



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

Certificate No.: IECEx CES 15.0002X issue No.:2

Status: Current

Date of Issue: 2016-07-08 Page 1 of 5

Applicant: **Calzoni S.r.l.**
Via A. De Gasperi n.7,
I-40012 Calderara di Reno (BO)
Italy

Equipment: Helideck lighting system, Type HPDEX-H-x and HPDEX-C-y
Optional accessory:

Type of Protection: Encapsulation "m"

Marking: Ex mb IIC T6 Gb

Approved for issue on behalf of the IECEx
Certification Body:

Mirko Balaz

Position:

Head of IECEx CB

Signature:
(for printed version)

Date:

Certificate history:

Issue No. 2 (2016-7-8)

Issue No. 1 (2015-7-7)

Issue No. 0 (2015-2-19)

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:

CESI
Centro Elettrotecnico
Sperimentale Italiano S.p.A.
Via Rubattino 54
20134 Milano
Italy



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Certificate No.: IECEx CES 15.0002X

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Page 2 of 5

Manufacturer: **Calzoni S.r.l.**
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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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0

IEC 60079-18 : 2014 Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"
Edition: 4.0

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:
IT/CES/ExTR15.0001/00

IT/CES/ExTR15.0001/01

IT/CES/ExTR15.0001/02

Quality Assessment Report:

IT/CES/QAR14.0005/02



IECEx Certificate of Conformity

Certificate No.: IECEx CES 15.0002X

Date of Issue: 2016-07-08

Issue No.: 2

Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The lighting System HPDEX is a series of signals system developed for Helideck. The System consists of a series of lighting segments, totally encapsulated, formed by 6 LED lighting elements, color: amber (mod. HPDEX-C-y) or green (mod. HPDEX-H-x).

The segments HPDEX-H-x, specially connected, are used for signaling of "H" of the platform, whereas the segments HPDEX-C-y, are used for signaling TD / PM circle.

The lighting lines are suitable to be installed, by means of a special frame, on metal platforms of heliports.

Lighting System HPDEX identification

Lighting System HPDEX model C

- HPDEX-C: single segment with 6 LED (*lighting elements*) and 3 meters cable entry
- HPDEX-C-4: line of 24 LED (*4 segments of 6 LED*) and 15 meters cable entry
- HPDEX-C-5: line of 30 LED (*5 segments of 6 LED*) and 15 meters cable entry
- HPDEX-C-6: line of 36 LED (*6 segments of 6 LED*) and 15 meters cable entry
- HPDEX-C-7: line of 42 LED (*7 segments of 6 LED*) and 15 meters cable entry

Lighting System HPDEX model H

- HPDEX-H: 4 line of 40 LED and 3 meters cable entry
- HPDEX-H-A: 4 line of 40 LED and 20 meters cable entry

CONDITIONS OF CERTIFICATION: YES as shown below:

The conditions of the installation, use and maintenance of the Helideck lighting system HPDEX, are included within the Safety Instruction. For a safe use these Instruction are to be followed precisely.

The System HPDEX lighting line shall installed on rigid and smooth metal surfaces.

The System HPDEX power cables, shall be terminated in a junction box that guarantees a type of protection provided in Section 1 of IEC 60079-0 standard and compatible with the installation area.

The lighting lines shall be powered by "LED drivers" modules with self-regulating output voltage according to the load and the maximum current of 350mA.

The "LED drivers" modules, if installed in hazardous areas, shall be protected with a type of protection provided in Section 1 of IEC 60079-0 standard.

Do not separate the System's components, when energized.

WARNING! clean external plastic parts with a damp cloth.

The ambient temperature in service (Tamb) has range: from -30°C up to +55°C.



IECEX Certificate of Conformity

Certificate No.: IECEX CES 15.0002X

Date of Issue: 2016-07-08

Issue No.: 2

Page 4 of 5

EQUIPMENT(continued):

Electrical characteristics

Product / Model	Maximum rated voltage	Maximum rated current
HPDEX-C	18Vdc	350mA
HPDEX-C-4	72Vdc	350mA
HPDEX-C-5	2 x 45Vdc (2 branches 45Vdc each)	350mA
HPDEX-C-6	2 x 54Vdc (2 branches 54Vdc each)	350mA
HPDEX-C-7	2 x 62Vdc (2 branches 62Vdc each)	350mA

Product / Model	Maximum rated voltage	Maximum rated current
HPDEX-H	2 x 60Vdc (2 branches 60Vdc each)	350mA
HPDEX-H-A	2 x 60Vdc (2 branches 60Vdc each)	350mA

The lighting lines shall be powered by "LED drivers" modules with self-regulating output voltage according to the load and the maximum current of 350mA

Ambient temperature: from -30°C up to +55°C

Degree of protection: IP 66/67



IECEX Certificate of Conformity

Certificate No.: IECEx CES 15.0002X

Date of Issue: 2016-07-08

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Page 5 of 5

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

Variation 2.1

Extended Degree protection to IP67

Variation 2.2

The Lighting System HPDEX, originally assessed in compliance with IEC 60079-0:2011 and IEC 60079-18:2009. With this issue the HPDEX system have been re-assessed on the basis of the IEC 60079-18:2014 standard