



# 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](http://www.iecex.com)

Certificate No.:

IECEx CES 11.0014X

issue No.:0

Certificate history:

Status:

Current

Date of Issue:

2011-09-28

Page 1 of 3

Applicant:

**Euromotori S.r.l.**  
Via Cavour s.n.c.  
I- 20846 Macherio (MB)  
Italy

Electrical Apparatus:

Three-phase and single-phase asynchronous motors supplied by mains or inverter,  
series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132, MAK  
160

Optional accessory:

Type of Protection:

Flameproof enclosures 'd'; Dust ignition protection 'tD'

Marking:

Ex d IIC T6, T5, T4, T3  
Ex tD A21 IP 66 T 85 °C, T 100 °C, T 125 °C, T 155 °C

Approved for issue on behalf of the IECEx  
Certification Body:


Mirko Balaz

Position:

Head of IECEx CB

Signature:  
(for printed version)

Date:

  
28-09-2011

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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](http://www.iecex.com).

Certificate issued by:

**CESI**  
Centro Elettrotecnico  
Sperimentale Italiano S.p.A.  
Via Rubattino 54  
20134 Milano  
Italy

  
**CESI**





## IECEx Certificate of Conformity

# CESI

Prot: B1040412

**Annex to certificate:** IECEx CES 11.0014X Issue No.0 of 2011-09-28

**Applicant:** Euromotori S.r.l.  
Via Cavour s.n.c.; I-20846 Macherio (MB) - Italy

**Electrical Apparatus:** Three-phase and single-phase asynchronous motors supplied by mains or inverter, series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132, MAK 160

### Description of equipment

Three-phase and single-phase asynchronous motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132 and MAK 160 supplied by mains or by frequency converter.

The motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 112 and MAK 132 are made with motor enclosure directly communicating with the terminal compartment. The motors series MAK 100 and MAK 160 are made with terminal compartment separated of the motor enclosure.

The motors are all made of grey cast iron.

The criteria for identification of types of the three-phase and single-phase asynchronous motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132 and MAK 160 are defined as follows:

- motor type **MAK\* 56-63-71-80-90-100-112-132-160** from 2 to 8 poles: three-phase motor, centre height 56-63-71-80-90-100-112-132-160 at 2,4,6,8 poles.
- motor type **MAK-M 56-63-71-80-90-100-112-132-160** from 2 to 6 poles : single-phase motor, centre height 56-63-71-80-90-100-112-132-160 at 2,4,6 poles.

\* **WV** in case of motors without fan.

The complete identification of all type of three-phase and single-phase asynchronous motors is detailed in the manufacturer documentation.

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

### Electrical characteristics

#### Mains supply:

- Maximum voltage: 1000 V (three-phase)  
250 V (single-phase)
- Maximum rated power: 0,25 ÷ 37 kW
- Rated frequency: 50 / 60 Hz
- Insulation class: F (t. F for T3 and T 155 °C)  
(with t. B for T6, T5, T4 and T 85 °C, T 100 °C, T125 °C)
- Duty: S1 ÷ S8
- Rated speed: 250 ÷ 3600 rpm
- Degree of protection: IP 66 (IEC 60034-5 and IEC 60529) for Dust  
IP 55 for Group IIC
- Ambient temperature range: -20 ÷ +60 °C (+40 °C; +45 °C; .....and +60 °C)

Page1 of 3





## IECEx Certificate of Conformity

# CESI

Prot: B1040412

**Annex to certificate:** IECEx CES 11.0014X Issue No.0 of 2011-09-28

**Applicant:** Euromotori S.r.l.  
Via Cavour s.n.c.; I-20846 Macherio (MB) - Italy

**Electrical Apparatus:** Three-phase and single-phase asynchronous motors supplied by mains or inverter, series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132, MAK 160

### Electrical characteristics (follows)

#### Temperature classes or maximum surface temperatures for the motors

T6 (T 85 °C), T5 (T 100 °C), T4 (T 125 °C), T3 (T 155 °C) as a function of the ambient temperature and of the electrical characteristics as indicated in the technical note n. E-NTD MAK 56-160 IIC.

