



# 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 10.0013X issue No.:2

Status: **Current**

Date of Issue: **2016-01-21** Page 1 of 4

Applicant: **Automatisme du Centre Est (ACE)**  
ZAE Capnord  
4, rue Nourissat  
F-21000 DIJON  
**France**

Electrical Apparatus: **Solenoid type 800700...**  
Optional accessory:

Type of Protection: **d**

Marking: **Ex d IIB + H2 T6, T5 or T4 Gb**

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

Position: Ex Certification Officer

Signature:  
(for printed version)

Date: \_\_\_\_\_

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: **Automatisme du Centre Est (ACE)**  
ZAE Capnord  
4, rue Nourissat  
F-21000 DIJON  
**France**

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 : 2007-10** Explosive atmospheres - Part 0: Equipment - General requirements

Edition: 5

**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:

[FR/INE/ExTR10.0005/00](#)

[FR/INE/ExTR10.0005/01](#)

[FR/INE/ExTR10.0005/02](#)

#### Quality Assessment Report:

[FR/INE/QAR10.0004/05](#)



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## Schedule

### EQUIPMENT:

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

The enclosure, made in steel, is composed by a housing including an electrical coil shrouded in resin and by a junction box, made in steel or light alloy, protected by flameproof enclosure.

The junction box can be replaced by threaded flange, fixed by screws, to adapt a certified type conduit entry. Solenoid may contain certified type closing cap or adapters.

Connection with the external electric circuits is ensured by the intermediary of certified type cable entry or conduit entry.

The solenoid offers the degrees of protection IP66 according to IEC 60529 standard.

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

In order to guarantee the tensile strength of the screws of the flameproof junction box, the screws must have a property class 8.8 minimum.

Length and gap of the flamepaths shall be in accordance with those defined in manufacturer's documents.



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

### Issue 1:

- add of marking:

Warning: "This equipment shall be installed so that the flanged joint are not within 5 mm of solid object that is not part of this equipment"

### Issue 2:

- add of marking:

Warning: "This equipment shall be installed so that the flanged joint are not within 1 mm of solid object that is not part of this equipment"



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Annexe: IECEx INE 10.0013X-02\_Annex.pdf

## PARAMETERS RELATING TO THE SAFETY

Nominal voltages in direct current: from 12 to 220 Volts,

Nominal voltages in alternative current: 24, 110 and 220 Volts,

Maximum powers: from 13.2 to 16.4 Watts.

### Table for temperature class

SOLENOID TYPE	Direct voltage (V)	alternative voltage (V)	(1) at T amb =40°C	(1) at T amb =50°C	(1) for T amb =60°C
3600	220	/	T6	T5	T5
2930	200	220	T6	T5	T5
873	110	/	T6	T5	T5
680	96	110	T6	T5	T4
174	48	/	T6	T5	T5
35	24	/	T5	T4	T4
42	24	/	T6	T5	T5
35	22	24	T6	T5	T5
11	12	/	T6	T5	T5

## MARKING

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

Automatisme du Centre Est (ACE)

ZAE Capnord

1, rue Nourissat

F-21000 Dijon

800700...

IECEx INE 10.0013X

(Serial number)

Ex d IIB + H2 T<sup>(1)</sup> Gb

T. Amb : from -20°C to +40°C or +50°C or +60°C

T.Cable : 73°C at T.Amb 40°C or 83°C at T.Amb 50°C or 93°C at T.Amb 60°C

**WARNING: DO NOT OPEN WHEN ENERGIZED.**

**THIS EQUIPMENT SHALL BE INSTALLED SO THAT THE FLANGED JOINT ARE NOT WITHIN 1 MM OF A SOLID OBJECT THAT IS NOT PART OF THIS EQUIPMENT.**



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## **ROUTINE EXAMINATIONS AND TESTS**

In accordance with 16.2 of the IEC 60079-1 standard, the body of the solenoid and the junction box in flameproof version having undergone successfully a static overpressure test to four times reference pressure at 24 bar, the apparatus is exempt of individual test.

In accordance with 16.1 of the IEC 60079-1 standard, the welded unit (marks 3, 4 and 5 of the drawing N° 800700-IECEx d) must have undergone successfully, prior to delivery, a static overpressure test of 9 bar for 10 seconds minimum.