

# Lighting: Emergency Lighting

FDBAES Series: Self-Contained Emergency Lighting Units with Self-Test System – Flameproof



**Fluorescent Switched Version**



**Incandescent Unswitched Version**



**Fluorescent Unswitched Version**

**Compliances:**

ATEX - IECEx:



Zone 1 & 2 – 21 & 22	ATEX	II 2 G / D	IECEx	CE
Ex d IIC	T6	Ex tD A21	T80°C	IP66/68 - IK08

**Electrical Data:**

Power & Lamp Type	Voltage	Frequency	Duration	
1 x 8 W Fluorescent 2 x 3 W Incandescent	230 Vac	50/60 Hz	1 hour	

**Operating Temperature:**

**-40°C to +55°C (Refer to (1) on page 105)**

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Zone 1 & 2 - 21 & 22

II 2 GD

ATEX / IECEx

IP66/68 - IK08

LIGHTING

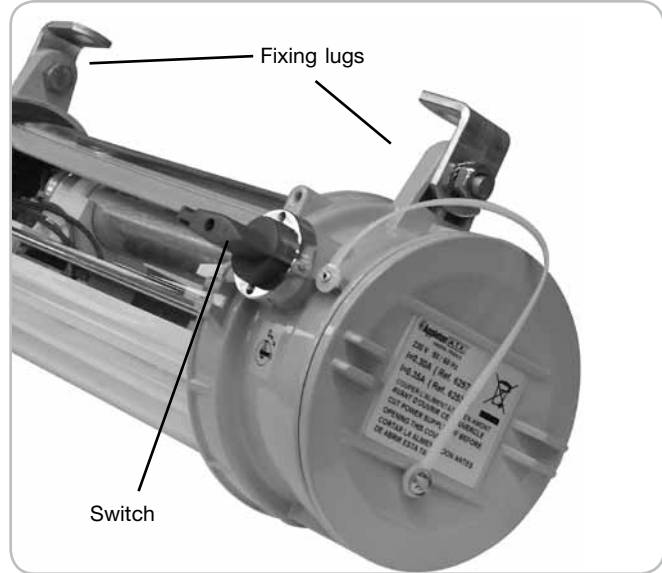
### Applications:

- Provides adequate lighting and/or visual indication of access on exit routes during an evacuation in a hazardous environment.
- Can be installed in hazardous areas designated as Zone 1, 2, 21 and 22.
- Typical applications include oil refineries, petrochemical plants, pulp and paper mills.

### Features:

All versions:

- Power supply 230 Vac 50/60 Hz.
  - 1 hour duration.
  - Threaded access cover with O-ring seal.
  - Can be maintained in hazardous areas as an internal switch cuts off battery supply automatically once the cover is unscrewed and opened.
  - Interchangeable flameproof battery pack.
    - 4.8 V - 4 Ah (Fluorescent version)
    - 3.6 V - 4 Ah (Incandescent version)
  - Padlockable switch is available on switched models which individually cuts off power supply and remote control.
  - Charge indicator by 4 nos yellow LEDs (life time over 10 years).
  - Operates in any position.
  - Non-maintained 8 W fluorescent or 2 x 3 W incandescent lamp versions (lamps supplied).
  - Connection to plug-in terminal block via 2 x 5 x 2.5 mm<sup>2</sup> terminals.
  - Supplied with two fixing lugs.
  - Automatic built-in self-test system (SATI) with memorization of tests indicated by LEDs.
  - Using a microprocessor and an internal clock, the unit will carry out automatic tests.
    - Weekly test: Lamp check during 6 seconds.
    - Quarterly test: Emergency operation and lamp check for 1 hour.
  - Can be remotely controlled and checked without switching the mains off with remote control unit from Legrand (Catalog Number 03901) or URA (Catalog Number 095448 and 095450) manufacturers.
  - The remote control unit installed in a safe area or inside a flameproof box allows manual ignition of all the units (max. 300 units) for visual inspection of their operation.
- Addressable versions (consult factory):
- Providing the regulatory control of the emergency lighting units and centralizing information coming from those units on a computerized management system.



- Operating without any special line, communication between units and the control system is realized via mains-borne signals on the remote control line.
- Capacity: one control system for 200 emergency lighting units.
- Max. capacity: 1000 emergency lighting units with boosters.

### Standard Material of Fixtures:

- Anti-corrosive gray painted Zamak end caps and cover.
- Nitrile O-ring seal.
- Sealed toughened glass.

