



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

### Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX INE 18.0003U** Page 1 of 4 [Certificate history:](#)  
Issue 0 (2018-07-30)

Status: **Current** Issue No: 1

Date of Issue: 2023-05-30

Applicant: **SCHNEIDER Electric Industries SAS**  
35, rue Joseph Monier  
Rueil Malmaison 92500  
France

Ex Component: Control and Signaling Units type XB4B...EX, XB4B...GEX and ZB....GEX

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **d e m t**

Marking: Ex eb mb IIC Gb or Ex db eb IIC Gb or Ex db eb mb IIC Gb  
Ex tb IIIC Db

Approved for issue on behalf of the IECEx  
Certification Body:

Position:

Signature:  
(for printed version)

Date:  
(for printed version)



Thierry HOUEIX

Ex Certification Officer

Signé électroniquement  
Digitally signed by  
Thierry HOUEIX  
Ex Certification Officer  
Délégué Certification

2023-06-05

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Certificate issued by:

**INERIS**  
Institut National de l'Environnement Industriel et des Risques  
BP n2 / Parc Technologique ALATA  
F-60550 Verneuil-en-Halatte  
France



controlling risks  
for sustainable development



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Manufacturer: **SCHNEIDER ELECTRIC INDUSTRIES SAS**  
BP 360  
ZI n°3  
16340 L'ISLE D'ESPAGNAC  
FRANCE  
**France**

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 component 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](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

[IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"  
Edition:4.1

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

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 component listed has successfully met the examination and test requirements as recorded in:

Test Report:

[FR/INE/ExTR18.0004/01](#)

Quality Assessment Report:

[FR/INE/QAR12.0009/13](#)



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**Ex Component(s) covered by this certificate is described below:**

Control and signaling units type XB4B ...GEX are fitted with a control or signaling head ZB4B ... associated with a ZBE...GEX contact and/or ZBVBM...GEX pilot light and/or ZBWD...GEX diode. The Dusts version XB4B...EX is fitted with a control or signaling head ZB4B ... associated with standards contact and/or pilot light and/or diode. The enclosure of ZBE ...GEX contact cover is made of plastic material. It contains an electrical contact "NO" or "NC". The enclosure of the light ZBVBM...GEX and those of the diode ZBWD156GEX is made of plastic material. It contains, either, an electronic circuit and one LED or one diode.

**SCHEDULE OF LIMITATIONS:**

The contact type ZBE...GEX, the pilot light ZBVBM...GEX and the diode type ZBWD156GEX have to be integrated into an enclosure protected by a recognized type of protection adapted to the area.

During the installation, the user will take into consideration that the heads units type XB4B.... underwent only a shock corresponding to an energy of a low risk.



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

The changes of the issue 01 are regarding:

- Application of standards :

IEC 60079-0:2017

IEC 60079-7:2015 + AMD1:2017

IEC 60079-18:2014 + AMD1:2017

## **Annex:**

[IECEX INE 18.0003U-01\\_Annex.pdf](#)



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## **PARAMETERS RELATING TO THE SAFETY**

### **Gas/Dusts version:**

#### **Contact type ZBE...GEX:**

Maximum voltage : 415 V  
Maximum current : 10 A

Service temperature: -50°C to +75°C.  
Ambient temperature range: -50°C to +75°C.

#### **For the pilot light type ZBVBM...GEX:**

Nominal voltage : from 24 to 254 V AC/DC  
Nominal current : from 2 to 10 mA

#### **For the diode type ZBWD156GEX:**

Maximum voltage: 230 V AC/DC  
Maximum current: 50 mA  
Maximum power: 0.06 W

Service temperatures of non-metallic parts of the pilot light and the diode: -40°C to +95°C

### **Dusts version only:**

#### **Contact:**

In AC :

Ue max : 600 V, Ie : 1.2 A  
Or Ue : 240 V, Ie : 3 A  
Or Ue : 120 V, Ie : 1.2 A

In DC :

Ue max : 600 V, Ie : 0.1 A  
Or Ue : 250 V, Ie : 0.27 A  
Or Ue : 125 V, Ie : 0.25A

