Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) # EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 07 ATEX 1076 X

(4) Equipment: Three-phase asynchronous motors 1MJ7 310-... und 1MJ7 313-...

(5) Manufacturer: Siemens AG, Automation and Drives Standard Drives

(6) Address: 91056 Erlangen, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 07-17350.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2006 **EN 60079-1:2004** **EN 60079-7:2003**

EN 61241-0:2006 **EN 61241-1:2004**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2 G Ex d IIC T1 - T4 respectively Ex de IIC T1 -T4 respectively

II 2 D Ex tD A21 IP65 T XXX °C

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. M. Thedens
Oberregierungsrat

Braunschweig, January 16, 2008

(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 07 ATEX 1076 X

(15) Description of equipment

The motors of types 1MJ7310-... and 1MJ7313 , size 315, consist of an enclosure made from grey cast iron. The shaft rotates in rolling bearings. Together with the end shields, the shaft forms a flameproof joint at the drive and the non-drive ends. Connection is by means of terminal box 1XC3 52., designed to Flameproof Enclosure "d" type of protection, or by means of terminal box 1XC1 58., designed to Increased Safety "e" type of protection. The auxiliary terminal box 1XB 3020 may optionally be fitted to the terminal boxes of Increased Safety "e" type of protection. Separately certified cable entry fittings provide for power input.

The electric motor data, incl. specifications safeguarding compliance with the temperature class, are defined in a data sheet attached to the EC type-examination certificate. The data sheets of EC Type Examination Certificate PTB 03 ATEX 1192 are also considered to be data sheets of the present EC Type Examination Certificate.

The maximum permissible ambient temperature range is: -20 °C to 60 °C. This temperature range can be restricted by the terminal boxes or components selected or by the data sheet specifying the electrical design.

For "D" areas (areas with inflammable dust), the machine with its terminal compartment is designed to "td" Protection by Enclosure type of protection. For the "D" area, the shaft is provided with sealing rings, which ensure that the IP degree of protection is maintained.

Additional, separately certified components (rotary pulse generator, bearing thermometer, fan drive motor, etc.) may also be used.

(16) Test report PTB Ex 07-17350

(17) Special conditions for safe use

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repair in compliance with the values in tables 1 and 2 of EN 60079-1 is not accepted.

Additional notes for safe operation

Components attached or installed (terminal compartments, bushings, cable entry fittings, connectors) have to be of a technical standard that complies with the specifications on the cover sheet. They must be suited for the operating conditions, and be covered by a separate examination certificate. The special conditions specified for the components must be complied with, and the components may have to be included in the type test.

Monitoring devices must satisfy the requirements in Directives 94/9/EC and EN 1127-1.

If the three-phase motor is cooled by a separately driven fan, adequate measures must be taken to ensure that the motor can only be operated with the separately driven fan switched on.

(18) Essential health and safety requirements

Met by compliance with the afore-mentioned Standards.

Zertifizierungsstelle Explosionsschutz
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Dr.-Ing. M. Thedens
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DATA SHEET 01 TO EC-TYPE-EXAMINATION CERTIFICATE PTB 07 ATEX 1076 X

Manufacturer: Siemens AG
Industry Sector
Drives Technologies Division
Large Drive
Vogelweiherstaße 1-15
90441 Nürnberg, Germany

for three-phase motors of type 1MJ7 31

Electrical data

The motors of type series 1MJ7 31 manufactured by Siemens AG, are designed for ratings up to the following values:

	Mains operation	Converter operation	
Rated voltage:	380 - 1100	380 - 690	V
Rated power:	152	152	kW
Frequency:	max. 60	5 – 100	Hz
Operation mode:	S1 – S9	S1 – S9	

For each motor design, compliance with the governing regulations has to be verified in the form of a type test. Due regard must in this connection be given to the code of practice "Merkblatt für die elektrische Auslegung und Prüfung von Motoren in der Zündschutzart Druckfeste Kapselung im Rahmen der EG-Baumusterprüfbescheinigung".

The motors may be employed only for the duty type and under the ambient conditions for which they were type tested. This equally applies to operation with frequency converter.

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, October 7, 2010

Dr.-Ing. U. Klausmeyer
Direktor und Professor