

FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Can be installed in hazardous areas designated as Zone 1 and 2 – 21 and 22.
- For use in locations where a high degree of corrosion resistance is required.
- For indoor/outdoor use where protection against dirt, water and moisture is necessary.
- Typical applications include:
 - Oil refineries
 - Petrochemical facilities
 - Pulp and paper, mills
 - Painting, sewage and water treatment facilities
 - Warehouses
 - Underground tunnels
 - General manufacturing facilities

Features

- Impact resistant borosilicate glass sealed tube.
- Easy access to lamps through gray painted aluminum threaded entry cap.
- Supplied with O-ring for improved ingress protection.
- Corrosion-resistant gray painted aluminum.
- Supplied with energy efficient and self induction ferromagnetic ballast on a removable gear tray.
- Quick and easy installation of fluorescent lighting fixtures with 2G11 and G13 lamp holders.
- Supplied with external and internal ground/earth connection.
- Fixture supplied with one M20 blanking plug.
- Easy connection to wire and disconnect with plug-in terminal blocks.
- Bi-pin (G13) 18 and 36 W magnetic ballast versions operate at 70 °C ambient temperature with T4 rating.
- Magnetic ballast versions 230 V 50 Hz or 240 V 50 Hz or 220 V 60 Hz or 230 V 60 Hz.
- Electronic ballast versions 110 to 254 Vac/Vdc, 50/60 Hz.
- 3 hour emergency version with automatic self test every month
- Plug in battery pack (6 V 4 Ah) is easy to remove for maintenance.

Standard Materials

- End caps and cover: aluminum
- Glass tube: borosilicate glass
- O-ring gasket: Nitrile (NBR)
- Internal reflector: white powder coated galvanized steel
- Mounting accessories: several accessories in different material such as zinc plated steel, galvanized steel or 316 stainless steel

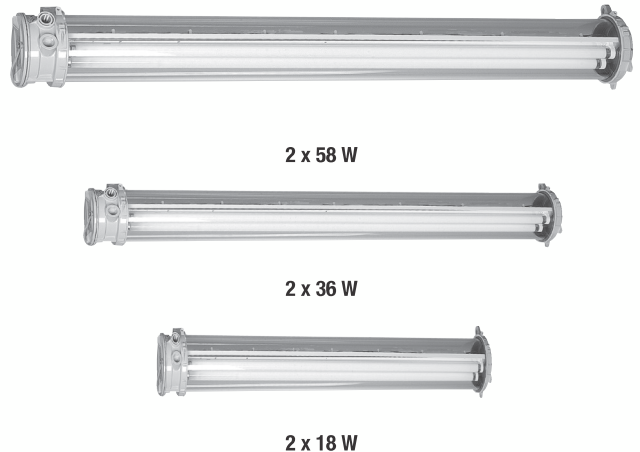
Options

- 8 W fluorescent (Bi-pin G5) available, see section HBDC series.

Certifications and Compliances

◆ ATEX/IECEx Certification

- **Certification Type: FLd**
 - Gas: Zone 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIB, Ex d IIB+H₂, Ex d IIC
 - Temperature Class: See Table on following page



- Dust: Zone 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table on following page
- Ambient Temperature: -20 °C to 55 °C
- CE Declaration of Conformity: 50203
- ATEX Certificate: LCIE 97 ATEX 6012
- IECEx Certificate: IECEx LCI 04.0018
- Index of Protection according EN/IEC 60529: IP66/68
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ - 2 liters

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.r505.B.00910

◆ Others Certification

- INMETRO Certificate: BVC11.0492 ①

Related Products

- For labels see *Labels for Emergency Lighting Units, ATX Self-Adhesive Signaling Labels for Emergency Lighting Units.*

① Inmetro certification available on special request only. Contact your local sales for more information

