Physical-Technical Testing Institute
Ostrava - Radvanice

EU - Type Examination Certificate

(1)

(2) **Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres (Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 25 ATEX 0018X

(4) Product: **LED Luminaire type KERN-EX2/21**

(5) Manufacturer: **VYRTYCH a.s.**

(6) Address: **Židněves 116, 294 06 Březno, Czech Republic**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report number:

25/0018 dated 15.07.2025

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018, EN 60079-15:2010, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) This certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 3G Ex nR IIC T6 Gc
II 2D Ex tb IIIC T85°C Db

This certificate is valid till: **31.07.2030**

Responsible person:

v z. Jgn

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV FTZÚ Ex NB 1026

Date of issue: 16.07.2025

Physical-Technical Testing Institute, s.p., Pikartská 1337/7, 716 07 Ostrava - Radvanice, Czech Republic
tel.: +420 595 223 111, +420 604 203 525, e-mail: ftzu@ftzu.cz, www.ftzu.cz

(13) **Schedule**

(14) **EU - Type Examination Certificate No. FTZÚ 25 ATEX 0018X**

(15) Description of Product:

The luminaire consists of four main parts: the housing, the optical opal cover, the reflector, and the mounting sheet for electrical components. The housing and cover are made of polycarbonate . The cover is attached to the housing using M5x25 screws, beneath which there are silicone o-rings. Additionally, the cover is secured by four protrusions that fit into the locking mechanism in the housing. In the groove of the housing, there is a seal made of EPDM material or a silicone foam seal.
The painted steel carrier for the components is inserted into the housing and secured with four screws On this carrier, the individual electrical components and other parts of the luminaire are attached. For emergency luminaires, emergency units are used, along with an LED indicator for the emergency unit status and either a NiCd VBA-N battery.

The component carrier also includes a three-pole (or multi-pole) terminal block for connecting the power cable with conductor cross-sections up to 2.5 mm². Power cable entries shall be provided by plastic or metal cable glands (M20x1.5; M25x1.5), which meet the required protection type, with a minimum ingress protection rating of IP66. Other holes in the housing shall be sealed using cable glands with blanking plugs or plugs, which must meet the same parameters as the cable glands.
Emergency mode testing for luminaires with emergency units is performed using by a magnet and a magnetic switch.

The luminaire is equipped with a test port for verifying the properties of the restricted breathing enclosure (nR) after installation, during commissioning, and during maintenance.

The luminaire contains LEDs on the LED module that are considered as non-array divergent LEDs and these LEDs are to be excluded based on Clause 1 of the standard EN 60079-28:2015.

Electrical parameters:

Un = 220 – 240 V, 0/50/60 Hz
for emergency unit Un = 220 – 240 V, 50/60 Hz
Additional parameters – see Annex.

The luminaire is verified according to the standards EN IEC 60079-15:2019 and EN IEC 60079-31:2024 too.

Responsible person:
v z.

Dipl. Ing. Lukáš Martinák
Head of Certification Body

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(13) **Schedule**

(14) EU - Type Examination Certificate No. FTZÚ 25 ATEX 0018X

(16) Report Number: 25/0018

(17) Specific Conditions of Use:

1. Ambient temperature range: - see Annex
2. The luminaire is intended for fixed installation and must be labelled "Warning - potential danger of electrostatic charging" - see Technical conditions.
3. The power supply cable shall be effectively fixed to prevent pulling or twisting.
4. Shall be used only Ex equipment cable glands and Ex equipment blanking elements with Ex protection Ex tb with IP 66 and with a minimum service temperature range -30°C to +60°C.
5. The Technical conditions for mounting and maintenance must be complied.
6. The battery pack must not be replaced in hazardous areas (unless the area is shown to be free from a hazardous atmosphere).
7. The luminaire shall be installed to avoid a risk from propagating brush discharges for application in explosive dust atmosphere.

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) and of this certificate and standards EN IEC 60079-15:2019 and EN IEC 60079-31:2024.

(19) Drawings and Documents:

Number	Rev.	Sheets	Date	Description
--	00	14	29.05.2025	Technical description
--	0	8	26.06.2025	Technical conditions for mounting luminaire
Assembly Drawing KERN-Ex2/21	--	1	03.06.2025	Assembly Drawing

Responsible person:

v z. [signature]

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Ostrava - Radvanice

ANNEX

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Type coding:

KERN-EX2/21-α-L04-γγγ-δδδ00-εεεε-ζζ-PD

- Polycarbonate opal cover
- Internal marking
- Connection type
- Designation of the luminous flux of the LED source
- CRI/ CCT
- Luminaire length 395 mm
- Type of luminaire closure
- Luminaire certified for zone 2/21
- Name of the luminaire

