



USER'S MANUAL

Explosion-proof LED luminaire Type OREX 1 No. 52-1200/Z



Cieszyn, January 2020

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1. Introduction

1.1. Intended use

The subject of this manual is an explosion-proof LED luminaire of an OREX 1 type, which is characterised by high luminous flux and power of up to 160 W. It is a compact light source with ultra-bright LEDs installed for high intensity of lighting from high heights. LEDs are enclosed in a corrosion-resistant housing made of high-quality aluminium. LEDs do not emit UV light.

1.2. Functional properties

OREX 1 luminaire is intended for lighting:

- industrial facilities and areas classified to the zones 1, 2, 21 and 22 of explosion hazard of dust, gases, vapours and vapours of flammable liquids,
- auxiliary rooms with high dust concentration and a possibility of the occurrence of water splashes that is: boiler rooms, pumping wells with observation wells, washrooms, garages, sheds, warehouses in open and restricted areas,
- process lines for the chemical, petroleum, gas, wood-working, loose mining, construction and foodstuff material processing industry.

2. Design

The OREX 1 luminaire consists of the following components:

- tempered glass pane,
- body - powder-coated aluminium alloy,
- back cover - powder-coated aluminium alloy,
- compression ring - powder-coated aluminium alloy,
- cable gland 2 x M20x1.5 (2 x M25x1.5 as an option),
- terminals 2.5mm²
- power supply unit,
- clamp,
- optional DALI control.

3. Technical data

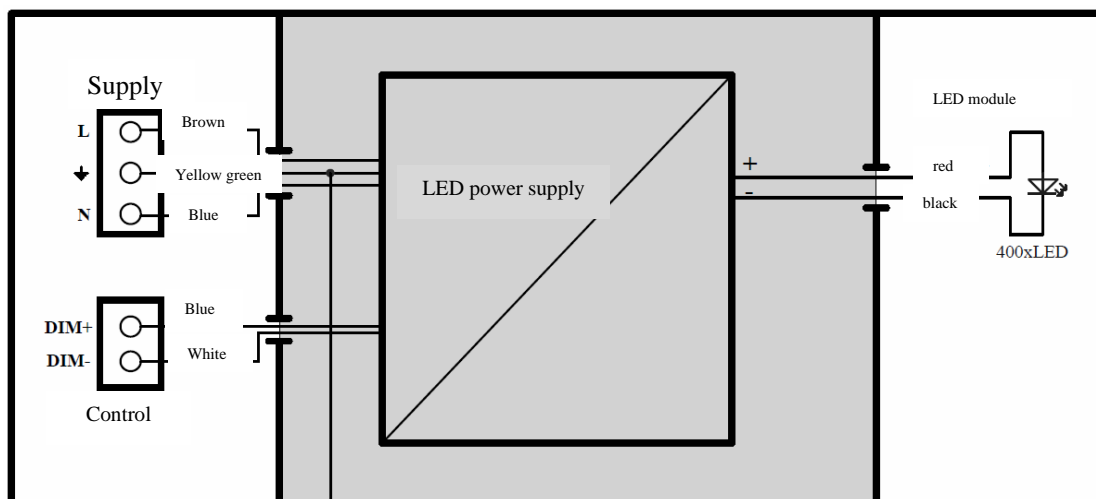
Technical parameters	
Parameter	Value (Unit)
Supply voltage	90-305 VAC, 127-431 VDC, 50-60(0) Hz,
ATEX marking for zones 1 and 21	⊕ II 2G Ex eb mb op is IIC T5 Gb ⊕ II 2D Ex tb op is IIIC T105°C Db
ATEX marking for zone 2 and 21	⊕ II 3G Ex ec op is IIC T5 Gc ⊕ II 2D Ex tb op is IIIC T105°C Db
ATEX marking for zone 2 and 22	⊕ II 3G Ex ec op is IIC T5 Gc ⊕ II 3D Ex tc op is IIIC T105°C Dc
Certificate number	JSHP 20 ATEX 00xxX
Standards	PN-EN 60079-0:2013, PN-EN 60079-7:2016, PN-EN 60079-18, PN-EN 60079-18:2015, PN-EN 60079-31:2014
Power factor	PF ≥ 0.98 115 VAC, PF ≥ 0.95 230 VAC
Current draw	1.7A 115 VAC, 0.78A 230 VAC
Protection class	I
Ingress protection	IP 66/67 IK 08
Allowable ambient temperature	-32°C to +55°C – (versions up to 100 W)
	-32°C to +50°C – (versions between 100 W and 160 W)
Source of light	ultra-bright LEDs
Power	60 W - 160 W
Colour temperature (±10%)	4000K (optionally 3000K, 5000K, 6500K) – zone 2,21; 2,22 4500K (optionally 5000K, 6500K) – zone 1,21
External dimensions	Ø390x134

