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 INE 11.0037X

Issue No: 1

Certificate history:
Issue No. 1 (2018-03-14)
Issue No. 0 (2012-02-24)

Status: **Current**

Date of Issue: **2018-03-14**

Applicant: **COEL MOTORI S.r.l**
Via campania, 40
I - 20090 Fizzonasco di Pieve Emanuele (MI)
Italy

Equipment: **Electromagnetic Brakes type VIS II ...**
Optional accessory:

Type of Protection: **db and tb**

Marking:
Ex db IIB or IIC T5, T4 or T3 Gb
Ex db I Mb
Ex tb III C T100°C, T135°C or T200°C Db
IP66

Approved for issue on behalf of the IECEx Certification Body: Thierry HOUEIX

Position: Ex Certification Officer

Signature:
(for printed version)

Date: 2018-03-14

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:

INERIS
Institut National de l'Environnement Industriel
et des Risques, BP n2
Parc Technologique ALATA
France

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Manufacturer: **COEL MOTORI S.r.l**
Via campania, 40
I - 20090 Fizzonasco di Pieve Emanuele (MI)
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 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"

*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:

FR/INE/ExTR11.0010/00 FR/INE/ExTR11.0010/01

Quality Assessment Report:

FR/INE/QAR11.0012/04

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The enclosure of the electromagnetic brake is fitted with a communication terminal box, the whole protected by flameproogf enclosure.
The electromagnetic brakes can be used down to -50°C except the type VIS II 250/280 and VIS II 315.
The electromagnetic brake is fitted with two internal thermal probes put in the winding. In option, it can be fitted with internal PTC or heating resistance.
The screws used for the assembly of the various parts of explosion-proof enclosures are made in quality higher or equal to 12.9
The enclosure gets the degrees of protection IP66 in accordance with IEC 60529.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The flameproof joints have different values from those specified in the tables of the IEC 60079-1 standard, contact the manufacturer for any repair.
- For group I, the user shall take into consideration that the equipment underwent only a shock test corresponding to a low risk energy.

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

For the issue n°1
-Addition of the new electromagnetic brakes types VIS II P25, VIS II P150, VIS II 315, VIS II P350 and VIS II P750.
-Application of the standards IEC 60079-0:2011, IEC 60079-1:2014 and IEC 60079-31:2013

Annex:

IECEx INE 11.0037X-01_Annex.pdf

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Certificate No.: IECEx INE 11.0037X

Issue No.: 01

Annex: IECEx INE 11.0037X-01_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

Supply voltage:

From 24 to 690 V AC
From 24 V to 300 V DC
Frequency: 50/60Hz
Isolation class: F

Type of Brake	Braking couple	Maximum duty cycles in case of sliding of the brake disk for a maximum 0.5 second for one time	Maximum duty cycles in case of sliding of the brake disk for a maximum 0.8 second for one time
VIS II 63/71	8 Nm	1800 starts/hour maximum	900 starts/hour maximum
VIS II 80/90	22 Nm	1800 starts/hour maximum	900 starts/hour maximum
VIS II 100/112	60 Nm	1300 starts/hour maximum	650 starts/hour maximum
VIS II 132/160	180 Nm	900 starts/hour maximum	450 starts/hour maximum
VIS II 180/200	460 Nm	600 starts/hour maximum	300 starts/hour maximum
VIS II 250/280	1200 Nm (S1) 2000 (S2, S3, S4)	600 starts/hour maximum	900 starts/hour maximum
VIS II P25	25 Nm	1800 starts/hour maximum	450 starts/hour maximum
VIS II P150	150 Nm	900 starts/hour maximum	100starts/hour maximum
VIS II 315	2200 Nm (S1) 3600 (S2, S3, S4)	280 starts/hour maximum	100 starts/hour maximum
VIS II P350	350 Nm	600 starts/hour maximum	300 starts/hour maximum
VIS II P750	750 Nm	600 starts/hour maximum	300 starts/hour maximum

Characteristic of the thermal switches :

Threshold of release : 125°C ± 5°C for class T4/T135°C, class T3/T200°C or group I
Threshold of release : 90°C ± 5°C for class T5/T100°C.

These electromagnetic brakes are intended to be used in the following ranges of ambient temperature:

- -20°C to 55°C or 60°C for electromagnetic brake type VIS II 250/280 and VIS II 315.
- -50°C to 55°C or 60°C for all other types.

MARKING

Marking has to be readable and indelible; it has to include the following indications:

A- Electromagnetic brake for group II:

- COEL MOTORI S.r.l
- I – 20090 Fizzonasco di Pieve Emanuele
- VIS II…**(*)**
- IECEx INE 11.0037X
- (Serial number)
- Ex db IIB or IIC T**(**)** Gb
- T_{amb} : **(**)**
- T.cable : 80°C
- IP66
- **WARNING:** DO NOT OPEN WHEN ENERGIZED IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.

