



# 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 16.0018X

Issue No: 1

Certificate history:

Status: **Current**

Issue No. 1 (2018-09-14)

Issue No. 0 (2016-07-11)

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Date of Issue: **2018-09-14**

Applicant: **AMPHENOL INDUSTRIAL**  
40-60 Delaware Avenue  
Sidney  
New York 13838  
**United States of America**

Equipment: **Plugs type EX309-1612-... or EX309-3212-... or EX309-6312-... or EX309-12512-... &  
Sockets type EX309-1611-... or EX309-3211-... or EX309-6311-... or EX309-12511-...**

Optional accessory:

Type of Protection: **Ex db eb tb**

Marking:

For Plugs:	-	For Sockets:
Ex eb IIC T3 or T4 or T5 or T6 Gb	-	Ex db eb IIC T3 or T4 or T5 or T6 Gb
Ex tb III C T80°C Db IP66	-	Ex tb III C T80°C Db IP66

Approved for issue on behalf of the IECEx  
Certification Body:

Thierry HOUEIX

Position:

Ex Certification Officer

Signature:  
(for printed version)



Date:

2018-09-14

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  
France



# IECEX Certificate of Conformity

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Manufacturer: **AMPHENOL INDUSTRIAL**  
40-60 Delaware Avenue  
Sidney  
New York 13838  
**United States of America**

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 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
<b>IEC 60079-7 : 2015</b> Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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/ExTR16.0036/00](#)      [FR/INE/ExTR16.0036/01](#)

Quality Assessment Report:

[GB/SIR/QAR08.0010/06](#)



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## Schedule

### EQUIPMENT:

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

The plugs type EX309-12-... are designed as Group II Category 2 equipment and is suitable for use for fixed installation in areas with explosion hazard designated Zone 1/21 and Zone 2/22, with type of protection Ex eb IIC / Ex tb IIIC.

The plugs type EX309-12-... have to be used only with AMPHENOL socket type EX309-11-..., Ex db eb IIC / Ex tb IIIC.

The sockets type EX309-11-... are formed by Ex eb enclosure with a switch mounted on the body.

The safety switch type COMMAND-Ex manufactured by SCAME is certified IECEx INE 13.0032U with type of protection Ex d e IIC Gb in a range of 32A to 80A, 2/4 poles. There are optional auxiliary contacts types M-0530 or M-0531 manufactured by CORTEM (certified IECEx CES 11.0031U with type of protection Ex d e IIC Gb) or ZBWE 6 or ZBWE 16 manufactured by EX-TECH (certified IECEx INE 13.0063U with type of protection Ex db eb IIC Gb).

The switch CZ series CZ0513 180A is certified IECEx CQM 10.0006U with type of protection Ex db e IIC Gb without optional auxiliary contacts.

The sockets type EX309-6311-... can be fitted with Ex e earth terminal Weidmuller type WPE35 certified IECEx ULD 05.0008U.

All versions of plugs & sockets enclosures get the degrees of protection IP66 in accordance with IEC 60529.

### SPECIFIC CONDITIONS OF USE: YES as shown below:

Ambient temperature ranges:

- Within the range -50°C to +60°C for Plugs type EX309-1612-... & Sockets type EX309-1611-...
- Within the range -50°C to +60°C for Plugs type EX309-3212-... & Sockets type EX309-3211-...
- Within the range -35°C to +60°C for Plugs type EX309-6312-... & Sockets type EX309-6311-...
- Within the range -35°C to +40°C for Plugs type EX309-12512-... & Sockets type EX309-12511-...

See Installation, Operation. Maintenance Instructions for safe use.



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

Issue 01 is related to:

- the extension of ambient temperature range up to -50°C to +60°C for Plugs EX309-1612-... & Sockets EX309-1611-...
- the application of the standards IEC 60079-1 (Ed.7.0) & IEC 60079-7 (Ed.5.0)
- the update of manufacturer documents

## Annex:

[IECEX INE 16.0018X-01\\_Annex.pdf](#)



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Issue No.: 01

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Annex: IECEx INE 16.0018X-01\_Annex.pdf

## PARAMETERS RELATING TO THE SAFETY

Rated Current: 16A or 32A or 63A or 125A according to versions

Rated Voltage: from 50V to 690V AC, from 50V to 500V DC according to versions

## MARKING

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

1. For plug series EX309-...12-...:

- AMPHENOL INDUSTRIAL
- New York 13838 - USA
- EX309-1612-... or EX309-3212-... or EX309-6312-... or EX309-12512-... <sup>(1)</sup>
- IECEx INE 16.0018X
- (Serial number)
- Ex eb IIC T<sup>(2)</sup> Gb
- Ex tb IIIC T80°C Db IP66
- Tamb. <sup>(3)</sup>
- Tcable: <sup>(4)</sup>
- *Rated Current and Rated Voltage (as defined in the manufacturer's documents)*

<sup>(1)</sup> The type is completed by numbers in accordance with the manufacturing variations

<sup>(2)</sup> Temperature Class for Gas according to the tables below

<sup>(3)</sup> Ambient temperature range according to the tables below when different from -20°C to +40°C

