

ARLIGHT

EXPROOF

FALCON

Safe
Lighting







About Exproof

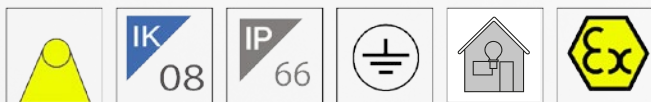
Exproof, also known as explosion-proof, is a crucial attribute of equipment utilized to ensure the establishment of safe working environments in areas with potentially explosive atmospheres. These areas encompass a wide range of industries dealing with flammable, combustible, and explosive materials, such as petroleum products, chemicals, LPG, natural gas, coal mines, grain silos, sugar factories, as well as timber and furniture manufacturing facilities. Within various industrial sectors, including factories and bakeries, the occurrence of an explosive atmosphere can arise during regular working conditions or in situations such as malfunctions and maintenance activities involving gases, dust, or volatile substances. The primary objective is to prevent the formation of an atmosphere with explosive and combustion characteristics. Nevertheless, despite all preventive measures, uncontrolled explosives and flammable atmospheres may still manifest in these areas. Hence, all equipment utilized in such environments must be specifically designed to mitigate the risk of causing explosions or combustion events.



To prevent potential risks to life and property, it is essential to utilize explosion-proof (Exproof) luminaires that have been produced and approved by international standards. These luminaires are designed to operate in environments where flammable, explosive, and combustible materials are present without generating sparks or arcs that could trigger explosions. Consequently, the use of Exproof luminaires, which eliminate the risk of explosions, is mandatory according to occupational safety and worker health regulations.



Internationally, Exproof standards align with the IECEx certification, while throughout Europe, the ATEX certificates are recognized. Hazardous areas are classified based on the frequency and duration of explosive atmospheres. Our Exproof LED lighting fixture, model S0415 FEX, is specifically designed for Zone2-22 areas and is suitable for use in environments with 3G - 3D explosive atmosphere content. The product offers temperature ranges of T5 to T6 for gas zones and T85°C to T100°C for dust zones.



Exproof Falcon INDOOR

Explosion Safe

Product Features

Color

RAL 9006 (Grey)

Optical Lens Angle

66°

CCT(K)

3000 K

4000 K

6500 K

Option Values

13.800 lm-22.600 lm

Power (W)

105W / 150W / 180W

Impact Resistance Class

IK08

IP Protection Class

IP66

Body

Electrostatic powder coated aluminum injection body

Optic

Specially designed clear polycarbonate optical lens and clear tempered glass.

Led

L90B50>50000 hour-life, LED with high efficacy factor and color rendering

Driver

Constant current output
DALI dimming

Operating Temperature

-25°C / +40°C

Option

Pendant

Busbar

Surface mounted/Cable duct

Certificate Code

II 3G Ex nR IIC T6...T5 Gc

II 3G Ex tc IIIC T85°C...

T100°C Dc

Reference Standards

EN 60079-0: 2018

EN IEC 60079-15: 2019

EN 60079-31:20145

IP66-EN 60529

IK08-EN 62262



Exproof Falcon OUTDOOR

Explosion Safe

Product Features

Color

RAL 1021 (Yellow)

Optical Lens Angle

66°

CCT(K)

4000 K

5000 K

6500 K

Option Values

15.600 lm-25.240 lm

Power (W)

105W / 150W / 180W

EN60529-IP66

EN62262-IK08

Impact Resistance Class

IK08

IP Protection Class

IP66

Body

Chromate-plated, electrostatic powder-coated aluminum injection body

Optic

Specially designed clear polycarbonate optical lens and clear tempered glass.

Led

L90B50>50000 hour-life, Led with high efficacy factor and color rendering

Driver

Constant current output, high back efficiency
DALI dimming

Operating Temperature

-25°C / +40°C

Option

DALI dimming

Option

Pendant

Busbar

Surface mounted/Cable duct

Certificate Code

II 3G Ex nR IIC T6...T5 Gc

II 3G Ex tc IIIC T85°C..