α – Type of the luminaire enclosure	γγγ – CRI/CCT	εεεε – Type of the connection		ζζ – Internal designation
G – Enclosure nR/ Silicone	827 – CRI80/ 2700K	0 - Without battery	ND – ON/OFF driver	00–99
H – Enclosure nR/ EPDM	830 – CRI80/ 3000K		D2 – DALI2 driver	
	835 – CRI80/ 3500K		CB – Central battery system	
	840 – CRI80/ 4000K	N – NiCd batteries	M3 – Emergency unit 3H + ON/OFF driver	
	850 – CRI80/ 5000K		M3A – Emergency unit 3H Self-test + ON/OFF driver	
	857 – CRI80/ 5700K		D3D2 – Emergency unit 3H DALI + DALI2 driver	
	860 – CRI80/ 6000K		NM3 – Emergency Unit 3H	
	865 – CRI80/ 6500K		M3A – Emergency unit 3H Self-test	
	927 – CRI90/ 2700K		NMD3 – 3H DALI Emergency Unit	
	930 – CRI90/ 3000K			
	935 – CRI90/ 3500K			
	940 – CRI90/ 4000K			
	950 – CRI90/ 5000K			
	957 – CRI90/ 5700K			
	960 – CRI90/ 6000K			
	965 – CRI90/ 6500K			

Responsible person:

v z. Ggm

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Ambient temperature range:

Standard version	LED module	Ambient temperature	Driver
KERN-EX2/21-α-L04-γγγ-1200-0ND-ζζ-PD	LED module 360x160_66LED	-30°C to +60°C	TCI PRO FLAT 22 BI
KERN-EX2/21-α-L04-γγγ-1800-0ND-ζζ-PD		-30°C to +55°C	
KERN-EX2/21-α-L04-γγγ-2400-0ND-ζζ-PD		-30°C to +55°C	TCI PRO FLAT 30 BI
KERN-EX2/21-α-L04-γγγ-2900-0ND-ζζ-PD		-30°C to +50°C	
KERN-EX2/21-α-L04-γγγ-3400-0ND-ζζ-PD		-30°C to +50°C	
KERN-EX2/21-α-L04-γγγ-4000-0ND-ζζ-PD		-30°C to +45°C	

Dimmable version	LED module	Ambient temperature	Driver
KERN-EX2/21-α-L04-γγγ-1200-0D2-ζζ-PD	LED module 360x160_66LED	-30°C to +60°C	TCI PRO FLAT 38 DALI NFC BI
KERN-EX2/21-α-L04-γγγ-1800-0D2-ζζ-PD		-30°C to +55°C	
KERN-EX2/21-α-L04-γγγ-2400-0D2-ζζ-PD		-30°C to +55°C	
KERN-EX2/21-α-L04-γγγ-2900-0D2-ζζ-PD		-30°C to +50°C	
KERN-EX2/21-α-L04-γγγ-3400-0D2-ζζ-PD		-30°C to +50°C	
KERN-EX2/21-α-L04-γγγ-4000-0D2-ζζ-PD		-30°C to +45°C	

Responsible person:
v z. Gg

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Maintained emergency luminaires	LED module	Ambient temperature	Driver + emergency unit + battery
KERN-EX2/21-α-L04-γγγ-1200/1800-εM3/εM3A-ζζ-PD	LED module 360x160_66LED	0°C to +40°C	TCI PRO FLAT 22 BI + TRIDONIC EM CONVERTER LED BASIC/ST 20x NiCd 50V + VBA-N-NiCd, 3,6/4,8V; 4Ah
KERN-EX2/21-α-L04-γγγ-1200/1800-εD3D2-ζζ-PD		0°C to +40°C	TCI PRO FLAT 38 DALI NFC BI + TRIDONIC EM CONVERTER LED PRO 20x NiCd 50V + VBA-N-NiCd, 3,6/4,8V; 4Ah
KERN-EX2/21-α-L04-γγγ-2400-εM3/εM3A-ζζ-PD		0°C to +40°C	TCI PRO FLAT 30 BI + TRIDONIC EM CONVERTER LED BASIC/ST 20x NiCd 50V + VBA-N-NiCd, 3,6/4,8V; 4Ah
KERN-EX2/21-α-L04-γγγ-2400-εD3D2-ζζ-PD		0°C to +40°C	TCI PRO FLAT 38 DALI NFC BI + TRIDONIC EM CONVERTER LED PRO 20x NiCd 50V + VBA-N-NiCd, 3,6/4,8V; 4Ah
KERN-EX2/21-α-L04-γγγ-2900/3400/4000-εM3/εM3A-ζζ-PD		0°C to +30°C	TCI PRO FLAT 30 BI + TRIDONIC EM CONVERTER LED BASIC/ST 20x NiCd 50V + VBA-N-NiCd, 3,6/4,8V; 4Ah
KERN-EX2/21-α-L04-γγγ-2900/3400/4000-εD3D2-ζζ-PD		0°C to +30°C	TCI PRO FLAT 38 DALI NFC BI + TRIDONIC EM CONVERTER LED PRO 20x NiCd 50V + VBA-N-NiCd, 3,6/4,8V; 4Ah

Non-maintained emergency luminaires	LED module	Ambient temperature	Emergency unit + battery
KERN-Ex2/21-α-L04-γγγ-400-εNM3/εM3A-ζζ-PD	LED module 278x15_6LED or LED module 278x15_10LED	0°C to +45°C	TRIDONIC EM CONVERTER LED BASIC/ST 20x NiCd 50V + VBA-N-NiCd, 3,6/4,8V; 4Ah
KERN-Ex2/21-α-L04-γγγ-400-εNMD3-ζζ-PD			TRIDONIC EM CONVERTER LED PRO 20x NiCd 50V + VBA-N-NiCd, 3,6/4,8V; 4Ah

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