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 0017X

(4) Product: **LED Luminaire type KERN-EX1/21**

(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:

25/0017 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 60079-7:2015+A1:2018, EN 60079-18:2015+A1:2017, 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 2G Ex eb mb IIC T4 Gb
II 2D Ex tb IIIC T85°C Db

This certificate is valid till: **31.07.2030**

Responsible person:

v z. 9p

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 0017X

(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. Electronic ballasts BAREL HFX LED BG2 / HFXE LED BG2, ExVeritas 22 ATEX 1237U/5 – Ex eb mb IIC Gb, and the LED module BAREL BG5 (300 mm), ExVeritas 19 ATEX 0478U/5 – Ex mb IIC Gb are used. Additionally, a Barel VSI LED diode, ExVeritas 22 ATEX 1237U/5 – Ex mb IIC Gb, is mounted on the component carrier, which is used to indicate the status of the emergency unit. For luminaires with an emergency unit, battery pack type VBR-Ex-NiCd 2x Linear 7,2 V / 5Ah, FTZÚ 24 ATEX 0058U, Ex eb IIC Gb, is used.

The component carrier also holds a WAGO 862-15xx terminal block PTB 03 ATEX 1189U, Ex eb IIC Gb, for connecting the supply cable with conductors up to 4 mm² cross-section.

Cable entries are ensured by plastic or metal Ex cable glands, which must meet the "eb" and "tb" requirements, minimum ingress protection rating IP66. Any remaining holes in the luminaire can be sealed with a sealing plug in Ex protection as the Ex cable gland.

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:

Luminaire equipped by driver BAREL HFX BG2:
220-240 V, 50/60 Hz, 220-240 V DC

Luminaire equipped by driver HFXE BG2 LED:
220-240 V, 50/60 Hz, 220-240 V DC

Additional parameters –see Annex.

The luminaire is verified according to the standard EN IEC 60079-31:2024 too.

Responsible person:
v z. Ggg

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(13) **Schedule**

(14) EU - Type Examination Certificate No. FTZÚ 25 ATEX 0017X

(16) Report Number: 25/0017

(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 eb and 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) of this supplementary certificate and standard EN IEC 60079-31:2024.

(19) Drawings and Documents:

Number	Rev.	Sheets	Date	Description
--	00	12	30.05.2025	Technical description
--	0	8	26.06.2025	Technical conditions for mounting luminaire
Assembly Drawing KERN-Ex1/21	--	1	02.07.2025	Assembly Drawing

Responsible person:

v z. Jga

Dipl. Ing. Lukáš Martinák
Head of Certification Body

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Physical-Technical Testing Institute
Ostrava - Radvanice

ANNEX

to EU - Type Examination Certificate No. FTZÚ 25 ATEX 0017X

Type coding:

KERN-EX1/21-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 1/21
- Name of the luminaire

α – Type of the luminaire enclosure	γγγ – CRI/CCT	εεεε – Type of the connection	ζζ – internal designation
J – Enclosure eb/Silicone	830 – CRI80/ 3000K	0ND – ON/OFF driver	00–99
K – Enclosure eb/EPDM	840 – CRI80/ 4000K	0D2 – DALI2 driver	
	850 – CRI80/ 5000K	NM3A – Emergency unit 3H Autotest + ON/OFF driver	
	857 – CRI80/ 5700K	NA3D2 – Emergency unit 3H Autotest + DALI2 driver	
	865 – CRI80/ 6500K	ND3D2 – Emergency unit 3H DALI + DALI2 driver	
	930 – CRI90/ 3000K	NNM3A – Emergency unit 3H Autotest	
	940 – CRI90/ 4000K	NNMD3 – Emergency unit 3H DALI	
	950 – CRI90/ 5000K		
	957 – CRI90/ 5700K		
	965 – CRI90/ 6500K		

Responsible person:

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ANNEX

to EU - Type Examination Certificate No. FTZÚ 25 ATEX 0017X

Ambient temperature range:

Type of luminaire	Ambient temperature range Ta	Power
KERN-EX1/21-α-L04-γγγ-1900-0ND-PD	-30°C to +50°C	20
KERN-EX1/21-α-L04-γγγ-1900-0D2-PD	-30°C to +50°C	20
KERN-EX1/21-α-L04-γγγ-1900-NM3A-PD	0°C to +35°C	20
KERN-EX1/21-α-L04-γγγ-1900-NA3D2-PD	0°C to +35°C	20
KERN-EX1/21-α-L04-γγγ-1900-ND3D2-PD	0°C to +35°C	20
KERN-EX1/21-α-L04-γγγ-400-NNM3A-PD	0°C to +45°C	5
KERN-EX1/21-α-L04-γγγ-400-NNMD3-PD	0°C to +45°C	5

Responsible person:

v z. Ggn

Dipl. Ing. Lukáš Martinák
Head of Certification Body

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