Temperature class in function of the ambient temperature can be:

- 20 ÷ +40 °C for T6 (T 85 °C) or T5 (T 100 °C) or T4 (T 125 °C) or T3 (T 155 °C)
- 20 ÷ +45 °C for T6 (T 85 °C) or T5 (T 100 °C) or T4 (T 125 °C) or T3 (T 155 °C)
- 20 ÷ +50 °C for T6 (T 85 °C) or T5 (T 100 °C) or T4 (T 125 °C) or T3 (T 155 °C)
- 20 ÷ +55 °C for T5 (T 100 °C) or T4 (T 125 °C) or T3 (T 155 °C)
- 20 ÷ +60 °C for T5 (T 100 °C) or T4 (T 125 °C) or T3 (T 155 °C)

#### Inverter supply:

- |                         |         |     |
|-------------------------|---------|-----|
| - Maximum voltage:      | 660     | V   |
| - Frequency range:      | 5 ÷ 87  | Hz  |
| - Maximum peak voltage: | 930     | V   |
| - Number of poles:      | 2 and 4 |     |
| - Maximum rated speed:  | 3600    | rpm |
| - Duty:                 | S9      |     |

#### Motors supplied by frequency converter (temperature class T3, T 155 °C)

The three-phase asynchronous motors supplied by frequency converter show the rating data on a supplementary plate and shall be provided, inside the stator winding, with thermal detectors (PTC thermistors or "Klickson" bimetallic sensors) for temperature control.

The operation of thermal detectors, in case of anomalous operation of the motor, shall guarantee the disconnection of the supply at a maximum of 155 °C; the resetting of the supply shall not be automatic.

#### Forced ventilation by auxiliary motor (temperature class T3, T 155 °C)

The operation of the primary motor shall be interlocked to the correct operation of the forced ventilation.

Possible anticondensate heaters installed inside the motors can have a maximum power of 80 W.





Prot: B1040412

## IECEx Certificate of Conformity

# CESI

**Annex to certificate:** IECEx CES 11.0014X Issue No.0 of 2011-09-28

**Applicant:** Euromotori S.r.l.  
Via Cavour s.n.c.; I-20846 Macherio (MB) - Italy

**Electrical Apparatus:** Three-phase and single-phase asynchronous motors supplied by mains or inverter, series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132, MAK 160

### Installation Conditions

The cable entry devices used on the enclosure shall be suitably certified.  
The accessories used for cable entries and for the unused holes shall be subject of a separate certification according to the applicable standards:

- in execution Ex d IIC
- and for the equipment with dust protection 'tD' the accessories used for cable entries and for unused holes shall guarantee the degree of protection IP66 according to IEC 60034-5 and IEC 60529 standards.

If cylindrical threads are used the coupling between the cable gland and terminal box shall be provided with lock to prevent loosening.

### Warning label

"At every disassembly the silicone grease must be renewed on the joints"

"Use screws quality 8.8 UNI EN ISO 898-1"

"Warning - Do not open when an explosive atmosphere may be present"

### In case of disassembling of terminal box

"Warning – Use the identical special screws supplied by the manufacturer"

### For motors supplied by frequency converter:

"Caution - Winding protected with PTC thermistors"

or

"Caution - Winding protected with bimetallic sensors"

### In case of use of space heaters:

"Caution – Inside space heaters"

**For motors with temperature class T3 (T 155 °C) T4 (T 125 °C) and motors with temperature class T5 (T 100 °C) T6 (T 85 °C) marked for Tamb > 40 °C:**

"The supply cable must be suitable for an operating temperature  $\geq 90$  °C"





# IECEx Certificate of Conformity

Certificate No.: IECEx CES 11.0014X

Date of Issue: 2011-09-28

Issue No.: 0

Page 2 of 3

Manufacturer: **Euromotori S.r.l.**  
Via Cavour s.n.c.  
I- 20846 Macherio (MB)  
**Italy**

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:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 61241-0 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
<b>IEC 61241-1 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*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/CES/ExTR11.0016/00

Quality Assessment Report:

IT/CES/QAR09.0005/02





# IECEx Certificate of Conformity

Certificate No.: IECEx CES 11.0014X

Date of Issue: 2011-09-28

Issue No.: 0

Page 3 of 3

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Three-phase and single-phase asynchronous motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132 and MAK 160 supplied by mains or by frequency converter.  
The motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 112 and MAK 132 are made with motor enclosure directly communicating with the terminal compartment. The motors series MAK 100 and MAK 160 are made with terminal compartment separated of the motor enclosure. The motors are all made of grey cast iron.

