




# 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 INE 12.0007X	issue No.:	0	Certificate history:	
Status:	Current				
Date of Issue:	2012-07-25	Page 1 of 3			
Applicant:	<b>ARIET</b> Via Monza, 13 I - 20060 Bussero (MI) Italy				
Electrical Apparatus:	<b>Electromagnetic brake type BY...</b>				
Optional accessory:					
Type of Protection:	mb				
Marking:	Ex mb IIC T6, T5, T4 or T3 Gb Ex mb IIIC T85°C, T100°C, T135°C or T200°C Db				
Approved for issue on behalf of the IECEx Certification Body:	Thierry HOUÉIX				
Position:	Ex Certification Officer				
Signature: (for printed version)					
Date:	2012-07-25				



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

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**

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 60079-18 : 2009** Explosive atmospheres Part 18: Equipment protection by encapsulation "m"

Edition: 3

*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/ExTR11.0034/00](#)

Quality Assessment Report:

[FR/INE/QAR11.0005/00](#)



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## Schedule

### **EQUIPMENT:**

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

The equipment is an electromagnetic brake encapsulated in a metallic enclosure.  
It exists four different types BY71, BY80, BY 90 and BY100.  
In alternative, the brake is fitted with a ventilator or self ventilated motor on all the sizes of brake.  
This electromagnetic brake gets the degrees of protection IP6X in accordance with IEC 60529.

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

The user will have to carry out a regular cleaning of the device in order to avoid the deposits of dust.



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## PARAMETERS RELATING TO THE SAFETY

The electromagnetic type BY71, BY80, BY90 or BY100 brake is supplied by a power source with the following parameters:

- $U_{max} = 12 \text{ Vdc to } 415 \text{ Vdc}$        $I_{max} = 4 \text{ kA}$ .

This equipment can be used in range of ambient temperatures from  $-50^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  or  $+55^{\circ}\text{C}$ .

- The use of the equipment must respect the following specifications according to the temperature class, ambient temperature and/or the maximum surface temperature:

Service *	Brake type BY71, BY80 and BY90 with ventilation				
	n rotation speed				max. ambient temperature
	$145 \leq n < 1450 \text{ rpm}$		$n \geq 1450 \text{ rpm}$		
	Gas	Dust	Gas	Dust	
S3	T4	T135°C	T6	T85°C	40°C
S4	T5	T100°C	T6	T85°C	40°C
S1	T5	T100°C	T6	T85°C	40°C
S3	T4	T135°C	T5	T100°C	55°C
S4	T4	T135°C	T5	T100°C	55°C
S1	T4	T135°C	T6	T85°C	55°C

\* Different functional cycles available:

- - S1 :  $2/3 \times U_n$
- - S3 : 4 min. ON / 6 min. OFF
- - S4 : 4 sec. ON / 9 sec. OFF



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## **ROUTINE EXAMINATIONS AND TESTS**

Each piece of equipment defined above has to successfully pass the following individual tests before delivery:

- In accordance with clause 9.1 from the IEC 60079-18 standard, a visual examination of encapsulation.
- In accordance with clause 9.2 from the IEC 60079-18 standard, a test of dielectric strength performed according to the relevant standards, between active and metallic mass, the potential test being applied for a minimum period of one second must be equal to 1800 Vrms for each type.