T100°C Dc

Reference Standards

EN 60079-0: 2018

EN IEC 60079-15: 2019

EN 60079-31: 2014

IP66-EN 60529

IK08-EN 62262



Exproof Opus INDOOR

Explosion Safe



Product Features

Color

White

CCT(K)

4000 K

Option Values

2480 lm-8830 lm

Power (W)

19W / 26W / 27W

34W / 38W / 44W

49W / 61W

EN60529-IP66

Impact Resistance Class

IK 10

IP Protection Class

IP66

Body

Matt natural anodized, aluminum ekstrusion profile

Diffuser

Opal white polycarbonate diffuser providing homogeneous light distribution

Led

L90B50>50000 hour-life, midpower with high efficacy factor and color rendering

Driver

Constant current output, high back efficiency
Pf > 0.90

Operating Temperature

-20°C / +35°C

Option

DALI dimming

1 or 3 hour emergency lighting module

Option

Surface mounted/Cable duct

Certificate Code

II 3G Ex nR IIC T6 Gc

II 3D Ex tc IIIC T85°C..

Reference Standards

EN 60079-0: 2018

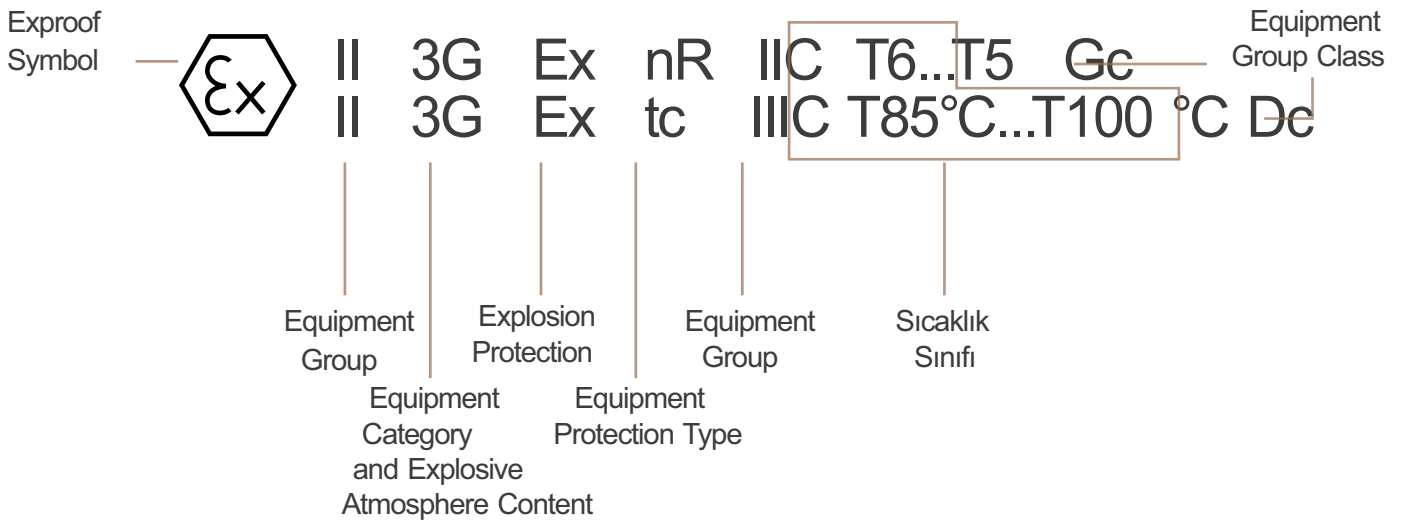
EN IEC 60079-15: 2019

EN 60079-31: 2014

EN 60529

EN 62262

S 0415 FEX Encoding Content



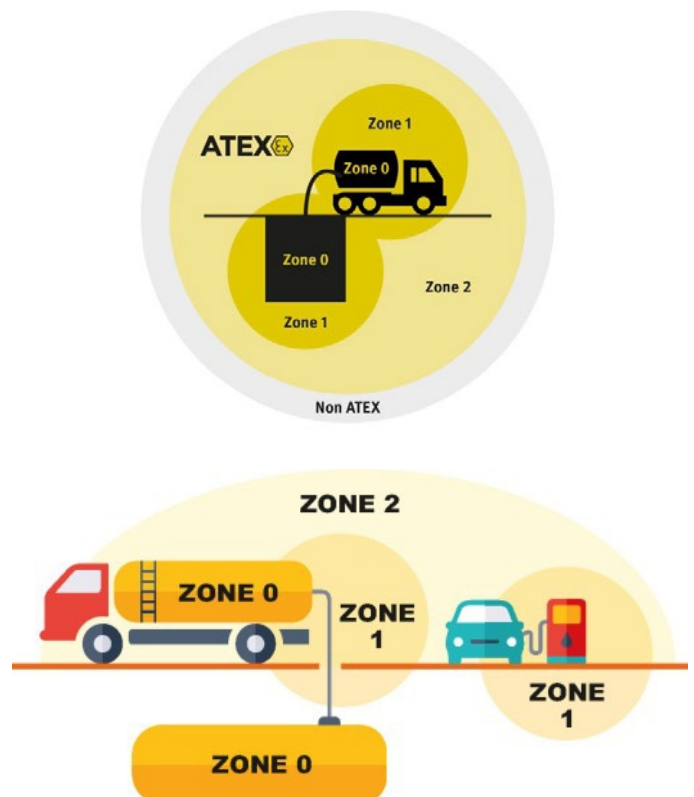
Zone and Gas Classifications in Explosive Atmospheres

Zone 2 (Low Danger)

Zone 2 pertains to areas where there is a low risk of encountering an explosive gas atmosphere, which may consist of a mixture of substances with air. Such an atmosphere is expected to occur only occasionally during normal operations, and duration is typically very brief. This zone is commonly associated with facilities that have welded pipe connections or specific parts of plants, such as natural gas and oil pipelines.

Zone 22 (Low Danger)

Zone 22 refers to areas where there is a low likelihood of encountering an explosive dust environment. Similar to Zone 2, this type of atmosphere is expected to occur only occasionally during normal operations, and its duration is typically very short.



