IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx INE 11.0011X**

Certificate history:
Issue 0 (2011-07-22)

Status: **Current**

Issue No: 1

Date of Issue: 2019-02-06

Applicant: **AUTOMATISME DU CENTRE EST (ACE)**
ZAE CAPNORD
4,rue Nourissant
F-21067 Dijon CEDEX
France

Equipment: **Solenoid valve type 800900-..-.....**

Optional accessory:

Type of Protection: **db h mb or eb h mb or h tb**

Marking: Ex db h mb I Mb
Ex db h mb IIC T6 or T5 Gb
Ex eb h mb IIC T6 or T5 Gb
Ex h tb III C T85 °C or T100 °C Db

Approved for issue on behalf of the IECEx Certification Body: **Dominique Charpentier**

Position: **Certification division manager**

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 www.iecex.com or use of this QR Code.

Certificate issued by:

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

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Date of issue: 2019-02-06 Issue No: 1

Manufacturer: **AUTOMATISME DU CENTRE EST (ACE)**
ZAE CAPNORD
4,rue Nourissant
F - 21067 Dijon CEDEX
France

Additional manufacturing locations:

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 equipment 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 60079-0:2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1:2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-18:2017 Edition:4.1	Explosive atmospheres - Part 18: Protection by encapsulation "m"
IEC 60079-31:2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2017 Edition:5.1	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
ISO 80079-36:2016 Edition:1.0	Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic methods and requirements
ISO 80079-37:2016 Edition:1.0	Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k"

This Certificate **does not** indicate compliance with 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/ExTR11.0012/01

Quality Assessment Report:

FR/INE/QAR10.0004/07

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

The solenoid enclosure, made in steel or stainless steel, is constituted by a housing including an electrical coil protected by encapsulation in resin, and by a junction box, protected by flameproof or increased safety enclosure.

This equipment is also fitted with a hydraulic valve, protected by constructional safety “c”, to be inserted in hydraulic circuit.

The device is also protected against dust, protection mode "tb".

Solenoid may be fitted with certified closing cap or adapters.

Connection with the external electric circuits is ensured by certified cable entry.

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

SPECIFIC CONDITIONS OF USE: YES as shown below:
To guarantee the tensile strength of the screws of the flameproof junction box, the yieldstress of the screws must be at least equal to 700N/mm^2.

Length and gap of the flamepath shall be in accordance with the values defined in documents of the manufacturer.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
For Issue No.: 1 :

- Application of the following standards for electrical part:
  IEC 60079-0 : 2017
  IEC 60079-1 : 2014-06
  IEC 60079-18 : 2017
  IEC 60079-31 : 2013
  IEC 60079-7 : 2017
- Application of the following standards for non-electrical part:
  ISO 80079-36 : 2016
  ISO 80078-37 : 2016

Annex:

IECEx INE 11.0011X-01_Annex.pdf

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PARAMETERS RELATING TO THE SAFETY

Nominal voltage in direct current : 24 V (dc)

Maximum power : 11.5 W

Maximum temperature of hydraulic fluid : 70°C

Table for temperature class:

		(1)			(2)		
		Maximum ambient temperature					
Type	Voltage (Vdc)	+40°C	+50°C	+60°C	+40°C	+50°C	+60°C
800900-50-…	24	T6	T5	T5	T85°C	T100°C	T100°C

MARKING

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

Type 800900-50-ED6 or 800900-50-SED6:

AUTOMATISMES DU CENTRE EST (ACE)
F-2100 DIJON
800900-50-ED6 or 800900-50-SED6
IECEx INE 11.0011X
(Serial Number)
(Year of Construction)

Ex db h mb IIC T(1) Gb

Ex h tb IIIC T(2) Db IP66

or

Ex eb h mb IIC T(1) Gb

Ex h tb IIIC T(2) Db IP66

or

Ex db h mb I Mb

Tamb.: from –25 to +40°C or +50°C or +60°C
Tcable: 80°C at Tamb. = 50°C or 90°C at Tamb. = 60°C
Code of connection
Rated voltage, maximum power
WARNING: DO NOT OPEN WHEN ENERGIZED

Type 800900-50-SEW6:

AUTOMATISMES DU CENTRE EST (ACE)
F-2100 DIJON
800900-50-SEW6
IECEx INE 11.0011X
(Serial Number)
(Year of Construction)

Ex db h mb IIC T(1) Gb

Ex h tb IIIC T(2) Db IP66

or

Ex eb h mb IIC T(1) Gb

Ex h tb IIIC T(2) Db IP66

Tamb.: from –25 to +40°C or +50°C or +60°C
Tcable: 80°C at Tamb. = 50°C or 90°C at Tamb. = 60°C
Code of connection
Rated voltage, maximum power
WARNING: DO NOT OPEN WHEN ENERGIZED

(1) and (2): see table above for temperature class according to maximum ambient temperature

ROUTINE EXAMINATIONS AND TESTS

Each apparatus defined above must have successfully passed before delivery:

For all versions:

- In accordance with clause 9.1 of IEC 60079-18 standard, a visual examination of encapsulation.
- In accordance with clause 9.2 of IEC 60079-18 standard, a test of dielectric strength on each of the different circuits. The test shall be carried out in accordance with clause 8.2.4 of IEC 60079-18 standard under 500 V r.m.s.
  The test voltage shall be applied for at least 1 second.

In addition, for Ex eb mb versions:

- In accordance with clause 7.1 of IEC 60079-7 standard, a test of dielectric strength on each of the different circuits. The test shall be carried out in accordance with clause 6.1 of IEC 60079-7 standard under 500 V r.m.s.
  The test voltage shall be applied for at least 1 minute.

In accordance with clause 16.2 of IEC 60079-1 standard, the equipment defined above is exempted of routine test since it has undergone a type test at 4 times the reference pressure under 42.4 bar.

Ex COMPONENTS USED

Apparatus defined above may use the following Ex component(s):

Terminals	07-9702-0.2./....	IECEx PTB 07.0007U	Ex eb IIC Gb or Ex eb I Mb	IEC 60079-0: 2011 (1) IEC 60079-7: 2015 (2)

(1) The component is not impacted by the major technical changes of IEC 60079-0:2017 standard
(2) The component is not impacted by the major technical changes of IEC 60079-7:2017 standard