The criteria for identification of types of the three-phase and single-phase asynchronous motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132 and MAK 160 are defined as follows:

- motor type MAK\* 56-63-71-80-90-100-112-132-160 from 2 to 8 poles: three-phase motor, centre height 56-63-71-80-90-100-112-132-160 at 2,4,6,8 poles.
- motor type MAK-M 56-63-71-80-90-100-112-132-160 from 2 to 6 poles : single-phase motor, centre height 56-63-71-80-90-100-112-132-160 at 2,4,6 poles.

\* WV in case of motors without fan.

The motors can be equipped with auxiliary devices (heaters, thermal detectors, etc.).  
See annex for further description.

### CONDITIONS OF CERTIFICATION: YES as shown below:

- The flamepaths are specified in the manufacturer drawings. For information regarding the dimensions of the flameproof joints the manufacturer shall be contacted.
- The external capacitor (for single-phase motors), which is not matter of the present certification, shall be placed in safety area or, alternatively, shall be made according to one of the type of protection listed in the IEC 60079-0 and/or IEC 61241-0 standards suitable for the installation in hazardous area.





# 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](http://www.iecex.com)

Certificate No.: IECEx CES 11.0014X issue No.: 1

Status: Current

Certificate history:  
Issue No. 1 (2015-5-22)  
Issue No. 0 (2011-9-28)

Date of Issue: 2015-05-22 Page 1 of 4

Applicant: **Euromotori S.r.l.**  
Via Cavour s.n.c.  
I- 20846 Macherio (MB)  
Italy

Electrical Apparatus: Three-phase and single-phase asynchronous motors supplied by mains or inverter, series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132, MAK 160

Optional accessory:

Type of Protection: Flameproof enclosures 'd'

Marking: Ex d IIC T6, T5, T4, T3 Gb

Approved for issue on behalf of the IECEx  
Certification Body:

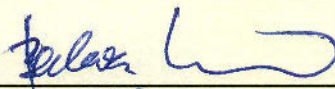
Mirko Balaz

Position:

Head of IECEx CB

Signature:  
(for printed version)

Date:

  
22-05-2015

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:

**CESI**  
Centro Elettrotecnico  
Sperimentale Italiano S.p.A.  
Via Rubattino 54  
20134 Milano  
Italy

**CESI**  
**CESI** S.p.A.

Testing & Certification Division  
Business Area Certification

Il Responsabile

(Roberto Piccin)







# IECEx Certificate of Conformity

Certificate No.: IECEx CES 11.0014X

Date of Issue: 2015-05-22

Issue No.: 1

Page 2 of 4

Manufacturer: **Euromotori S.r.l.**  
Via Cavour s.n.c.  
I- 20846 Macherio (MB)  
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** Explosive atmospheres - Part 0: General requirements  
Edition: 6.0

**IEC 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 6

*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/CES/ExTR11.0016/00

IT/CES/ExTR11.0016/01

### Quality Assessment Report:

IT/CES/QAR09.0005/05





# IECEx Certificate of Conformity

Certificate No.: IECEx CES 11.0014X

Date of Issue: 2015-05-22

Issue No.: 1

Page 3 of 4

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Three-phase and single-phase asynchronous motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132 and MAK 160 supplied by mains or by frequency converter.

The motors are all made of grey cast iron.

The single-phase motors are made with capacitors external to the motor or directly connected to it.

The criteria for identification of types of the three-phase and single-phase asynchronous motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132 and MAK 160 are defined as follows:

- motor type MAK\* 56-63-71-80-90-100-112-132-160 from 2 to 8 poles: three-phase motor, centre height 56-63-71-80-90-100-112-132-160 at 2,4,6,8 poles.
- motor type MAK-M 56-63-71-80-90-100-112-132-160 from 2 to 6 poles : single-phase motor, centre height 56-63-71-80-90-100-112-132-160 at 2,4,6 poles.

\* VV in case of motors without fan.

See annex for further description.

### CONDITIONS OF CERTIFICATION: YES as shown below:

- The flamepaths are specified in the manufacturer drawings. For information regarding the dimensions of the flameproof joints the manufacturer shall be contacted.
- When the supply voltage tolerance is not  $\pm 10\%$ , than on the name plate is provided indication of the range of voltage variation "Un  $\pm 5\%$ " (within "zone A" of the IEC 60034-1 standard).
- For single-phase asynchronous motors series MAK 56 + 160 without capacitor directly coupled to the motor: The external capacitor, which is not matter of the present certification, shall be placed in safety area or, alternatively, shall be made according to one of the type of protection listed in the IEC 60079-0 standards suitable for the installation in hazardous area.
- For installation in places with presence of gas group IIC, when motors are painted with a maximum thickness of paint exceeding 0.2 mm, shall be taken into account the risk of electrostatic charges.