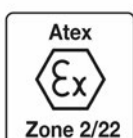
Our Ex-proof LED lighting fixture is suitable for use in hazardous locations classified under the 3D and 3G categories. It provides safe and reliable heat transfer, with temperature ranges of T5 to T6 for the gas zone and temperature ranges of T85°C to T100°C for the dust zone. It is suitable for use in areas defined as "Zone2-22" as specified below.

Gas Environments Temperature Classes

Temperature Class IEC/EN NEC 505-10	The highest Surface Temperature of the Equipment	Flash Temperature of Combustible Materials	Temperature Class NEC 500-3 CEC 18-052	II A	II B	II C
T1	450	>450	T1	Acetone, Ethane, Benzol Ethylotenet, Ammonia, Ethanoic Acid, Methane Methanol, Propane Toluene, Carbon Oxide	Air Gas Acrylnitril	Hydrogen
T2	300 280 260 230 215	>300≤450 >280≤300 >260≤280 >230≤260 >215 ≤230	T2 T2A T2B T2C T2D	Ethanol, i-Amyl Acetate n-Butane, n-Butyl Alcohol	Ethylene	Acetylene
T3	200 180 165 160	>200≤300 >180≤200 >165≤180 >160≤165	T3 T3A T3B T3C	Gasline, Diesel Fuel Aviation Fuel, Hot Oil n hexane		
T4	135 120	>135≤200 >120≤135	T4 T4A	Acetaldehyde Ethylether		
T5	100	>120≤135	T5			
T6	85	>100≤100	T6			Carbon Disulfide

OTDOOR

INDOOR



Exproof Falcon INDOOR/ OUTDOOR

Usage Areas

- Petroleum Refineries and Facilities
- LPG and Natural Gas Installations
- Chemical Product Manufacturing Plants
- Pharmaceutical Factories
- Iron and Steel Plants
- Coal Mines
- Wood Material Production Facilities
- Alcoholic Beverage Factories
- Flour and Sugar Factories
- Grain Silos
- Vehicle Parking Areas
- Corridors in Logistics and Storage Areas
- Power Plants



