



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 EUT 14.0001X Issue No: 1 Certificate history:
Status: **Current** Page 1 of 4 [Issue No. 1 \(2017-03-10\)](#)
Date of Issue: **2017-03-10** [Issue No. 0 \(2014-03-07\)](#)

Applicant: **Elpromtech S.r.l.**
Via Mantova, 93
43122 Parma
Italy

Equipment: **Series O-M three-phase and single-phase asynchronous squirrel cage rotor
motors, supplied by mains or inverter**

Optional accessory: *Terminal box and Capacitor box*

Type of Protection: **Flameproof enclosures "d"; Equipment dust ignition protection by enclosure "t", Increased safety "e"**

Marking:
Ex db IIC T3, T4 or T5
Ex tb IIIC T125°C
or
Ex db eb IIC T3, T4 or T5
Ex tb IIIC T125°C

Approved for issue on behalf of the IECEX
Certification Body:

Dionisio Bucchieri

Position:

Head of IECEX CB

Signature:
(for printed version)

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:

Eurofins Product Testing Italy S.r.l.
Via Cuorgnè,
n.21 - 10156 Torino
Italy



Product Testing



IECEX Certificate of Conformity

Certificate No: IECEx EUT 14.0001X

Issue No: 1

Date of Issue: 2017-03-10

Page 2 of 4

Manufacturer: **Elpromtech S.r.l.**
Via Mantova, 93
43122 Parma
Italy

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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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:

[IT/EUT/ExTR14.0001/01](#)

Quality Assessment Report:

[IT/EUT/QAR14.0001/03](#)



IECEx Certificate of Conformity

Certificate No: IECEx EUT 14.0001X

Issue No: 1

Date of Issue: 2017-03-10

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The three-phase and single-phase asynchronous squirrel cage rotor motors series O-M, are made of aluminium (the paint used has a maximum thickness of 0.2 mm) with separate parts: motor enclosure, terminal box for supply and a capacitor enclosure. The motors are suitable for Group IIC and IIIC.

All the parts of the flameproof enclosures have flameproof joints independent from each other.

The motors can be equipped with auxiliary devices (heaters, thermal protectors).

Possibility of supply through inverter exclusively with the use of thermal protectors applied on the windings.

Such protectors may be either PTO and PTC and they shall be connected to an appropriate protection device conforming to EN 50495.

A more detailed description is given in the annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

Supply voltage must be within:

- $\pm 5\%$ of the nominal value for temperature class T5;
- $\pm 10\%$ of the nominal value for temperature class T3 or T4



IECEX Certificate of Conformity

Certificate No: IECEx EUT 14.0001X

Issue No: 1

Date of Issue: 2017-03-10

Page 4 of 4

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

Introduction of two new sizes of shaft height (160 and 180);

Maximum power increased up to 30 kW;

Introduction of "Ex e" terminal boxes;

Standard updates (IEC 60079-1 and IEC 60079-31);

Flameproof joints modified;

Annex:

[Annex to CoC.pdf](#)

The motors are made of aluminium (the paint used has a maximum thickness of 0.2 mm) and have separate parts: motor enclosure, terminal box for supply and capacitor enclosure (optional). The motors are suitable for group IIC and group IIIC.

The motor enclosure has types of protection “Ex d” and “Ex t”;

The terminal box can have types of protection “Ex d” and “Ex t” or “Ex e” and “Ex t”;

The capacitor enclosure has types of protection “Ex d” and “Ex t”;

All the parts of the flameproof enclosures have flameproof joints independent from each other.

The motors can be equipped with auxiliary devices (heaters, thermal protectors).

The anti-condensation heater can be activate only when the motor is not powered.

In case of single phase motors the capacitors have to be placed in the appropriate enclosure or in safe zone.

Electrical characteristics

Mains Supply

Maximum rated voltage: 850 V

Maximum rated power: 30 kW

Rated frequency: 50/60 Hz

Insulation class: F or H

Duty: S1, S2, S3, S9

Poles: 2, 4, 6, 8, 2/4, 4/8, 4/6, 6/8

Degree of protection: IP 66

Ambient temperature. $-40 \div +40$ °C (till +60°C for T3,T4 class of temperature)

Temperature classes and Maximum surface temperature:

T5, T4, T3, T 125°C as a function of the ambient temperature and of the electrical characteristics (as indicated in the technical note n. MOTORI ASINCRONI SERIE O – M gradezze 56-180 IECEx).

Inverter supply

Frequency range: 5-87Hz

Possibility of supply through inverter exclusively with the use of thermal protectors applied on the windings.

Such protectors may be either PTO and PTC and they shall be connected to an appropriate protection device conforming to EN 50495.

Activation temperature related to the temperature class:

- 90°C for temperature class T5;
- 130°C for temperature class T4;
- 150°C for temperature class T3.

Ventilation

The motors can be ventilated and not ventilated (with half power in respect to the ventilated corresponding motors so to maintain a T3 temperature class).

Ventilation can be made by fan, who is fitted directly on the shaft, or by using an auxiliary motor.

The auxiliary motor belongs to O-M series. It will be a two poles 63 motor (for shaft height from 80 to 132) or a two poles 71 motor (for shaft height from 160 to 180).

Impellers for Ex db motors, which have a peripheral speed below 50 m/s, are made of plastic material.

Impellers for Ex tb or Ex db tb or Ex db motors (which have a peripheral speed below 50 m/s) are made by plastic dissipative material or metallic material.

The degree of protection (IP) of ventilation openings are:

- IP 20 on the air inlet side
- IP 10 on the air outlet side

Cable entries

The cable entries integrated in motor body, terminal box (motor side), capacitor box are part of this certification.

All the other cable entries devices used on the enclosures are already properly IEC Ex certified.

The accessories used for cable entries and for unused holes must be subjected of a separate IEC Ex certification according to the applicable standards IEC 60079-31 and IEC 60079-1 or IEC 60079-7.

Warning label

“Flameproof joints cannot be repaired”

“Use screws quality 8.8”

Special condition for a safe use

Supply voltage must be within:

- $\pm 5\%$ of the nominal value for temperature class T5;
- $\pm 10\%$ of the nominal value for temperature class T3 or T4.