# IECEx Certificate of Conformity

Certificate No.: IECEx CES 11.0014X

Date of Issue: 2015-05-22

Issue No.: 1

Page 4 of 4

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

### Variation 1.1

Three-phase and single-phase asynchronous motors series MAK 56 + 160, originally assessed in compliance with IEC 60079-0: 2004, have been re-assessed on the basis of the IEC 60079-0: 2011 standard. For EPL Gb no difference between the two standards affects the design of three-phase and single-phase asynchronous motors series MAK 56 + 160. The marking has been updated including the equipment protection level (EPL) "Gb". The three-phase and single-phase asynchronous motors series MAK 56 + 160 with type of protection "Ex tD" are excluded from this update of standard.

### Variation 1.2

New construction of single-phase asynchronous motors series MAK 56 + 160. The new construction of single-phase asynchronous motors is made by coupling to the terminal box, by means a fitting system, one or two enclosures for capacitor. The capacitor is completely sealed with sealant into enclosure which is made of machined steel bar with threaded cover.

### Variation 1.3

Modification of electrical characteristics for the single-phase asynchronous motors series MAK 56 + 160: Single-phase asynchronous motors series MAK 56 + 160 can be manufactured, for the same rated power, with windings having different rated voltage (from 48 V  $\pm$  5% up to 280 V  $\pm$  5%); all the other electrical characteristics, as well as the capacitors capacitance, are determined consequently.

### Variation 1.4

Motors supplied by frequency converter: In addition to the use of PTC or Klaxon inside the stator winding, the motors can also be equipped with PT100 thermal detectors. The new intervention temperature of probes is of 130 °C instead of the previous 155 °C.

### Variation 1.5

Constructional modification on motors series MAK 80, MAK 90 and MAK 100: The motors series MAK 80, MAK 90 and MAK 100 can be manufactured with a new minimum width of the cylindrical joint between frame and terminal box. The new minimum width of the cylindrical joint is 10.5 mm (18.5 mm previous). The width of the flanged part of the spigot joint frame/terminal box is unchanged.

### Variation 1.6

Updating routine tests.

### Variation 1.7

Editorial correction made on ExTR Cover and on ExTR Checklist.





Prot B5013101

## IECEx Certificate of Conformity

# CESI

**Annex to certificate:**

**IECEx CES 11.0014X Issue No.1 of 2015-05-22**

**Applicant:**

**Euromotori S.r.l.**

**Via Cavour s.n.c.; I-20846 Macherio (MB) - Italy**

**Electrical Apparatus:**

**Three-phase and single-phase asynchronous motors supplied by mains or inverter, series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132, MAK 160**

### Description of equipment

Three-phase and single-phase asynchronous motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132 and MAK 160 supplied by mains or by frequency converter.

The motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 112 and MAK 132 are made with motor enclosure directly communicating with the terminal compartment. The motors series MAK 100 and MAK 160 are made with terminal compartment separated of the motor enclosure.

The motors are all made of grey cast iron.

The single-phase motors are made with capacitors external to the motor or directly connected to it.

The version of single-phase motors with capacitor directly connected is made by coupling to the terminal box, by means a fitting system, one or two capacitor enclosures. The capacitor is completely sealed with sealant into enclosure which is made of machined steel bar with threaded cover.

The criteria for identification of types of the three-phase and single-phase asynchronous motors series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132 and MAK 160 are defined as follows:

- motor type **MAK\* 56-63-71-80-90-100-112-132-160** from 2 to 8 poles: three-phase motor, centre height 56-63-71-80-90-100-112-132-160 at 2,4,6,8 poles.
- motor type **MAK-M 56-63-71-80-90-100-112-132-160** from 2 to 6 poles : single-phase motor, centre height 56-63-71-80-90-100-112-132-160 at 2,4,6 poles.

\* **WV** in case of motors without fan.

The complete identification of all type of three-phase and single-phase asynchronous motors is detailed in the manufacturer documentation.

