155-5 DP CU	6ES7 155-5BA00-a	T4	0...+60°C	supply 24 Vdc, 1.0 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Technology Module TM PosInput 2	6ES7 551-1AB00-a	T4	0...+60°C	supply 24 Vdc, 2.9 A 4 Input channels Outputs 24Vdc, 4 channels 0.5 A p.d. / 0.5 A res. / 5 W tung. at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Interface Module IM 155-5 PN HF CU	6ES7 155-5AA00-aaCa	T4	0...+60°C	supply 24 Vdc, 1.2 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Digital Input Module 16 DI, 24V DC BA	6ES7 521-1BH10-a	T4	0...+60°C	supply 24 Vdc Inputs 24 Vdc, 16 channels at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Digital Input Module 32 DI, 24V DC BA	6ES7 521-1BL10-a	T4	0...+60°C	supply 24 Vdc Inputs 24 Vdc, 32 channels (2 groups of 16) at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Digital Output Module 16 DQ, DC 24V / 0.5A	6ES7 522-1BH10-a	T4	0...+60°C	supply 24 Vdc, 4A per group Outputs 24 Vdc, 16 channels (2 groups of 8) 0.5 A p.d. / 0.5 A res. / 5 W tungsten at 40°C to 60 °C: 4A to 2A per group, horizontally mounted at 40°C: 2A per group, vertically mounted	24Vdc

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Digital Output Module 32 DQ, DC 24V / 0.5A	6ES7 522-1BL10-a	T4	0...+60°C	supply 24 Vdc, 4A per group Outputs 24 Vdc, 16 channels (2 groups of 8) 0.5 A p.d. / 0.5 A res. / 5 W tungsten at 40°C to 60 °C: 4A to 2A per group, horizontally mounted at 40°C: 2A per group, vertically mounted	24Vdc
Digital Input / Output Module DI 16x24Vdc / DQ 16x24Vdc/0.5A BA	6ES7 523-1BL00-a	T4	0...+60°C	supply 24 Vdc, 4A per group Outputs 24 Vdc, 16 channels (2 groups of 8) 0.5 A p.d. / 0.5 A res. / 5 W tungsten at 40°C to 60 °C: 4A to 2A per group, horizontally mounted at 40°C: 2A per group, vertically mounted	24Vdc
Front connector "Push In", 15.4mm	6ES7 592-1BM00-aaAa	T4	0...+60°C	-	24Vdc
Front connector "Push In", 25.4mm	6ES7 592-1BM00-aaBa	T4	0...+60°C	-	24Vdc
Central processing unit CPU 1515 - 2PN	6ES7 515-2AM00-a	T4	0...+60°C	supply 24 Vdc, 0.8 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Central processing unit CPU 1515F - 2PN	6ES7 515-2FM00-a	T4	0...+60°C	supply 24 Vdc, 0.8 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Central processing unit CPU 1518 - 4PN/DP	6ES7 518-4AP00-a	T4	0...+60°C	supply 24 Vdc, 0.8 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc
Central processing unit CPU 1518F - 4PN/DP	6ES7 518-4FP00-a	T4	0...+60°C	supply 24 Vdc, 0.8 A at 40°C vertically mounted at 60°C horizontally mounted	24Vdc

The Suffix –a denotes any letter or number referring to non-electrical properties as product associates, language, delivery packing, documentation etc.