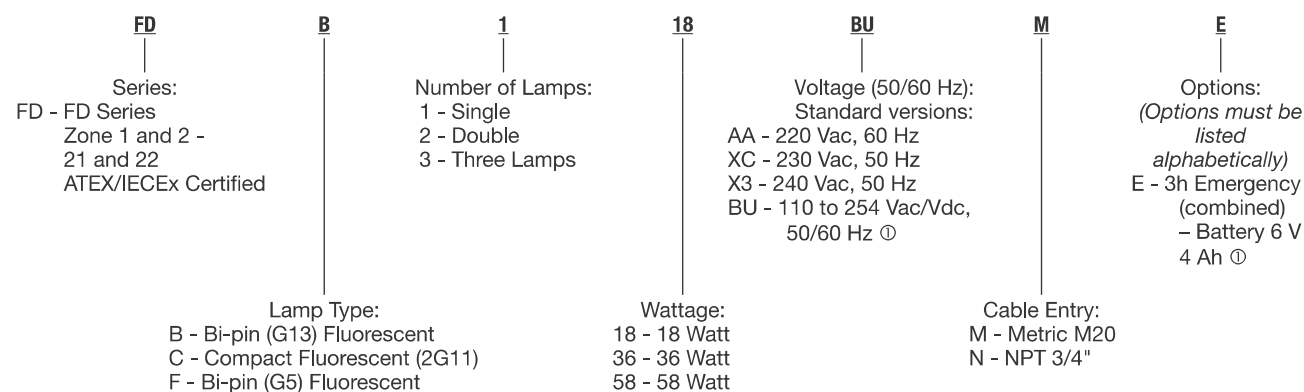
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Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide — FD Series Cylindrical Fluorescent Luminaires



T Rating (Gas) and Surface Temperature (Dust) Table

Model	Lamp Type	Gas – T Rating					Dust – Surface Temperature	
		Without External Reflector			With External Reflector		Without External Reflector	With External Reflector
		Ta = 40 °C	Ta = 55 °C	Ta = 70 °C	Ta = 40 °C	Ta = 55 °C		
0.3	Compact Fluorescent 2G11 18 W max.	T6	T5	N.A.	T5	T4	95 °C	130 °C
	a) Fluorescent G13 Magnetic Ballast 1 x 18 W/2 x 18 W	T6	T5	T4	T6	T5	97 °C	95 °C
0.6	b) Fluorescent G13 Electronic Ballast 1 x 18 W/2 x 18 W/3 x 18 W	T6	T6	N.A.	T6	T5	78 °C	95 °C
	c) Compact Fluorescent 2G11 1 x 36 W 2 x 36 W	T6	T5	N.A.	T6 T5	T4	95 °C	130 °C
1.2	a) Fluorescent G13 Magnetic Ballast 1 x 36 W/2 x 36 W/3 x 36 W	T6	T5	T4	T6	T5	110 °C	95 °C
	b) Fluorescent G13 Electronic Ballast 1 x 36 W/2 x 36 W/3 x 36 W	T6	T6	N.A.	T6	T6	78 °C	80 °C
1.5	a) Fluorescent G13 Magnetic Ballast 1 x 58 W/2 x 58 W	T6	T6	N.A.	T6	T5	80 °C	95 °C
	b) Fluorescent G13 Electronic Ballast 1 x 58 W/2 x 58 W/3 x 58 W	T6	T5	N.A.	T6	T5	84 °C	95 °C

Ⓢ The 3 hour emergency version is only available on fluorescent, 2 lamp fixtures with BU voltage - 110 to 254 Vac/Vdc, 50/60 Hz.

FD Series Cylindrical Fluorescent Luminaires

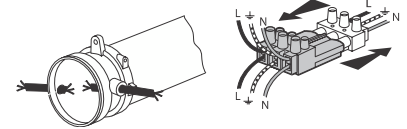
Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Ordering Information – Standard Versions

Two M20 threaded entries, supplied with one M20 aluminum blanking plug.
Connection via 1 x 3 double deck terminals.
Capacity (flexible/solid): 0.75 mm² to 2.5 mm².