Chemical Plants



Coal Mine



Petroleum Refinery



1) TYPE EXAMINATION CERTIFICATE

- 2) Equipment or protective system intended for use in potentially explosive atmospheres — Directive 2014/34/EU
- 3) Type Examination Certificate Number : **SCA20ATEXV006X/Rev.01** (for revision detail see cl.20)
- 4) Equipment : Led Luminaire, TYPES: FALCON-S0415FEX (The type description is in the schedule)
- 5) Manufacturer : Arlight Aydınlatma A.Ş.
- 6) Manufacturer Address : Saray Mahallesi 205 Sok. No.4, 06980, Kahramankazan, Ankara/TURKEY
- 7) Equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- 8) SCA Belgelendirme ve Özel Egt. Hizm. Ltd. Sti. Certifies that this equipment has been found to comply with the Essential Health and Safety Requirements that relate to the design of Category 3 equipment, which is intended for use in potentially explosive atmospheres. These Essential Health and Safety Requirements are given in Annex II to European Union Directive 2014/34/EU of the European Parliament and of the Council, 26 February 2014.
The examination and test results are recorded in the confidential report **V/2019-08-122/Rp.04**
- 9) Essential Health and Safety Requirements is made about reference standards.
EN 60079-0:2018, EN IEC 60079-15:2019, EN 60079-31:2014
- 10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions of safe use specified in the schedule to this certificate.
- 11) Type Examination Certificate relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured.
- 12) The marking of the equipment shall include the following :



II 3G Ex nR IIC T6...T5 Gc
II 3D Ex tc IIIC T85°C...T100°C Dc

The competent person
SCA Technical Manager
İsmail OĞLAKCIOĞLU

Date of Approval : 08.02.2021

SCA Belgelendirme ve Özel Eğitim Hizmetleri Ltd. Sti.
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13) SCHEDULE

14) Type Examination Certificate : SCA20ATEXV006X/Rev.01

15) Description of Equipment and/or Protective System:

Led Luminaires are suitable for illumination of hazardous areas which are used in Category 3D and 3G. FALCON-S0415FEX series led luminaires has 2 parts: luminaire and driver box. The luminaire comprise of an aluminium enclosure fitted with 4mm tempered glass and optical lens that incorporates a gasket for sealing and an aluminium frame. The driver enclosure is cast from an aluminium alloy

Technical Parameters

Rated voltage : 220-240 VAC
 Rated power : From 105W to 180W
 Rated frequency : 50/60 Hz
 Degree of protection : IP 66
 Ambient temperature : -25°C to +40°C

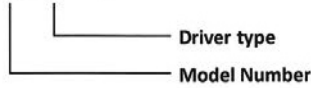
Temperature Classes

Temperature classes depends on the model/led type

Temperature class	T6 / T85°C	T5 / T100°C
Model	Outdoor	Indoor

Type Coding Of Luminaire

LNS2XX.1.Y.FF.00



Description of Y (driver type):

1 for Non-dimmable model
6 for Dimmable model (DALI)

Indoor Led Type : Samsung LM561B+

Outdoor Led Type : Samsung LM301B

The competent person
 SCA Technical Manager
 İsmail OĞLAKCIOĞLU

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CONTINUATION OF SCHEDULE TO TYPE EXAMINATION CERTIFICATE SCA20ATEXV006X/Rev.01

Description of XX (Model Number)

