



EC-TYPE EXAMINATION CERTIFICATE

Equipment or Protective System intended for use
in potentially explosive atmospheres
Directive 94/9/EC

[3] EC-Type Examination Certificate number:

CESI 01 ATEX 099

[4] Equipment: Three-phase asynchronous motors series T . 225 S/M; T . 250 S/M supplied by mains or inverter

[5] Manufacturer: **WEG MOTORES Ltda**

[6] Address: Rua Joinville 3000 – Jaraguá do sul, BRAZIL -

[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-A1/039417.

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

EN 50014: 1997 + A1..A2 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:



II 2 G EEx d IIB T4, T3



II 2 G EEx de IIB T4, T3

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

date December 21, 2001 - translation issued on September 13, 2002

prepared CERT - D. Parazzoli

verified CERT - M. Balaz

approved CERT - U. Colombo

CESI

CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO
Business Unit Certificazione

Il Responsabile

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[13]

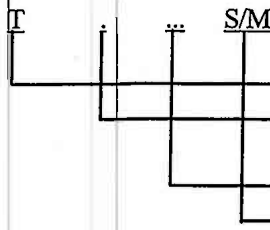
Schedule

[14]

EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 099

[15]

Description of equipment



Three-phase asynchronous motor

EX: motor and terminal box with type of protection "EX d"

EXe: motor with type of protection "EX d" and terminal box "EX e"

center height : 225, 250

winding length

The accessories used for cable entries and for closing unused holes shall guarantee a minimum degree of protection IP 55 according to EN 60034-5 standard, shall be certified according to EN 50014 and EN 50018 standards for the EX d terminal box and according to EN 50014 and EN 50019 standards for the EX e terminal box .

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

Electrical characteristics

- Maximum rated voltage: 690 V
- Maximum rated power: 75 kW
- Rated current (at 400 V): 131 A
- Rated frequency: 50 / 60 Hz
- Rated speed (at 50 Hz): 730 ÷ 2965 rpm
- Duty: S1 ÷ S9
- Ambient temperature: -20 ÷ +60 °C

- **Insulation class:** F with the temperature limit specified for insulation class B

The anticondensate heaters installed inside the motor can have a maximum power of 90 W.

Motors supplied by inverter:

Type of protection:

EX d IIB T3 and EX de IIB T3

- In alternative, the three-phase asynchronous motors can be supplied by inverter. In this case the electrical characteristics are indicated on a suitable label. For the other electrical characteristics see the documents annexed to this certificate.
- The motors supplied by inverter shall be provided, inside the stator winding, with PTC or PT 100 thermal detectors.
- The PTC thermal detectors are calibrated for an operation temperature of 155 °C. The protection circuit connected with the PT 100 thermal detectors shall be calibrated for an operation temperature of 155 °C according to IEC 61508.
- The operation of the thermal detector shall guarantee the disconnection of the supply; the resetting of the supply shall not be automatic.

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Schedule

[13]

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 099**

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

Warning label

“Use screws quality 12.9 ISO/R 898/I and R 898/II”

For temperature class T3:

“The supply cable must be suitable for an operating temperature not less than 80 °C”

For motor supply by inverter:

“Winding protected with PTC thermistors”

or

“Winding protected with PT 100 detectors. Calibrate at 155 °C”

In case of use of anticondensate heaters:

“Attention – energized resistors”.

[16] **Report n. EX-A1/039417**

Verification of the degree of protection

The three-phase asynchronous motors treated with silicone grease on the flameproof joints and with bearings grease inside seal gasket or inside external labyrinth, as indicated on the documents annexed to this certificate, have been tested in accordance EN 60034-5 standard for the degree of protection IP 55.

The test results prove that the motors above mentioned comply with the EN 60034-5 specification for the degree of protection IP 55.

Individual tests

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

The routine overpressure test shall be carried out with the static method at 20 bar on the motor enclosure and at 10,5 bar on the EEx d terminal box (paragraph 15.1.3.1 of EN 50018 standard).

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) on the EEx e terminal box .

[13]

Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 099**

[16] **Report n. EX-A1/039417 (follows)**

Descriptive documents (prot. EX-A1/039429)

- n. TB-0286 Rev. 5	dated	30.10.2001
- n. TB-0832	dated	11.04.2001
- n. TB-0835	dated	20.04.2001
- n. TB-0837	dated	23.04.2001
- n. TB-0838	dated	23.04.2001
- n. TB-0090 Rev. 04	dated	01.11.2001
- n. TB-0091 Rev. 06	dated	12.09.2001
- n. TB-0092 Rev. 02	dated	18.07.2000
- n. TB-0093 Rev. 02	dated	17.04.2001
- n. TB-0094 Rev. 01	dated	21.08.1991
- n. TB-0095 Rev. 04	dated	15.05.2001
- n. TB-0287	dated	07.06.1993
- n. TB-0288 Rev. 01	dated	05.04.1994
- n. TB-01 Rev. 07	dated	25.09.2001
- n. TB-02 Rev. 07	dated	25.09.2001
- n. TB-03 Rev. 07	dated	25.09.2001
- n. TB-04 Rev. 07	dated	25.09.2001
- n. TB-05 Rev. 07	dated	25.09.2001
- Instructions for the installation (11 sheets)	dated	04.2001
- declaration of conformity	dated	30.10.2001

One copy of all documents is kept in CESI files.

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

None.

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

Covered by standard indicated at page 1.