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

Certificate No.:	**IECEx FTZU 25.0012X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2025-07-16		
Applicant:	**VYRTYCH a.s.** Židněves 116 Březno 294 06 **Czech Republic**		
Equipment:	**LED luminaire, type KERN-EX1/21**		
Optional accessory:			
Type of Protection:	**Increased safety; encapsulation; dust protection**		
Marking:	Ex eb mb IIC T4 Gb Ex tb IIIC T85 °C Db		

Approved for issue on behalf of the IECEx Certification Body: **Dipl. Ing. Martin Gregor**

Position: **Vice Head of Certification Body**

Signature: (for printed version)

Date: (for printed version) 2025-07-16

FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV, s.p. OSTRAVA-RADVANICE

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Fyzikalne technicky zkusebni ustav
(Physical -Technical Testing Institute)
Pikartska 7, 71607 Ostrava - Radvanice
Czech Republic

IECEx Certificate of Conformity

Manufacturer: **VYRTYCH a.s.**
Židněves 116
Březno 294 06
Czech Republic

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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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:

CZ/FTZU/ExTR25.0012/00

Quality Assessment Report:

CZ/FTZU/QAR22.0001/03

FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV, s.p. • OSTRAVA-RADVANICE •

IECEx Certificate of Conformity

Certificate No.: **IECEx FTZU 25.0012X** Page 3 of 3

Date of issue: 2025-07-16 Issue No: 0

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

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, IECEx EXV 22.0018U - Ex eb mb IIC Gb, and the LED module BAREL BG5 (300 mm), IECEx EXV 19.0027U - Ex mb IIC Gb are used. Additionally, a Barel VSI LED diode, IECEx EXV 19.0027U - 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, IECEx FTZÚ 24.0018U - Ex eb IIC Gb, is used.
The component carrier also holds a WAGO 862-15xx terminal block IECEx PTB 05.0003U - 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 IEC 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

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Ambient temperature range: - see Annex to the certificate IECEx FTZU 25.0012X , Issue No: 0

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 Service temperature range -30 °C to +60 °C.

5. The Technical conditions for mounting and maintainance 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.

Annex:

Annex_to_IECEx_FTZU_25_0012X00.pdf

FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV, s.p. • OSTRAVA-RADVANICE •

Applicant: **VYRTYCH** a.s

Address: Židněves 116, 294 06 Březno, Czech Republic

Electrical Apparatus: LED luminaire, type KERN-EX1/21

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		

FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV, s.p. • OSTRAVA-RADVANICE •

FTZÚ, s.p., Pikartská 1337/7, 716 00 Ostrava-Radvanice, Czech Republic,
tel.: +420 595 223 111, +420 604 203 525, ftzu@ftzu.cz, www.ftzu.cz

Applicant: **VYRTYCH** a.s

Address: Židněves 116, 294 06 Březno, Czech Republic

Electrical Apparatus: LED luminaire, type KERN-EX1/21

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

FTZÚ, s.p., Pikartská 1337/7, 716 00 Ostrava-Radvanice, Czech Republic,
tel.: +420 595 223 111, +420 604 203 525, ftzu@ftzu.cz, www.ftzu.cz