XX	Power	Led Type	Mounting Type
50	105W	Indoor	M1-Pendant
51	105W	Outdoor	M1-Pendant
52	150W	Outdoor	M1-Pendant
53	150W	Indoor	M1-Pendant
54	180W	Outdoor	M1-Pendant
55	180W	Indoor	M1-Pendant
56	105W	Indoor	M2-Cable channel
57	105W	Outdoor	M2-Cable channel
58	150W	Indoor	M2-Cable channel
59	150W	Outdoor	M2-Cable channel
60	180W	Outdoor	M2-Cable channel
61	180W	Indoor	M2-Cable channel
62	105W	Outdoor	M3-Surface mounted
63	105W	Indoor	M3-Surface mounted
64	150W	Outdoor	M3-Surface mounted
65	150W	Indoor	M3-Surface mounted
66	180W	Indoor	M3-Surface mounted
67	180W	Outdoor	M3-Surface mounted
68	105W	Outdoor	M5-Busbar
69	105W	Indoor	M5-Busbar
70	150W	Indoor	M5-Busbar
71	150W	Outdoor	M5-Busbar
72	180W	Outdoor	M5-Busbar
73	180W	Indoor	M5-Busbar

16) Test and Assessment Report V/2019-08-122/Rp.04

Complied with IP66 degree of protection.

The competent person
SCA Technical Manager
İsmail OĞLAKCIOĞLU

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CONTINUATION OF SCHEDULE TO TYPE EXAMINATION CERTIFICATE SCA20ATEXV006X/Rev.01

17) Special Conditions for Safe Use :

The cable glands used for cable entries and plugs for unused holes on equipment must have to following parameters and certification:

- "Ex nR" and "Ex tc" or "Ex eb" protection type
- Minimum degree of protection IP 66 according to EN 60529
- Threaded entry size shall be in accordance with technical file and technical drawings

Notes for manufacturing and operation

Not subject to routine pressure testing.

(According to EN IEC 60079-15:2019 article 11.3.2.1.1 "Type test only without additional routine test". Test report: V/2019-08-122/Rp.03 - 28.02.2020)

18) Essential Health and safety Requirements :

Met by compliance with the standards listed in Section 9 of this certificate.

19) Drawings and Documents :

Technical file S0415FEX/Rev.01 dated 28.12.2020 includes drawings, safety, maintenance and mounting instructions.

Drawing No:	Pages	Title	Rev.	Date
124318-1	1	Luminaire Enclosure	00	24.09.2019
103911	1	Optical Lens	00	17.07.2017
104009	1	Frame	00	27.12.2016
103880	1	Glass	00	27.12.2016
125867-1	1	Driver Box Assembly	01	28.12.2020
125867-2	1	Driver Box Painting Detail	01	28.12.2020
125867-4	1	Driver Box Installation Detail	00	28.12.2020
103770	1	Silicon Gasket	00	17.07.2017

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CONTINUATION OF SCHEDULE TO TYPE EXAMINATION CERTIFICATE SCA20ATEXV006X/Rev.01

Drawing No:	Pages	Title	Rev.	Date
103912	1	Gasket Between Lens and Glass	00	27.12.2016
128303-1	1	Indoor, M1-Pendant Assembly	01	28.12.2020
128303-2	1	Indoor, M2-Cable Channel Assembly	01	28.12.2020
128303-3	1	Indoor, M3-Surface Mounted Assembly	01	28.12.2020
128303-4	1	Indoor, M5-Busbar Assembly	01	28.12.2020
128303-5	1	Indoor Label	00	24.09.2019
128303-8	1	Indoor Detailed	01	28.12.2020
128303-10	1	Indoor General Assembly	01	28.12.2020
103909	1	Indoor LED scheme	00	24.09.2019
124317-1	1	Outdoor, M1-Pendant Assembly	01	28.12.2020
124317-2	1	Outdoor, M2-Cable Channel Assembly	01	28.12.2020
124317-3	1	Outdoor, M3-Surface Mounted Assembly	01	28.12.2020
124317-4	1	Outdoor, M5-Busbar Assembly	01	28.12.2020
124317-5	1	Outdoor Label	00	24.09.2019
124317-8	1	Outdoor Detailed	01	28.12.2020
124317-10	1	Outdoor General Assembly	01	28.12.2020
128453	1	Outdoor LED scheme	00	24.09.2019

20) Certificate History :

Revision Number	Publication Date	Explanation
Rev.00	14.05.2020	First Publication
Rev.01	08.02.2021	Published for the technical revisions

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SCA Technical Manager
İsmail OĞLAKCIOĞLU

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