



USER'S MANUAL

Explosion-proof LED luminaire

OREX 2 type

No. 52-1271/Z

Translation of manual



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1. Introduction

1.1. Intended use

The subject of this manual is an explosion-proof LED luminaire of an OREX 2 type, which is characterised by high luminous flux and power of up to 270 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

The OREX 2 luminaire is intended for lighting:

- industrial facilities and areas classified to zone 2 of gas, vapour, vapour of flammable liquid explosion hazard and zone 21 and 22 of flammable dust explosion hazard,
- auxiliary rooms with high dust concentration and with 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 2 luminaire consists of the following components:

- body - powder-coated aluminium alloy,
- compression ring - powder-coated aluminium alloy,
- tempered glass pane,
- LED light module,
- power supply unit with a lead-out connection conductor 3x1.0mm² (300 mm in length),
- eye clamp.

3. Technical data

Technical parameters		
Parameter	Value (Unit)	
Supply voltage	90-275 VAC, 140-250 VDC, 50-60 / 0 Hz	
Power	60-270 W	
Power factor	PF ≥0.96 115 VAC, PF≥ 0.95 230 VAC	
ATEX marking for zone 2 and 21	Ⓜ II 3G Ex ec op is IIC T3/T4/T5 Gc Ⓜ II 2D Ex tb op is IIIC Tx°C Db	
ATEX marking for zone 2 and 22	Ⓜ II 3G Ex ec op is IIC T3/T4/T5 Gc Ⓜ II 3D Ex tc op is IIIC Tx°C Dc	
EU-type examination certificate number:	JSHP 20 ATEX 00xxX	
Standards	PN-EN 60079-0:2013, PN-EN 60079-7:2016, PN-EN 60079-28:2015, PN-EN 60079-31:2014	
Source of light	ultra-bright LEDs	
Colour temperature	4000K (optionally 3000K, 5000K, 6500K)	
Protection class	I	
Ingress protection	IP 66/67	IK 08

Technical parameters	
Parameter	Value (Unit)
Allowable ambient temperature	-32°C to +55°C – 60-100 W versions – temp. class T4 -32°C to +50°C – 120-160 W versions – temp. class T4
	-32°C to +50°C – 180-220 W versions – temp. class T4 -32°C to +45°C – 240-270 W versions – temp. class T4
External dimensions	Ø390x140 – for versions up to 160 W Ø460x150 – for versions over 160 W

3.1. Version types summary

Order code	Temp. class	Zone	Optional code	Optional code	Power [W]	Weight [kg]	Luminous flux [lm]
OREX 2/60	../T5 or ../T4	../221	-	../R90 or ../R70	60	6.0	9 480
OREX 2/80			-		80	6.0	12,260
OREX 2/100			../10 V		Max. 100	6.0	15,090
OREX 2/120			-		120	6.5	18,420
OREX 2/150			-		150	6.5	22,140
OREX 2/160	../T5 or ../T4 or ../T3	or	../10 V	../R90 or ../R70	Max. 160	6.5	23,320
OREX 2/180		../222	-	../3K or ../5K or ../6K	180	9	27,720
OREX 2/200			-		200	9	30,200
OREX 2/220		-	220	9	33,200		
OREX 2/240		-	240	9	36,240		
OREX 2/260		-	260	9	36,900		
OREX 2/270		../10 V	Max. 270	9	39,500		

4. Operation, service and use

If the power supply is switched on, the luminaire is illuminated automatically.

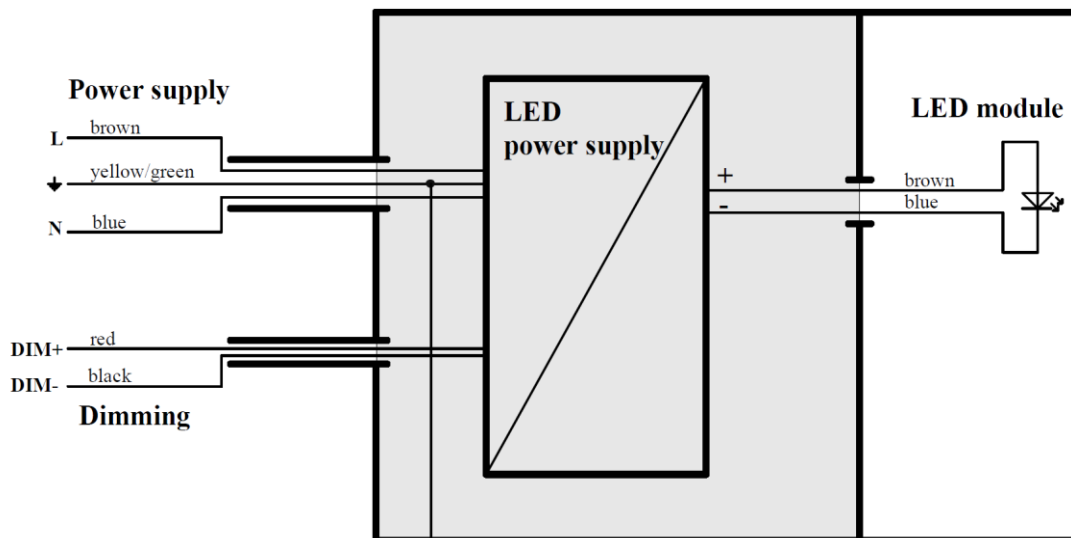
5. Installation, mounting, disassembling

Note!

The equipment should be installed taking into consideration all recommendations given in this manual and should be carried out by a fitter, professional installer with necessary knowledge, tools and qualifications.

Electrical installation

The luminaire is equipped with a three-wire conductor (L, N, PE), a shorting PE protective conductor (earthing), connected internally with a metal body. A conductor for dimming control is led out from the luminaire as an option. All conductors should be connected properly, in accordance with the ATEX requirements and a proper IP degree, which should be not less than IP 54. Conductors controlling dimming are not protected with an intrinsically safe design and, thus, they should be properly protected if they are not used (e.g. in a box with reinforced-design connectors). Conductors should be connected in such a way as to prevent their self-disconnection or loosening.



Luminaire diagram

Mechanical assembly

The luminaire should be fixed using the supplied installation eye, which should be screwed into the body of the power unit and properly protected against loosening with the use of a spring washer and a side locking screw.

6. Maintenance and repairs

The design of the luminaire makes it possible to replace the light source and power supply unit, 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.

7. Transport and storage

7.1. 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.

7.2. 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.

8. Additional information

8.1. 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.

8.2. Special conditions for safe use

- The ambient temperature range and temperature class of the device should be specified in accordance with the following table:

Luminaire power	Ambient temperature range					
	-32°C≤Ta≤+30°C	-32°C≤Ta≤+35°C	-32°C≤Ta≤+40°C	-32°C≤Ta≤+45°C	-32°C≤Ta≤+50°C	-32°C≤Ta≤+55°C
From 60 W to 100 W	T5 / T93°C		T5 / T98°C	T4 / T104°C	T4 / T114°C	
From 120 W to 160 W	T5 / T93°C	T5 / T98°C	T4 / T104°C	T4 / T114°C		-
From 180 W to 220 W	T5 / T100°C		T4 / T123°C			T3 / T133°C
From 240 W to 270 W	T5 / T100°C	T4 / T123°C			T3 / T133°C	-

8.3. 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.

8.4. 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.