For Bi-pin (G13) Fluorescent Lamps - T8, 26 mm or T12, 38 mm



Wattage (W)	No. of Lamps	Gas Group	Model	Weight kg	Volume dm ³	Catalog Number
230 V - 50 Hz – Magnetic Ballast – Starter Ignition						
Compensated power supply – power factor > 0.9						
18W	1	IIC	0.6	9.0	58	FDB118XCM
	2	IIC	0.6	9.7	58	FDB218XCM
36W	1	IIB+H ₂	1.2	14.7	99	FDB136XCM
	2	IIB+H ₂	1.2	15.3	99	FDB236XCM
58W	1	IIB	1.5	17.0	119	FDB158XCM
	2	IIB	1.5	18.2	119	FDB258XCM
240 V - 50 Hz – Magnetic Ballast – Starter Ignition						
Compensated power supply – power factor > 0.9						
18W	1	IIC	0.6	9.0	58	FDB118X3M
	2	IIC	0.6	9.7	58	FDB218X3M
36W	1	IIB+H ₂	1.2	14.7	99	FDB136X3M
	2	IIB+H ₂	1.2	15.3	99	FDB236X3M
58W	1	IIB	1.5	17.0	119	FDB158X3M
	2	IIB	1.5	18.2	119	FDB258X3M
220 V - 60 Hz – Magnetic Ballast – Starter Ignition						
Compensated power supply – power factor > 0.9						
18W	2	IIC	0.6	9.7	58	FDB218AAM
36W	2	IIB+H ₂	1.2	15.3	99	FDB236AAM
58W	2	IIB	1.5	18.2	119	FDB258AAM

Shaded catalog numbers are normally stocked items. All other items are made to order.

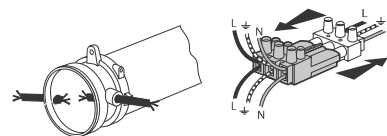
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Zone 1 and 2 - 21 and 22
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Ordering Information – Standard Versions – Continued

Two M20 threaded entries, supplied with one M20 aluminum blanking plug.
Connection via 1 x 3 double deck terminals.
Capacity (flexible/solid): 0.75 mm² to 2.5 mm².



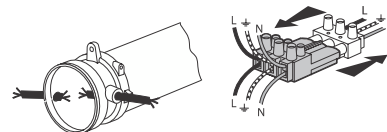
Wattage (W)	No. of Lamps	Gas Group	Model	Weight kg	Volume dm ³	Catalog Number
For Bi-pin (G13) Fluorescent Lamps - T8, 26 mm or T12, 38 mm 110 to 254 Vac/Vdc, 50/60 Hz – Electronic Ballast Power factor > 0.95						
18W	2	IIC	0.6	9.7	58	FDB218BUM
36W	2	IIB	1.2	15.3	99	FDB236BUM
	3	IIB	1.2	16.3	99	FDB336BUM
58W	1	IIB	1.5	17.0	119	FDB158BUM
	2	IIB	1.5	18.2	119	FDB258BUM
	3	IIB	1.5	19.2	119	FDB358BUM

For 2G11 Compact Fluorescent Lamps – TC-L
230 V - 50 Hz – Magnetic Ballast – Starter Ignition
Compensated power supply – power factor > 0.9 – Lamps supplied

18W	1	IIC	0.3	9.0	58	FDC118XCM
	2	IIC	0.3	9.7	58	FDC218XCM
36W	1	IIB+H ₂	0.6	14.7	99	FDC136XCM
	2	IIB+H ₂	0.6	15.3	99	FDC236XCM

Emergency Versions

Two M20 threaded entries, supplied with one M20 aluminum blanking plug.
Connection via 1 x 4 double deck terminals.
Capacity (flexible/solid): 0.75 mm² to 2.5 mm².





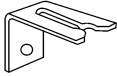
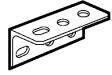

Wattage (W)	No. of Lamps	Gas Group	Model	Line Output	Weight kg	Volume dm ³	Catalog Number
For Bi-pin (G13) Fluorescent Lamps – T8, 26 mm or T12, 38 mm 110 to 254 Vac/Vdc, 50/60 Hz – Electronic Ballast 3 hour duration - battery pack 6 V 4 Ah - Power factor > 0.95 - Self test every month.							
18W	2	IIC	0.6	29%	11.6	58	FDB218BUME
36W	2	IIB	1.2	16%	17.2	99	FDB236BUME
58W	2	IIB	1.5	11%	20.2	119	FDB258BUME

