



[1] **EC-TYPE EXAMINATION CERTIFICATE**

[2] **Equipment or Protective Systems or Component Intended for use  
in Potentially explosive atmospheres  
Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

**CESI 01 ATEX 003X**

[4] Equipment: Three phase asynchronous motors series .280.. and .315..

[5] Manufacturer: **CEMP International S.p.A.**

[6] Address: Via Piemonte, 16 - 20030 Senago (MI) - Italy

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] CESI, notified body n° 0722 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system 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 confidential report n° EX-A1/001963.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 50014 + A1..A2: 1997      EN 50018: 2000      EN 50019: 2000**

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system 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 or protective system in accordance to the directive 94/9/EC.  
Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

**Ex II 2 G    EEx d IIC T4,T3    or    EEx de IIC T4,T3**

This certificate may only be reproduced in its entirety and without any change, schedule included.

date            January 19<sup>th</sup>, 2001 - translation issued on January 19<sup>th</sup>, 2001

prepared      CERT - P. Canavesi

verified        CERT - M. Balaž

approved      CERT - U. Colombo

**CESI**  
CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO  
Responsabile Area Certificazione

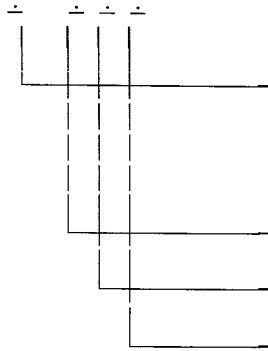
[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE N° CESI 01 ATEX 003X**

[15] **Description of equipment**

The three phase asynchronous motors series .280.. and .315.. are identified by the following code:



type of protection, temperature class, type of construction and possible constructional modifications (motor with cable permanently connected instead of the terminal box, motor supplied by frequency converter, motor with forced ventilation).

shaft height (280, 315)

core length (S = short, M = long)

polarity (2 ÷ 16); double polarity

A complete identification of the subjected apparatus is reported in the Technical Note no. NT/AM/0004 annexed to this EC type examination certificate.

The accessories used for cable entries and to close the openings not used as cable entries shall be certified according to EN 50014 and EN 50018 for the EEx-d terminal box and according to EN 50014 and EN 50019 for the EEx-de terminal box.

If cylindrical threads are used, the coupling between the cable gland and the terminal box shall be made according to the requirements indicated in the drawings annexed to this certificate.

### Electrical characteristics

- Maximum rated power	:	110 / 160	[kW]
- Maximum voltage	:	1000	[V]
- Maximum current	:	280	[A]
- Rated frequency	:	50/60	[Hz]
- Rated speed	:	360 ÷ 3600	[rpm]
- Duty	:	S1 ÷ S9	
- Ambient temperature	:	-20 ÷ +60	[°C] for temperature class T4
		-20 ÷ +80	[°C] for temperature class T3

The anticondensate heaters installed inside the motor can have a maximum power of 440 W.

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## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE N° CESI 01 ATEX 003X**

[15] **Description of equipment (follow)**

Electrical characteristics with frequency converter supply

The three phase asynchronous motors series .280.. and .315.. supplied by frequency converter shall be provided with thermal detectors installed in the stator windings with a maximum operating temperature of 155 °C for class temperature T3 and 110 °C for class temperature T4.

The operation of the thermal detectors shall guarantee the disconnection of the supply; the resetting of the supply must not be automatic.

### Warning label

- For motors supplied by frequency converter  
"Windings fitted with PTC thermistors"  
or  
"Windings fitted with RTD. Set to 110 °C"
- For motors with terminal box:  
"Cable of temperature rating maximum of 90 °C shall be used"
- In case of use anticondensate heaters:  
" Attention - energized resistors".

[16] **Report N° EX-A1/001963**

### Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 24 of EN 50014 Standard, at clause 16 of EN 50018 Standard and at clause 7 of EN 50019 Standard..

The manufacturer is exempted from the overpressure test on the terminal box since it has been submitted to an overpressure test at 34 bar, corresponding to four times the reference pressure.

The dielectric test with applied voltage shall be performed at  $2U+1000$  V with a minimum value of 1500 V between the supply terminals and earth ( $U$ =rated voltage).

The overpressure test shall be carried out at 20 bar on the motor enclosure, with the static method (clause 15.1.3.1 of EN 50018 Standard).

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## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE N° CESI 01 ATEX 003X**

[16] **Report N° EX-A1/001963**

### **Verification of the degree of protection**

The three phase asynchronous motors series .280.. and .315.. with the flame joints treated with silicon grease and complete of the bearing rings indicated in the documents annexed to this certificate, have been tested in accordance with the specifications of EN 60034-5 Standard for the degree of protection IP55.

The motors above mentioned comply with EN 60034-5 Standard for the degree of protection IP 55.

### **Descriptive documents (prot. EX-A0/001964)**

- no. NT/AM/0004 (12 pages)	dated	21.11.2000
- no. C283106	dated	31.03.2000
- no. C283112	dated	14.07.2000
- no. C283113	dated	26.09.2000
- no. C283123	dated	05.10.2000
- no. C283124	dated	22.11.2000
- no. C283107	dated	09.03.1999
- no. 71280022	dated	02.03.2000
- no. ISTR004 (11 pages)	dated	04.05.2000
- EC Declaration of conformity	dated	19.01.2001

One copy of all documents is kept in CESI files.

[17] **Special conditions for safe use**

1) The motor with the cables permanently connected, shall have these cables protected against the risk of damage due to mechanical stresses and with the end connection made according to one of the types of protection indicated in the EN 50014 Standard and in accordance with the installation rules specified for the place where the motor is used.

2) When the motor is supplied by frequency converter for class temperature T4, the protection circuit, to which the thermoelements installed inside the stator windings shall be connected, shall be in accordance with the principles of IEC 61508 or shall be duplicated

3) In case of forced ventilation, the user shall provided a device so to guarantee the operation of the motor only when the forced ventilation is on.

4) The operation of the protections mentioned in 2) and 3) shall guaranteed the disconnection of the motor supply and the resetting of the supply shall not be automatic.

[18] **Essential Health and Safety Requirements**

Assured by compliance to the Standards indicated at pag. 1.

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