(2) **Equipment and protective systems intended for use in potentially explosive atmospheres**
Directive 94/9/EC

(1) EC-TYPE EXAMINATION CERTIFICATE

(3) Number of the EC type examination certificate: **INERIS 12ATEX0084X**

(4) Equipment or protective system:

ELECTROMAGNETIC BRAKES TYPE PY0.., PY1.., PY2.. and PY3..

(5) Manufacturer: ARIET

(6) Address: Via Monza, 13
I - 20060 Bussero (MI)

(7) This equipment or protective system and any other acceptable alternative of this one are described in the annex of this certificate and the descriptive documents quoted in this annex.

(8) INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23rd March 1994, certifies that this equipment or protective system fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in annex II of the Directive.

The examinations and the tests are consigned in report No 025843/13.

(9) The respect of the Essential Health and Safety Requirements is ensured by:

- conformity with:

EN 60079-0	:	2009	IEC 60079-0	:	2011
EN 60079-1	:	2007	IEC 60079-1	:	2007
EN 60079-7	:	2007	IEC 60079-7	:	2006
EN 60079-31	:	2009	IEC 60079-31	:	2008

- specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

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Institut national de l'environnement industriel et des risques
Etablissement public à caractère industriel et commercial - RCS Senlis B 381 984 921 - Siret 381 984 921 00019 - APE 743B

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protective system is subjected to the special conditions for safe use, mentioned in the annex of 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 the protective system will have to contain:

Verneuil-en-Halatte, 2013.06.25

The Chief Executive Officer,
By delegation
T. HOUEIX
Ex Certification Officer

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N°INERIS 12ATEX0084X

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

The electromagnic brake consists of a casing protected by flameproof enclosure and receiving the electrical live part and brake discs. The terminal box is protected by flameproof enclosure or by increased safety.

These enclosures get the degrees of protection IP66 in accordance with EN/IEC 60529.

PARAMETERS RELATING TO THE SAFETY

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

Nominal power

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

Static torque

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 electromagnetic brakes 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(*)
INERIS 12ATEX0084X
⟨Ex⟩ II 2 G ⟨Ex⟩ II 2 D
(Serial number)
(Year of contruction)
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 temperature ambient if different from -20°C to 40°C.

B - **Electromagnetic brake with terminal box "Ex e":**

ARIET
I - 20060 Bussero
PY(*)
INERIS 12ATEX0084X
⟨Ex⟩ II 2 G ⟨Ex⟩ II 2 D
(Serial number)
(Year of construction)
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

On the terminal box:

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

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

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

Type of brake	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

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

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 EN/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 EN/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 EN/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 EN/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 terminal box in version Ex e:

In accordance with clause 7.1 of the EN/IEC 60079-7 standard, each apparatus defined above has to have successfully passed, before delivery, a test of dielectric on the circuit of the connection unit, performed according to the relevant standards, the test voltage being applied during one minute.

(16) DESCRIPTIVE DOCUMENTS

The descriptive document quoted hereafter constitutes the technical documentation of the equipment, subject of this certificate.

Certification file n°PY/DC/IECEx/ATEX (6 rubrics) of 2012.02.11 signed on 2013.02.12

(17) SPECIAL CONDITIONS FOR SAFE USEE

- The gap and diametrical clearance of the flamepath joints are less than the values specified in the tables of the EN/IEC 60079-1 standard.
- The width of the flameproof joints is superior to those specified in tables of EN/IEC 60079-1 standard.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is ensured by:

- Conformity to the standards quoted in clause (9).
- All provisions adopted by the manufacturer and defined in the descriptive documents.