3.1. Version types summary

Order code	Zone	Optional code	Optional code	Power [W]	Weight [kg]	Luminous flux [lm] ../121
OREX 1/60	../121	-	../M25	60	7.0	7,960
OREX 1/80		-		80	7.0	10,200
OREX 1/100		../10 V	../R90 or ../R70 ../3K or ../5K or ../6K	Max. 100	7.0	12,520
OREX 1/120		-		120	7.5	15,440
OREX 1/150		-		150	7.5	18,870
OREX 1/160		../10 V		Max. 160	7.5	19,560

4. Installation, mounting, disassembling

The luminaire is adapted for straight-through supply or final supply through cable glands M20 (M25) x 1.5 located on the top cover. For versions ../121 (zone 1 21) the luminaire is equipped with one gland and blanking plug (another gland is available as an option on request). Luminaire equipment makes it possible to fix the device to the surface of the roof, wall or to a rope.



5. Maintenance and repairs

The design of the luminaire makes it possible to replace the light source and power supply unit (except for the version for zone 1), which should be carried out by an authorised service. The lifetime of the light source and LEDs depends on the ambient temperature of the luminaire and its power. If the luminaire is damaged, it should be replaced with a new or repaired by an authorised service.

Due to the explosion-proof design, any maintenance works related to the device (except for spare parts replacement specified in this manual) may only be conducted by the manufacturer service or by an entity authorised by the manufacturer with appropriate service documentation.

6. Transport and storage

6.1. Transport


The originally packed devices should be transported using covered means of transport. The packaging should be secured against shifting and sudden shocks. Devices should be transported at a temperature not lower than -20°C and not higher than +50°C.

6.2. Storage

The equipment should be stored horizontally in closed areas at a temperature not lower than -5°C and not exceeding +40°C and away from heaters.

7. Additional information

7.1. CE marking

 The CE marking has been affixed under the following regulations:
Explosion-proof equipment – Directive 2014/34/EU (ATEX)
Electromagnetic compatibility - Directive 2014/30/EU (EMC)
Restriction of hazardous substances – Directive 2011/65/EU (RoHS II)

Information on the obtained certificates and standards applied to the equipment evaluation has been specified in the declaration of conformity attached to every copy of the device.

The harmonised standards applied to demonstrate the compliance with the relevant directive are set out in the EU declaration of conformity supplied together with the device.

7.2. Special conditions for safe use

- for luminaires up to 100 W $-32^{\circ}\text{C} \leq T_{\text{amb}} \leq +55^{\circ}\text{C}$
- for luminaires over 100 W $-32^{\circ}\text{C} \leq T_{\text{amb}} \leq +50^{\circ}\text{C}$

7.3. Basic safety principles

- Before attempting any works related to the equipment, the provisions of this manual should be read thoroughly.
- Follow good engineering practices during the selection of the equipment for a given application, during installation and during operation.
- The device should only be operated by personnel trained for this purpose.
- The safety rules of this type of equipment should be observed.
- Prior to the installation, check whether the marking on the rating plate satisfies requirements for a given application.
- Following the guidelines of the manual is a condition for warranty claims.

7.4. Recycling and disposal



The symbol of a crossed-out waste container that appears on a product indicates that it is subject to the provisions of European Directive 2012/19/EU (WEEE) and the Waste Electrical and Electronic Equipment Act (Journal of Laws of 2015, item 1688 as amended). The worn-out device together with a battery (if included) may not be disposed of jointly with other waste. The worn-out equipment should be handed to the manufacturer or to a point collecting discarded electronic and electric equipment to ensure its proper disposal. The requirements for the management and disposal of other waste are specified in the Waste Law (Journal of Laws of 2013, item 21 as amended).

In order to obtain more detailed information on product recycling, please contact the manufacturer, a local government unit, or waste management services.