



CERTIFICADO DE CONFORMIDADE

Certificate of Conformity

Nº: IEx 14.0020

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Solicitante / Endereço:

Applicant / Address
Solicitante / Dirección

HUBBEL LIMITED
388 Hillington Road
G52 4BL - Glasgow - Scotland - UK

Produto / Modelo / Marca:

Product / Model / Trademark
Producto / Modelo / Marca

Luminaries
Evolution II and Evolution II LT
Chalmit

Família de Produto:

Product's Family
Familia de productos

NA

Número de Série / Lote:

Serial number / Batch number
Número de serie / Número de lote

NA

Marcação:

Marking
Maricación

Ex d e IIB T* Gb or Ex d e mb IIB T* Gb
Ex tb IIIC T* °C Db IP 67
***See page 2**

Normas Aplicáveis:

Applicable Standards
Normas aplicables

ABNT NBR IEC 60079-0:2013; ABNT NBR IEC 60079-1:2009;
ABNT NBR IEC 60079-7:2008; ABNT NBR IEC 60079-18:2010 and
ABNT NBR IEC 60079-31:2011

Portaria Inmetro N° / Escopo:

Inmetro Decree n° / Scope
Ordenanza Inmetro / Alcance

179:2010/Equipamentos Elétricos e Eletrônicos para Atmosferas Explosivas

Concessão para:

Concession for
Concesión

Application of the Conformity Identification Mark on the products related in this Certificate

Associação IEx Certificações, that is a Product Certification Body accredited by Cgcre/INMETRO, under the registration OCP 0064, confirms that the product is in conformity with the Standards and Regulation above.

Emissão: 10/03/2014

Issue / Expedición

Revisão: 28/03/2014

Revision / Revisión

Validade: 27/10/2016

Validity / Validad



Marco A. Buciarelli Roque

Signature authorized
Authorized signatory
Persona autorizada

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Fabricante / Endereço:

Manufacturer / Address
Fabricante / Dirección

HUBBEL LIMITED
388 Hillington Road
G52 4BL - Glasgow - Scotland - UK

Representante Legal / Endereço:

Legal Representative / Address
Representante Legal / Dirección

FÁBRICA DE PEÇAS ELÉTRICAS DELMAR LTDA.
Rodovia Antonio Romano Schincariol, S/N, Km 113
18279-125 - Tatui - SP - Brasil
CNPJ: 72.183.759/0001-68

Produto Description:

The Evolution II and Evolution II LT fixtures are designed to supply up to 277 Vac / 60 Hz, having a lamp that can be of halogen (tungsten), or SON/T or MBI/T mounted in a rectangular flameproof enclosure associated with an increased safety compartment that confines the control gear and terminals mounted on one end. The luminaries are manufactured with aluminum ACC44100 (LM6M). The partition wall between the enclosures is fitted with a flameproof capacitor housing (may be fitted with potted leads or a line bushing) and a potted ignition/lamp holder housing.

The lamp housing is provided with a glass diffuser contained by a frame fixed by 12 screws whose heads are sealed to prevent its removal. The glass is cemented into a recess in the lamp housing. A grid of optional protection can be used.

The marking including the type of protection "Ex m" results of using a ballast with the following marking: Ex e mb IIC Gb, which is not only applicable for halogen lamps and 600 V (SON/T).

(*)The types of lamps, temperature class and ambient temperature ranges are indicated below:

Lamp Type	Power (W)	Temperature Class	Cable Temperature Rise (K)	Ambient Temperature Range (°C) / Group IIB (LT Version)	Ambient Temperature Range (°C) / Group IIB	Maximum Temperature for Dust (°C)
Tungsten Halogen E40 Lampholder	500	T3	50	-50 to +40	-20 to +40	195
Tungsten Halogen R7S Lampholder	500	T3	40	-50 to +55	-20 to +55	195
HPS SON/T	150	T4	40	-50 to +40	-20 to +40	130
		T3	35	-50 to +55	-20 to +55	175
	250	T4	40	-50 to +40	-20 to +40	130
		T3	35	-50 to +55	-20 to +55	175
	400	T3	40	-50 to +55	-20 to +55	175
	600	T3	55	-50 to +35	-20 to +35	195

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MBI (MBI/T)	150	T4	40	-50 to +40	-20 to +40	130
		T3	35	-50 to +55	-20 to +55	175
	250	T4	40	-50 to +40	-20 to +40	130
		T3	35	-50 to +55	-20 to +55	175
	400	T3	40	-50 to +55	-20 to +55	175

Cable entry holes are provided as specified on the approved drawings for the accommodation of cable entry devices, with or without the interposition of a thread adapter. Unused entries are to be fitted with stopping plugs.

Components such as terminal blocks, bushings, reducers, plugs and ballasts were evaluated and listed in the Evaluation Report RACT-Ex 686.008.14A(79), in the list of approved components.

Documents:

Title	Number	Revision	Date
Conformity Assessment Report	RACT-Ex 686.008.14A(79)	0	07/03/2014
Test Report issued by BASEEFA	IECEX GB/BAS/ExTR12.0052/00	-	05/12/2013
Audit Report issued by IEx	RAF 686.F1.I	-	06/11/2013

The approved documents are listed in the Conformity Assessment Report RACT-Ex 686.008.14A(79).

Observations:

- FÁBRICA DE PEÇAS ELÉTRICAS DELMAR LTDA** is responsible to assure that all products provided to the Brazilian market are in conformity with product description and schedule documents approved in this certification process;
- Some components were tested with four times its reference pressure and are exempt from routine overpressure test (the capacitor housing and the ignitor housing with potted cables);
- A plaqueta de marcação apresenta as seguintes informações:
 - "A Elevação da Temperatura no Cabo é de 40 °C acima da ambiente"
 - "ATENÇÃO: Não abra quando estiver energizada. NÃO ABRA por 15 minutos após o desligamento"
- Routine Tests:
 - Each and every lamp housing assembly must be subjected to a routine overpressure test at 4.2 bar for 15 seconds;
 - Each and every potted capacitor housing cover must be subjected to a routine overpressure test at 12.0 bar for 15 seconds.
 - An Electric Strength test of $(1000 + 2U) \times 1.2$ must be applied for a minimum duration of 100 ms, according to item 6.1 and 7.1 of IEC 60079-7:2006.

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- e) The products must be installed in compliance with relevant standards for electrical installations for explosive atmospheres;
- f) The activities of installation, inspection, maintenance, repair, overhaul and recovery of equipment are responsibility of the users and must be performed in accordance with the requirements of current technical standards and the manufacturer's recommendations;
- g) The marking of the product shall be made according to NBR IEC 60079-0:2008, on the external surface of product and shall be visible, legible, durable, indelible and resistant to a possible chemical corrosion;
- h) Only the units commercialized after the issuance of this Certificate are covered by this certification;
- i) This certification refers only and exclusively to the conformity assessment requirements for electrical equipment for explosive atmospheres, not covering any other regulation applicable to the product;
- j) This Certificate is issued based on the certification scheme with Assessment of Manufacturer Quality System and Type Tests. It is valid only for products identical to the assessed products. Any modification in the project, as well use of different components and/or materials specified in the schedule drawings/documents without IEx authorization, will invalidate this Certificate.

Revision history:

Revision	Date	Description
0	10/03/2014	Initial issue
1	28/03/2014	It was rewritten the observation "b" and corrected the type of the Lamp SON/T in the description.

Quotation: 14.0.686.008.14

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