(*) One of the following types : VIS II 63/71, VIS II 80/90, VIS II 100/112, VIS II 132/160, VIS II 180/200, VIS II 250/280, VIS II P25, VIS II P150, VIS II 315, VIS II P350 or VIS II P750.

(**) See table below.

B- Electromagnetic brake for group III:

- COEL MOTORI S.r.l
- I – 20090 Fizzonasco di Pieve Emanuele
- VIS II…**(*)**
- IECEx INE 11.0037X
- (Serial number)
- Ex tb IIIC T**(**)** Db
- T_{amb} : **(**)**
- T.cable : 80°C
- IP66
- **WARNING: DO NOT OPEN WHEN ENERGIZED IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.**

(*) One of the following types : VIS II 63/71, VIS II 80/90, VIS II 100/112, VIS II 132/160, VIS II 180/200, VIS II 250/280, VIS II P25, VIS II P150, VIS II 315, VIS II P350 or VIS II P750.

(**) See table below.

C- Electromagnetic brake for groups II and III:

- COEL MOTORI S.r.l
- I – 20090 Fizzonasco di Pieve Emanuele
- VIS II…**(*)**
- IECEx INE 11.0037X
- (Serial number)
- Ex db IIB or IIC T**(**)** Gb
- Ex tb IIIC T**(**)** Db
- T_{amb} : **(**)**
- T.cable : 80°C
- IP66
- **WARNING:** DO NOT OPEN WHEN ENERGIZED IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.

(*) One of the following types : VIS II 63/71, VIS II 80/90, VIS II 100/112, VIS II 132/160, VIS II 180/200, VIS II 250/280, VIS II P25, VIS II P150, VIS II 315, VIS II P350 or VIS II P750.

(**) See table below.

D- Electromagnetic brake for group I:

- COEL MOTORI S.r.l
- I – 20090 Fizzonasco di Pieve Emanuele
- VIS II…**(*)**
- IECEx INE 11.0037X
- (Serial number)
- Ex db I Mb
- T_{amb} : **(**)**
- T.cable : 80°C
- IP66
- **WARNING:** DO NOT OPEN WHEN ENERGIZED IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.

(*) One of the following types: VIS II 63/71, VIS II 80/90, VIS II 100/112, VIS II 132/160, VIS II 180/200, VIS II 250/280.

(**) -20°C to +55°C for the type VIS II 250/280 or -50°C to +55°C for VIS II 63/71, VIS II 80/90, VIS II 100/112, VIS II 132/160, VIS II 180/200.

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Annex: IECEx INE 11.0037X-01_Annex.pdf

Type of brake	Temperature class		Ambient temperature	Threshold of release of the thermal probe
	Gas	Dust		
VIS II 63/71, VIS II 80/90, VIS II 100/112 VIS II 132/160 VIS II 180/200	T5	T100°C	-20°C +60°C, -50°C +60°C	90°C ± 5°C
	T4	T135°C	-20°C +55°C, -50°C +55°C	125°C ± 5°C
	T3	T200°C		
VIS II 250/280	T5	T100°C	-20°C +60°C	90°C ± 5°C
	T4	T135°C	-20°C +55°C	125°C ± 5°C
	T3	T200°C		
VIS II P25	T5	T100°C	-20°C +60°C, -50°C +60°C	90°C ± 5°C
	T4	T135°C	-20°C +55°C, -50°C +55°C	125°C ± 5°C
VIS II P150	T5	T100°C	-20°C +60°C, -50°C +60°C	90°C ± 5°C
	T4	T135°C	-20°C +55°C, -50°C +55°C	125°C ± 5°C
VIS II 315	T5	T100°C	-20°C +60°C	90°C ± 5°C
	T4	T135°C	-20°C +55°C	125°C ± 5°C
VIS II P350	T5	T100°C	-20°C +60°C, -50°C +60°C	90°C ± 5°C
	T4	T135°C	-20°C +55°C, -50°C +55°C	125°C ± 5°C
VIS II 750	T5	T100°C	-20°C +60°C, -50°C +60°C	90°C ± 5°C
	T4	T135°C	-20°C +55°C, -50°C +55°C	125°C ± 5°C

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.2 of the IEC 60079-1 standard, the equipment defined above is exempted from routine test due to the fact a static pressure test has been performed at 4 times the reference pressure under:

- 68 bar for the electromagnetic brake type VIS II 315 and 250/280.
- 58.8 bar for all other types.