#### **Pilot light :**

Ue : from 24 to 254 VAC  
Ue : 24 V AC/DC

#### **Diode :**

Ue max : 230 V AC/DC  
Ie max : 50 mA  
P max : 0.06 W



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Table 1: Service temperature and protection degrees IP of the associated control units:

References	Service temperatures	protection degrees IP
XB4BS..., XB4BT...	-20°C to +65°C	IP65
XB4BD..., XB4BC..., XB4BV..., XB4BP...BM5GEX, XB4BW...BM5GEX	-20°C to +75°C	IP65
XB4BA..., XB4BG..., XB4BJ..., XB4BP...	-20°C to +75°C	IP66

## **MARKING**

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

### Contact alone:

SCHNEIDER ELECTRIC  
FR - 16340 L'ISLE D'ESPAGNAC  
ZBE...GEX<sup>(1)</sup>  
IECEX INE 18.0003U  
Ex db eb IIC Gb  
Rated voltage and current

*(1) spots are replaced with numbers or characters corresponding to functions NC or NO. The designation of the complete device has to appear on the operating heads or on the smallest package container.*

### Associated control unit + contact:

SCHNEIDER ELECTRIC  
FR-16430 L'ISLE D'ESPAGNAC  
XB4B...GEX\*  
IECEX INE 18.0003U  
Ex db eb IIC Gb  
Ex tb IIIC Db  
Rated voltage and current

### Pilot light alone:

SCHNEIDER ELECTRIC  
FR-16430 L'ISLE D'ESPAGNAC  
ZBVBM...GEX  
IECEX INE 18.0003U  
Ex eb mb IIC Gb  
Rated voltage and current



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heads + pilot light:

SCHNEIDER ELECTRIC  
FR-16430 L'ISLE D'ESPAGNAC  
XB4BV...GEX\*  
IECEX INE 18.0003U  
Ex eb mb IIC Gb  
Ex tb IIIC Db  
Rated voltage and current

heads + pilot light + contact:

SCHNEIDER ELECTRIC  
FR - 16340 L'ISLE D'ESPAGNAC  
XB4BP...BM5GEX\*  
IECEX INE 18.0003U  
Ex db eb mb IIC Gb  
Ex tb IIIC Db  
Rated voltage and current

heads + pilot light + contact + diode:

SCHNEIDER ELECTRIC  
FR - 16340 L'ISLE D'ESPAGNAC  
XB4BW...BM5GEX\*  
IECEX INE 18.0003U  
Ex db eb mb IIC Gb  
Ex tb IIIC Db  
Rated voltage and current

Diode alone:

SCHNEIDER ELECTRIC  
FR - 16340 L'ISLE D'ESPAGNAC  
ZBWD156GEX  
IECEX INE 18.0003U  
Ex eb mb IIC Gb  
Rated voltage and current

Dusts version only:

SCHNEIDER ELECTRIC  
FR - 16340 L'ISLE D'ESPAGNAC  
XB4B...EX\*  
IECEX INE 18.0003U  
Ex tb IIIC Db

*(\*) spots are replaced with numbers and/or characters corresponding to functions. The designation of the complete device has to appear on the operating heads or on the smallest package container*

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.



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## **ROUTINE EXAMINATIONS AND TESTS**

### For the contact ZBE...GEX:

In accordance with clause 7.1 of the IEC 60079-7 standard, each piece of the Ex component has to have successfully passed, before delivery, a dielectric strength test, performed according to the relevant standards.

In accordance with clause 16.2 of the IEC 60079-1 standard, the Ex component is exempted of routine test in owing to the fact that its internal volume is less than 10 cm<sup>3</sup>.

### For the pilot light ZBVBM...GEX and the diode ZBWD156GEX:

Each Ex component defined above has to have successfully passed, before delivery :

- In accordance with clause 7.1 of the IEC 60079-7 standard, a test of dielectric performed according to the relevant standards.
- In accordance with clause 9.1 from the IEC 60079-18 standard, a visual examination of encapsulation.
- In accordance with § 9.2 of the IEC 60079-18, a test of dielectric strength under a voltage to 2U+1000 volts between active parts and encapsulant surface during a minimum of one second.

### For the heads:

No required.