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 12.0016X issue No.:0

Certificate history:

Status: **Current**

Date of Issue: **2013-07-09** Page 1 of 3

Applicant:
ARIET
Via Monza, 13
I - 20060 Bussero (MI)
Italy

Electrical Apparatus: **Electromagnetic brake type PY0.., PY1.., PY2.. or PY3..**
Optional accessory:

Type of Protection: **d, d e, and tb**

Marking:
Ex d IIB or IIC T5 or T4 Gb
Ex d e IIB or IIC T5 or T4 Gb
Ex tb IIIC T100°C or T135°C Db IP66

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

Position: Ex Certification Officer

Signature:
(for printed version)

Date: 2013-07-09

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
F-60550 Verneuil-En-Halatte
France

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Manufacturer: **ARIET**
Via Monza, 13
I - 20060 Bussero (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 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 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 Edition: 4	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:
FR/INE/ExTR12.0015/00

Quality Assessment Report:

FR/INE/QAR11.0005/01

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Schedule

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

The electromagnetic brake consists of a casing protectred by flameproof enclosure and receiving the electrical live part and brake disc. The terminal box is proteted by flameproof enclosure or by increased safety.
These electromagnetic brakes get the degrees of protection IP66 in accordance with the IEC 60529 standard .

CONDITIONS OF CERTIFICATION: YES as shown below:

The gap and diametric clearance of the different flamepath joints are less than the values specified in the tables of the IEC 60079-1 standard.
The width of the different flameproof joints is superior to that specified in tables of IEC 60079-1 standard.

Annexe: IECEx INE 12.0016X_Annex.pdf

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PARAMETERS RELATING TO THE SAFETY

Maximum supply voltage	:	24 to 750V (AC) : 12 to 440 V (DC)
Frequency	:	47 to 63 Hz
Operating cycle	:	S1 (continuous cycle) S2 (40% - 180 working/h) S3 (40% - 240 working/h)

Nominal power of electromagnetic brake

Brake type PY0	:	88 W
Brake type PY1	:	105 W
Brake type PY2	:	295 W
Brake type PY3	:	500 W

Static torque of electromagnetic brake

Brake type PY0	:	0,3 to 0,8 Nm
Brake type PY1	:	1 to 3 Nm
Brake type PY2	:	5 to 12 Nm
Brake type PY3	:	16 to 32 Nm

These enclosures can be used in range of ambient temperatures from -20°C or -50°C to 40°C or 55°C.

MARKING

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

A – Electromagnetic brake with terminal box "Ex d":

- ARIET
- I – 20060 Bussero
- PY**(*)**
- IECEx INE 12.0016X
- (Serial number)
- Ex d IIB or IIC T**(**) Gb**
- Ex tb IIIC T(**) Db IP66
- …°C < Tamb < …°C **(**)**
- T.Cable : **(**)**
- FOR INPUT HOLES: SEE SAFETY NOTE.
- **WARNINGS:**
- DO NOT OPEN WHEN ENERGIZED

- AFTER DE-ENERGIZING, DELAY 5 MINUTES BEFORE OPENING
- USE SCREWS HAVING MINIMUM QUALITY A2 CLASS 70

(*) Type is completed by number and letter in accordance with the manufacturing variations.

(**) See table below.

Range of ambient temperature if different from -20°C to 40°C (see table below).

A – <u>Electromagnetic brake with terminal box "Ex e"</u>:

- ARIET
- I – 20060 Bussero
- PY**(*)**
- IECEx INE 12.0016X
- (Serial number)
- Ex d e IIB or IIC T**(**)** Gb
- Ex tb IIIC T(**) Db IP66
- …°C < Tamb < …°C **(**)**
- T.Cable : **(**)**
- FOR INPUT HOLES: SEE SAFETY NOTE.
- **WARNINGS:**
- DO NOT OPEN WHEN ENERGIZED
- AFTER DE-ENERGIZING, DELAY 5 MINUTES BEFORE OPENING
- USE SCREWS HAVING MINIMUM QUALITY A2 CLASS 70

<u>On the terminal box</u>:

- The symbol "e"
- (Rated voltage and rated current and/or rated voltage)

(*) Type is completed by number and letter in accordance with the manufacturing variations.

(**) See table below.

Range of ambient temperature if different from -20°C to 40°C (see table below).

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Type of electromagnetic	Range of ambient temperatures	Explosive atmosphere concerned		Cable temperature
		Gas	Dust	
PY0 to PY3	-20°C to 40°C or -50°C to 40°C	T5	T100°C	NA
PY0 to PY3	-20°C to 55°C or -50°C to 55°C	T4	T135°C	90°C

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ROUTINE EXAMINATIONS AND TESTS

For the terminal box in version Ex d for ambient temperature -20°C and -50°C:

In accordance with clause 16.2 of the IEC 60079-1 standard, the equipment defined above is exempted of routine test in owing to the fact that it has undergone a static type test at 4 times the reference pressure under 18.4 bar.

For the brake types PY0, PY1 and PY2 for ambient temperature -20°C and -50°C:

In accordance with clause 16.2 of the IEC 60079-1 standard, the equipment defined above is exempted of routine test in owing to the fact that it has undergone a static type test at 4 times the reference pressure under 31.6 bar.

For the brake type PY3 for ambient temperature -20°C:

In accordance with clause 16.2 of the IEC 60079-1 standard, the equipment defined above is exempted of routine test in owing to the fact that it has undergone a static type test at 4 times the reference pressure under 32.8 bar.

For the brake types PY3 for ambient temperature -50°C:

In accordance with clause 16.1 of the IEC 60079-1 standard each equipment defined above has to have successfully passed, before delivery, an overpressure test of a period comprised between 10 and 60 seconds under :

- 15.6 bar for the brake type PY3.

For the terminal box in version Ex e:

In accordance with clause 7.2 of the IEC 60079-7 standard, a test of dielectric strength for the version with terminal box protected by increased safety on each of the different circuits of the connection units, performed according to the relevant standards, the test voltage being applied during one minute.