



# 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)

Certificate No.:	<b>IECEx FIDI 20.0006X</b>	Page 1 of 4	Certificate history:
Status:	<b>Current</b>	Issue No: 1	Issue 0 (2020-10-06)
Date of Issue:	2022-11-18		
Applicant:	<b>Officine Orobiche S.r.l.</b> Via Giorgio Paglia, 22 I - 24050, Zanica (BG) Italy		
Equipment:	<b>LED Bicolor Illuminator with Power Supply Unit type: LL RG... Ex</b>		
Optional accessory:			
Type of Protection:	<b>'ia'; 'db'; 'op is'; 'tb'</b>		
Marking:	<b>LED Illuminator:</b>  Ex ia op is IIC T4 Gb  Ex ia op is IIIC T135 °C Db  <b>Power Supply Unit:</b>  Ex db [ia Ga] IIC T6 Gb  Ex tb [ia Da] IIIC T85°C Db		

Approved for issue on behalf of the IECEx  
Certification Body:

Position:

Signature:  
(for printed version)

Date:  
(for printed version)

Marino Kelava

Certification Signatory



*[Handwritten signature]*

*2022-11-18*

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explosion safety solutions



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Manufacturer: **Officine Orobiche S.r.l.**  
Via Giorgio Paglia, 22  
I - 24050, Zanica (BG)  
**Italy**

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 equipment 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 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-25:2010-02** Explosive atmospheres – Part 25: Intrinsically safe electrical systems  
Edition:2.0

**IEC 60079-28:2015** Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  
Edition:2

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

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

Test Report:

**HR/FIDI/ExTR20.0004/00**

Quality Assessment Report:

**IT/CES/QAR16.0002/07**



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Officine Orobiche LL\_RG\*\_\*\_\* LED illuminator is a special LED bicolor red-green lamp for bicolor glass level gauges used in steam generators. The equipment is composed by the LED Illuminator enclosure and by the Power Supply Unit (PSU). The LED Illuminator enclosure contains green and red LED modules. Each LED module mounts 3 LED (green or red) connected in series. The LED Illuminator and cable entries are mechanically protected by a steel enclosure.

The PSU consists of an IECEx certified enclosure, marked Ex db IIC Gb / Ex tb IIIC Db, containing a AC/DC power supply and up to 12 certified intrinsically safe 'ia' EPL Ga associated apparatus. The associated apparatus are manufactured by "G.M. International srl", type "PSD1001" active barriers, certificate IECEx BVS 07.0027X. Each barrier has 4 I.S. independent channels, each channel supplies one LED module that mounts 3 LED connected in series. The PSU enclosures are manufactured by "Officine Meccaniche M.A.M. srl", model types "GUB4 – GUB5A– GUB5B – GUB6", certificate IECEx INE 11.0018X.

LED Illuminator Enclosure contains the LED modules that comply with intrinsic safety mode of protection. Connection between the LED Illuminator and the power supply is made using multipolar cables which can supply up to 4 LED modules. Certified cable glands mounted on Power Supply Units with elastomeric sealing ring are MODEL 20SA2F1RA5 manufacturer CMP S.r.l. or MODEL REVL1IB Manufacturer ELFIT S.p.A.

The model type used depends of the number of LED modules that the Power Supply Unit has to supply.

## Model/type reference:

LL RG4 Ex Four Led Modules with round connector  
LL RG6 Ex Six Led Modules with round connector  
LL RG4 CG Ex Four Led Modules with cable gland  
LL RG6 CG Ex Six Led Modules with cable gland

## Technical data

Rated voltage: 230 Vac

Rated current: 0.7 A

Ambient temperature: LED Illuminator: -40°C up to +70°C  
Power Supply Unit: -20°C up to +40°C

Degree of ingress protection: LED Illuminator IP65  
Power Supply Unit IP66

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

1. LED cabinet steel cover and cable mechanical protection is part of the certified equipment to ensure mechanical protection.
2. Flameproof joints of power supply unit GUB enclosure have different values from those specified in the tables of IEC 60079-1 standard, contact manufacturer for any repair.



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

Manufacturer's and applicant's address and QAR reference were updated.