

#### INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification Scheme for Explosive Atmospheres**

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

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IECEx LCI 09.0005X

issue No.:4

Status:

Current

2016-02-19

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Issue No. 4 (2016-2-19) Issue No. 3 (2013-8-8) Issue No. 2 (2011-12-30)

Certificate history:

Issue No. 1 (2010-3-5) Issue No. 0 (2009-2-3)

Applicant:

Date of Issue:

MARECHAL ELECTRIC

5. avenue de Presles

94417 SAINT-MAURICE Cedex

**France** 

**Electrical Apparatus:** 

Optional accessory:

Industrial plug and socket type DXN1

Type of Protection:

Gas: d, e, Dust: t

Marking:

Ex d e IIC T\* Gb alternate Ex db eb IIC T\*

Ex tb IIIC T\* Db alternate Ex tb IIIC T\* IP66 or IP66/67

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For complete marking see "Equipment" section.

Approved for issue on behalf of the IECEx

Certification Body:

Julien GAUTHIER

Position:

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.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE) 33 Avenue du General Leclerc FR-92260 Fontenay-aux-Roses France

Documents relative to LCIE certification activites (Certificates, QARs, ExTRs) can be registered under the references "LCI" or "LCIE".





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Manufacturer:

**MARECHAL ELECTRIC** 

ZI de la Maine 76150 MAROMME

**France** 

Additional Manufacturing location

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 60079-1: 2007-04

Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition: 6

IEC 60079-31: 2008

Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure 't'

Edition: 1

IEC 60079-7: 2006-07

Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

Edition: 4

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/LCI/ExTR08.0050/00 FR/LCI/ExTR08.0050/03 FR/LCI/ExTR08.0050/01 FR/LCI/ExTR08.0050/04 FR/LCI/ExTR08.0050/02 FR/LCI/ExTR08.0050/05

Quality Assessment Report:

FR/LCI/QAR09.0002/07



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#### Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

Industrial socket with 2, 3, 4 or 5 contacts version constituted with two main parts which are plug and socket. The equipment consists of two main parts: the inlet (plug) and the socket-oulet (connector).

"d" compartment results from assembly of the inlet and socket-outlet.

The terminals are carried out inside "e" compartment of each part, with a maximum voltage 550V and maximum current 20A.

For possible arrangement see Additional information.

#### Electrical parameters:

Ue = 550V max AC and DC Ie = 20A max

#### Routine verification and routine tests:

Each "e" compartment shall be submitted to the dielectric strength test in accordance with clause 6.1 of IEC 60079-7

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

- Apparatus shall not be exposed to mechanical impact higher than 4 Joules
- User shall assured good and cleanliness conditions of socket before connecting , and close cover after use.

#### - Operating conditions:

#### Ambient temperature:

- -20°C to +40°C, for standard use, with accessories in LATAMID 6E02 and with the exception of the inclined surface box 70° type B1 and inclined sleeve 70° type B1 in VESTAMID

  -40°C to +60°C, for the enclosure material of accessories and housings in VESTAMID



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#### **EQUIPMENT(continued):**

#### Marking:

MARECHAL ELECTRIC

Address: ...

Serial number: ...

Year of construction: ...

Type: DXN1

Ex d e IIC T\* Gb alternate Ex db eb IIC T\*
Ex tb IIIC T\* Db alternate Ex tb IIIC T\* IP66 or IP66/67
WARNING - DO NOT OPEN WHEN ENERGIZED (on accessories)

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#### \*: Temperature table:

| Ta                               | Gas | Dust  |
|----------------------------------|-----|-------|
| -40°C <b>⊴</b> ′a <b>⊴</b> +60°C | T5  | T90°C |
| -40°C ≰a 40°C                    | T6  | T70°C |



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

Adding of a material for safety shutter

#### Issue 02:

- Adding of accessories: certified empty boxes type MXBJ
- Possibility to use a metal latch
- Normative update for IEC 60079-1 Ed.6 standard.

#### Issue 03:

- Addition of new materials : casing, wall box, pawl, internal parts (retaining ring, retaining clip, conductor clamp, pressure pad and screw of conductor clamp)
- Additon of new socket-outlet front gasket
- Addition of new handle
- Addition of intrinsically safe protection mode according to IEC 60079-11 Ed.6 standard
- Normative update according to IEC 60079-0 Ed.5 and IEC 60079-31 Ed.1 standards

#### Issue 04:

- Clarification of AC and DC voltage
- Possibility to have lockout hole in the inlet housing
- Possibility to use new accessories (new sleeve and new metallic boxes for sleeve)
   Remove the intrinsically safe type of protection
- Change of accessories' gaskets
- Addition of new option: self-ejection
- Normative update according to IEC 60079-0 Ed.6 standard



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#### Additional information:

Possible arrangement for Industrial plug and socket outlet:

| Designation<br>Accessories   |
|--|
| Handle with gasket<br>and a cable gland  |
| Surface box with 2<br>cable entries, 1 cable<br>gland, 1 blanking cap,<br>both with a gasket |
| Accessories<br>(plug/inlet cap or<br>cover)  |
| Surface box 70° type<br>B1   |
| Finger draw plate  |
| Inclined sleeve 70°<br>type B1   |
| Inclined sleeve 30°  |
| Adapter plate  |
| Empty box (MXBJ1 to MXBJ10)  |
|  |

| istrial plug and socket o      |  |  |
|--------------------------------|--|--|
| Designation<br>Inlet           |  |  |
| Appliance inlet                |  |  |
| Padlockable<br>appliance inlet |  |  |
|                                |  |  |
|                                |  |  |
|                                |  |  |
|                                |  |  |
|                                |  |  |
|                                |  |  |

| Designation<br>Socket-outlet   |
|--|
| Socket-outlet (lid sprung open)  |
| Socket-outlet (lid sprung closed)  |
| Socket-outlet with<br>180° lid sprung<br>open  |
| Socket-outlet with<br>180° lid open and<br>lid sprung closed                           |
| Socket-outlet with<br>'mushroom-headed'<br>latch or padlockable<br>(lid sprung open)   |
| Socket-outlet with<br>'mushroom-headed'<br>latch or padlockable<br>(lid sprung closed) |
|  |

# Designation Accessories Handle with flat gasket and cable gland Surface box with 2 cable entries, 1 cable gland, 1 blanking cap, both with a gasket Finger draw plate Surface box 70° type B1 Inclined sleeve 30° Inclined sleeve 70° type B1 Adapter plate Empty box (MXBJ1 to MXBJ10)