



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 20 ATEX 0092X

- (4) Product: **Flameproof luminaire type 591 44 .. (K)**
(5) Manufacturer: **ELEKTROSVIT Svatobořice, a. s.**
(6) Address: **Nádražní 1290/44, 696 04 Svatobořice-Mistřín, 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:

20/0092 dated 30.08.2021

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

**EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015+A1:2018;
EN 60079-31:2013; EN 60079-28:2015**

(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 db eb op is IIC T4-T5 Gb**

 **II 2D Ex tb op is IIIC T_{max.surface} – see below (15) Db**

(13) This certificate is valid till: **31.08.2026**

Responsible person:


Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 30.08.2021

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**Physical-Technical Testing Institute
Ostrava - Radvanice**

(13)

Schedule

(14) **EU - Type Examination Certificate No. FTZÚ 20 ATEX 0092X**

(15) Description of Product:

The luminaire consists of a housing, LED module and a flange with protective glass. In the case of type K, the luminaire also includes a protective basket. The body is made of cast AlSi alloy. A steel hanger is fixed at the top with two screws. On the side of the body, there is a connection compartment in the secured "eb" version closed by a lid with a silicone flat seal, inside the connection compartment:

- connection terminal block 10 pcs WAGO 264 (PTB 98 ATEX 3129U);
- two cable glands HSK-M25-Ex (alternatively HSK-M20-Ex + reduction RSD-MS-Ex) in explosion-proof design Ex eb IIC Gb and Ex ta IIIC Da (KEMA 99 ATEX 6971X, DMT 03 ATEX E 049);
- Ex multicore bushing RSM 21 M25x1,5 (FIDI 19 ATEX 0013U).

An aluminium base plate with LED module is fixed in the luminaire body. A flange is screwed into the body, the M205x2 thread of which forms the "db" joint. The flange is made of AlSi alloy and is sealed with a polyurethane sealant with protective tempered glass.

The surface of the luminaire is treated with polyester powder paint in RAL 1005.

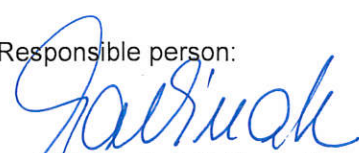
The light source is LED PCB 100/80 W, using Philips Lumileds LUXEON diodes and the light output is 152 lm/W for type 591 44 01 (K) and 153 lm/W for type 591 44 02 (K).

The light source is a 65 W LED PCB, using Philips Lumileds LUXEON diodes and a light output of 150 lm/W at the type 591 44 03 (K).

Basic technical data:

Type:	591 44 01 (K)		591 44 02 (K)	
Explosion-proof marking:	II 2G Ex db eb op is IIC T4 Gb II 2D Ex tb IIIC Tmax.surface°C Db		II 2G Ex db eb op is IIC T5 Gb II 2D Ex tb IIIC Tmax.surface°C Db	
Light source:	LED DPS SIRIUS 100/80W			
LED type:	LUXEON 3030 HE Plus			
LED driver:	2x TRIDONIC LCO 90W 200-1050mA 165V one4all NFC C EXC3			
Luminous flux:	15025 lm		11475 lm	
Power input:	99,2 W		75 W	
Voltage:	198 – 264 V AC / 170 – 250 V DC			
Degree of protect:	IP66			
Temperature class and surface temperature:	T4	T90°C	T5	T81°C
Operating temperature:	-40°C to +50°C		-40°C to +55°C	

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Physical-Technical Testing Institute
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Schedule

(14) EU - Type Examination Certificate No. FTZÚ 20 ATEX 0092X

(15) Description of Product (continuation):

Type:	591 44 03 (K)	
Explosion-proof marking:	II 2G Ex db eb op is IIC T5 Gb II 2D Ex tb IIIC Tmax.surface°C Db	
Light source:	LED DPS SIRIUS 65W	
LED type:	LUXEON 3030 HE Plus	
LED driver:	TRIDONIC LCO 90W 200–1050mA 165V one4all NFC C EXC3	
Luminous flux:	9750 lm	
Power input:	65 W	
Voltage:	198 – 264 V AC / 170 – 250 V DC	
Degree of protect:	IP66	
Temperature class and surface temperature:	T5	T87°C
Operating temperature:	-40°C to +60°C	

(16) Report Number: 20/0092

(17) Specific Conditions of Use:

1. Verified values of the maximum gaps and minimum constructional length of flameproof joints of this enclosure are different from relevant minimum and maximum values mentioned in standard. To obtain information about joints dimension it is necessary to contact the manufacturer.
2. Ambient temperature: $-40^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$ for 591 44 01 (K)
 $-40^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$ for 591 44 02 (K)
 $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ for 591 44 03 (K).
3. The equipment must be installed to avoid a risk from propagating brush discharges for application in explosive dust atmosphere.

Responsible person:


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(14) **EU - Type Examination Certificate No. FTZÚ 20 ATEX 0092X**

(18) Essential Health and Safety Requirements:

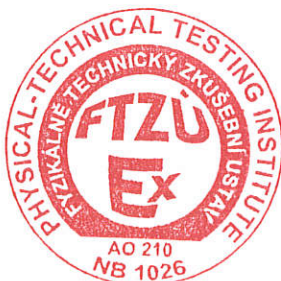
Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this certificate.

(19) Drawings and Documents:

Number	Sheets	Date	Description
495.3707	4	--	Technical description
495.3718	4	--	Technical description
0-591 44 01	1	12.11.2020	Drawings SIRIUS LED
0-591 44 03	1	23.06.2020	Drawings SIRIUS LED
R-591 44 01,02	6	30.08.2021	Material list
R-591 44 03	6	23.06.2020	Material list
--	1	25.08.2021	Wiring diagram 591 44 01,02
--	1	25.08.2021	Wiring diagram 591 44 03

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