<sup>(4)</sup> Tcable: 80°C for type EX309-1612-... when maximum ambient temperature is +60°C;  
 Tcable: 85°C for type EX309-3212-... when maximum ambient temperature is +60°C;  
 Tcable: 90°C for type EX309-6312-... when maximum ambient temperature is +60°C;  
 Tcable: 85°C for type EX309-12512-... when maximum ambient temperature is +40°C;

Plug EX309-1612-... & Socket EX309-1611-...			
Ambient temperature range	Temperature Class for Gas	Optional auxiliary contacts	
		CORTEM M-053x	EX-TECH ZBWE
-40°C to +60°C	T5	yes	yes
-40°C to +50°C	T6	yes	yes
-50°C to +60°C	T5	no	yes
-50°C to +50°C	T6	no	yes

Plug EX309-3212-... & Socket EX309-3211-...			
Ambient temperature range	Temperature Class for Gas	Optional auxiliary contacts	
		CORTEM M-053x	EX-TECH ZBWE
-50°C to +60°C	T4	no	no
-50°C to +50°C	T4	no	no
-50°C to +40°C	T5	no	yes
-40°C to +60°C	T4	no	no
-40°C to +50°C	T4	yes	no
-40°C to +40°C	T5	yes	yes



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Plug EX309-6312-... & Socket EX309-6311-...			
Ambient temperature range	Temperature Class for Gas	Optional auxiliary contacts	
		CORTEM M-053x	EX-TECH ZBWE
-35°C to +60°C	T3	no	no
-35°C to +50°C	T3	no	no
-35°C to +40°C	T4	yes	yes

Plug EX309-12512-... & Socket EX309-12511-...	
Ambient temperature range	Temperature Class for Gas
-35°C to +40°C	T4

2. For socket series EX309-...11-...:

- AMPHENOL INDUSTRIAL
- New York 13838 - USA
- EX309-1611-... or EX309-3211-... or EX309-6311-... or EX309-12511-... <sup>(1)</sup>
- IECEx INE 16.0018X
- (Serial number)
- Ex db eb IIC T<sup>(2)</sup> Gb
- Ex tb IIIC T80°C Db IP66
- Tamb. <sup>(3)</sup>
- Tcable: <sup>(4)</sup>
- *Rated Current and Rated Voltage (as defined in the manufacturer's documents)*
- WARNING: DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

<sup>(1)</sup> The type is completed by numbers in accordance with the manufacturing variations

<sup>(2)</sup> Temperature Class for Gas according to the tables above

<sup>(3)</sup> Ambient temperature range according to the tables above when different from -20°C to +40°C

<sup>(4)</sup> Tcable: 80°C for type EX309-1611-... when maximum ambient temperature is +60°C;  
Tcable: 85°C for type EX309-3211-... when maximum ambient temperature is +60°C;  
Tcable: 90°C for type EX309-6311-... when maximum ambient temperature is +60°C;  
Tcable: 85°C for type EX309-12511-... when maximum ambient temperature is +40°C

## **ROUTINE EXAMINATIONS AND TESTS**

Each piece of equipment defined above must have successfully passed; before delivery:

- In accordance with clause 7.1 of the IEC 60079-7 standard, a dielectric strength test on each of the different circuits of the connection units, performed according to the relevant standards, the supply voltage shall be applied for one minute.



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## LIST OF Ex COMPONENTS USED IN THIS PRODUCT

Ex component	Manufacturer	Type	Certificate	Ex Marking	Standards
Safety switch (for Plugs and Sockets 16A, 32A and 63A)	SCAME	COMMAND-Ex	IECEX INE 13.0032U	Ex d e IIC Gb	IEC 60079-0:2011 IEC 60079-1:2007 <sup>(2)</sup> IEC 60079-7:2006 <sup>(4)</sup>
Optional auxiliary contacts (with Safety switch type COMMAND-Ex)	CORTEM	M-0530 or M-0531	IECEX CES 11.0031U	Ex d e IIC Gb	IEC 60079-0: 2007 <sup>(1)</sup> IEC 60079-1:2007 <sup>(2)</sup> IEC 60079-7:2006 <sup>(4)</sup>
Optional auxiliary contacts (with Safety switch type COMMAND-Ex)	EX-TECH SOLUTION	ZBWE 6 or ZBWE 16	IECEX INE 13.0063U	Ex db eb IIC Gb	IEC 60079-0: 2011 IEC 60079-1:2014 IEC 60079-7:2015
Safety switch (for Plugs and Sockets 125A)	CZ	series CZ0513 type D180	IECEX CQM 10.0006U	Ex db e IIC Gb	IEC 60079-0:2011 IEC 60079-1:2014 IEC 60079-7:2006 <sup>(4)</sup>
Earth terminal (63A)	Weidmuller	series WPE	IECEX ULD 05.0008U	Ex e II	IEC 60079-0:2004 <sup>(1)</sup> IEC 60079-7:2001 <sup>(3)</sup>

<sup>(1)</sup> Not impacted by major technical changes of the standard IEC 60079-0:2011

<sup>(2)</sup> Not impacted by major technical changes of the standard IEC 60079-1:2014

<sup>(3)</sup> Not impacted by major technical changes of the standard IEC 60079-7:2006 and IEC 60079-7:2015

<sup>(4)</sup> Not impacted by major technical changes of the standard IEC 60079-7:2015