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Accessories and Replacement Parts		
Description		Catalog Number
External Reflector – White Painted Galvanized Steel		
	Model 0.3	FDER1G
	Model 0.6	FDER2G
	Model 1.2	FDER3G
	Model 1.5	FDER4G
Protective Guard – Zinc Plated Steel		
	Model 0.3	FDPG1Z
	Model 0.6	FDPG2Z
	Model 1.2	FDPG3Z
	Model 1.5	FDPG4Z
Fixing Brackets for Ease of Surface Installation – Set of Two		
	Zinc plated steel	FDFBZ
	316 stainless steel	FDFBS
Surface Mounting Brackets – Set of Two		
	Zinc plated steel	FDSBZ
	316 stainless steel	FDSBS
Half Clamp Brackets for Pole Mounting – Set of Two		
	Pole diameter 42 to 49 mm	
	Zinc plated steel	FDHC49Z
	316 stainless steel	FDHC49S
	Pole diameter 60 mm	
	Zinc plated steel	FDHC60Z
	316 stainless steel	FDHC60S
Fall Prevention Kit		
	1.20 meter stainless steel chain	FDSCS

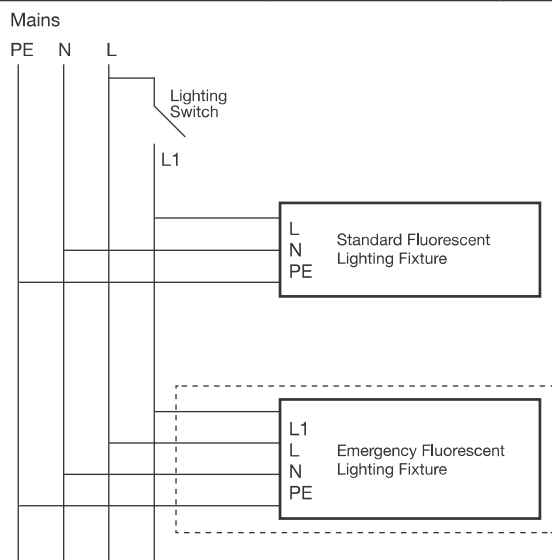
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Wiring Diagram



Emergency Function Diagram

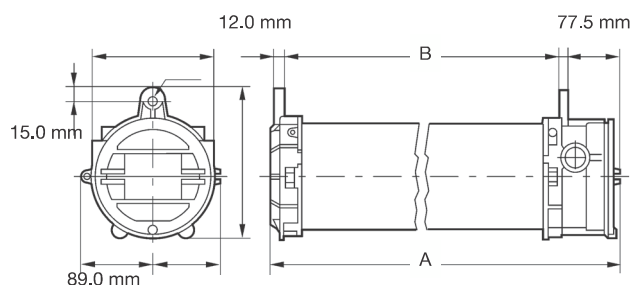
Two Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

LED Status

Color	Indication	Function
Green	Blinking 1:1	Mains ok, Batteries are connected, charging
	ON	Mains ok, Batteries are charged
Red	Blinking 1:1	Batteries are not connected or defective
	Flashing 1:1	Batteries are charging and discharging during automatic cycle
	ON	Mains faulty, output ON
	OFF	No mains, Battery empty
Yellow	Blinking 1:1	Mains ok, Performing Self test
	ON	Self test was not ok

Dimensions in Millimeters



Model	A	B
0.3	430	335
0.6	745	650
1.2	1365	1260
1.5	1655	1560

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Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

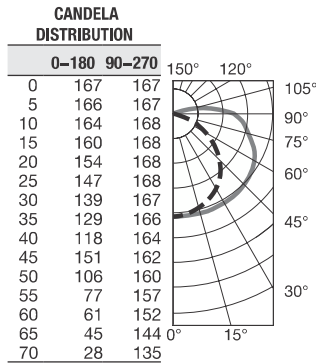
Bi-pin (G13) Fluorescent

2G11 Compact Fluorescent

1 x 18 W

Efficiency 75.3%

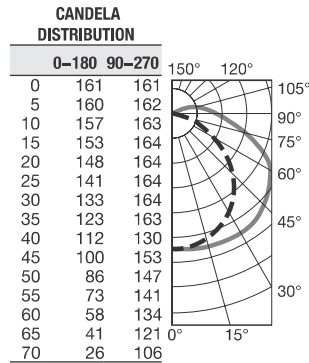
NF C 71-121/0: 0.69 H + 0.06 T



2 x 18 W

Efficiency 68.1%

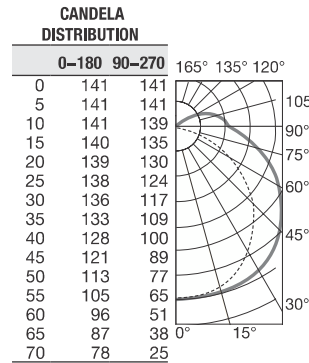
NF C 71-121: 0.63 G + 0.06 T



3 x 18 W

Efficiency 57%

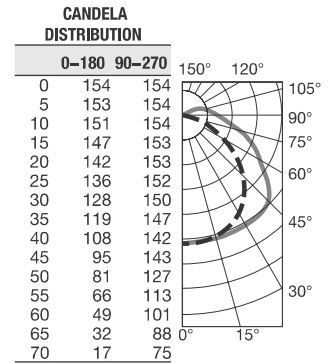
NF C 71-121: 0.50 G + 0.07 T



2 x 18 W

Efficiency 56.2%

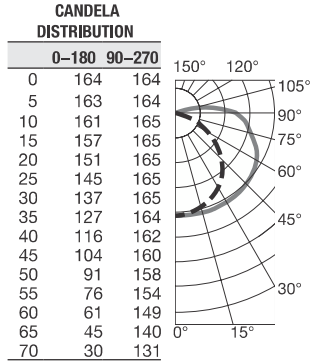
NF C 71-121: 0.52 G + 0.04 T



1 x 36 W

Efficiency 74.3%

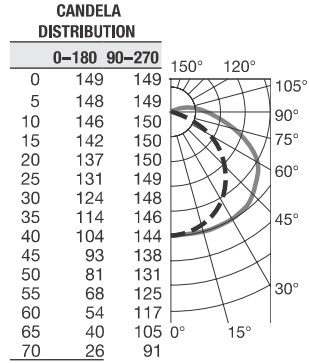
NF C 71-121/0: 0.69 H + 0.05 T



2 x 36 W

Efficiency 61.5%

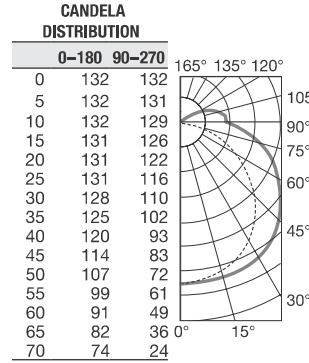
NF C 71-121: 0.57 G + 0.04 T



3 x 36 W

Efficiency 53.3%

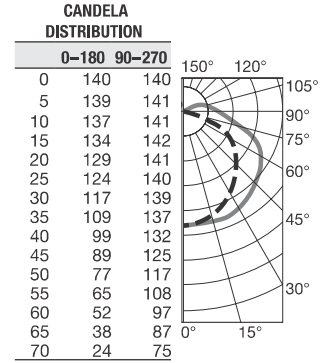
NF C 71-121: 0.47 G + 0.06 T



2 x 36 W

Efficiency 53.6%

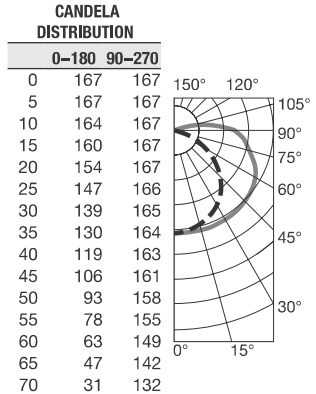
NF C 71-121: 0.50 G + 0.04 T



1 x 58 W

Efficiency 74.5%

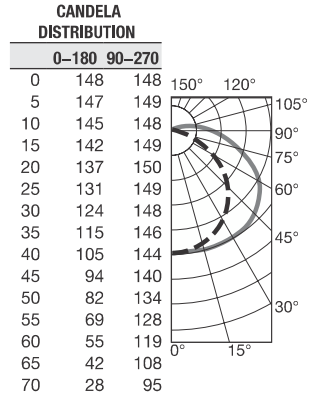
NF C 71-121/0: 0.70 H + 0.05 T



2 x 36 W

Efficiency 61.5%

NF C 71-121: 0.57 G + 0.04 T



3 x 36 W

Efficiency 53.3%

NF C 71-121: 0.47 G + 0.06 T