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

### Electrical characteristics

#### Mains supply:

- Maximum voltage: 1000 V (three-phase)  
294 V (single-phase)
- Maximum rated power: 0.12 ÷ 37 kW
- Rated frequency: 50 / 60 Hz
- Insulation class: F (t. F for T3)  
(t. B for T6, T5, T4)
- Duty: S1 ÷ S8
- Rated speed: 250 ÷ 3600 rpm
- Degree of protection: IP 55 or IP 66 (IEC 60034-5 and IEC 60529)
- Ambient temperature: -20 ÷ +60 °C (+40 °C; +45 °C; .....and +60 °C)

Possible anticondensate heaters installed inside the motors can have a maximum power of 80 W.





## IECEx Certificate of Conformity

# CESI

Prot B5013101

**Annex to certificate:**

**IECEx CES 11.0014X Issue No.1 of 2015-05-22**

**Applicant:**

**Euromotori S.r.l.**

**Via Cavour s.n.c.; I-20846 Macherio (MB) - Italy**

**Electrical Apparatus:**

**Three-phase and single-phase asynchronous motors supplied by mains or inverter, series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132, MAK 160**

**Electrical characteristics (follows)**

Frequency converter supply:

- Maximum voltage: 660 V
- Frequency range: 5 ÷ 87 Hz
- Number of poles: 2 and 4
- Maximum peak voltage: 930 V
- Maximum rated speed: 3600 rpm
- Duty: S9

Temperature classes for the motors

T6, T5, T4, T3 as a function of the ambient temperature and of the electrical characteristics as indicated in the manufacturer documentation.

Temperature class in function of the ambient temperature can be:

- 20 ÷ +40 °C for T6 or T5 or T4 or T3
- 20 ÷ +45 °C for T6 or T5 or T4 or T3
- 20 ÷ +50 °C for T6 or T5 or T4 or T3
- 20 ÷ +55 °C for T5 or T4 or T3
- 20 ÷ +60 °C for T5 or T4 or T3

Motors supplied by frequency converter (temperature class T3)

The three-phase asynchronous motors supplied by frequency converter show the rating data on a supplementary plate and shall be provided, inside the stator winding, with thermal detectors (PTC, Klixson, PT100) for temperature control.

The PTC or Klixson thermal detectors are calibrated for cut off the supply at 130 °C; the protection circuit connected with the PT 100 thermal detectors shall be calibrated for an intervention at 130 °C. The resetting of the supply shall not be automatic.

Forced ventilation by auxiliary motor (temperature class T3)

The operation of the primary motor shall be interlocked to the correct operation of the forced ventilation.

**Installation Conditions**

The cable entry devices used on the enclosure shall be suitably certified.

The accessories used for cable entries and for the closing of the unused holes shall be subject of separate certification according to IEC 60079-0 and IEC 60079-1 standards for gas group IIC and guarantee the minimum degree of protection as indicated on plate.

If cylindrical threads are used the coupling between the cable gland and terminal box shall be provided with block to prevent loosening.





## IECEx Certificate of Conformity

**CESI**

Prot B5013101

**Annex to certificate:**

**IECEx CES 11.0014X Issue No.1 of 2015-05-22**

**Applicant:**

**Euromotori S.r.l.**

**Via Cavour s.n.c.; I-20846 Macherio (MB) - Italy**

**Electrical Apparatus:**

**Three-phase and single-phase asynchronous motors supplied by mains or inverter, series MAK 56, MAK 63, MAK 71, MAK 80, MAK 90, MAK 100, MAK 112, MAK 132, MAK 160**

### **Warning label**

"At every disassembly the silicone grease must be renewed on the joints"

"Use screws quality 8.8 UNI EN ISO 898-1"

"Warning - Do not open when an explosive atmosphere may be present"

### **In case of disassembling of terminal compartment**

"Warning – Use the identical special screws supplied by the manufacturer"

### **For motors supplied by frequency converter:**

"Caution - Winding protected with PTC thermistors"

or

"Caution - Winding protected with bimetallic sensors"

or

"Caution - Winding protected with PT 100 detectors. Calibrate at 130 °C"

### **In case of use of space heaters:**

"Caution – Inside space heaters"

**For motors with temperature class T3, T4 and motors with temperature class T5, T6 marked for Tamb > 40 °C:**

"The supply cable must be suitable for an operating temperature  $\geq 90$  °C"