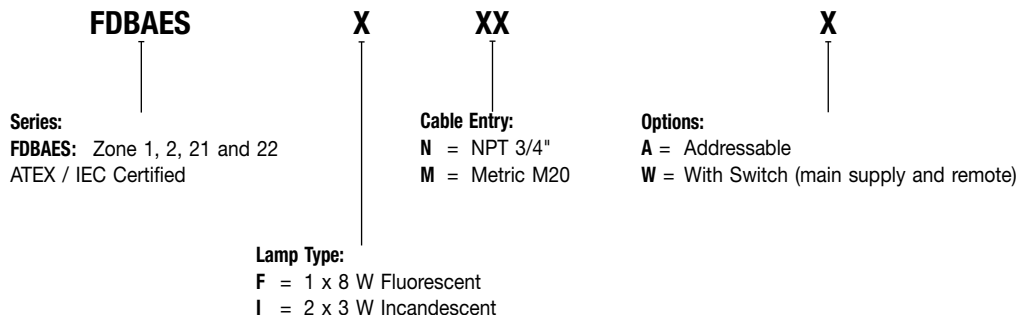
### Standard Material of Accessories:

- Zinc plated steel or 316 stainless steel fixing brackets.
- White painted galvanized steel.
- Zinc plated steel guard.

### Options:

- Addressable monitoring software, please consult factory.
- Low temperature application, please consult factory.

### Catalog Number Logic:



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Zone 1 & 2 - 21 & 22

Ex II 2 GD

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### Ordering Information:

**Unswitched Version** – 1 hour duration – Non-maintained – Two threaded cable entries with one blanking plug

Type	Power & Lamp	Lumen Output	Cable Entries	Weight (kg)	Volume (dm <sup>3</sup> )	Catalog Number	Old Catalog Number	Pack
Space Lighting	1 x 8 W Fluorescent	415 lm	3/4" NPT M20	8.1	37.1	<b>FDBAESFN</b>	094959	1
						<b>FDBAESFM</b>	–	1
Escape Route Lighting	2 x 3 W Incandescent	63 lm	3/4" NPT M20	8.1	37.1	<b>FDBAESIN</b>	094966	1
						<b>FDBAESIM</b>	–	1

**Switched Version** – 1 hour duration – Non-maintained – One threaded cable entry

Type	Power & Lamp	Lumen Output	Cable Entries	Weight (kg)	Volume (dm <sup>3</sup> )	Catalog Number	Old Catalog Number	Pack
Space Lighting	1 x 8 W Fluorescent	415 lm	3/4" NPT M20	10	40.4	<b>FDBAESFNW</b>	094958	1
						<b>FDBAESFMW</b>	–	1
Escape Route Lighting	2 x 3 W Incandescent	63 lm	3/4" NPT M20	10	40.4	<b>FDBAESINW</b>	094965	1
						<b>FDBAESIMW</b>	–	1

**Addressable & Unswitched Version** – 1 hour duration – Non-maintained – Two threaded cable entries with one blanking plug

Type	Power & Lamp	Lumen Output	Cable Entries	Weight (kg)	Volume (dm <sup>3</sup> )	Catalog Number	Old Catalog Number	Pack
Space Lighting	1 x 8 W Fluorescent	415 lm	3/4" NPT M20	8.1	37.1	<b>FDBAESFNA</b>	094955	1
						<b>FDBAESFMA</b>	–	1
Escape Route Lighting	2 x 3 W Incandescent	63 lm	3/4" NPT M20	8.1	37.1	<b>FDBAESINA</b>	094967	1
						<b>FDBAESIMA</b>	–	1

**Addressable & Switched Version** – 1 hour duration – Non-maintained – One threaded cable entry

Type	Power & Lamp	Lumen Output	Cable Entries	Weight (kg)	Volume (dm <sup>3</sup> )	Catalog Number	Old Catalog Number	Pack
Space Lighting	1 x 8 W Fluorescent	415 lm	M20	10	40.4	<b>FDBAESFMAW</b>	–	1
Escape Route Lighting	2 x 3 W Incandescent	63 lm	M20	10	40.4	<b>FDBAESIMAW</b>	–	1

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Zone 1 & 2 - 21 & 22








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### Accessories:

Picture	Description	Catalog Number	Old Catalog Number
	<b>Reflector</b> White painted galvanized steel	<b>FDER5G</b>	094866
	<b>Protective Guard</b> Zinc plated steel	<b>FDPG5Z</b>	094876
	<b>Fixing Brackets</b> – set of two brackets for ease of surface installation Zinc plated steel 316 stainless steel	<b>FDFBZ</b> <b>FDFBS</b>	094897 094889
	<b>Surface Mounting Brackets</b> – set of two Zinc plated steel 316 stainless steel	<b>FDSBZ</b> <b>FDSBS</b>	094898 094890
	<b>Half Clamps</b> – set of two Zinc plated steel versions: 1-1/4" (dia. 42mm) to 1-1/2" (dia. 49mm) 2" (dia. 60mm)	<b>FDHC49Z</b> <b>FDHC60Z</b>	094899 094891
	316 stainless steel versions: 1-1/4" (dia. 42mm) to 1-1/2" (dia. 49mm) 2" (dia. 60mm)	<b>FDHC49S</b> <b>FDHC60S</b>	094892 094893
	<b>Spare Lamps</b> 8W fluorescent G5	<b>LF008G5</b>	094990
	3 W - 3.6 V - 1 A incandescent, BA9S	<b>LI003BA9S</b>	094995
	<b>Fall Prevention Kit</b> 1.20 m stainless steel chain	<b>FDSCS</b>	093819

### Compliances:

Hazardous Area	Gas	Dust
Certification Type	FLd	
Zones	1–2	21–22
Conforming to ATEX 94/9/CE	CE 0081 ⊕ II 2 G	CE 0081 ⊕ II 2 D
Symbol of Protection ATEX	Ex d IIC	Ex tD A21
Symbol of Protection IEC		
T Rating	T6	N.A.
Surface Temperature	N.A.	T80°C
Ambient Temperature	-40°C to +55°C (1)	
CE Declaration of Conformity	50203	
ATEX Certificate	LCIE 97 ATEX 6012	
IECEx Certificate	IECEx LCI 04.0018	
Other Certifications	GOST	
Index of Protection (solid and liquid)	IP66/68	
Impact Resistance (shock)	IK08	
Internal Volume	> 2 dm <sup>3</sup> (2 liters)	

(1) Optimum operating temperature for battery is -5°C to +30°C

### Standards:

<b>Ex standards</b>	EN / IEC 60079-0; 60079-1; 61241-0; 61241-1
<b>Product standards</b>	EN / IEC 60598-1; 60598-2-22 - NFC 71800; 71820
<b>EMC standards</b>	EN / IEC 55015; 61547
<b>Other standards</b>	EN / IEC 60529 (IP); 62262 (IK)

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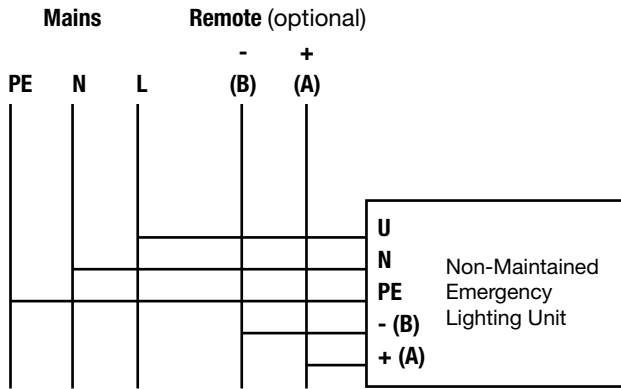
II 2 GD

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### Technical Data:

#### Electrical Wiring Diagram:

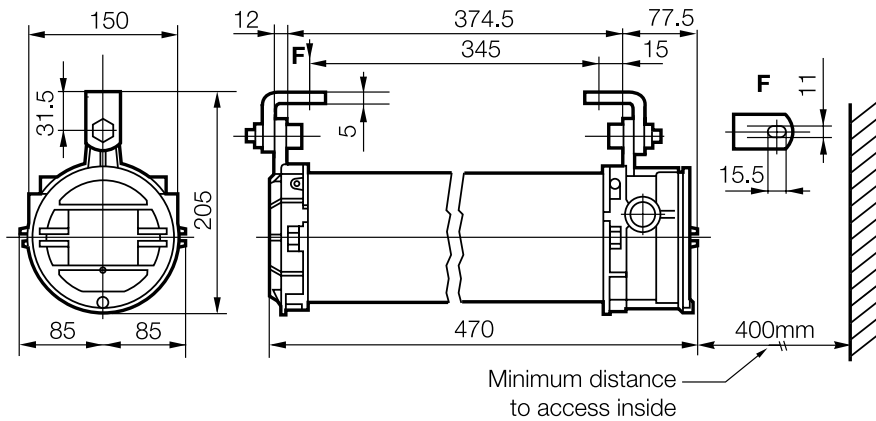


#### Emergency Function Diagram:

Mains status	Non-maintained	
	1 x 8 W Fluor.	2 x 3 W Inc.
Mains Switched ON		
Mains Switched OFF		

### Dimensions (mm):

#### Unswitched Versions:



#### Switched Versions:

