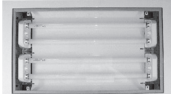
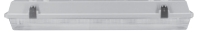
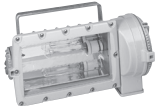


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FDBAES



FDES



FNES



Labels



ELS



SBDO



SBDS



SBDB



SBDC

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Applications

- For use in hazardous locations defined by ATEX/IECEx.
- For use in locations where a high degree of corrosion resistance is required.
- For indoor or outdoor use where protection against dirt, water and moisture is necessary
- Typical applications include:
 - Oil refineries
 - Petrochemical facilities
 - Pulp and paper mills
 - Food processing plants
 - Warehouses
 - Underground tunnels,
 - General manufacturing facilities

Features

- 60,000+ hours LED life for years of maintenance free operation.
- Lightweight design, hinged cover with captive screws, and terminal block wiring for easy installation and maintenance.
- Contemporary, low profile design suitable for tight spaces.
- Field replaceable components are available.
- Industry-leading thermal management for safe, reliable operation over wide temperature range.
- Optional safety cables prevent luminaire from falling.
- Terminal blocks provided for field wiring (1 to 6mm² wire)
- Full range of lumen outputs, with light distribution equivalent to Appleton's FN Series.
- Full range of lumen outputs, with light distribution equivalent to Appleton's FN Series.
- Easy to retrofit in same mounting footprint as Appleton's FN / FE Series fluorescent fixtures.
- (1) M20 plug or (1) M25 plug provided.

Standard Materials

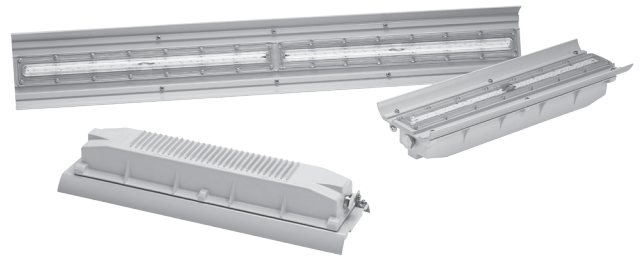
- Housing: copperfree (4/10 of 1% max.) aluminum
- Lens: thermal shock- and impact-resistant polycarbonate lens
- Gasket: silicone rubber, mechanically secured
- Bolts: stainless steel
- Close up plugs: nickel plated brass

Standard Finishes

- Housing: gray RAL 7038 Epoxy

Options

- For optional safety cables, add suffix **-C** to the end of the catalog number.



Certifications and Compliances

◆ ATEX/IECEx Certification

• Certification type LLEDA

- Gas: Zone 2
 - Conforming to ATEX 94/9/EC: Ex II 3 G
 - Protection Level: EPL Gc
 - Type of Protection: Ex nA IIC
 - Temperature Class: From T6 to T3 (See *Technical Data table*)
- Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/EC: $\text{Ex II 2 D and II 3 D}$
 - Protection Level: EPL Db and Dc
 - Type of Protection: Ex tb IIIC and Ex tc IIIC
 - Surface Temperature: From +63 °C to +84 °C (See *Technical Data table*)
- EC Declaration of Conformity: 50309
- ATEX Certificate:
 - Zone 21: LCIE 15 ATEX 3006X
 - Zone 2, 22: LCIE 15 ATEX 1003X
- IECEx Certificate:
 - Zone 2, 21 and 22: IECEx LCIE 15.0010X
- Ambient Temperature: -40 °C up to +60 °C or + 65°C (See *Technical Data table*)
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

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

Catalog Numbering Guide — ATEX/IECEx Certified Linear LED

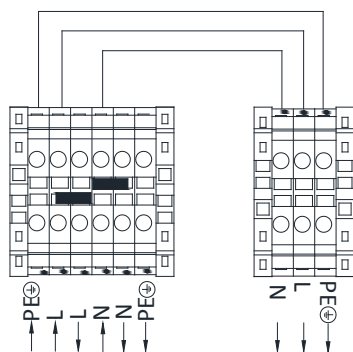
LLEDA	A	2	L	2	BU	Z2	C
LLEDA - Linear LED Series Zones 2 - 21 -22 ATEX/IECEx Certified	Housing: A - Aluminum	Size of Cable Entries: 2 - M20 3 - M25	Termination/Wiring: L - Dual Loop In/Out - Through Wiring (Single phase) (3 entries, 1 at one end and 2 at the other) S - Standard (2 entries on the same side) T - Through Wiring (3 phases) (2 entries, one at each end)	Lumens [Length of Fixture]: 2 - 2,200 [0.61 m] 5 - 4,400 [0.61 m] 7 - 7,800 [1.22 m]	Voltage: BU - Universal Voltages 120-277 Vac, 50/60 Hz	Hazardous Rating: Z1 - Zone 1 ① Z2 - Zone 2 and 21-22	Options: C - Safety Cables D - Diffused Lens E - 3h Emergency ① H - 90 Minutes Emergency ①

Termination/Wiring

Version : L

Dual Loop In/Out - Through Wiring (Single phase)

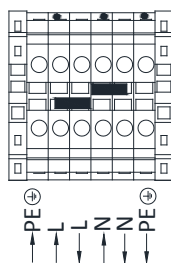
3 entries, 1 at one end and 2 at the other



Version : S

Standard

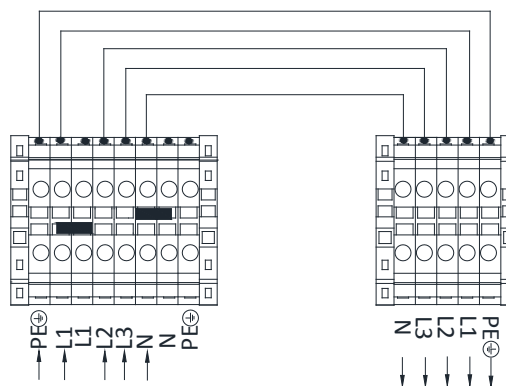
2 entries on the same side



Version : T

Through Wiring (3 phases)

2 entries, one at each end



① Certification in progress

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Lighting

LED LUMINAIRES

Technical Data

Lamp		Ambient Temperature °C	Supply Wire Temperature °C	Zone 2 - 22		Zone 21
Lumen Output	Type			Gas Class of Temperature	Dust Surface Temperature	Dust Surface Temperature
2,200 lm	LED	40 °C	75 °C	T6 (75 °C)	54 °C	54 °C
		55 °C	75 °C	T5 (90 °C)	69 °C	69 °C
		60 °C	75 °C	T5 (95 °C)	74 °C	74 °C
		65 °C	75 °C	T5 (100 °C)	79 °C	79 °C
4,400 lm	LED	40 °C	75 °C	T4 (129 °C)	64 °C	64 °C
		55 °C	75 °C	T3 (144 °C)	79 °C	79 °C
		60 °C	75 °C	T3 (148 °C)	84 °C	84 °C
7,800 lm	LED	40 °C	75 °C	T4 (130 °C)	64 °C	64 °C
		55 °C	75 °C	T3 (145 °C)	79 °C	79 °C
		60 °C	75 °C	T3 (149 °C)	84 °C	84 °C

Lamp Comparison Chart

Catalog Number (Lamp Data)	Lumens Clear lens	Line Current Amps	Input Power	Power Factor	THD	CRI	Color Temp CCT	Length
LLEDAA2S2BUZ2	2,200 lm	0.24 A @ 120 V 0.15 A @ 277 V	22 W	> 0.95 > 0.87	< 20%	70	5650K	0.61 m
LLEDAA3S2BUZ2								
LLEDAA2T2BUZ2								
LLEDAA3T2BUZ2								
LLEDAA2L2BUZ2								
LLEDAA3L2BUZ2								
LLEDAA2S5BUZ2	4,400 lm	0.51 A @ 120 V 0.30 A @ 277 V	45 W	> 0.95	< 20%	70	5650K	0.61 m
LLEDAA3S5BUZ2								
LLEDAA2T5BUZ2								
LLEDAA3T5BUZ2								
LLEDAA2L5BUZ2								
LLEDAA3L5BUZ2								
LLEDAA2S7BUZ2	7,800 lm	0.90 A @ 120 V 0.53 A @ 277 V	81 W	> 0.95	< 20%	70	5650K	1.22 m
LLEDAA3S7BUZ2								
LLEDAA2T7BUZ2								
LLEDAA3T7BUZ2								
LLEDAA2L7BUZ2								
LLEDAA3L7BUZ2								

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

	Conduit/Cable Entries	Voltage	Weight kg	Catalog Numbers
2,200 Lumens — 0.61 m (2 ft)				
	Standard cable entry provides 2 entries on the same side of the housing.			
	M20 Standard	120-277 Vac, 50/60 Hz	6.21	LLEDAA2S2BUZ2 ④
	M25 Standard	120-277 Vac, 50/60 Hz		LLEDAA3S2BUZ2 ④
	Through Wiring (3 phases) cable entry provides 2 entries, one at each end of the housing.			
	M20 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz	6.21	LLEDAA2T2BUZ2 ④
	M25 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz		LLEDAA3T2BUZ2 ④
	Dual Loop In/Out - T/W (1 phase) cable entry provides 3 entries, 1 at one and 2 at the other end.			
	M20 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz	6.21	LLEDAA2L2BUZ2 ④
	M25 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz		LLEDAA3L2BUZ2 ④
4,400 Lumens — 0.61 m (2 ft)				
	Standard cable entry provides 2 entries on the same side of the housing.			
	M20 Standard	120-277 Vac, 50/60 Hz	6.35	LLEDAA2S5BUZ2 ④
	M25 Standard	120-277 Vac, 50/60 Hz		LLEDAA3S5BUZ2 ④
	Through Wiring (3 phases) cable entry provides 2 entries, one at each end of the housing.			
	M20 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz	6.35	LLEDAA2T5BUZ2 ④
	M25 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz		LLEDAA3T5BUZ2 ④
	Dual Loop In/Out - T/W (1 phase) cable entry provides 3 entries, 1 at one and 2 at the other end.			
	M20 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz	6.35	LLEDAA2L5BUZ2 ④
	M25 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz		LLEDAA3L5BUZ2 ④
7,800 Lumens — 1.22 m (4 ft)				
	Standard cable entry provides 2 entries on the same side of the housing.			
	M20 Standard	120-277 Vac, 50/60 Hz	8.69	LLEDAA2S7BUZ2 ④
	M25 Standard	120-277 Vac, 50/60 Hz		LLEDAA3S7BUZ2 ④
	Through Wiring (3 phases) cable entry provides 2 entries, one at each end of the housing.			
	M20 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz	8.69	LLEDAA2T7BUZ2 ④
	M25 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz		LLEDAA3T7BUZ2 ④
	Dual Loop In/Out - T/W (1 phase) cable entry provides 3 entries, 1 at one and 2 at the other end.			
	M20 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz	8.69	LLEDAA2L7BUZ2 ④
	M25 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz		LLEDAA3L7BUZ2 ④

④ For optional safety cables, add suffix -C to the end of the catalog number.

LLEDA Viamaster™ LED Series Luminaires

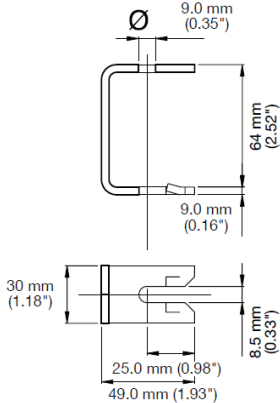
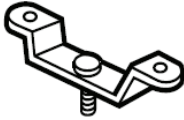
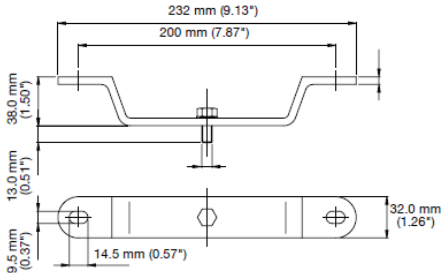
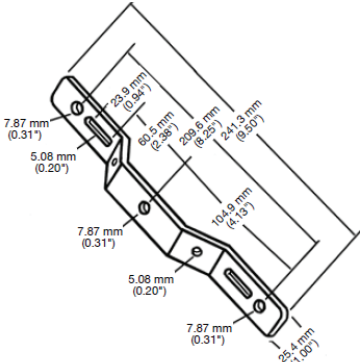
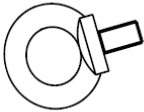
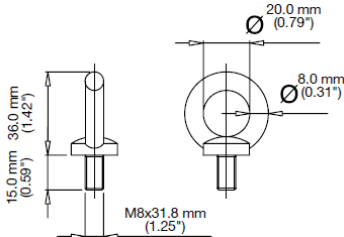
For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Lighting

LED LUMINAIRES

Accessories and Replacement Parts

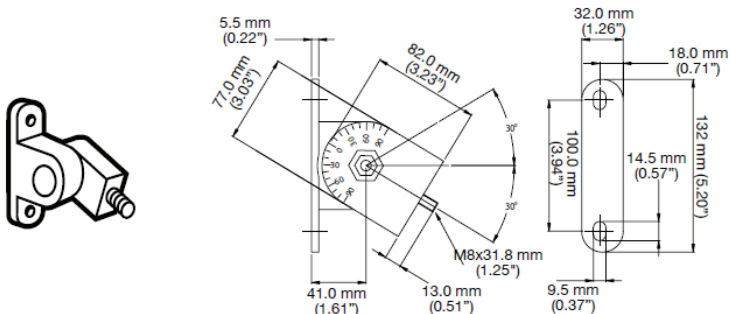
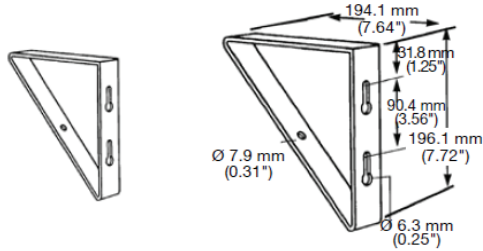
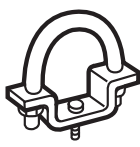
	Description	Catalog Number
Mounting Brackets — Set of Two		
		Fixing Brackets for Surface Installation Zinc plated steel 316 stainless steel
		FEFBZ FEFBS
		Surface Mounting Aluminium (gray painted) 316 stainless steel
		FESBA FESBS
		Surface Mounting Stainless steel (Do not retrofit in same mounting footprint as Appleton's FN / FE Series)
		FVSM
		M8 Ring Bolts Zinc plated steel — For use with optional safety chain (not provided)
		FERBM8Z

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Accessories and Replacement Parts

	Description	Catalog Number
Mounting Brackets — Set of Two		
	Hinged Brackets for Adjusting Luminaire Aluminium	FEHBA
	Fixed 45° Wall Mount 1/8" stainless steel <i>(Do not retrofit in same mounting footprint as Appleton's FN / FE Series)</i>	FVWFM
	Half Clamp Brackets for Pole Mounting For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube) Zinc plated steel 316 stainless steel For 60 mm pole (2" tube) Zinc plated steel 316 stainless steel	FEHC49Z FEHC49S FEHC60Z FEHC60S
Retrofit Brackets — Set of Two		
	Adapts mounting holes for 4 foot fixture to 700 mm mounting centers	LLEDRB
Fall Prevention Kit		
	Safety Cables — Attached to fixtures to guard against them falling when the primary method of attachment fails.	LLEDSC
Replacement Lens		
	Clear polycarbonate lens with an integral gasket	LLEDCPL
	Diffused lens with an integral gasket	LLEDDPL
Replacement Driver		
	120-277 Vac driver	LLEDBU2

LLEDA Viamaster™ LED Series Luminaires

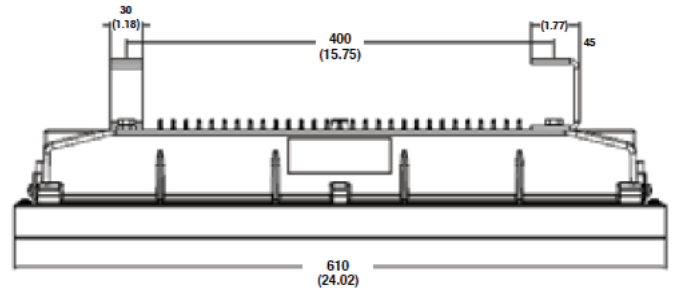
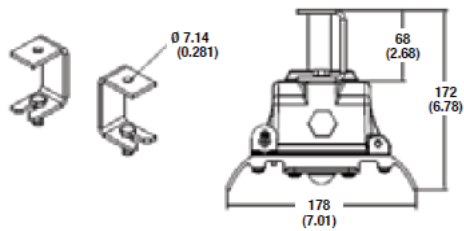
For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Mounting Options Dimensions in Millimeters (Inches)

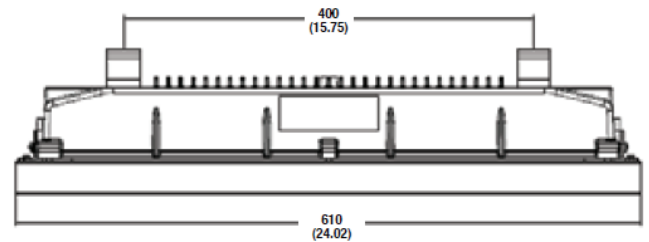
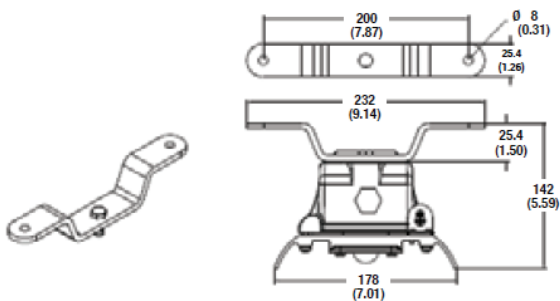
FEFBS

Ceiling/Surface Mount



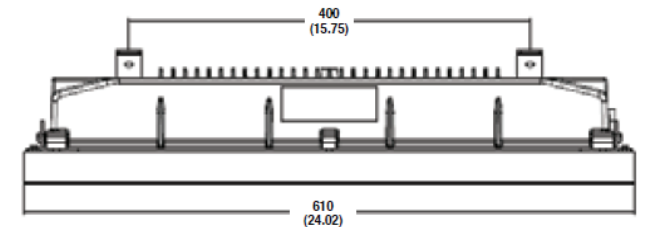
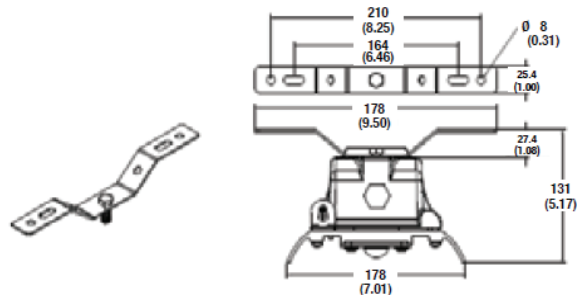
FESBA / FESBS

Ceiling/Surface Mount



FVSM

Ceiling/Surface Mount



LLEDA Viamaster™ LED Series Luminaires

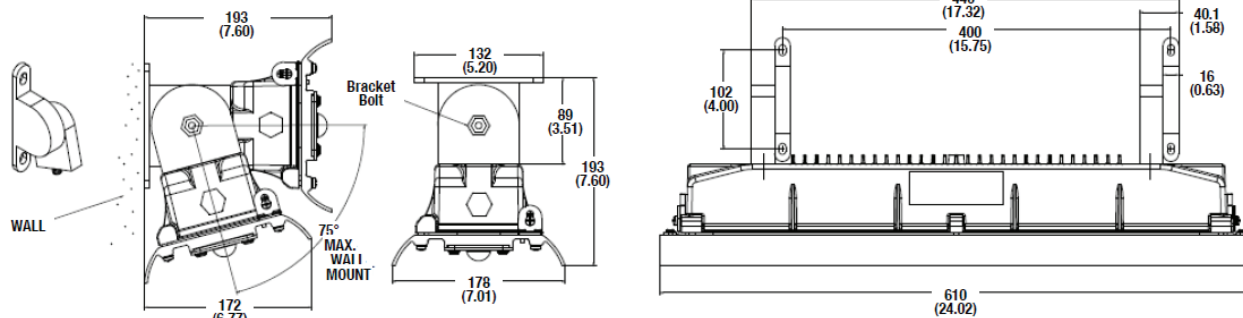
For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Mounting Options (continued) Dimensions in Millimeters (Inches)

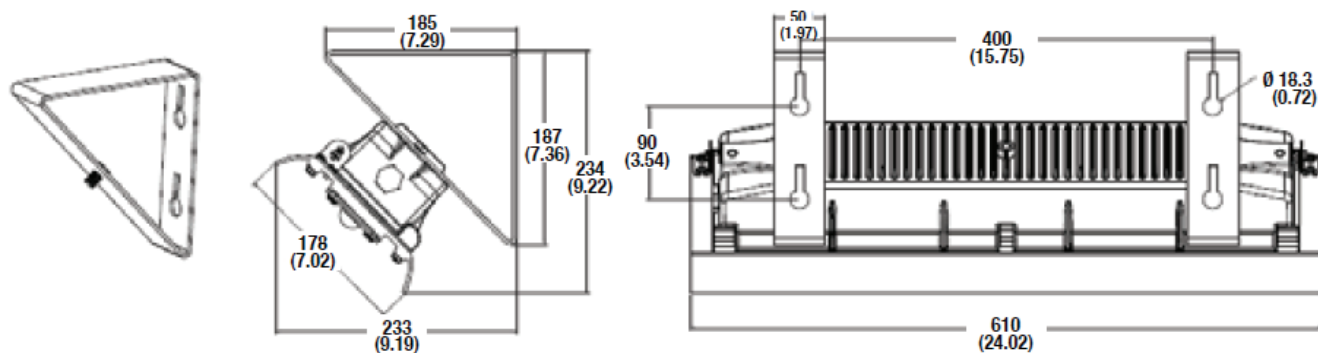
FEHBA

Wall/Hinged Mount



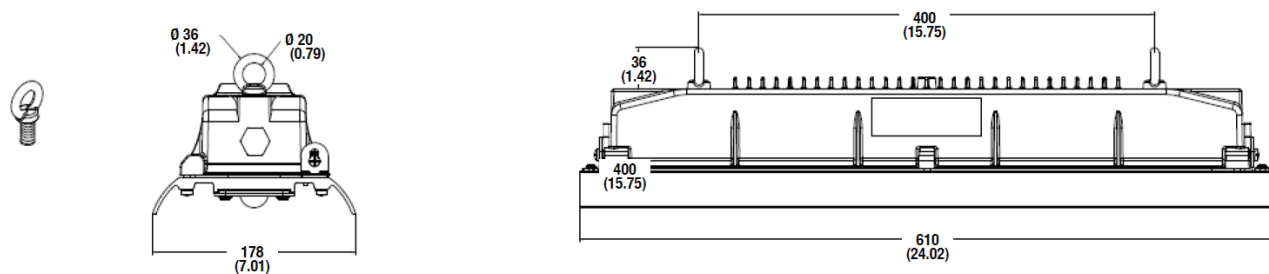
FWWM

Wall/Fixed 45° Mount



FERBM8Z

Ceiling/Chain Mount

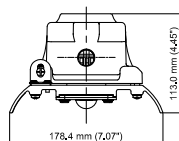


LLEDA Viamaster™ LED Series Luminaires

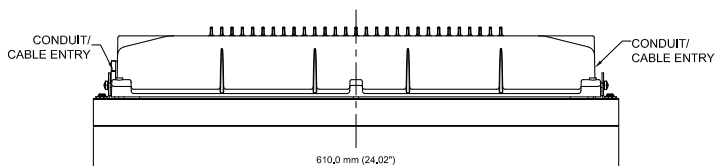
For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

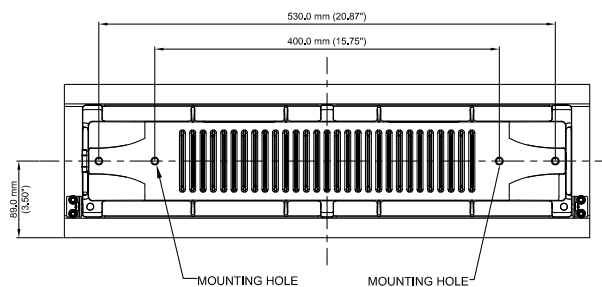
Dimensions in Millimeters (Inches)



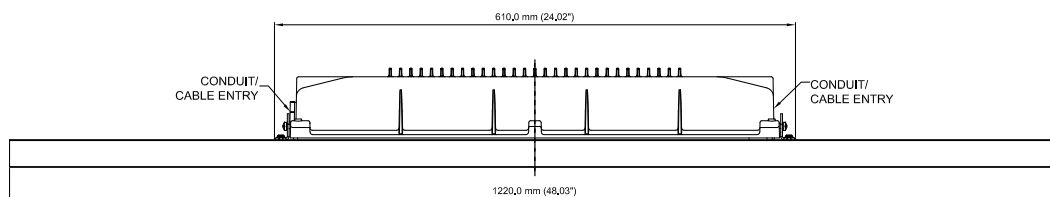
End View — 0.61 m (2 ft) and 1.22 m (4 ft) Versions



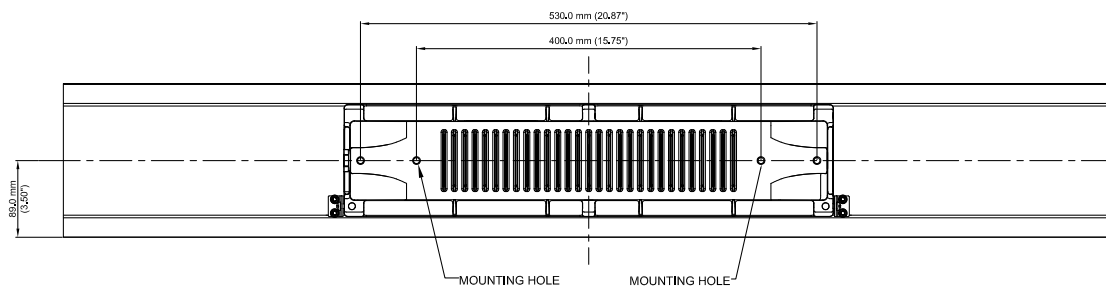
Side View — 0.61 m (2 ft) Versions



Top (Mounting) View — 0.61 m (2 ft) Versions



Side View — 1.22 m (4 ft) Version



Top (Mounting) View — 1.22 m (4 ft) Version

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **ID140031A**

Catalog Number: LLEDA12BU2

Lamps: linear LED fixture, one LED board for a total of 10 LEDs, aluminum LED reflector is curved painted gray, 609.6 millimeters (24 inches) long x 177.8 millimeters (7 Inches) wide, with lexan 163R polycarbonate lens.

Candela Distribution

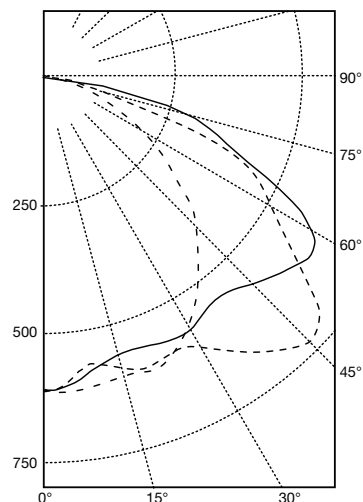
	0.0	22.5	45.0	67.5	90.0	Flux
0	613	613	613	613	613	
5	596	594	599	613	616	57
15	588	578	560	585	603	164
25	594	591	567	520	589	263
35	657	624	548	475	513	351
45	727	698	570	438	408	437
55	592	634	620	355	291	456
65	447	450	485	288	171	378
75	122	145	278	315	67	223
85	4	5	29	104	8	49
90	0	0	1	6	3	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	484	20.3
0-40	835	35.1
0-60	1728	72.6
0-90	2379	100.0

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.7	1.3



REPORT NUMBER: **ID140011A**

Catalog Number: LLEDA15BU2

Lamps: linear LED fixture, two LED boards for a total of 20 LEDs, aluminum LED reflector is curved painted gray, 609.6 millimeters (24 inches) long x 177.8 millimeters (7 Inches) wide, with lexan 163R polycarbonate lens.

Candela Distribution

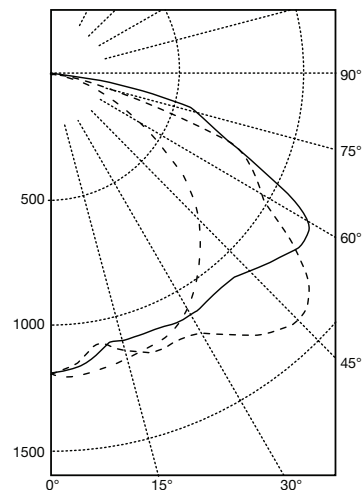
	0.0	22.5	45.0	67.5	90.0	Flux
0	1190	1190	1190	1190	1190	
5	1152	1162	1169	1178	1204	110
15	1145	1127	1096	1120	1171	319
25	1173	1163	1111	1018	1129	514
35	1266	1210	1190	916	1007	685
45	1392	1348	1115	851	827	853
55	1174	1246	1209	706	576	897
65	875	868	965	560	343	745
75	300	391	601	594	145	480
85	12	15	69	257	32	115
90	0	1	14	35	16	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	943	19.9
0-40	1628	34.4
0-60	3378	71.5
0-90	4718	99.8

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.7	1.3



LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: ID140021A

Catalog Number: LLEDA17BU2

Lamps: linear LED fixture, four LEDs board for a total of 36 LEDs, aluminum LED reflector is curved painted gray, 1219.2 millimeters (48 inches) long x 177.8 millimeters (7 Inches) wide, with lexan 163R polycarbonate lens.

Candela Distribution

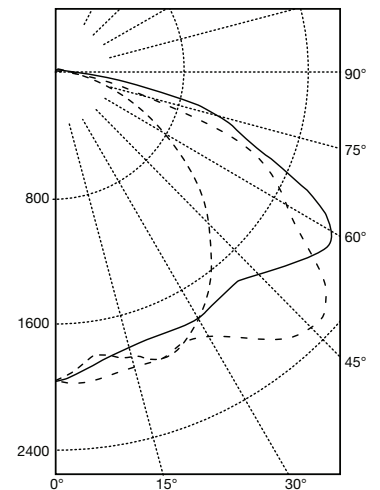
	0.0	22.5	45.0	67.5	90.0	Flux
0	1966	1966	1966	1966	1966	
5	1884	1904	1914	1941	1979	182
15	1874	1864	1812	1876	1942	529
25	1810	1904	1813	1677	1906	845
35	2076	1997	1770	1525	1681	1128
45	2309	2252	1827	1409	1366	1411
55	1952	2100	2032	1162	971	1501
65	1474	1512	967	944	579	1270
75	427	507	91	1064	225	768
85	13	15	8	390	32	173
90	0	1	6	28	13	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1555	19.9
0-40	2683	34.3
0-60	5596	71.6
0-90	7806	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.7	1.3



FDLED Series Luminaires

Flameproof

Zones 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 LED array through gray painted aluminum threaded entry cap.
- Supplied with O-ring for improved ingress protection.
- Corrosion-resistant gray painted aluminum.
- Supplied with energy efficient electronic driver on a removable gear tray.
- 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.

Standard Materials

- End caps and cover: aluminum.
- Glass tube: tempered borosilicate glass.
- O-ring gasket: Nitrile (NBR).
- Internal reflector: white powder coated galvanized steel (400 lm version) or aluminium (2400/4725 lm versions).
- Mounting accessories: several accessories in different material such as zinc plated steel, galvanized steel or 316 stainless steel.

Options

- Diffused polycarbonate lens (2400/4725 lm versions only)
- Ta -50 °C IP66 (without gasket)
- Ta -40 °C IP66/68 (with EPDM70)

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: FDLED**
 - Gas: Zone 1 and 2:
 - Conforming to ATEX 94/9/CE:  II 2 G
 - Type of Protection:
 - Ex d IIB (4725 lm version)
 - Ex d IIB+H₂ (2400 lm version)
 - Ex d IIC (400 lm version)
 - Temperature Class: T6
 - Dust: Zone 21 and 22:
 - Conforming to ATEX 94/9/CE:  II 2 D
 - Type of Protection: Ex tb IIIC
 - Surface Temperature:
 - +75 °C (400 lm version)
 - +80 °C (2400 and 4725 lm version)
 - Ambient Temperature: -30 °C to 60 °C
 - CE Declaration of Conformity: 50312
 - ATEX Certificate: INERIS 15 ATEX 0042X



4725 lm (IIB)



2400 lm (IIB+H2)



400 lm (IIC)

- IECEx Certificate: IECEx INE 15.0046X
- Index of Protection according EN/IEC 60529: IP66/68
- Impact Resistance (shock):
 - IK09 (400 and 2400 lm version)
 - IK08 (4725 lm version)
- Internal Volume: > 2 dm³ - 2 liters

◆ EURASEC Certification

- Not yet available (around Mid-2016)

◆ Others Certification

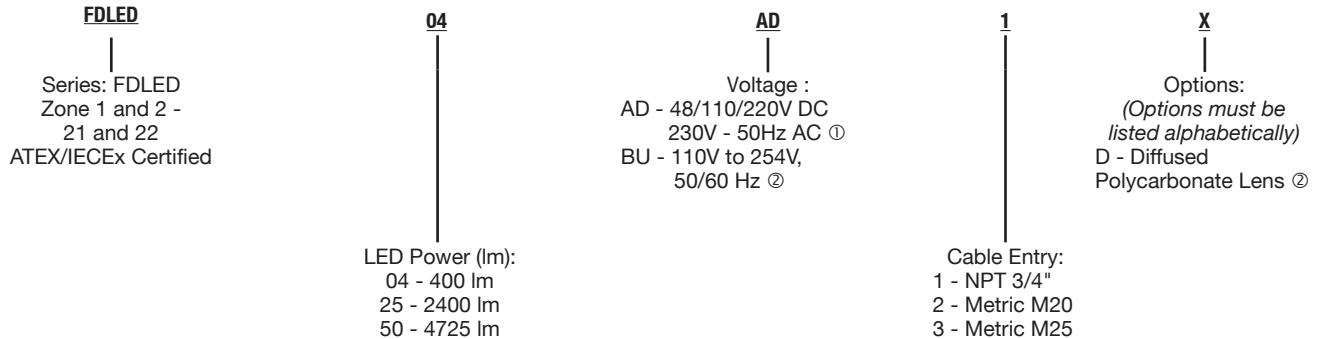
- Not yet available (around Mid-2016)

FDLED Series Luminaires

Flameproof

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

Catalog Numbering Guide — FD LED Series Luminaires



Technical Data

Lumen Output	Type	P	I _e	Gas group	Ambient Temperature °C	Class of Temperature	Surface Temperature
400 lm	LED	6 W	0.03 A	IIC	-30 °C to + 60°C	T6	75 °C
2400 lm	LED	23 W	0.21 A	IIB+H2	-30 °C to + 60°C	T6	80 °C
4725 lm	LED	46 W	0.42 A	IIB	-30 °C to + 60°C	T6	80 °C

Led Power (lm)	Voltage	Cable Entry	Weight kg	Volume dm ³	Catalog Number
400 lm	48/110/220V DC 230V - 50Hz AC	M20	7.8	36.0	FDLED04AD2
2400 lm	110V to 254V, 50/60 Hz	M20	8.1	37.1	FDLED25BU2
4725 lm	110V to 254V, 50/60 Hz	M20	9.0	58.0	FDLED50BU2

① Only 400 lm version

② Only 2400 and 4725 lm version

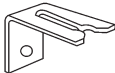
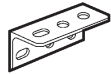
Shaded catalog numbers are normally stocked items. All other items are made to order.

FDLED Series Luminaires

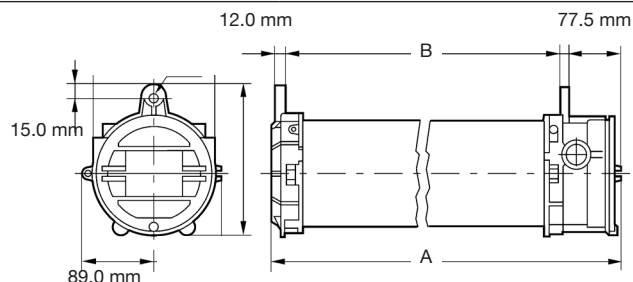
Flameproof

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

Accessories and Replacement Parts

Description		Catalog Number
Protective Guard – Zinc Plated Steel		
	Model 0.3 (for 400 lm)	FDPG1Z
	Model 0,4 (for 2400 lm)	FDPG5Z
	Model 0.6 (for 4725 lm)	FDPG2Z
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		
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FDHC49Z
	316 stainless steel	FDHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FDHC60Z
	316 stainless steel	FDHC60S
Fall Prevention Kit		
	1.20 meter stainless steel chain	FDSCS

Dimensions in Millimeters



Model	A	B
0.3 (400 lm)	430	335
0,4 (2400 lm)	470	375
0.6 (4725 lm)	745	650

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

DEMULED LED Series Luminaires

Flameproof

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

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 and 2 – 21 and 22.
- Typical applications include oil refineries, petrochemical plants, pulp and paper mills.

Features

All versions:

- Power supply 230 Vac, 50 Hz.
- 1 hour duration (emergency).
- Threaded access cover with O-ring seal.
- Battery pack :
Escape route lighting: 2.4 V - 0,8 Ah (2 cells - Nicd)
Space lighting: 6 V - 1,6 Ah (6 cells - Nicd)
- Charge indicator by 1 green LED (life time over 10 years).
- Operates in any position.
- Connection to plug-in terminal block via 5 x 2.5 mm² terminals.
- Supplied with two fixing brackets (zinc plated steel)
- 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.
- Escape route lighting: 45 lumens, 0.50 wattage.
Space lighting: 400 lumens, 0.95 wattage.

Addressable versions:

- Operates without additional control lines. Communication between units and the control system is realized via mains borne signals that utilize the existing electrical wiring.
- Standard control system capacity: one control system for up to 200 emergency lighting units.
- Optional increased control system capacity: booster (repeater unit) is used to increase the length of the network allowing up to 1000 emergency lighting units to be on one control system. This allows for the use of a single computer to centralize the management of the facilities emergency lighting system. For more information, please contact your local sales representative

Standard Materials

- End caps and cover: aluminum
- O-ring seal: Nitrile
- Lens: tempered borosilicate glass tube
- Fixing brackets: zinc plated steel or 316 stainless steel
- Accessories: white painted galvanized steel
- Guard: zinc plated steel

Options

- Ta -40°C (with EPDM70)
- Addressable monitoring software, please consult your local sales representative.



Certifications and Compliances

◆ ATEX/IECEX Certification

• Certification Type: DEMULED

- Gas: Zone 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: T6
- Dust: Zone 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tb IIIC
 - Surface Temperature: +75 °C
- Ambient Temperature: -30 °C to 55 °C ①
- CE Declaration of Conformity: 50314
- ATEX Certificate: INERIS 15ATEX0056X
- IECEx Certificate: IECEx INE 15.0052X
- Index of Protection according EN/IEC 60529: IP66/68 (10m/1h)
- Impact Resistance (shock): IK09
- Internal Volume: > 2 dm³ - 2 liters
- Conforming to NF AEAS

◆ EURASEC Certification

- Not yet available (around Mid-2016)

◆ Others Certification

- Not yet available (around Mid-2016)

Related Products

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

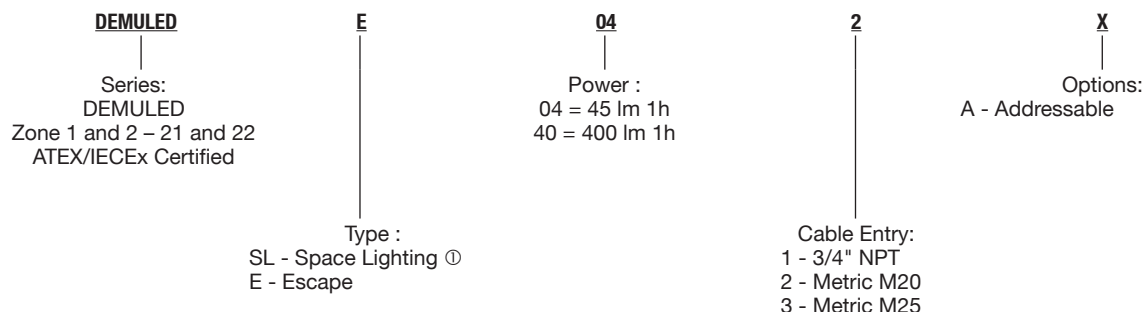
① Optimum operating temperature for battery is -5 °C to +30 °C

DEMULED LED Series Luminaires

Flameproof

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

Catalog Numbering Guide



Type	Lamp	Lumen Output	Cable Entries	Weight kg	Volume dm ³	Option	Catalog Number
Escape	LED	45 lm	M20	7.8	36	SATI	DEMULEDE042
Escape	LED	45 lm	M20	7.8	36	Adressable	DEMULEDE042A

Accessories and Replacement Parts

	Description	Catalog Number
	Protective Guard Zinc plated steel	FDPG1Z
	Fixing Brackets: Set of two for ease of surface installation Zinc plated steel 316 stainless steel	FDFBZ FDFBS
	Surface Mounting Brackets: Set of two Zinc plated steel 316 stainless steel	FDSBZ FDSBS
	Half Clamps: Set of two Zinc plated steel versions: For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube) For 60 mm pole (2" tube) 316 stainless steel versions: For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube) For 60 mm pole (2" tube)	FDHC49Z FDHC60Z FDHC49S FDHC60S
	Fall Prevention Kit 1.20 m stainless steel chain	FDSCS

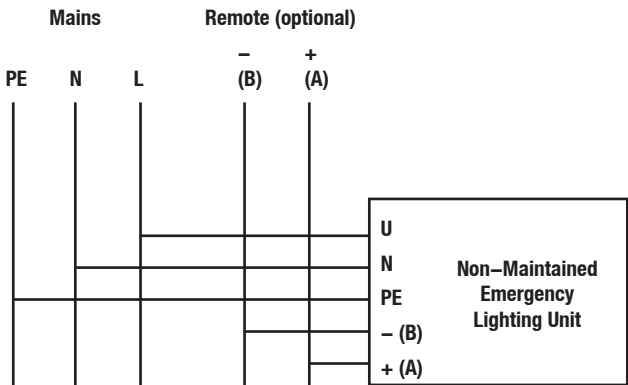
① Under certification process

DEMULED LED Series Luminaires

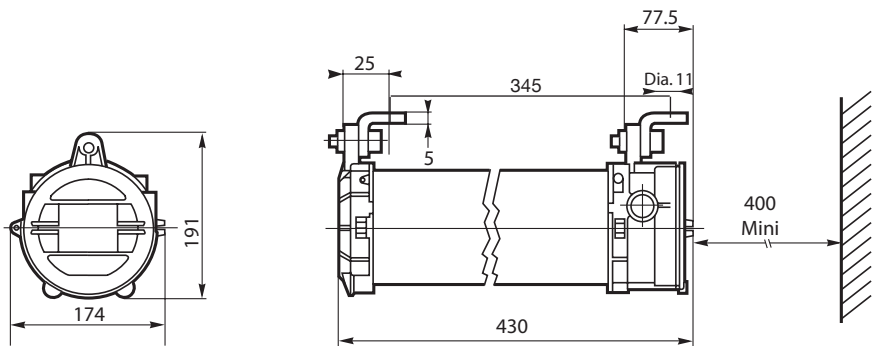
Flameproof

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

Electrical Wiring Diagram



Dimensions in Millimeters



AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

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

Applications

- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Food processing plants
 - Storage areas
 - Waste and sewage treatment
 - Parking garages
 - Other areas where water, dirt and rough usage are a problem

Features

- Compact in size, attractively styled contemporary design, rugged and dependable.
- Easy to install and service.
- One-piece housing.
- One-piece lens in hinged cover. Secured by four M6 captive stainless steel slotted hex-head bolts.
- Thermal shock- and impact-resistant glass lens standard.
- Diffused polycarbonate lens available as an option.
- Heavy duty, high temperature silicone rubber gasket, mechanically secured.
- Universal design for flood and high bay mounting.
- Floodlight Mounting:
 - Yoke mount, zinc plated steel yoke with architectural bronze polyester finish.
- High Bay Mounting:
 - One Conduit entry on back of luminaire with locking set screw.
 - Rotate yoke up or remove.
- Chain Mounting:
 - Mounts via eyebolts threaded into the corners of the fixture.
 - Available with chain mounting, or as an accessory.
 - Rotate yoke up or remove.
- Cool operating temperatures translate into long luminaire life.
- Three 3/4" NPT threaded Entries with two 3/4" NPT aluminum close up plugs provided.
- Electrical:
 - 120-277 Vac, 50/60 Hz
- Terminal block (screw type for secure connection) can accept 0.2 - 4 mm².

Standard Materials

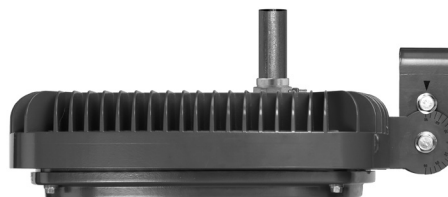
- Housing and lens door: copperfree (4/10 of 1% max.) aluminum
- Gasket: silicone rubber
- Reflector: metallized high reflectance finish
- Yoke mount: zinc plated steel
- Bolts: stainless steel
- Close up plugs: (2) aluminum provided

Standard Finishes

- Housing, lens cover and yoke mount: architectural bronze polyester



Floodlight



High Bay

Certifications and Compliances

◆ ATEX/IECEx Certification

- **Certification Type AMLED**
 - Gas: Zone 2
 - Conforming to ATEX 94/9/EC: Ⓔ II 3 G
 - Protection Level: EPL Gc
 - Type of Protection: Ex nA IIC
 - Temperature class: *See Table on following page*
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/EC: Ⓔ II 2 D and II 3 D
 - Protection Level: EPL Db and Dc
 - Type of Protection: Ex tb IIIC and Ex tc IIIC
 - Temperature class: *See Table on following page*
- EC Declaration of Conformity: 50307
- ATEX Certificate:
 - Zone 2/22: LCIE 14 ATEX 1016X
 - Zone 21: LCIE 14 ATEX 3049X
- IECEx Certificate: IECEx LCIE 14.0030X
- Ambient Temperature: -40 °C to +55 °C
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

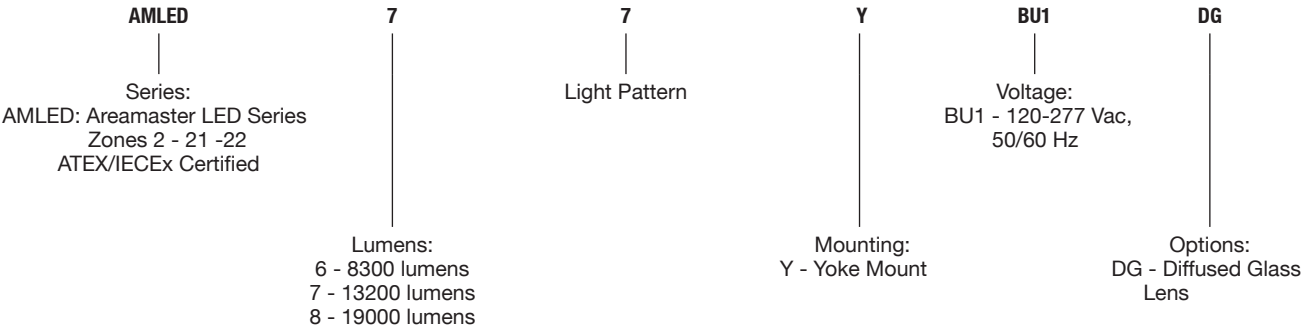
AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

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

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

Catalog Numbering Guide — ATEX/IECEX Certified Areamaster LED



AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

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

Technical Data – Ambient Temperature Ta °C

Lighting Position Ta	GAS (Zone 2) Temperature Class / Cable T°						DUST (Zones 21–22) Surface Temperature					
	Downward		Wall Mounting		Upward		Downward		Wall Mounting		Upward	
	+40°C	+55°C	+40°C	+55°C	+40°C	+55°C	+40°C	+55°C	+40°C	+55°C	+40°C	+55°C
AMLED67YBU1	T4 114°C	T4 129°C	T4 109°C	T4 124°C	T4 117°C	T3 132°C	68°C	83°C	67°C	82°C	70°C	85°C
AMLED77YBU1	T3 144°C	T3 159°C	T3 146°C	T3 161°C	T3 150°C	T3 165°C	75°C	90°C	74°C	89°C	77°C	92°C
AMLED87YBU1	T3 178°C	T3 193°C	T3 176°C	T3 191°C	T3 183°C	T2 198°C	83°C	98°C	82°C	97°C	87°C	102°C

Electrical Specifications – Flood Mount

Catalog Number	Voltage Range	Frequency (Hz)	Watts Input Power (Nom.)	Input Amps (Max.)	Total Harmonic Distortion	Power Factor
AMLED67YBU1	120-277 Vac	50/60 Hz	76/74 W	0.64 - 0.32 A	0.5	> 0.98
AMLED77YBU1	120-277 Vac	50/60 Hz	125/121 W	1.10 - .047 A	0.5	> 0.98
AMLED87YBU1	120-277 Vac	50/60 Hz	174/169 W	1.60 - 0.70 A	0.5	> 0.98



Line Voltage

Catalog Number

120-277 Vac, 50/60 Hz

AMLED67YBU1

120-277 Vac, 50/60 Hz

AMLED77YBU1

120-277 Vac, 50/60 Hz

AMLED87YBU1

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

AMLED Areamaster™ LED Flood/High Bay Luminaires

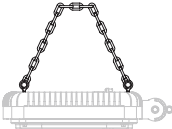
For Hazardous Locations. 8300, 13200 and 19000 lumens

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

Lighting

LED LUMINAIRES

Accessories and Replacement Parts

	Description	Catalog Number
Crossarm Mounting Bracket		
	Has 180° horizontal adjustment — degree marked. Facilitates mounting floodlight to crossarm or other flat surface, or to G-AM-8-WB. Includes floodlight yoke bolts. Malleable iron, zinc plated, chromate sealed, architectural bronze polyester finish.	GAM8CA
Pipe or Wall Mount Bracket		
	Used with G-AM-8-CA. Clamps to 1" to 2-1/2" pipe, vertical or horizontal, or mounts on flat surfaces. Includes U-bolt and crossarm bracket bolts. Malleable iron, zinc plated, chromate sealed, with architectural bronze polyester finish.	GAM8WB
Poletop Slip-Fitter		
	Slip-fits 1-1/2" or 2" pipe size poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Body is malleable iron-zinc plated, chromate sealed, with cast aluminum cap. Assembly has architectural bronze polyester finish.	GSF20
	Slip-fits 1" or 1-1/2" pipe size poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Body is malleable iron-zinc plated, chromate sealed, with cast aluminum cap. Assembly has architectural bronze polyester finish.	AMLEDSF1
Poletop Slip-Fitter		
	Slip-fits 2" or 2-1/2" poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Malleable iron, zinc plated, chromate sealed, with architectural bronze polyester finish.	GAM8SF
Chain		
	Chain mount assembly comes with two (2) 914.4 mm long chains, four (4) eye bolts, four (4) hex bolts, four (4) lock washers, four (4) hex nuts, eight (8) plain washers and an instruction sheet for complete assembly and mounting. Chains are galvanized steel, eye bolts are zinc plated steel, all other hardware is stainless steel.	AMLEDCM

	Description	Catalog Number
LED Array		
	With White LED's for the AMLED67	AMLED67AW
	With White LED's for the AMLED77	AMLED77AW
	With White LED's for the AMLED87	AMLED87AW
Drivers		
	120 - 277 Vac — BU1 Version — AMLED87: Left Side — AMLED67, AMLED77	AMLEDDBU1L
	120 - 277 Vac — BU1 Version — AMLED87: Right Side	AMLEDDBU1R
Door Assembly		
	With a Glass Lens, Pins	AMLEDMDOOR

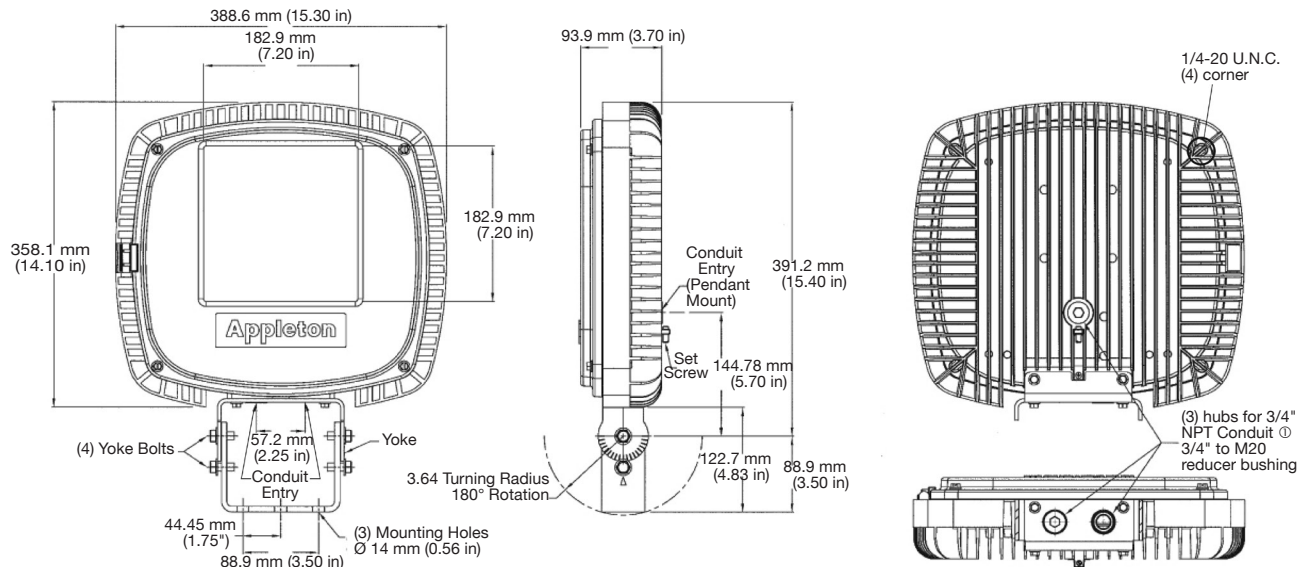
AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

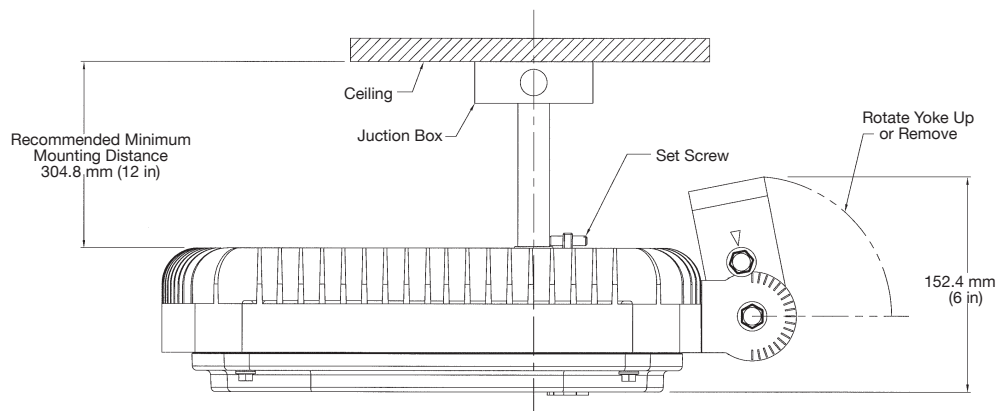
Zone 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters (Inches)

Floodlight



High Bay Pendant Mount



① 3/4" NPT/M20 adapter supplied for ATEX version.

AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

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

Lighting

LED LUMINAIRES

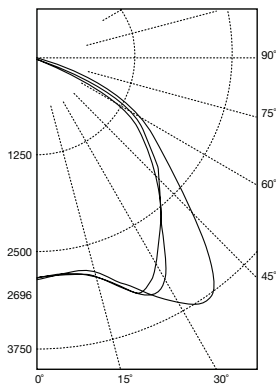
Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: AMLED67YBU1_FLOOD

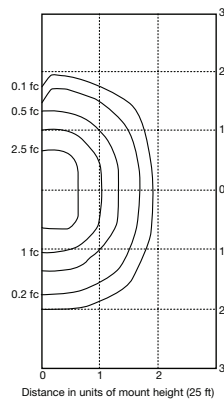
Lamps: Areamaster, High Bay Mount, LED Board 39 LEDs, Specular Reflector 6-1/2 X 6-1/2 Tapered To 3-1/2 X 3-1/2, Lens Clear

Luminaire Lumens 8238

POLAR CANDELA DISTRIBUTION



ISOCANDELA CURVES



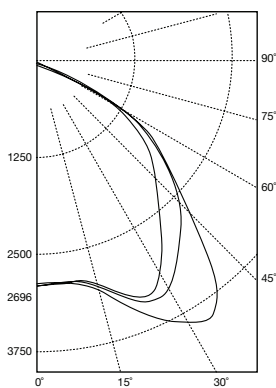
Zonal Lumen and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-10	245.6	N.A.	3.0
10-20	771.8	N.A.	9.4
20-30	1431	N.A.	17.4
30-40	1842	N.A.	22.4
40-50	1785	N.A.	21.7
50-60	1448	N.A.	17.6
60-70	667.1	N.A.	8.1
70-80	43.8	N.A.	0.5
80-90	4.5	N.A.	0.1

REPORT NUMBER: AMLED67YBU1_HIGHBAY

Lamps: Areamaster, High Bay Mount, LED Board 39 LEDs, Specular Reflector 6-1/2 X 6-1/2 Tapered To 3-1/2 X 3-1/2, Lens Clear

POLAR CANDELA DISTRIBUTION



Zonal Lumen Summary and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-30	2434	N.A.	29.2
0-40	4283	N.A.	51.6
0-60	7553	N.A.	90.6
60-90	780	N.A.	9.4
0-90	8333	N.A.	100.0
90-180	0	N.A.	0
0-180	8333	N.A.	100.0

Zonal Lumen and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-10	244.8	N.A.	2.9
10-20	764.2	N.A.	9.2
20-30	1425	N.A.	17.1
30-40	1849	N.A.	22.2
40-50	1787	N.A.	21.4
50-60	1483	N.A.	17.8
60-70	731.0	N.A.	8.8
70-80	46.7	N.A.	0.6
80-90	2.4	N.A.	0.0

AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

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

Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: AMLED77YBU1_FLOOD

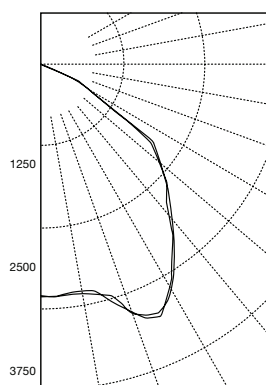
Lamps: Areamaster, High Bay Mount, LED Board 56 LEDs, Specular Reflector 6-1/2 X 6-1/2 Tapered To 3-1/2 X 3-1/2, Lens Clear

Characteristics: Maximum Candela: 5818; Maximum Candela Angle: 22.5 H 25.5 V; Horizontal Beam Angle (50%): 97.0; Vertical Beam Angle (50%): 102; Horizontal Field Angle (10%): 134; Vertical Field Angle (10%): 134; Beam Lumens 10414; Field Lumens 12967; Luminaire Lumens 13157

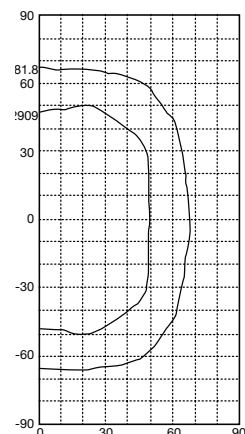
AXIAL CANDELA

DEG.	HOR.	VERT.
90.0	0	0
85.0	21	2
75.0	26	5
65.0	700	733
55.0	2400	2341
47.5	3023	2976
42.5	3375	3307
37.5	3838	3826
33.0	4312	4319
29.0	4670	4719
25.5	4964	4898
22.5	4910	4857
19.5	4700	4660
17.0	4456	4343
15.0	4273	4249
13.0	4184	4165
11.0	4154	4123
9.0	4139	4105
7.0	4124	4119
5.0	4127	4133
3.0	4138	4150
1.0	4149	4153
0.0	4149	4149

AXIAL CANDELA DISPLAY



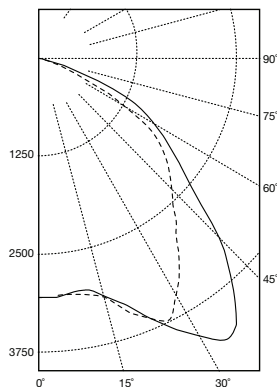
ISOCANDELA CURVES



CIE Type – Direct

Plane	Spacing Criteria
0 Deg	1.5
90 Deg	1.5

Zone	Lumens
0-5	98
5-10	290
10-15	485
15-20	711
20-25	993
25-30	1264
30-35	1440
35-40	1517
40-45	1471
45-50	1392
50-55	1283
55-60	1086
60-65	764
65-70	340
70-75	37
75-80	4
80-85	2
85-90	1



REPORT NUMBER: AMLED77YBU1_HIGHBAY

Lamps: Areamaster, High Bay Mount, LED Board 56 LEDs, Specular Reflector 6-1/2 X 6-1/2 Tapered To 3-1/2 X 3-1/2, Lens Clear

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

		Effective Rcc. Slab. Reinforcement size																	
% Ceiling	Rcc	80			70			50			30			10			0		
% Walls	Rw	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	0	
0	1	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	100
1	1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	1	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76
3	1	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65
4	1	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56
5	1	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	50	48
6	1	73	60	52	46	71	59	51	45	58	50	45	56	50	45	54	49	44	42
7	1	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	1	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	1	58	45	37	32	57	45	37	32	44	37	32	43	36	31	42	36	31	30
10	1	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	32	28	27

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	3841	N.A.	29.1	90-130	2	N.A.	0.0
0-40	6798	N.A.	51.5	90-150	6	N.A.	0.0
0-60	12029	N.A.	91.1	90-180	7	N.A.	0.1
0-90	13177	N.A.	99.8	0-180	13199	N.A.	100
90-120	1	N.A.	0.0				

AMLED Areamaster™ LED High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

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

Lighting

LED LUMINAIRES

Photometric Data — DATA SHOWN IS ABSOLUTE

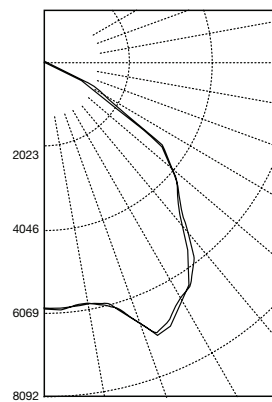
REPORT NUMBER: AMLED87YBU1_FLOOD

Lamps: Areamaster, Pendant Mount, LED Board 20 LEDs, Specular Reflector 6-1/2 X 6-1/2 Tapered To 3-1/2 X 3-1/2, Lens Clear

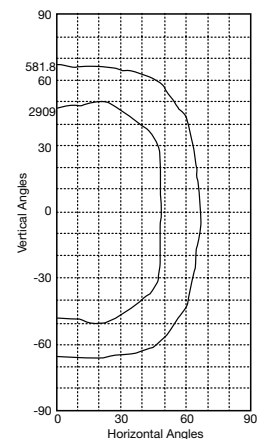
Characteristics: NEMA Type: 7Hx7V; Maximum Candela: 8092; Maximum Candela Angle: 25.5H 25.5V; Horizontal Beam Angle (50%): 97.3; Vertical Beam Angle (50%): 103; Horizontal Field Angle (10%): 137; Vertical Field Angle (10%): 136; Beam Lumens 14933; Field Lumens 18585; Luminaire Lumens 18842

AXIAL CANDELA		
DEG.	HOR.	VERT.
90	0	0
85	31	5
75	36	8
65	1239	938
55	3463	3477
47.5	4393	4345
42.5	4921	4831
37.5	5955	5752
33	6455	6392
29	6656	6778
25.5	6998	7087
22.5	7109	7158
19.5	6665	6664
17	6302	6222
15	6059	6108
13	6027	6044
11	5931	5942
9	5914	5938
7	5933	5956
5	5974	5975
3	6003	5995
1	6002	6004
0	5999	5999

AXIAL CANDELA DISPLAY



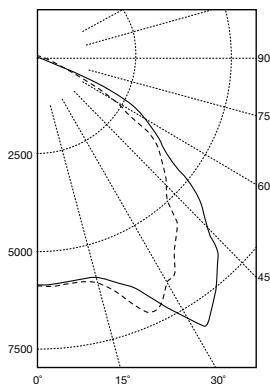
ISOCANDELA CURVES



CIE Type – Direct

Plane	Spacing Criteria
0-180	1.54
90-270	1.54

Zone	Lumens
0- 5	141
5- 10	419
10- 15	697
15- 20	1004
20- 25	1408
25- 30	1794
30- 35	2079
35- 40	2151
40- 45	2143
45- 50	2011
50- 55	1834
55- 60	1567
60- 65	1118
65- 70	514
70- 75	62
75- 80	3
80- 85	2
85- 90	1



REPORT NUMBER: AMLED87YBU1_HIGHBAY

Lamps: Areamaster, High Bay Mount, LED Board 20 LEDs, Specular Reflector 6-1/2 X 6-1/2 Tapered To 3-1/2 X 3-1/2, Lens Clear

Coefficients of Utilization – Zonal Cavity Method Effective Floor Cavity Reflectance 0.20

		Effective Floor Ceiling Relationship Data																									
% Ceiling	Rcc	80					70					50					30					10					0
% Walls	Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
0	119	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	106	102	102	102	102	100	100	100	100		
1	111	107	103	100	108	105	101	99	100	98	95	97	95	93	93	91	90	88	88	88	88	88	88	88	88		
2	102	95	89	84	99	93	88	83	89	85	81	86	83	79	83	80	77	75	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65	65		
4	86	75	67	60	84	73	66	60	71	64	59	69	63	58	67	62	58	56	56	56	56	56	56	56	56		
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48	48	48	48	48	48	48	48		
6	73	60	52	45	71	59	51	45	57	50	45	56	49	45	54	49	44	42	42	42	42	42	42	42	42		
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	43	39	37	37	37	37	37	37	37	37		
8	63	49	41	36	61	49	41	35	47	40	35	46	40	35	45	39	35	33	33	33	33	33	33	33	33		
9	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31	29	29	29	29	29	29	29	29		
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26	26	26	26	26	26	26	26		

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	5462	N.A.	28.8	90-130	3	N.A.	0
0-40	9692	N.A.	51.2	90-150	5	N.A.	0
0-60	17247	N.A.	91.1	90-180	7	N.A.	0
0-90	18946	N.A.	100.1	0-180	18933	N.A.	100
90-120	2	N.A.	0				

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Applications

- Enclosed and gasketed fixtures suitable for use in:
 - Marine and wet locations
 - A wide range of industrial, chemical processing and other areas where flammable gases and vapors are present
 - Areas of low clearance, low ceiling heights or where fixture weights must be minimized
 - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Manufacturing plants
 - Storage areas
 - Waste and sewage treatment
 - Parking garages
 - Other areas where dust, water, dirt and rough usage are a problem

Features

- Compact light weight low profile design is suited for low mounting heights.
- Modular design allows scores of fixture component combinations to meet installation needs. Uses same mounting hoods as Mercmaster III.
- Fixture housing and mounting hoods are copperfree cast aluminum with baked epoxy finish. All exposed hardware is stainless steel.
- Accommodates a wide range of voltages.
- Ambient temperatures:
 - 70 W to 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
- Electrical: 120-277 Vac, 50/60 Hz.
- Pole terminal block: 1 x 0.75 to 6 mm².
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- All Mercmaster mounting hoods have provision for easy field installation of fuses in fixtures (see Fixture Unit — Electrical Specification).
- NPT and metric threads standard.
- NEMA Type V light distribution is standard.
 - Type V distribution is required in areas where sufficient, evenly distributed light is necessary. It produces a circular distribution that has the same intensity at all angles.
- Ballast bodies and mounting hoods must be purchased separately.



Standard Materials

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Globe: polycarbonate

Standard Finishes

- Mounting hoods, bodies and guards: baked gray epoxy-clad finish, electrostatically applied for complete uniform protection

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Certifications and Compliances

◆ATEX/IECEX Certification

• Certification Type MLEDNA**

- ATEX
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: ⚡ II 3 G
 - Type of Protection: Ex nA IIC Gc
 - Temperature class:
 - 70 W and 100 W equivalent: T4 [+40 °C], T4 [+55 °C], T3 [+65 °C]
 - 150 W to 175 W equivalent: T4 [+40 °C], T4 [+ 55 °C]
 - 250 W equivalent: T4 [+40 °C], T4 [+50 °C]
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: ⚡ II 3 D
 - Type of Protection: Ex tc IIIC Dc
 - Surface Temperature:
 - 70 W and 175 W equivalent: T92 °C
 - 250 W equivalent: T79 °C
 - Ambient Temperature:
 - 70 W and 100 W equivalent: -40 °C to +65 °C
 - 150 W to 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
 - ATEX Certificate: LCIE 11 ATEX 1008, LCIE 14 ATEX 3063
 - IECEx Certificate: IECEx LCI 11.0058
 - Index of Protection according EN/IEC 60529: IP66
- IECEx
 - Gas: Zone 2
 - Type of Protection: Ex nA IIC Gc
 - Temperature class:
 - 70 W to 175 W equivalent: T4 [+40 °C], T4 [+ 55 °C]
 - 250 W equivalent: T4 [+40 °C], T4 [+50 °C]
 - Dust: Zone 22
 - Type of Protection: Ex tc IIIC Dc
 - Surface Temperature:
 - 70 W and 175 W equivalent: T92 °C
 - 250 W equivalent: T79 °C
 - Ambient Temperature:
 - 70 W and 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
 - IECEx Certificate: IECEx LCI 11.0058
 - Index of Protection according EN/IEC 60529: IP66

◆EURASEC Certification

— EURASEC N° TC RU C-FR. гб 05.B.00912

◆Others certification

— INMETRO Certificate: BVC12.1522 ①

DesignLights™ Consortium (for the following models):

- MLEDN15
- MLEDN17
- MLEDN25

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

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Illustrated Features



Heatsink

Reliable heat transfer via the cast, epoxy powder coat aluminum body. Provides maximum heat dissipation from the LED assembly to the outside environment.



Driver Assembly

Utilizing non-sparking components avoiding the ignition of gases or vapors that may be present (nA).

Modular Plug between LED and driver.

Terminal Blocks (Zone 2)

A seven-point terminal block is provided to facilitate wiring. Terminal block accommodates wire size ranging from 0.75 to 6 mm²

Epoxy Finish

Ballast housing, hoods and guards are copperfree aluminum with epoxy powder coat finish.

Electrical Protection

Ground wire provided to bond mounting hood to ballast housing.

Safety

Rounded heatsink edges prevent possible injury during installation.



LED Chamber

Protected by polycarbonate lens, allows for easy maintenance access.



Cooler Operating Cone Hood

Larger sloped surface sheds dusts, dirt and combustible fibers providing better heat dissipation.

Mounting Hood and Globe Gaskets

Silicone rubber gaskets seals out moisture, dirt and dust. Stays flexible, withstands high temperatures. Closure design assures uniform gasket compression.



"Safety" High Hinge

Extra-high hinge provides additional protection against accidental ballast housing disengagement during installation or maintenance.

Stainless Steel Latch Assembly

Captive, stainless steel latch assembly bolt and nut closes securely, resists attack of corrosive atmospheres. Swing-away design simplifies servicing.



MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Lighting

LED LUMINAIRES

Wall Mount  <table><tr><th>Description</th><th>Catalog Number</th></tr><tr><td>3/4"</td><td>KPWB75</td></tr><tr><td>1"</td><td>KPWB100</td></tr><tr><td>M20</td><td>KPWB20</td></tr></table>	Description	Catalog Number	3/4"	KPWB75	1"	KPWB100	M20	KPWB20	Pendant Mount  <table><tr><th>Hub Size</th><th>Catalog Number</th></tr><tr><td>3/4"</td><td>KPA75</td></tr><tr><td>1"</td><td>KPA100</td></tr><tr><td>M20</td><td>KPAM20</td></tr></table>	Hub Size	Catalog Number	3/4"	KPA75	1"	KPA100	M20	KPAM20	Pendant Cone Mount  <table><tr><th>Hub Size)</th><th>Catalog Number</th></tr><tr><td>3/4"</td><td>KPCH75</td></tr><tr><td>1"</td><td>KPCH100</td></tr><tr><td>M20</td><td>KPCHM20</td></tr></table>	Hub Size)	Catalog Number	3/4"	KPCH75	1"	KPCH100	M20	KPCHM20	Ceiling Mount  <table><tr><th>Hub Size</th><th>Catalog Number</th></tr><tr><td>3/4"</td><td>KPC75</td></tr><tr><td>1"</td><td>KPC100</td></tr><tr><td>M20</td><td>KPCM20</td></tr></table>	Hub Size	Catalog Number	3/4"	KPC75	1"	KPC100	M20	KPCM20
Description	Catalog Number																																		
3/4"	KPWB75																																		
1"	KPWB100																																		
M20	KPWB20																																		
Hub Size	Catalog Number																																		
3/4"	KPA75																																		
1"	KPA100																																		
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1"	KPC100																																		
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25° Stanchion Mount  <table><tr><th>Description</th><th>Catalog Number</th></tr><tr><td>1-1/4"</td><td>KPS125</td></tr><tr><td>1-1/2"</td><td>KPS150</td></tr></table>	Description	Catalog Number	1-1/4"	KPS125	1-1/2"	KPS150	90° Stanchion Mount  <table><tr><th>Description</th><th>Catalog Number</th></tr><tr><td>1-1/4"</td><td>KPST125</td></tr><tr><td>1-1/2"</td><td>KPST150</td></tr></table>	Description	Catalog Number	1-1/4"	KPST125	1-1/2"	KPST150																						
Description	Catalog Number																																		
1-1/4"	KPS125																																		
1-1/2"	KPS150																																		
Description	Catalog Number																																		
1-1/4"	KPST125																																		
1-1/2"	KPST150																																		

Ballast Bodies		
		
LED Wattage	Light Level Equivalent	Ballast Bodies
ATEX/IECEx Certified Ballast Bodies ①		120-277 Vac, 50/60 Hz
35/33 W	70 W Metal Halide	MLEDNA70P5BU
47.5/46 W	100 W Metal Halide	MLEDNA10P5BU
61/62 W	150 W Metal Halide	MLEDNA15P5BU
74/72 W	175 W Metal Halide	MLEDNA17P5BU
95.5/92 W	250 W Metal Halide	MLEDNA25P5BU

Clear GLobe	Diffused Globe
	
Supplied as standard	Option : add "D"

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

Catalog Numbering Guide for Ballast Bodies — ATEX/IECEx Certified Mercmaster LED ①

MLEDNA
MLEDNA -
Mercmaster LED Series
Zones 2 - 22
ATEX/IECEx Certified

17
Light Level Equivalent:
70 - 70 W Metal Halide (2300 lm)
10 - 100 W Metal Halide (3450 lm)
15 - 150 W Metal Halide (4850 lm)
17 - 175 W Metal Halide (6076 lm)
25 - 250 W Metal Halide (9455 lm)

P
Optical Assembly:
P - Polycarbonate
Globe

5

BU
Voltage:
BU - Universal
Voltages
120-277 Vac,
50/60 Hz

D

Options:
D - Diffused Globe

① Ballast bodies and mounting hoods must be purchased separately.

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Technical Data

Lamp		Ambient Temperature °C	Supply Wire Temperature °C	Gas Class of Temperature	Dust Surface Temperature
Light Level Equivalent to HID	Type				
70 Watt NEMA Type V	LED	40°C	60°C	T4	T92°C
		55°C	75°C	T4	
		65°C	90°C	T4	
100 Watt NEMA Type V	LED	40°C	60°C	T4	T92°C
		55°C	75°C	T4	
		65°C	90°C	T4	
150 Watt NEMA Type V	LED	40°C	60°C	T6	T92°C
		55°C	75°C	T6	
175 Watt NEMA Type V	LED	40°C	60°C	T6	T92°C
		55°C	75°C	T6	
250 Watt NEMA Type V	LED	40°C	60°C	T4	T79°C
		50°C	75°C	T4	

Lamp Comparison Chart

Lamp Data	Line Current Amps	Input Power	Lumens	CRI	Lamp Life (Hours)	Color Temp CCT
NEMA Type V						
MLEDN70	0.31 A @ 120 V	35 W	2300 lm	70	60,000+	5650
	0.17 A @ 277 V	33 W				
	0.24 A @ 347 V	34 W				
	0.11 A @ 480 V	32 W				
MLEDN100	0.41 A @ 120 V	47.5 W	3450 lm	70	60,000+	5650
	0.20 A @ 277 V	46 W				
	0.25 A @ 347 V	42 W				
	0.12 A @ 480 V	44 W				
MLEDN150	0.53 A @ 120 V	61 W	4850 lm	70	60,000+	5650
	0.25 A @ 277 V	62 W				
	0.29 A @ 347 V	62 W				
	0.14 A @ 480 V	64 W				
MLEDN175	0.63 A @ 120 V	74 W	6076 lm	70	60,000+	5650
	0.28 A @ 277 V	72 W				
	0.25 A @ 347 V	86 W				
	0.16 A @ 480 V	88 W				
MLEDN250	0.83 A @ 120 V	95.5 W	9455 lm	70	60,000+	5650
	0.36 A @ 277 V	92 W				
	0.45 A @ 347 V	96 W				
	0.31 A @ 480 V	95 W				

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Lighting

LED LUMINAIRES

Ballast bodies

Ballast bodies and mounting hoods must be purchased separately

	LED Wattage BU	Light Level Equivalent	Current Draw	Voltage Range	Weight kg	Ballast bodies Catalog Number
	35/33 W	70 W HPS	120 Vac @ .31 Amps 277 Vac @ .17 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA70P5BU
	47.5/46 W	100 W HPS	120 Vac @ .41 Amps 277 Vac @ .20 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA10P5BU
	61/62 W	150 W HPS	120 Vac @ .53 Amps 277 Vac @ .25 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA15P5BU
	74/72 W	175 W PSMH	120 Vac @ .63 Amps 277 Vac @ .28 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA17P5BU
	95.5/92 W	250 W HPS/PSMH	120 Vac @ .83 Amps 277 Vac @ .36 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA25P5BU

Mounting Hoods

Ballast bodies and mounting hoods must be purchased separately

	Description	Hub Size	Weight kg	Mounting Hoods Catalog Number
Pendant 	One Hub, Rigid Mounting	3/4	1.0	KPA75
		1	1.0	KPA100
		M20	1.0	KPAM20
Pendant Cone 	One Hub, Rigid Mounting	3/4	1.1	KPCH75
		1	1.1	KPCH100
		M20	1.1	KPCHM20
Ceiling 	Five Hubs, Four Close-Up Plugs	3/4	1.4	KPC75
		1	1.4	KPC100
		M20	1.4	KPCM20
Wall 	Five Hubs, Four Close-Up Plugs	3/4	1.8	KPWB75
		1	1.8	KPWB100
		M20	1.8	KPWBM20
25° Stanchion 	One Hub	1-1/4	1.5	KPS125
		1-1/2	1.5	KPS150
90° Stanchion 	One Hub	1-1/4	1.7	KPST125
		1-1/2	1.7	KPST150

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

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Replacement Parts

	Description	Catalog Number
Globes and Gaskets		
	Clear Globe	VPGLLED
	Diffused Globe	VPGLDIFF
	Globe Gasket — Silicone Rubber	KRFGK

	Description	Catalog Number
LED Array		
	70 Watt LED Array Assembly, Type V, White LED's	MLEDN70A5W
	100 Watt LED Array Assembly, Type V, White LED's	MLEDN10A5W
	150 Watt LED Array Assembly, Type V, White LED's	MLEDN15A5W
	175 Watt LED Array Assembly, Type V, White LED's	MLEDN17A5W
	250 Watt LED Array Assembly, Type V, White LED's	MLEDN25A5W

Drivers

120-277 V Driver (70 W thru 250 W only)	MLEDNDBU
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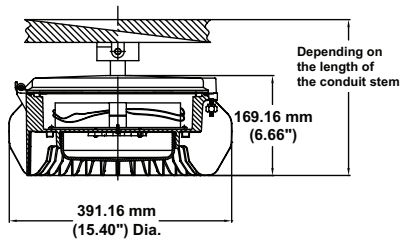
Shaded catalog numbers are normally stocked items. All other items are made to order.

MLEDNA Mercmaster™ LED Series Luminaires

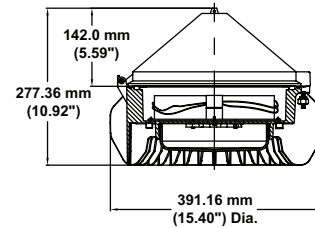
Enclosed and Gasketed Fixtures

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

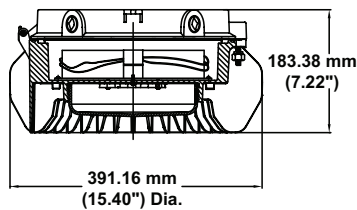
Dimensions in Millimeters (Inches)



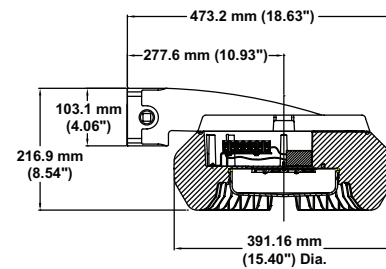
Pendant Mount



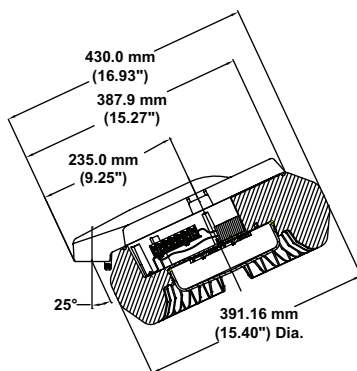
Pendant Cone Mount



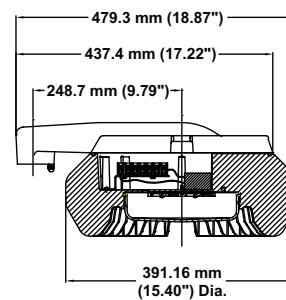
Ceiling Mount



Wall Mount



25° Stanchion Mount



90° Stanchion Mount

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN70P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

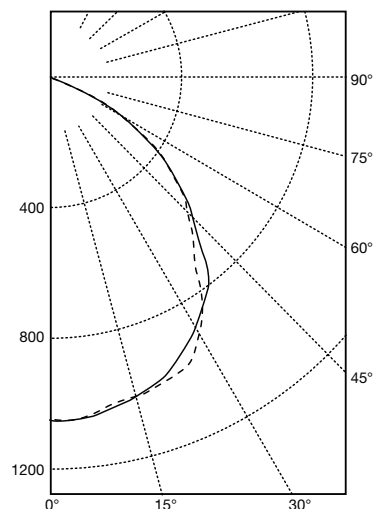
	0.0	22.5	45.0	67.5	90.0	Flux
0	1054	1054	1054	1054	1054	
5	1048	1047	1051	1047	1048	100
15	1016	1014	1016	1014	1016	287
25	977	961	941	961	977	442
35	805	779	824	779	805	497
45	583	607	603	607	583	465
55	408	425	411	425	408	358
65	185	146	139	146	185	133
75	5	5	4	5	5	9
85	1	0	0	0	1	1
90	0	0	0	0	0	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	829	36.1
0-40	1326	57.7
0-60	2149	93.5
0-90	2292	99.7

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.3	1.3



REPORT NUMBER: **MLEDN10P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

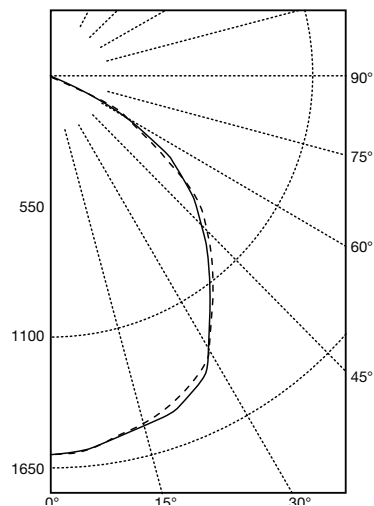
	0.0	22.5	45.0	67.5	90.0	Flux
0	1580	1580	1580	1580	1580	
5	1569	1568	1568	1568	1569	149
15	1509	1510	1513	1510	1509	427
25	1412	1414	1437	1414	1412	655
35	1177	1215	1171	1215	1177	748
45	934	915	893	915	934	707
55	577	588	632	588	577	527
65	228	218	195	218	228	209
75	6	7	6	7	6	13
85	0	0	0	0	0	1
90	0	0	0	0	0	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1231	35.8
0-40	1980	57.6
0-60	3213	93.5
0-90	3438	100.0

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN15P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

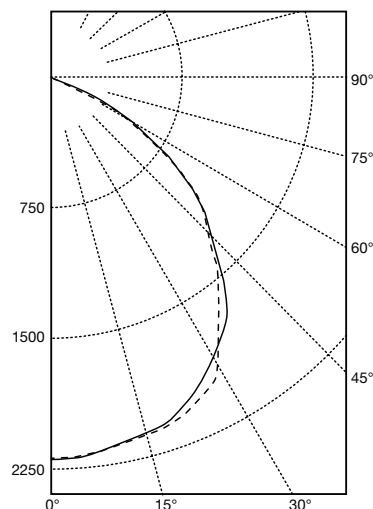
Candela Distribution						
	0.0	22.5	45.0	67.5	90.0	Flux
0	2208	2208	2208	2208	2208	
5	2202	2195	2197	2195	2202	209
15	2137	2131	2127	2131	2137	603
25	2045	2003	1977	2003	2045	926
35	1669	1658	1735	1658	1669	1051
45	1252	1282	1297	1282	1252	988
55	836	850	838	850	834	746
65	276	307	333	307	276	298
75	16	12	11	12	16	22
85	2	1	1	1	2	2
90	1	0	0	0	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1738	35.8
0-40	2789	57.5
0-60	4523	93.3
0-90	4844	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



REPORT NUMBER: **MLEDN17P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

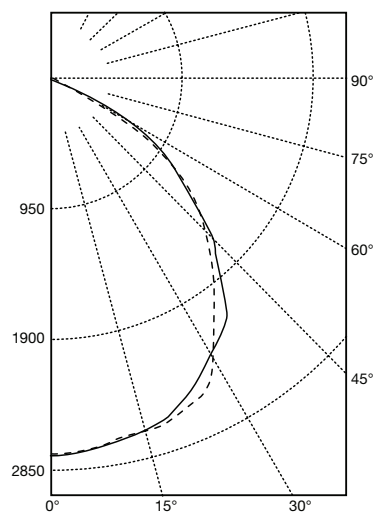
Candela Distribution						
	0.0	22.5	45.0	67.5	90.0	Flux
0	2739	2739	2739	2739	2739	
5	2724	2724	2725	2724	2724	259
15	2660	2658	2655	2658	2660	752
25	2553	2508	2462	2508	2553	1156
35	2069	2062	2201	2062	2069	1312
45	1580	1614	1655	1614	1580	1243
55	1047	1093	1046	1093	1047	943
65	353	380	391	380	353	378
75	19	15	16	15	19	28
85	2	1	1	1	2	2
90	1	0	0	0	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	2167	35.7
0-40	3478	57.2
0-60	5664	93.2
0-90	6072	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

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

Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN250P5BU** ①

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

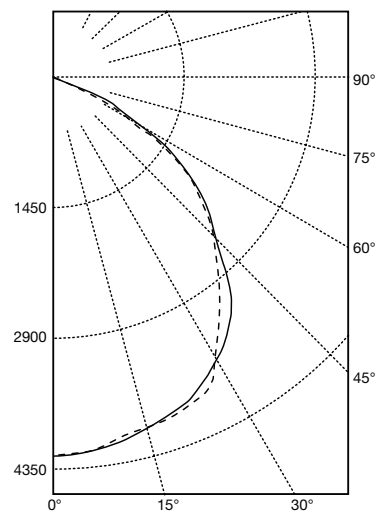
	0.0	22.5	45.0	67.5	90.0	Flux
0	4206	4206	4206	4206	4206	
5	4170	4182	4177	4182	4170	397
15	4035	4046	4038	4046	4035	1145
25	3913	3888	3829	3888	3913	1784
35	3211	3233	3380	3233	3211	2046
45	2484	2524	2532	2524	2484	1942
55	1710	1763	1708	1763	1710	1530
65	682	564	606	564	682	568
75	20	18	17	18	20	31
85	2	1	1	1	2	2
90	1	1	0	1	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	3326	35.2
0-40	5372	56.8
0-60	8844	93.5
0-90	9445	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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, food processing plants, warehouses, underground tunnels and general manufacturing facilities, FPSO, FLNG, ...

Features

- Corrosion-resistant fiberglass reinforced polyester body and hinged polycarbonate lens.
- High impact resistance housing (20 Joules – IK10) from -40°C to +55 °C ambient temperature and wind profile for use in extreme offshore and onshore environments.
- Latch assembly and elastomer gasket seals against water and dust ingress, IP66/67.
- Easily accessed for maintenance using Allen key or straight blade screwdriver.
- Central opening with unique patented release system to prevent damage.
- Can be horizontally or vertically mounted.
- Hinged parabolic reflector for high lumen output efficiency.
- Vibration resistant spring loaded lampholders for bi-pin (G13).
- Positive safety switch disconnects power to lamps and ballast to allow maintenance in hazardous locations.
- Electronic multi-tap ballast 110 to 254 Vac/Vdc +/- 10% 50/60 Hz, for global applications. High power factor electronic ballast (>0.95). EOL (End Of Life) protection in accordance to the latest EN/IEC 60079-7 standard.
- Two channel ballast prevents dark areas by allowing one lamp to remain lit if one fails.
- Ballast plug-in with Ex e connector for quick and error-free maintenance.
- Available in 3 hour or 90 minute emergency versions, including multi-tap ballast with built-in monthly self test. Test results through multi-colored LED.
- Ex e battery with plug-in connector.

Standard Materials

- Fiberglass reinforced polyester housing
- Polycarbonate lens
- Elastomer gasket
- Highly reflective white polycarbonate internal reflector
- Mounting accessories available in different materials such as gray painted aluminum, zinc plated steel, galvanized steel or 316 stainless steel

Options

- Silicone coating for added protection in H₂S hydrogen sulfide environments.
- Available without safety switch.
- Level gauge light fitting.
- 316 stainless steel fixing inserts.



2 x 58 W



2 x 36 W



2 x 18 W

Certifications and Compliances

◆ ATEX/IECEx Certification

• Certification Type: FLe

- Gas: Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex de IIC or Ex demb IIC (emergency version)
 - Temperature Class: T5 Ⓔ to T4
- Dust: Zone 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex t IIIC Db
 - Surface Temperature: +75 °C
- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50201
- ATEX Certificate: LCIE 07 ATEX 6017
- IECEx Certificate: IECEx LCI 04.0017
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00910

◆ Others Certification

- INMETRO Certificate: BVC11.0276 ①

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

② With ceiling position use at +40 °C ambient temperature.

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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

FLUORESCENT LUMINAIRES

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

Catalog Numbering Guide — FE Non-Metallic Fluorescent Lighting Fixtures

FE	B	1	18	BU	P	A	C
Series: FE - FE Series Zone 1, 2, 21, 22 ATEX/IECEX Certified	Lamp Type: B - Bi-pin (G13)		Wattage: 18 - 18 Watt 36 - 36 Watt 58 - 58 Watt	Voltage: BU - 110 to 254 Vac/Vdc, 50/60 Hz		Cable Type: A - Armored M20 N - Unarmored M25 U - Unarmored M20	Options: <i>(options must be listed alphabetically)</i> C - Silicon Coating for Diffuser E - 3 Hour Emergency Battery: 6 V - 4 Ah (18W) 6 V - 7 Ah (36W, 58W) E9 - 90 Minute Emergency Battery: 6 V - 4 Ah (18W) 6 V - 7 Ah (36W, 58W) L - Level Gauge Light Fitting ① X - 4 Entries ②
		Number of Lamps: 1 - Single 2 - Double 3 - Three Lamps			Mounting Version: P - Pole Mount ③ S - Surface/Suspension Mount Standard Wiring T - Surface/Suspension Mount Through Wiring L - Surface/Suspension Mount Dual Loop in/out Through Wiring (single phase)		

① Only for single standard versions.

② Only for S, T and L mounting versions.

③ Only 2 x 18 W and 2 x 36 W with M25 entry versions.

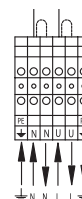
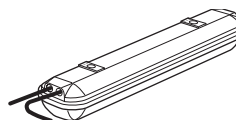
FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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

Surface/Suspension Mounting and Standard Wiring Version

Connection via 1 x 6 terminals.
Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 threaded entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland — 8 to 18.5 mm diameter — and two M25 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
1	18	G13	110/254	5.5	32.3	FEB118BUSN
2	18	G13	110/254	5.5	32.3	FEB218BUSN
1	36	G13	110/254	7.9	54.2	FEB136BUSN
2	36	G13	110/254	7.9	54.2	FEB236BUSN
3	36	G13	110/254	9.9	54.2	FEB336BUSN
1	58	G13	110/254	9.0	65.0	FEB158BUSN
2	58	G13	110/254	9.0	65.0	FEB258BUSN
3	58	G13	110/254	11.0	65.0	FEB358BUSN

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 plugged clearance entry, supplied with two M20 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
1	18	G13	110/254	5.5	32.3	FEB118BUSA
2	18	G13	110/254	5.5	32.3	FEB218BUSA
1	36	G13	110/254	7.9	54.2	FEB136BUSA
2	36	G13	110/254	7.9	54.2	FEB236BUSA
3	36	G13	110/254	9.9	54.2	FEB336BUSA
1	58	G13	110/254	9.0	65.0	FEB158BUSA
2	58	G13	110/254	9.0	65.0	FEB258BUSA
3	58	G13	110/254	11.0	65.0	FEB358BUSA

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

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

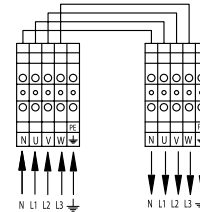
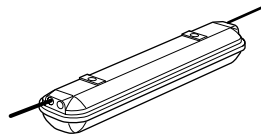
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Surface/Suspension Mounting and Through Wiring

Version (three phase)

Connection via 2 x 5 terminals.

Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 threaded entries, two at one end and one at opposite end, supplied with two M25 polyamide cable glands — 8 to 18.5 mm diameter — and one M25 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	5.5	32.3	FEB218BUTN
2	36	G13	110/254	7.9	54.2	FEB236BUTN
2	58	G13	110/254	9.0	65.0	FEB258BUTN

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 threaded entry with brass earth continuity plate at opposite end, supplied with one M20 polyamide plug.

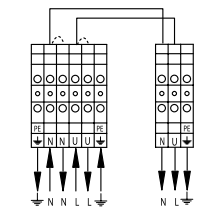
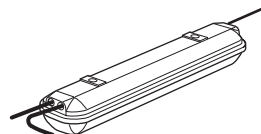
Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	5.5	32.3	FEB218BUTA
2	36	G13	110/254	7.9	54.2	FEB236BUTA
2	58	G13	110/254	9.0	65.0	FEB258BUTA

Surface/Suspension Mounting and Dual Loop In/Out

Through Wiring Version (single phase):

Connection via 1 x 6 terminals and 1 x 3 terminals.

Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with two M25 polyamide cable glands — 8 to 18.5 mm diameter — and one M25 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	5.5	32.3	FEB218BULN
2	36	G13	110/254	7.9	54.2	FEB236BULN
2	58	G13	110/254	9.0	65.0	FEB258BULN

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 threaded entry with brass earth continuity plate at opposite end, supplied with one M20 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	5.5	32.3	FEB218BULA
2	36	G13	110/254	7.9	54.2	FEB236BULA
2	58	G13	110/254	9.0	65.0	FEB258BULA

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

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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

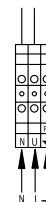
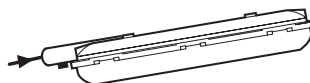
Pole Mounting Version

Connection via 1 x 3 terminals.

Capacity (flexible/solid): 4 mm²/6 mm².

For mounting on 42 mm diameter pole or tubular wall-mounting support.

Supplied with one integrated M25 polyamide cable gland — 8 to 18.5 mm diameter.



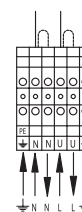
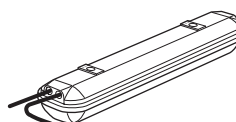
Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	6.2	34.1	FEB218BUPN
2	36	G13	110/254	8.7	54.2	FEB236BUPN

Level Gauge Tank Light -

Surface/Suspension Mounting with Standard Wiring

Connection via 1 x 6 terminals.

Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland — 8 to 18.5 mm diameter — and two M25 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
1	18	G13	110/254	5.5	32.3	FEB118BUSNL
1	36	G13	110/254	7.9	54.2	FEB136BUSNL
1	58	G13	110/254	9.0	65.0	FEB158BUSNL

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

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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

Emergency Battery Backup

Surface/Suspension Mounting and Standard Wiring

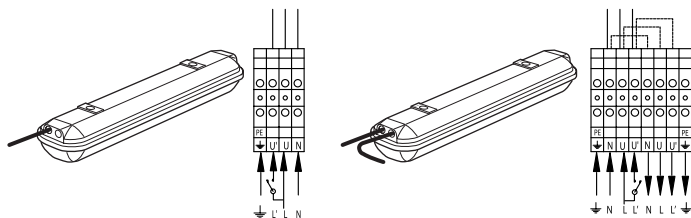
Connection via 1 x 4 terminals for 18 W version.

Connection via 1 x 8 terminals for 36 W and 58 W versions.

Capacity (flexible/solid): 4 mm²/6 mm².

Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland — 8 to 18.5 mm diameter — and two M25 polyamide plugs.



Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	G13	110/254	7.3	32.3	3 H	4Ah	FEB218BUSNE
2	36	G13	110/254	9.6	54.2	3 H	7Ah	FEB236BUSNE
3	36	G13	110/254	11.6	54.2	3 H	7Ah	FEB336BUSNE
2	58	G13	110/254	10.7	65.0	3 H	7Ah	FEB258BUSNE
3	58	G13	110/254	12.7	65.0	3 H	7Ah	FEB358BUSNE

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 plugged clearance entry, supplied with two M20 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	G13	110/254	7.3	32.3	3 H	4Ah	FEB218BUSAE
2	36	G13	110/254	9.6	54.2	3 H	7Ah	FEB236BUSAE
3	36	G13	110/254	11.6	54.2	3 H	7Ah	FEB336BUSAE
2	58	G13	110/254	10.7	65.0	3 H	7Ah	FEB258BUSAE
3	58	G13	110/254	12.7	65.0	3 H	7Ah	FEB358BUSAE

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

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

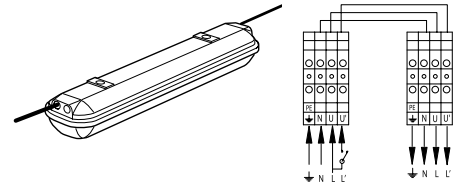
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Emergency Battery Backup

Surface/Suspension Mounting and Through Wiring Version

Connection via 2 x 4 terminals.

Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13):

Three M25 entries, two at one end and one at opposite end, supplied with two M25 polyamide cable glands — 8 to 18.5 mm diameter — and one M25 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	7.3	32.3	3 H	4Ah	FEB218BUTNE
2	36	Bi-pin	110/254	9.6	54.2	3 H	7Ah	FEB236BUTNE
2	58	Bi-pin	110/254	10.7	65.0	3 H	7Ah	FEB258BUTNE

Armored Version - Bi-pin (G13):

Two M20 threaded entries with brass earth continuity plate at one end and one M20 threaded entry with brass earth continuity plate at opposite end, supplied with one M20 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	7.3	32.3	3 H	4Ah	FEB218BUTAE
2	36	Bi-pin	110/254	9.6	54.2	3 H	7Ah	FEB236BUTAE
2	58	Bi-pin	110/254	10.7	65.0	3 H	7Ah	FEB258BUTAE

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

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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

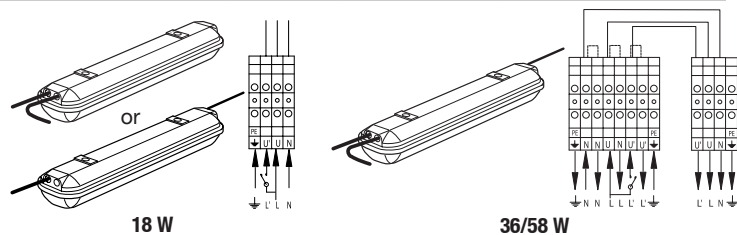
Emergency Battery Backup

Surface/Suspension Mounting and Dual Loop In/Out Through Wiring Version (single phase)

Connection via 1 x 4 double deck terminals for 18 W version.

Connection via 1 x 8 terminals and 1 x 4 terminals for 36 W and 58 W versions.

Capacity (flexible/solid):
4 mm²/6 mm²



Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with two M25 polyamide cable glands — 8 to 18.5 mm diameter — and one M25 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	7.6	32.3	3 H	4Ah	FEB218BULNE
2	36	Bi-pin	110/254	9.9	54.2	3 H	7Ah	FEB236BULNE
2	58	Bi-pin	110/254	10.7	65.0	3 H	7Ah	FEB258BULNE

Armored Version - Bi-pin (G13)

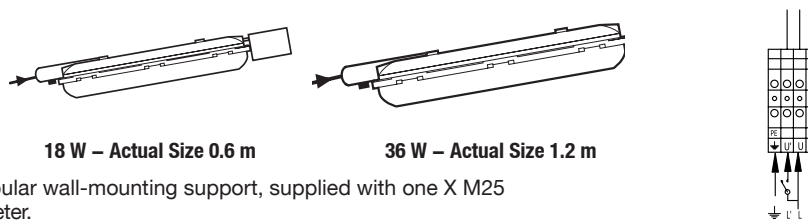
Two M20 threaded entries with brass earth continuity plate at one end and one M20 threaded entry with brass earth continuity plate at opposite end, supplied with one M20 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	7.6	32.3	3 H	4Ah	FEB218BULAE
2	36	Bi-pin	110/254	9.9	54.2	3 H	7Ah	FEB236BULAE
2	58	Bi-pin	110/254	10.7	65.0	3 H	7Ah	FEB258BULAE

Pole Mounting Version

Connection via 1 x 4 terminals.

Capacity (flexible/solid):
4 mm²/6 mm².



18 W – Actual Size 0.6 m

36 W – Actual Size 1.2 m

For mounting on diameter 42 mm pole or tubular wall-mounting support, supplied with one X M25 polyamide cable gland — 8 to 18.5 mm diameter.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	10.0	54.2	3 H	4Ah	FEB218BUPNE ①
2	36	Bi-pin	110/254	10.4	54.2	3 H	7Ah	FEB236BUPNE

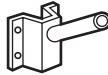
① 2 x 18 W is supplied with external battery pack (see dimensional data).

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

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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

Accessories and Replacement Parts		
	Description	Catalog Number
Fixing Brackets		
	Set of two brackets for surface installation	
	Zinc plated steel	FEFBZ
	316 stainless steel	FEFBS
Brackets for Surface Mounting		
	Set of two	
	Aluminium (gray painted)	FESBA
	316 stainless steel	FESBS
M8 Ring Bolts		
	Set of two	
	Zinc plated steel	FERBM8Z
Half Clamps Brackets for Pole Mounting		
	Set of two	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
Wall Mounting Adaptor		
	For pole mounting version	
	Diameter 42mm	
	Galvanized steel	FEWMG
Hinged Brackets		
	Set of two brackets for adjusting luminaire	
	Aluminium	FEHBA
	316 stainless steel	FEHBS
Fall Prevention Kit		
	Safety chain retains fixture temporarily to ease installation	
	For M25 cable entry	FESCM25
	For M20 cable entry	FESCM20

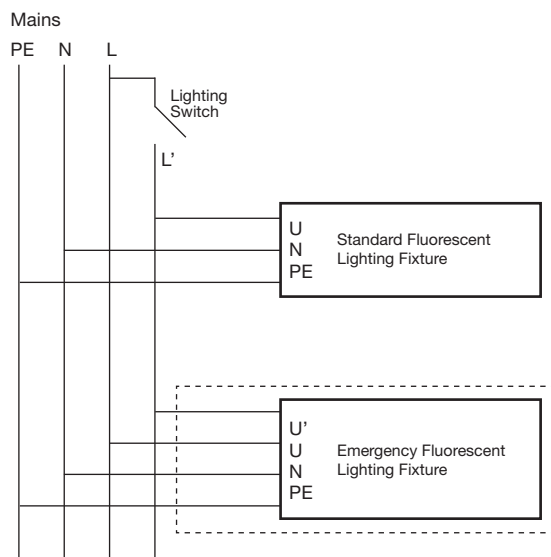
Shaded catalog numbers are normally stocked items. All other items are made to order.

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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

Wiring Diagram



Emergency Function Diagram

Two Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

Three Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

LED Status

Color	Indication	Function
Green	LED Blinking	Mains good – Battery charging
	LED Continuous	Mains good – Battery charged
Red	LED Blinking	No battery connected <i>OR</i> Something is defective
	LED Continuous	Mains faulty – Output ON
	LED Flashing	Mains faulty – Battery empty <i>OR</i> Lamp is defective
Yellow	LED Blinking	Mains good – Performing self test
	LED Continuous	Self test was not okay
None (Off)	No Light Emitted	No mains – Battery completely empty

Emergency Light Duration

Version	Battery Capacity	Duration	Light Output
2 x 18 W	4 Ah – 6 V	90 minute	80%
	4 Ah – 6 V	3 hour	40%
2 x 36 W	7 Ah – 6 V	90 minute	45%
	7 Ah – 6 V	3 hour	25%
2 x 58 W	7 Ah – 6 V	90 minute	30%
	7 Ah – 6 V	3 hour	15%

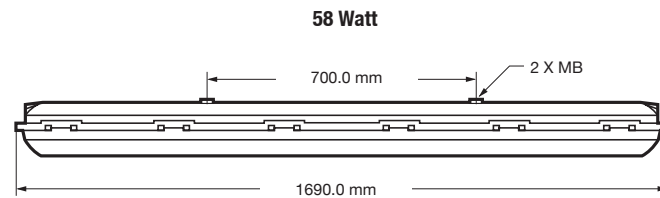
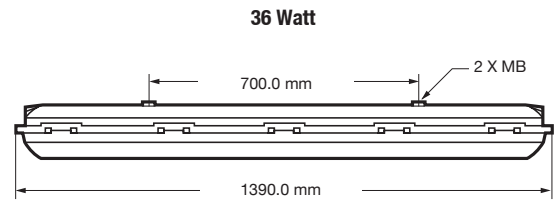
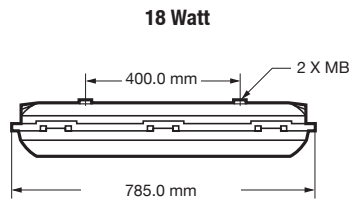
FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

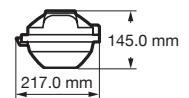
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters

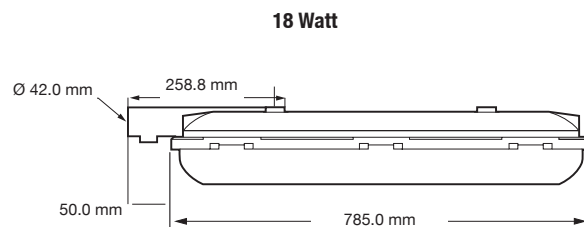
Surface/Suspension Mounting



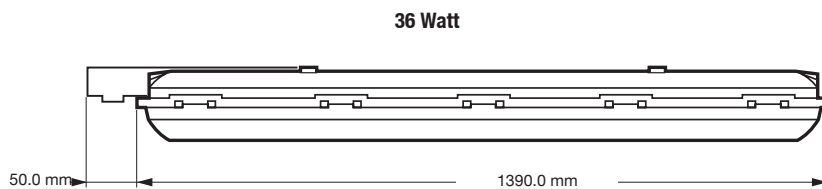
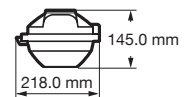
End View



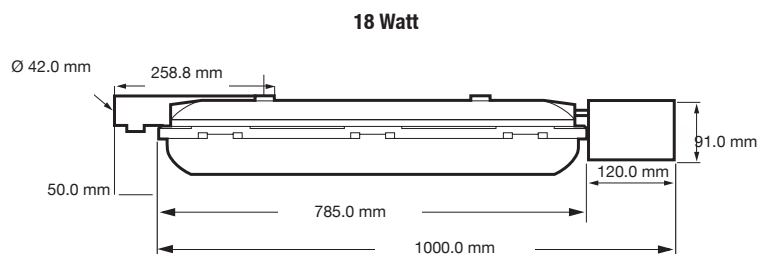
Pole Mounting



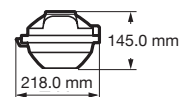
End View



Emergency Pole Mounting



End View



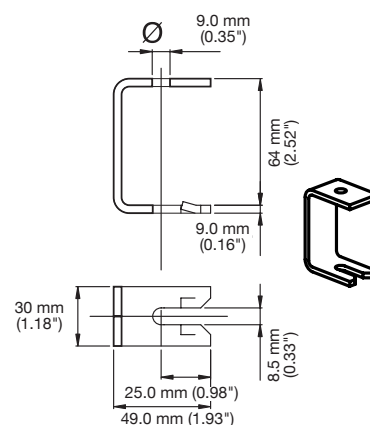
FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

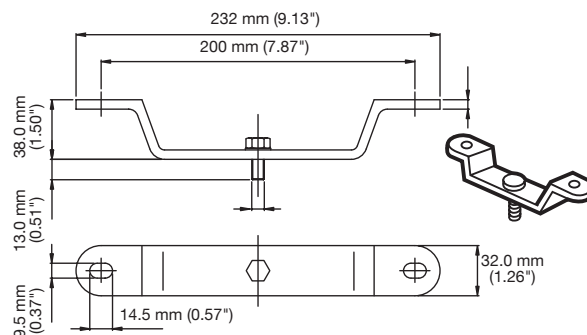
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Mounting Data

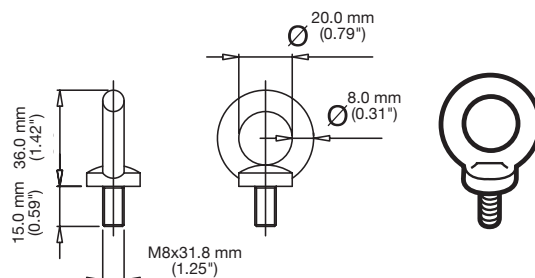
FEFBZ: zinc plated steel — Set of two quick fixing brackets for ease of surface mounting



FESBS: 316 stainless steel — Set of two brackets for surface mounting



FERBM8Z: zinc plated steel — Set of two ring bolts



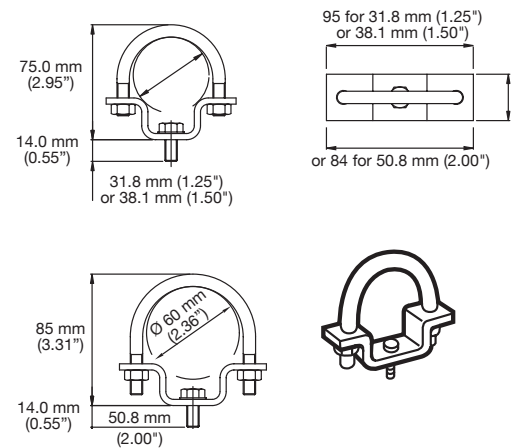
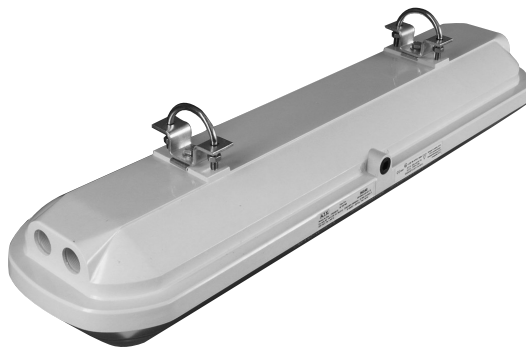
FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

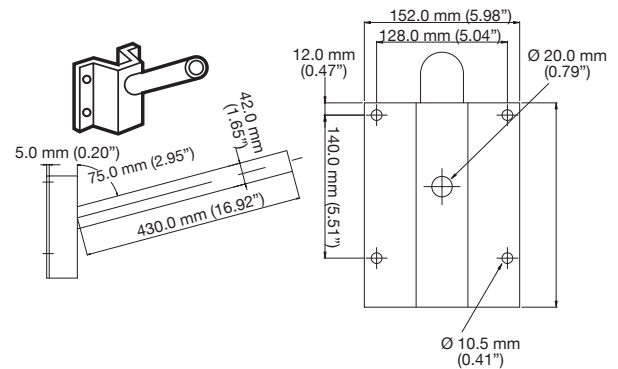
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Mounting Data

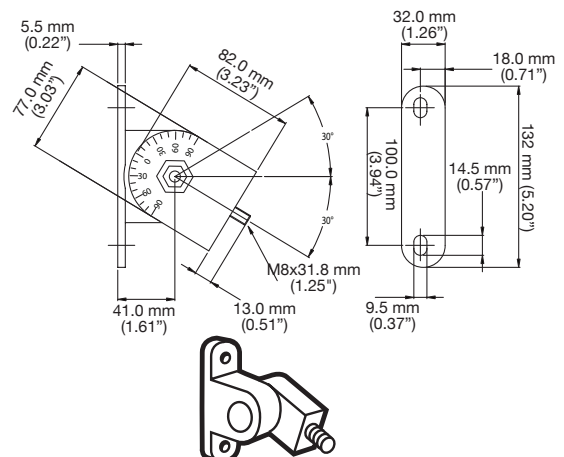
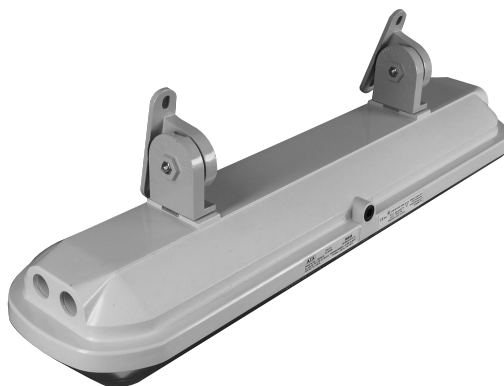
FEHC49Z: zinc plated steel or FEHC49S: 316 stainless steel — Set of two clamps for pole diameter 42 mm to 49 mm (for 1-1/4" to 1-1/2" pole).
FEHC60Z: zinc plated steel or FEHC60S: 316 stainless steel — Set of two clamps for pole diameter 60 mm (for 2" pole).



FEWMG: galvanized steel — Wall mounting pole diameter 42 mm (1-1/4")



FEHBA: aluminum or FEHBS: 316 stainless steel — Set of two hinged brackets for adjusting luminaire.



FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

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

Photometric Data

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

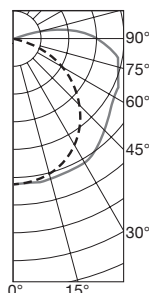
--- Longitudinal
— Transverse

1 x 18 Watt

TOTAL LUMINAIRE EFFICIENCY = 94.8%
NF C 71-121: 0.86 H + 0.09 T

CANDELA DISTRIBUTION

	0-180	90-270
0	215	215
5	214	214
10	211	215
15	207	213
20	200	211
25	191	209
30	181	208
35	169	202
40	155	196
45	139	187
50	122	181
55	103	175
60	83	174
65	62	173
70	42	165

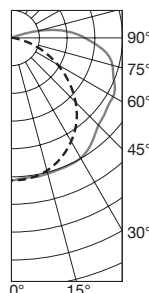


1 x 36 W

Efficiency 89.3%
NF C 71-121: 0.81 H + 0.08 T

CANDELA DISTRIBUTION

	0-180	90-270
0	205	205
5	204	203
10	202	203
15	197	202
20	191	201
25	182	201
30	173	200
35	161	192
40	148	183
45	133	177
50	117	173
55	99	168
60	80	168
65	61	163
70	41	154

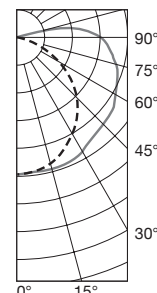


1 x 58 W

Efficiency 87.5%
NF C 71-121: 0.80 H + 0.07 T

CANDELA DISTRIBUTION

	0-180	90-270
0	198	198
5	197	197
10	194	198
15	190	197
20	184	195
25	176	194
30	166	193
35	155	187
40	142	180
45	128	174
50	113	170
55	96	167
60	78	163
65	59	157
70	41	151

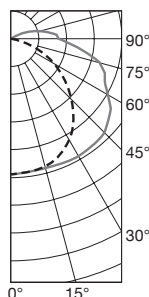


2 x 18 W

Efficiency 85.1%
NF C 71-121: 0.78 H + 0.08 T

CANDELA DISTRIBUTION

	0-180	90-270
0	195	195
5	195	194
10	192	192
15	187	192
20	181	193
25	173	194
30	163	194
35	152	193
40	138	192
45	124	191
50	108	183
55	91	176
60	73	163
65	55	150
70	37	145

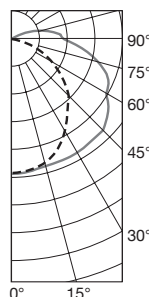


2 x 36 W

Efficiency 80.5%
NF C 71-121: 0.73 H + 0.07 T

CANDELA DISTRIBUTION

	0-180	90-270
0	185	185
5	185	184
10	182	182
15	178	181
20	172	183
25	164	183
30	154	183
35	143	183
40	131	183
45	117	179
50	102	173
55	85	166
60	68	155
65	51	145
70	35	141

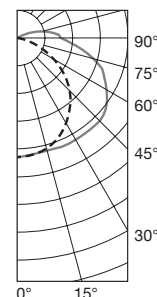


2 x 58 W

Efficiency 76.9%
NF C 71-121: 0.70 H + 0.07 T

CANDELA DISTRIBUTION

	0-180	90-270
0	173	173
5	172	173
10	170	171
15	166	169
20	161	172
25	154	172
30	145	172
35	135	171
40	123	172
45	111	170
50	97	165
55	82	157
60	66	148
65	50	139
70	34	133

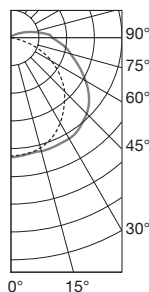


3 x 18 W

Efficiency 68.1%
NF C 71-121: 0.63 G + 0.05 T

CANDELA DISTRIBUTION

	0-180	90-270
0	173	173
5	172	172
10	169	170
15	135	169
20	160	169
25	153	168
30	144	167
35	135	162
40	123	158
45	110	153
50	96	146
55	82	136
60	66	123
65	50	111
70	34	100

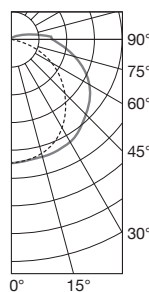


3 x 36 W

Efficiency 68.1%
NF C 71-121: 0.63 G + 0.07 T

CANDELA DISTRIBUTION

	0-180	90-270
0	174	174
5	174	174
10	171	173
15	167	171
20	162	171
25	155	170
30	146	168
35	136	163
40	125	159
45	112	153
50	98	145
55	83	135
60	67	123
65	51	110
70	35	100

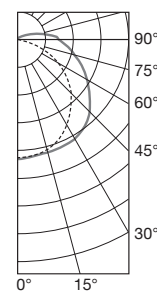


3 x 58 W

Efficiency 65.6%
NF C 71-121: 0.61 H + 0.04 T

CANDELA DISTRIBUTION

	0-180	90-270
0	170	170
5	170	170
10	167	168
15	163	169
20	158	167
25	151	167
30	143	163
35	133	159
40	122	155
45	109	149
50	95	140
55	81	129
60	65	116
65	49	105
70	33	96



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



2 x 58 W



2 x 36 W



2 x 18 W

- 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.Г505.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

FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

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

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

Catalog Numbering Guide — FD Series Cylindrical Fluorescent Luminaires

FD	B	1	18	BU	M	E
Series: FD - FD Series Zone 1 and 2 - 21 and 22 ATEX/IECEx Certified	Lamp Type: B - Bi-pin (G13) Fluorescent C - Compact Fluorescent (2G11) F - Bi-pin (G5) Fluorescent	Number of Lamps: 1 - Single 2 - Double 3 - Three Lamps	Wattage: 18 - 18 Watt 36 - 36 Watt 58 - 58 Watt	Voltage (50/60 Hz): Standard versions: AA - 220 Vac, 60 Hz XC - 230 Vac, 50 Hz X3 - 240 Vac, 50 Hz BU - 110 to 254 Vac/Vdc, 50/60 Hz ①	Cable Entry: M - Metric M20 N - NPT 3/4"	Options: (Options must be listed alphabetically) E - 3h Emergency (combined) – Battery 6 V 4 Ah ①

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

① 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 Luminares

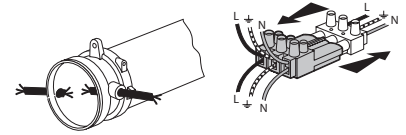
Standard and Emergency Battery Back-Up. Flameproof

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.

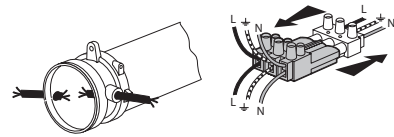
FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

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

Ordering Information – Standard Versions – Continued

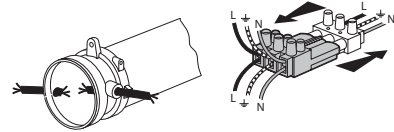
Two M20 threaded entries, supplied with one M20 aluminum blanking plug.
Connection via 1 x 3 double deck terminals.
Capacity (flexible/solid): 0.75 mm² to 2.5 mm².



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.



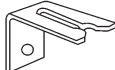
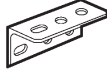
Wattage (W)	No. of Lamps	Gas Group	Model	Line Output	Weight kg	Volume dm ³	Catalog Number
For Bi-pin (G13) Fluorescent Lamps – T8, 26 mm or T12, 38 mm 110 to 254 Vac/Vdc, 50/60 Hz – Electronic Ballast 3 hour duration - battery pack 6 V 4 Ah - Power factor > 0.95 - Self test every month.							
18W	2	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

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

FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

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

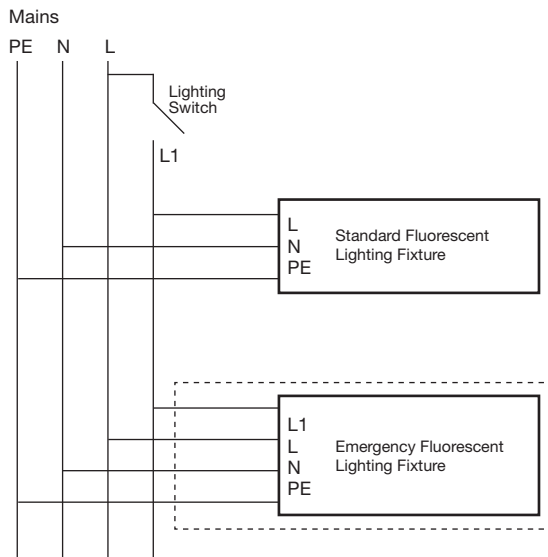
Accessories and Replacement Parts		
	Description	Catalog Number
External Reflector – White Painted Galvanized Steel		
	Model 0.3	FDER1G
	Model 0.6	FDER2G
	Model 1.2	FDER3G
	Model 1.5	FDER4G
Protective Guard – Zinc Plated Steel		
	Model 0.3	FDPG1Z
	Model 0.6	FDPG2Z
	Model 1.2	FDPG3Z
	Model 1.5	FDPG4Z
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

FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

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

Wiring Diagram



Emergency Function Diagram

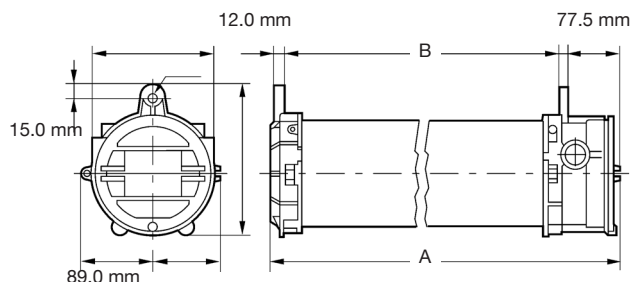
Two Lamp Version

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

FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

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

Photometric Data

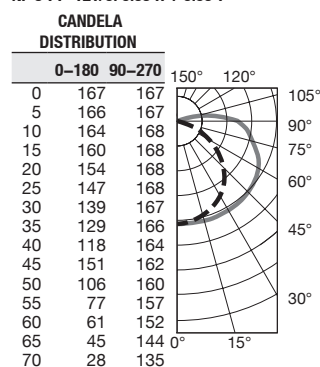
Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

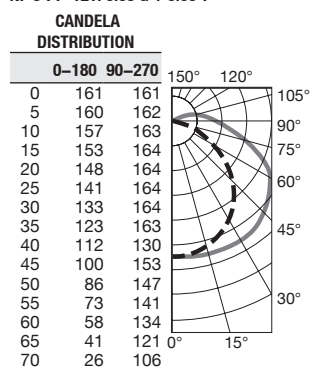
Bi-pin (G13) Fluorescent

2G11 Compact Fluorescent

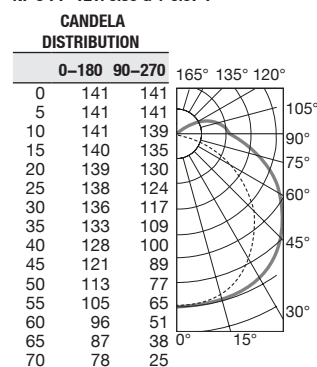
1 x 18 W
Efficiency 75.3%
NF C 71-121/0: 0.69 H + 0.06 T



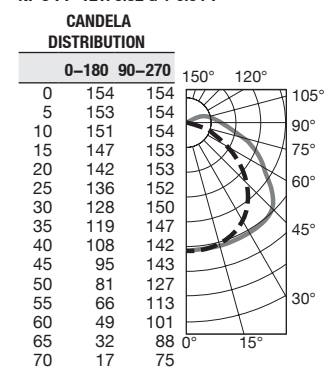
2 x 18 W
Efficiency 68.1%
NF C 71-121: 0.63 G + 0.06 T



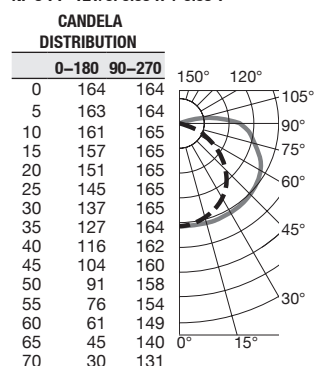
3 x 18 W
Efficiency 57%
NF C 71-121: 0.50 G + 0.07 T



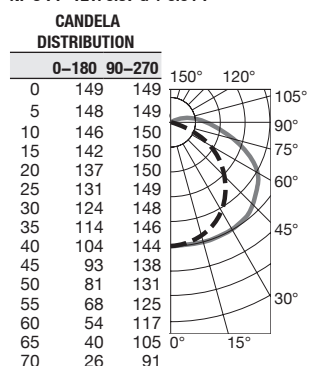
2 x 18 W
Efficiency 56.2%
NF C 71-121: 0.52 G + 0.04 T



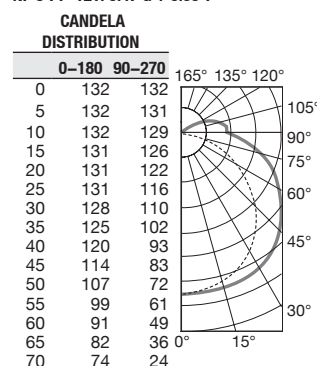
1 x 36 W
Efficiency 74.3%
NF C 71-121/0: 0.69 H + 0.05 T



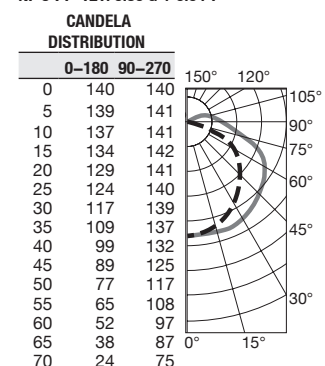
2 x 36 W
Efficiency 61.5%
NF C 71-121: 0.57 G + 0.04 T



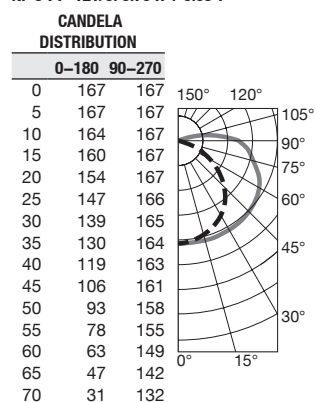
3 x 36 W
Efficiency 53.3%
NF C 71-121: 0.47 G + 0.06 T



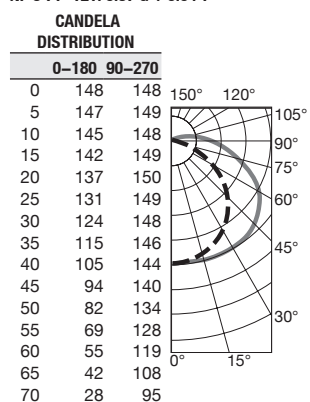
2 x 36 W
Efficiency 53.6%
NF C 71-121: 0.50 G + 0.04 T



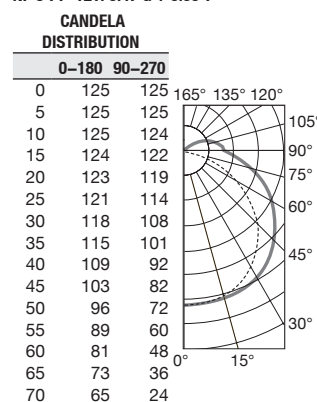
1 x 58 W
Efficiency 74.5%
NF C 71-121/0: 0.70 H + 0.05 T



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



RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

Applications

- Designed for flush or surface mounting; most specifically clean room environments where a seamless smooth ceiling is mandatory.
- Typical applications include: the food industry, chemical plants, pharmaceuticals and delicate electronic manufacturing such as the aerospace industry.
- Ideal for use in rigorous corrosive environments, involving water, dust and extreme temperature variations.
- Can be installed in hazardous areas designated as Zone 1 and 2 - 21 and 22.

Features

- One piece welded steel housing with integral frame to seal out contaminants.
- Allows recessed mounting in permanent ceilings from 55 mm to 130 mm.
- Frameless tempered 5 mm thick lens. Lens secured to housing by internal metallic hinges and secured with captive 316L stainless steel screws, allowing for easy lamp replacement and fixture maintenance.
- Positive safety switch and Ex e battery with plug-in connector for safety and easy maintenance in hazardous locations.
- Designed for ease of installation and maintenance.
- Bi-pin G13 lampholder.
- Also available as surface mounting version.
- New ballast:
 - EOL (End Of Life) protection in accordance to the latest EN 60079-7 standard
 - Multi-tap 110 to 254 Vac/Vdc +/-10% 50/60 Hz
 - Two channel standard ballast (if one lamp fails the second lamp remains in operation)
 - Ex e plug-in connector for rapid and error free maintenance
 - Self test on 3 hours duration emergency version
 - High power factor electronic ballast (>0.95)
- Cable entries:
 - Three clearance holes for M20 cable gland supplied with M20 polyamide cable gland — cable diameter 6.5 to 14.5 mm — and M20 polyamide blanking plug. See *Standard Cable Entry Accessories on following pages*.
 - One M6 earth stud.

Standard Materials

- Housing and integral frame: one piece, welded steel
- Safety lens: 5 mm thick tempered
- Gasket: silicone, 4 lips, completely sealed and contained in the fixture
- Internal reflector: white polycarbonate multi-parabolic
- Cable gland and blanking plug: polyamide

Standard Finishes

- Housing and integral frame: white powder epoxy paint

Options

- 3 hours emergency version - Battery 6 V - 4 Ah. Add suffix **-E**.
- 1 hour 30 emergency (combined) - Battery 6 V - 7 Ah. Add suffix **-E1**.
- 3H Emergency (combined) - Battery 6 V - 7 Ah. . Add suffix **-E7**.
- White painted steel internal reflector. Add suffix **-P**.
- 316L stainless steel housing and integral frame, natural finish. Add suffix **-S**.



4 x 18 W Surface Mounting



2 x 36 W Recessed

Certifications and Compliances

◆ ATEX/IECEx Certification

- Certification Type: RE**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II2 G
 - Type of Protection: Ex de IIC/ Ex demb IIC (emergency version)
 - Temperature class: T6 to T4 (See *Table on following page*)
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓔ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -20 °C ≤ Ta ≤ 55 °C
 - CE Declaration of Conformity: 50276
 - ATEX Certificate: LCIE 07 ATEX 6104
 - IECEx Certificate: IECEx LCI 07.0019
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK09 or IK10 depending on version

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.r505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC13.2672 ①

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

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

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

Catalog Numbering Guide — RE Series Recessed Fluorescent Luminaires

RE	B	1	18	BU	F	L	E
Series: RE - RE Series Zone 1 and 2 – 21 and 22 ATEX/IECEX Certified	Lamp Type: B - Bi-pin (G13)		Wattage: 18 - 18 Watt 36 - 36 Watt 58 - 58 Watt	Voltage: B3 - 100 to 130 Vac/ Vdc, 50/60 Hz BU - 110 to 254 Vac/ Vdc, 50/60 Hz BK - 220 to 240 Vac/ Vdc, 50/60 Hz		Termination/Wiring: L - Loop In/Loop Out T - Through wired ①	Options: E - 3H Emergency (combined) - Battery 6 V - 4 Ah E1 - 1 H 30 Emergency (combined) - Battery 6 V - 7 Ah E7 - 3H Emergency (combined) - Battery 6 V - 7 Ah P - White painted steel internal reflector ② S - 316L stainless steel housing
		Number of Lamps: 1 - Single 2 - Double 3 - Three Lamps 4 - Four Lamps			Mounting/Access: F - Recessed Lighting/ Front Access (U Shape) M - Surface Mounting Lighting		

① T/W and Loop in/Loop out - 3 cores (single phase).

② As standard for 18 W emergency version and 4 lamp version.

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

T Ratings

Version	Ambient Temperature					
	Ceiling Position			Wall Position		
	40 °C	50 °C	55 °C	40 °C	50 °C	55 °C
2 x 18 W ①	T6	T5	T5	T5	T5	T4
2 x 18 W Emergency ①	T5	T4	T4	T5	T5	T4
3 x 18 W	T5	T4	T4	T4	T4	T4
4 x 18 W	T5	T4	T4	T5	T4	T4
2 x 36 W ①	T5	T4	T4	T5	T4	T4
2 x 36 W Emergency ①	T5	T4	T4	T5	T4	T4
3 x 36 W	T4	T4	T4	T4	T4	T4
4 x 36 W	T5	T4	T4	T5	T4	T4
2 x 58 W ①	T4	T4	T4	T4	T4	T4
2 x 58 W Emergency ①	T4	T4	T4	T4	T4	T4
3 x 58 W	T4	T4	T4	T4	T4	T4
4 x 58 W	T4	T4	T4	T4	T4	T4

Termination and Wiring

- Terminal capacity: 4 mm² flexible or 6 mm² solid.
- Loop in/Loop out: One terminal block ②
 - Standard version:
2 (L) + 2 (N) + 2 (PE)
 - Emergency version:
2 (LP) + 2 (L) + 2 (N) + 2 (PE)
- Through wired: Two terminal blocks (one at each end) ②
 - Standard version:
2 (L) + 2 (N) + 2 (PE)
1 (L) + 1 (N) + 1 (PE)
 - Emergency version:
2 (LP) + 2 (L) + 2 (N) + 2 (PE)
1 (LP) + 1 (L) + 1 (N) + 1 (PE)

Standard Cable Entry Accessories

Version	Cable Gland	Blanking Plug	Nickel Plated Brass Locknut
Loop	1	1	3
Through	2	1	3

① T Rating for single lamp version is the same as twin lamp version.

② PE: Earth; N: Neutral. L: Live. LP: Permanent Live for emergency version.

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

Recessed — 110/254 Vac/Vdc, 50/60 Hz — Front Access — White Painted Steel Housing

Version	Reflector	Wiring	Weight kg	Volume dm³	Catalog Number ①②③④⑤⑥⑦
Standard Version — Bi-pin Lamps (G13)					
2 x 18 W	Polycarbonate	Loop	14	64	REB218BUFL
		Through	14	64	REB218BUFT
4 x 18 W	White Painted Steel	Loop	21	93	REB418BUFLP
		Through	21	93	REB418BUFTP
2 x 36 W	Polycarbonate	Loop	19	108	REB236BUFL
		Through	19	108	REB236BUFT
4 x 36 W	White Painted Steel	Loop	29	158	REB436BUFLP
		Through	29	158	REB436BUFTP
2 x 58 W	Polycarbonate	Loop	22	130	REB258BUFL
		Through	22	130	REB258BUFT
4 x 58 W	White Painted Steel	Loop	32	190	REB458BUFLP
		Through	32	190	REB458BUFTP
3 Hours Emergency Version — Bi-pin Lamps (G13)					
2 x 18 W	White Painted Steel	Loop	14	64	REB218BUFLEP
		Through	14	64	REB218BUFTPE
4 x 18 W	White Painted Steel	Loop	21	93	REB418BUFLEP
		Through	21	93	REB418BUFTPE
2 x 36 W	Polycarbonate	Loop	19	108	REB236BUFLE
		Through	19	108	REB236BUFTE
4 x 36 W	White Painted Steel	Loop	29	158	REB436BUFLEP
		Through	29	158	REB436BUFTPE
2 x 58 W	Polycarbonate	Loop	22	130	REB258BUFLE
		Through	22	130	REB258BUFTE
4 x 58 W	White Painted Steel	Loop	32	190	REB458BUFLEP
		Through	32	190	REB458BUFTPE

① For surface mounting lighting, replace letter **F** with letter **M** in the 9th position; example: REB218BUML.

② For 3 hours emergency version - Battery 6 V - 4 Ah, add suffix **E** to the end of the catalog number; example: REB218BUFLE.

③ For 1 hour 30 emergency (combined) - Battery 6 V - 7 Ah, add suffix **E1** to the end of the catalog number; example: REB218BUFLE1.

④ For 3H Emergency (combined) - Battery 6 V - 7 Ah, add suffix **E7** to the end of the catalog number; example: REB218BUFLE7.

⑤ For fixture without a safety switch, add suffix **N** to the end of the catalog number; example: REB218BUFLN.

⑥ For fixture with a white painted steel internal reflector, add suffix **P** to the end of the catalog number; example: REB218BUFLP.

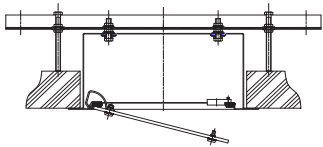
⑦ For fixture with 316L stainless steel housing and integral frame and natural finish, add suffix **S** to the end of the catalog number; example: REB218BUFLS.

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

Accessories and Replacement Parts

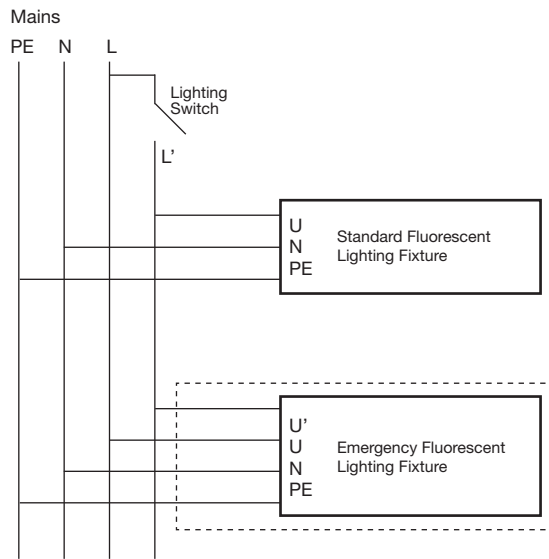
	Description	Weight kg	Catalog Number
Fixing Brackets - Set of four			
	Zinc plated steel	0.60	REFBST
	316 stainless steel	0.60	REFBSS
Ceiling Mounting Brackets - Set of two			
	Zinc plated steel	2.00	RECMST
	316 stainless steel	2.0	RECMSS
M8 Eye Bolts - Set of four			
	Zinc plated steel	0.25	REEBST
	316 stainless steel	0.25	REEBSS

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

Wiring Diagram



Emergency Function Diagram

Two Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

Three Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

LED Status

Color	Indication	Function
Green	LED Blinking	Mains good – Battery charging
	LED Continuous	Mains good – Battery charged
Red	LED Blinking	No battery connected <i>OR</i> Something is defective
	LED Continuous	Mains faulty – Output ON
	LED Flashing	Mains faulty – Battery empty <i>OR</i> Lamp is defective
Yellow	LED Blinking	Mains good – Performing self test
	LED Continuous	Self test was not okay
None (Off)	No Light Emitted	No mains – Battery completely empty

Emergency Light Duration

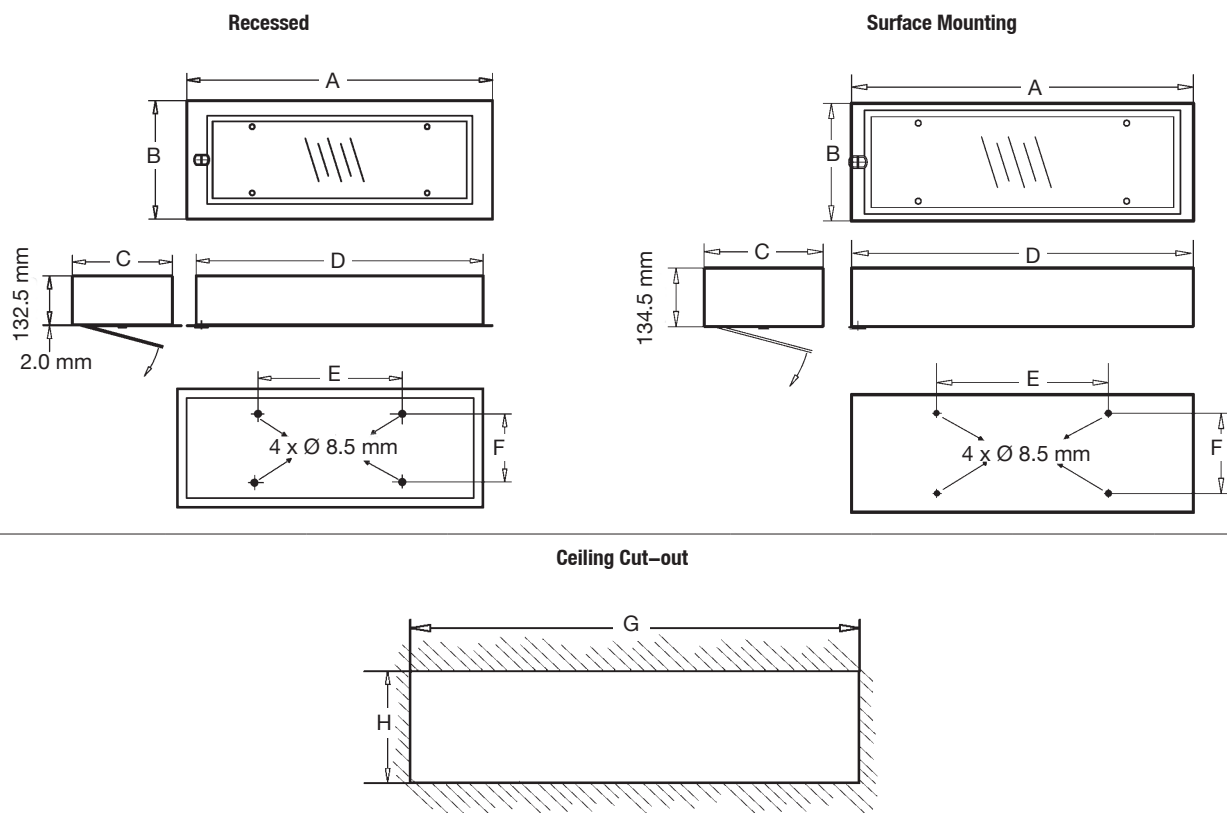
Version	Battery Capacity	Duration	Light Output
2 x 18 W	4 Ah – 6 V	90 minute	80%
	4 Ah – 6 V	3 hour	40%
2 x 36 W	7 Ah – 6 V	90 minute	45%
	7 Ah – 6 V	3 hour	25%
2 x 58 W	7 Ah – 6 V	90 minute	30%
	7 Ah – 6 V	3 hour	15%

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

Dimensions in Millimeters



Versions	A	B	C	D	E	F	G	H
18 W (1, 2, 3 lamps)	826	320	270	776	390	184	786	280
18 W (4 lamps)	826	490	440	776	390	354	786	450
36 W (1, 2, 3 lamps)	1436	320	270	1386	1000	184	1396	280
36 W (4 lamps)	1436	490	440	1386	1000	354	1396	450
58 W (1, 2, 3 lamps)	1736	320	270	1686	1300	184	1696	280
58 W (4 lamps)	1736	490	440	1686	1300	354	1696	450

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

Photometric Data

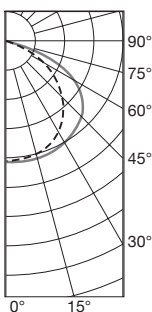
Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

1 x 18 W
Efficiency 67.1%
NF C 71-121: 0.67 E

CANDELA DISTRIBUTION

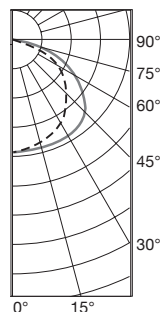
	0-180	90-270
0	209	209
5	208	208
10	205	208
15	201	207
20	194	205
25	186	203
30	176	201
35	164	197
40	151	192
45	136	185
50	120	177
55	102	164
60	83	141
65	63	115
70	43	77



2 x 18 W
Efficiency 62%
NF C 71-121: 0.62 E

CANDELA DISTRIBUTION

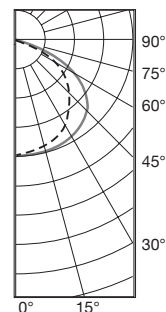
	0-180	90-270
0	205	205
5	204	203
10	202	203
15	197	202
20	191	201
25	182	201
30	173	200
35	161	192
40	148	183
45	133	177
50	117	173
55	99	168
60	80	168
65	61	163
70	41	154



3 x 18 W
Efficiency 61.2%
NF C 71-121: 0.61 E

CANDELA DISTRIBUTION

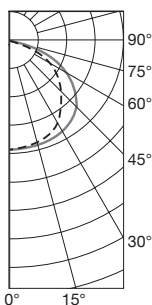
	0-180	90-270
0	201	201
5	200	201
10	197	201
15	193	200
20	187	197
25	179	195
30	169	192
35	158	189
40	145	181
45	131	170
50	115	155
55	98	132
60	80	107
65	61	80
70	41	53



2 x 18 W
Efficiency 60.5%
NF C 71-121: 0.60 F

CANDELA DISTRIBUTION

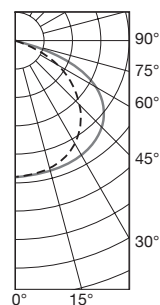
	0-180	90-270
0	196	196
5	195	196
10	193	195
15	189	195
20	183	193
25	175	191
30	166	187
35	155	182
40	143	174
45	129	162
50	114	147
55	98	131
60	79	109
65	60	85
70	40	62



4 x 18 W
Efficiency 63.7%
NF C 71-121: 0.63 E

CANDELA DISTRIBUTION

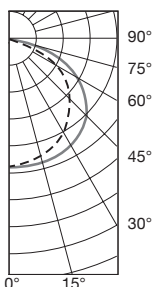
	0-180	90-270
0	194	194
5	193	194
10	191	195
15	186	195
20	181	193
25	173	192
30	164	190
35	153	185
40	141	179
45	128	171
50	113	160
55	96	146
60	78	127
65	60	106
70	40	82



4 x 36 W
Efficiency 61.5%
NF C 71-121: 0.61 E

CANDELA DISTRIBUTION

	0-180	90-270
0	190	190
5	289	190
10	287	190
15	183	189
20	177	188
25	170	186
30	162	182
35	151	178
40	139	172
45	126	163
50	111	152
55	96	138
60	78	121
65	60	102
70	42	80



RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

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

Photometric Data

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

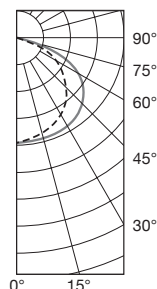
--- Longitudinal
— Transverse

1 x 36 W
Efficiency 64.4%
NF C 71-121: 0.64 E

CANDELA DISTRIBUTION

0-180 90-270

0	196	196
5	195	196
10	192	196
15	188	194
20	182	192
25	174	189
30	165	188
35	154	185
40	152	181
45	129	176
50	114	170
55	97	159
60	80	143
65	61	116
70	43	76

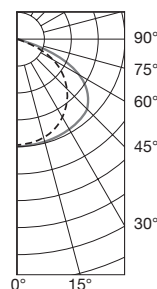


2 x 36 W
Efficiency 64.8%
NF C 71-121: 0.64 E

CANDELA DISTRIBUTION

0-180 90-270

0	198	198
5	197	198
10	194	198
15	190	197
20	184	196
25	176	195
30	167	195
35	156	194
40	144	191
45	130	184
50	115	172
55	98	154
60	80	129
65	62	101
70	43	72

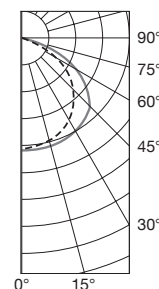


3 x 36 W
Efficiency 63.7%
NF C 71-121: 0.63 F

CANDELA DISTRIBUTION

0-180 90-270

0	207	207
5	207	208
10	204	208
15	199	206
20	193	204
25	185	202
30	175	200
35	164	196
40	151	189
45	136	178
50	120	162
55	103	139
60	84	112
65	65	83
70	45	55

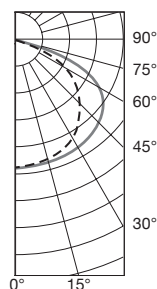


1 x 58 W
Efficiency 64.9%
NF C 71-121: 0.65 E

CANDELA DISTRIBUTION

0-180 90-270

0	189	189
5	188	189
10	187	188
15	184	187
20	181	186
25	176	185
30	170	185
35	162	184
40	150	180
45	136	175
50	119	169
55	102	162
60	83	146
65	63	122
70	43	85

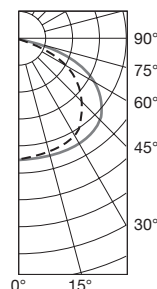


2 x 58 W
Efficiency 61.8%
NF C 71-121: 0.62 E

CANDELA DISTRIBUTION

0-180 90-270

0	182	182
5	182	183
10	181	183
15	178	182
20	174	182
25	170	182
30	164	181
35	156	181
40	145	178
45	131	172
50	116	162
55	99	148
60	81	126
65	52	99
70	43	70

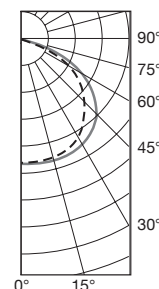


3 x 58 W
Efficiency 57.8%
NF C 71-121: 0.58 E

CANDELA DISTRIBUTION

0-180 90-270

0	185	185
5	185	185
10	183	185
15	181	184
20	177	182
25	172	180
30	166	178
35	159	174
40	147	168
45	133	158
50	118	144
55	100	125
60	82	101
65	63	75
70	43	49



FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

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

Applications

- Can be installed in hazardous areas designated as Zone 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, food processing plants, warehouses, underground tunnels and general manufacturing facilities.

Features

- Corrosion-resistant fiberglass reinforced polyester body and hinged polycarbonate lens.
- High impact resistance housing (20 Joules - IK10) from -40°C to +55 °C ambient temperature and wind profile for use in extreme offshore and onshore environments.
- Latch assembly and elastomer gasket seals against water and dust ingress, IP66/67.
- Easily accessed for maintenance using Allen key or straight blade screw driver.
- Central opening with unique patented release system to prevent damage.
- Hinged parabolic reflector for high lumen output efficiency.
- Vibration resistant spring loaded lampholders for Bi-pin (G13) or mono-pin (Fa6) versions.
- Electronic multi-tap ballast 110 to 254 Vac/Vdc +/- 10% 50/60 Hz, for global applications. High power factor electronic ballast (>0.95). EOL (End Of Life) protection in accordance to the latest EN/IEC 60079-7 standard.
- Also available with electronic ballast 220/240 Vac/Vdc +/- 10% 50/60 Hz. High power factor electronic ballast (>0.95). EOL.
- Available in 3 hours emergency version, including multi-tap ballast with built-in monthly self test. Test results through multi-color LED.

Standard Material

- Fiberglass reinforced polyester housing
- Polycarbonate lens
- Elastomer gasket
- Highly reflective white polycarbonate internal reflector
- Mounting accessories available in different materials such as gray painted aluminum, zinc plated steel, galvanized steel or 316L stainless steel

Options

- Silicone coating for added protection in H₂S hydrogen sulfide environments.
- Without safety switch.
- Level gauge light fitting.
- 316L stainless steel fixing inserts.



2 x 58 W



2 x 36 W



2 x 18 W

Certifications and Compliances

◆ATEX or ATEX/IECEx Certification

- **Certification Type: FLn**
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection 'nA' : Ex nA IIC T6 Gc
 - Type of Protection 'nR' : Ex nR IIC T4 Gc
 - Temperature class: T6 (nA) or T4 (nR)
 - Ambient Temperature: -20 °C to +55 °C
 - Dust: Zone 21
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -40 °C to +55 °C ①
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex t IIIC Dc
 - Surface Temperature: T75 °C
 - Ambient Temperature: -20 °C to +55 °C ①
- CE Declaration of Conformity: 50212
- ATEX Certificate:
 - Zone 2-22: LCIE 03 ATEX 6072
 - Zone 21: LCIE 02 ATEX 6067
- IECEx Certificate:
 - Zone 2-22: IECEx LCI 04.0021
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK10

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆Others Certification

- INMETRO Certificate: BVC11.0815 ①

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

FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

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

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

Catalog Numbering Guide For FN Non-Metallic Fluorescent Lighting Fixtures

FN	B	1	18	BU	P	A	C
Series: FN - FN Series Zones 2 & 22: ATEX/IECEX certified Zone 21: ATEX certified	Lamp Type: B - Bi-pin (G13) C - PL Compact Lamps (2G11) ②	Number of Lamps: 1 - Single 2 - Double 3 - Three Lamps	Wattage: 18 - 18 Watt 36 - 36 Watt 58 - 58 Watt 55 - 55 Watt 80 - 80 Watt	Voltage: BU - 110 to 254 Vac/Vdc 50/60 Hz BK - 220 to 240 Vac/Vdc 50/60 Hz	Mounting Version: P - Pole Mount ① S - Surface/Suspension Mount Standard Wiring T - Surface/Suspension Mount Through Wiring L - Surface/Suspension Mount Dual Loop in/out Through Wiring (single phase)	Cable Type: A - Armored M20 N - Unarmored M25 U - Unarmored M20	Options: (Options must be listed alphabetically) C - Silicon Coating for Diffuser E - 3H Emergency (combined) - Battery 6 V - 4 Ah N - No Switch ③ X - 4 Entries ④

① Only 2 x 18 W and 2 x 36 W with M25 entry versions.

② Only 55 W and 80 W standard versions.

③ Only for standard versions.

④ Only for S, T and L mounting versions.

FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

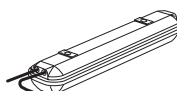
Zone 2 - 21 and 22
Gas (G) and Dust (D)

Standard Version

Surface/Suspension Mounting and Standard Wiring Version

Connection via 1 x 6 terminals.

Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 threaded entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland (dia. 8 to 18.5 mm) and two M25 polyamide blanking plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg (lb)	Volume dm ³	Catalog Number
2	18	G13	220/240	5.5	32.3	FNB218BKSN
2	18	G13	110/254	5.5	32.3	FNB218BUSN
2	36	G13	220/240	7.9	54.2	FNB236BKSN
2	36	G13	110/254	7.9	54.2	FNB236BUSN
2	58	G13	220/240	9	65	FNB258BKSN
2	58	G13	110/254	11	65	FNB258BUSN

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 plugged clearance entry, supplied with two M20 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	220/240	5.5	32.3	FNB218BKSA
2	18	G13	110/254	5.5	32.3	FNB218BUSA
2	36	G13	220/240	7.9	54.2	FNB236BKSA
2	36	G13	110/254	7.9	54.2	FNB236BUSA
2	58	G13	220/240	9	65	FNB258BKSA
2	58	G13	110/254	11	65	FNB258BUSA

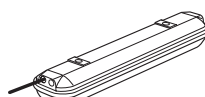
Emergency Version

Surface/Suspension Mounting and Standard Wiring

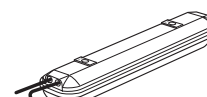
Connection via 1 x 4 terminals for 18 W version.

Connection via 1 x 8 terminals for 36 W & 58 W versions.

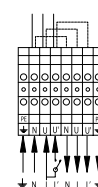
Capacity (flexible/solid): 4 mm²/6 mm².



18 W



36/58 W



Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland (dia. 8 to 18.5 mm) and two M25 polyamide blanking plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	G13	110/254	7.3	32.3	3 H	4 Ah	FNB218BUSNEN
2	36	G13	110/254	9.6	54.2	3 H	4 Ah	FNB236BUSNEN
2	58	G13	110/254	10.7	65	3 H	4 Ah	FNB258BUSNEN

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 plugged clearance entry, supplied with two M20 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	G13	110/254	7.3	32.3	3 H	4 Ah	FNB218BUSAEN
2	36	G13	110/254	9.6	54.2	3 H	4 Ah	FNB236BUSAEN
2	58	G13	110/254	10.7	65	3 H	4 Ah	FNB258BUSAEN

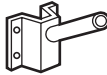
Shaded catalog numbers are normally stocked items. All other items are made to order.

FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

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

Accessories and Replacement Parts

	Description	Catalog Number
Fixing Brackets		
	Set of two brackets for surface installation	
	Zinc plated steel	FEFBZ
	316 stainless steel	FEFBS
Brackets for Surface Mounting		
	Set of two	
	Aluminium (gray painted)	FESBA
	316 stainless steel	FESBS
M8 Ring Bolts		
	Set of two	
	Zinc plated steel	FERBM8Z
Half Clamps Brackets for Pole Mounting		
	Set of two	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
Wall Mounting Adaptor		
	For pole mounting version	
	Diameter 42mm	
	Galvanized steel	FEWMG
Hinged Brackets		
	Set of two brackets for adjusting luminaire	
	Aluminium	FEHBA
	316 stainless steel	FEHBS
Fall Prevention Kit		
	Safety chain retains fixture temporarily to ease installation	
	For M25 cable entry	FESCM25
	For M20 cable entry	FESCM20

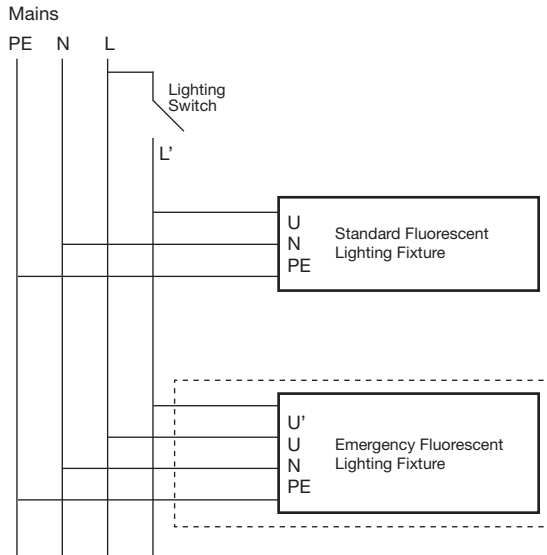
Shaded catalog numbers are normally stocked items. All other items are made to order.

FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

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

Wiring Diagram



Emergency Function Diagram

Two Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

Three Lamp Version

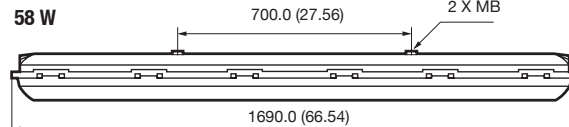
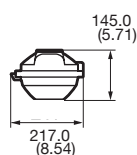
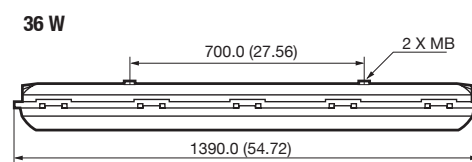
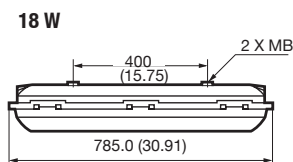
Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

LED Status

Color	Indication	Function
Green	LED Blinking 1:1	Mains ok, Batteries are iconnected, charging
	LED ON	Mains ok, Batteries are charged
Red	LED Blinking 1:1	Batteries are not connected or defective
	LED Flash	Batteries are charging and discharging during automatic cycle
	LED ON	Mains faulty - Output ON
	No Light emitted	No mains, Battery empty
Yellow	LED Blinking 1:1	Mains ok, Performing Self test
	LED ON	Self test was not ok

Dimensions in Millimeters (Inches)

Surface/Suspension Mounting



FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

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

Photometric Data

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

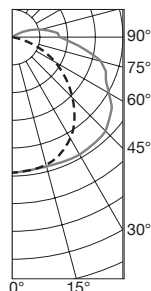
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

2 x 18 W
Efficiency 85.1%
NF C 71-121: 0.78 H + 0.08 T

CANDELA DISTRIBUTION

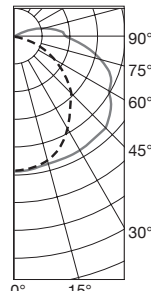
	0-180	90-270
0	195	195
5	195	194
10	192	192
15	187	192
20	181	193
25	173	194
30	163	194
35	152	193
40	138	192
45	124	191
50	108	182
55	91	176
60	73	163
65	55	150
70	37	145



2 x 36 W
Efficiency 80.5%
NF C 71-121: 0.73 H + 0.07 T

CANDELA DISTRIBUTION

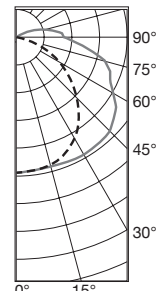
	0-180	90-270
0	185	185
5	185	184
10	182	182
15	178	181
20	172	183
25	164	183
30	154	183
35	143	183
40	131	183
45	117	179
50	102	173
55	85	166
60	68	155
65	51	145
70	35	141



2 x 58 W
Efficiency 76.9%
NF C 71-121: 0.70 H + 0.07 T

CANDELA DISTRIBUTION

	0-180	90-270
0	173	173
5	172	173
10	170	171
15	166	169
20	161	172
25	154	172
30	145	172
35	135	171
40	123	172
45	111	170
50	97	165
55	82	157
60	66	148
65	50	139
70	34	133



FL Series Light Duty Non–Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

Applications

- Light duty luminaire ideal for commercial and light industrial locations including hazardous areas designated as Zone 2 or 22 environments.
- Typical applications include oil refineries petrochemical plants, pulp and paper mills, tunnels and other light duty manufacturing locations.

Features

- Utilizes two 26 mm (T8) bi-pin fluorescent lamps.
- Fiberglass reinforced polyester housing.
- Instant start 95% power factor ballast.
- Available in various lengths and wattages ranging from 18 to 58. Pre-impregnated fiberglass reinforced white polyester housing.
- Closing system using stainless steel clips.
- Electrostatically applied white powder painted steel reflector provides optimal lighting distribution.
- Poured-in-place elastomer gasket secures IP65 / 67 ingress protection.

Standard Material

- Fiberglass reinforced polyester (FRP) housing
- Polycarbonate lens
- White powder painted sheet steel reflector
- Elastomer gasket
- Polycarbonate lampholders
- Mounting accessories available in different materials such as gray painted aluminum, zinc plated steel, galvanized steel or 316 stainless steel

Options

- Available in 3 hours emergency version, including multi-tap ballast with built-in monthly self test. Test results through multi-colored LED.
- Plug-in battery pack is easy to remove for maintenance.
- Battery voltage is 6 volts and 4 Ah capacity.
- One fluorescent tube remains lit for up to 3 hours and up to 29% light intensity for 18 Watt, 15% for 36 Watt and 9% for 58 Watt.
- All emergency units supplied with cut off switch to battery when fixture is opened.



2 x 58 W



2 x 18 W

Certifications and Compliances

◆ATEXCertification

- **Certification Type: EFn (Standard Version) / EFn-EM (Emergency Version)**
 - Gaz: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 3 G
 - Type of Protection: Ex nR II or Ex nA II
 - T Rating: T4 for nA protection mode. (T3 for 2x58W Version)
See temperature chart for nR protection mode
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 3 D
 - Type of Protection: Ex tD A22
 - Surface Temperature: See Table on following page
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 50213/50219
 - ATEX Certificate:
 - EFn (Standard Version): LCIE 08.6005X
 - EFn-EM (Emergency Version): LCIE 08.6063X
 - Index of Protection (solid & liquid): IP65 / 67

◆EURASEC Certification

- EURASEC N° TC RU C-FR.1505.B.00912

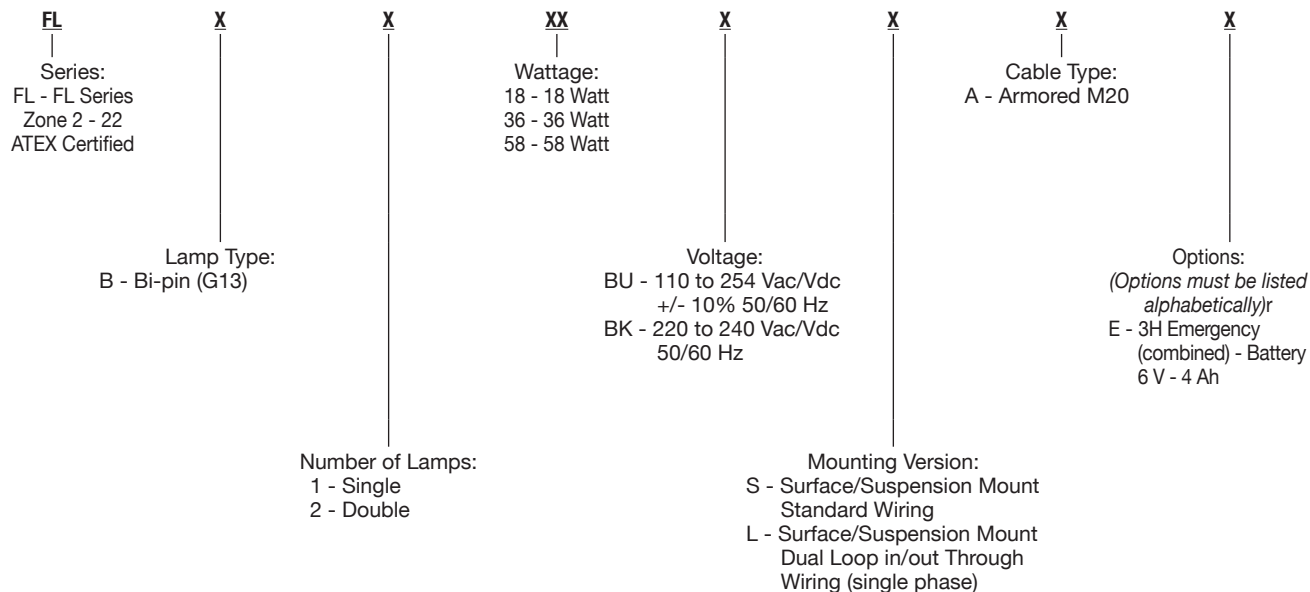
FL Series Light Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

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

Catalog Numbering Guide For FL Non-Metallic Fluorescent Lighting Fixtures



Temperature Chart

Version	Dust		Gas	
	Surface Temp. for Ta = +55° C	T Rating for Ta = 40° C	T Rating for Ta = 50°C	T Rating for Ta = 55°C
1 x 18 W	75°C	T6	T6	T6
2 x 18 W		T6	T5	T5
1 x 36 W	83°C	T6	T6	T5
2 x 36 W		T6	T6	T5
1 x 58 W	91°C	T5	T5	T5
2 x 58 W		T5	T5	T5

FL Series Light Duty Non–Metallic Fluorescent Luminares

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

Standard Version for Armored and Unarmored Cable

Supplied with one M20 cable entry at each end plus two locknuts, two earth continuity and one blanking plug.
Also supplied with one 2 x (3 x 2.5 mm²) max. flexible or rigid connection terminal block.

Number of Lamps	Watts	Voltage (V)	Weight kg	Volume dm ³	Pack.	Catalog Number
1	18	220/240	2.3	22.3	1	FLB118BKSA
2	18	220/240	2.3	22.3	1	FLB218BKSA
2	18	110/254	2.3	22.3	1	FLB218BUSA
1	36	220/240	2.8	38	1	FLB136BKSA
1	36	110/254	2.8	38	1	FLB136BUSA
2	36	220/240	3.6	38)	1	FLB236BKSA
2	36	110/254	3.6	38	1	FLB236BUSA
1	58	220/240	3.4	45	1	FLB158BKSA
1	58	110/254	3.4	45	1	FLB158BUSA
2	58	220/240	4.4	45	1	FLB258BKSA
2	58	110/254	4.4	45	1	FLB258BUSA

Emergency Version for Armored and Unarmored Cable

Supplied with one M20 entries with earth continuity at each end. Also supplied with two M20 locknuts and one blanking plug.
Equipped with one 2 x (5 x 2.5 mm²) max. flexible or rigid connection terminal block

Number of Lamps	Watts	Voltage (V)	Weight kg	Volume dm ³	Pack.	Catalog Number
2	18	110/254	4.5	22.3	1	FLB218BUSAE
2	36	110/254	7.0	38	1	FLB236BUSAE
2	58	110/254	7.5	45	1	FLB258BUSAE

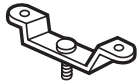
Shaded catalog numbers are normally stocked items. All other items are made to order.

FL Series Light Duty Non–Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts

	Description	Catalog Number
Fixing Brackets		
	Set of two brackets for surface installation	
	Zinc plated steel	FEFBZ
	316 stainless steel	FEFBS
Brackets for Surface Mounting		
	Set of two	
	Aluminium (gray painted)	FESBA
	316 stainless steel	FESBS
M8 Ring Bolts		
	Set of two	
	Zinc plated steel	FERBM8Z
Half Clamps Brackets for Pole Mounting		
	Set of two	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
Hinged Brackets		
	Set of two brackets for adjusting luminaire	
	Aluminium	FEHBA
	316 stainless steel	FEHBS
Fall Prevention Kit		
	Safety chain retains fixture temporarily to ease installation	
	For M20 cable entry	FESCM20

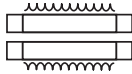
Shaded catalog numbers are normally stocked items. All other items are made to order.

FL Series Light Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

Emergency Function Diagram — Emergency Function 2 Tubes

Mains	Lighting Switch ON	Lighting Switch OFF
Fluorescent Luminaire ON		
Fluorescent Luminaire OFF		

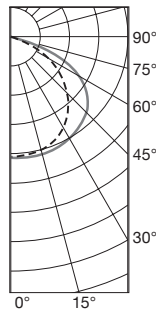
Photometric Data

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

--- Longitudinal
— Transverse

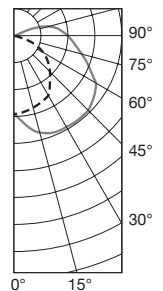
1 x 18 W
Efficiency 67.8%
NF C 71-121: 0.58 H + 0.09 T

CANDELA DISTRIBUTION		
	0-180	90-270
0	142	142
5	142	142
10	139	140
15	135	135
20	130	132
25	123	128
30	113	126
35	102	128
40	90	132
45	78	136
50	66	134
55	54	131
60	43	129
65	33	119
70	23	110



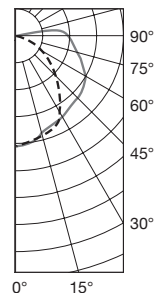
2 x 18 W
Efficiency 68.9%
NF C 71-121: 0.60 H + 0.09 T

CANDELA DISTRIBUTION		
	0-180	90-270
0	116	116
5	115	119
10	113	133
15	110	150
20	105	156
25	100	157
30	94	158
35	88	159
40	81	158
45	74	157
50	65	152
55	55	145
60	45	137
65	35	128
70	25	114



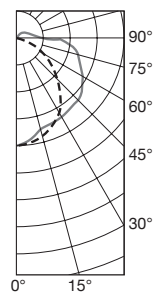
2 x 36 W
Efficiency 64.1%
NF C 71-121: 0.57 H + 0.07 T

CANDELA DISTRIBUTION		
	0-180	90-270
0	163	163
5	162	162
10	160	159
15	155	145
20	149	140
25	142	139
30	132	139
35	120	138
40	104	134
45	80	133
50	60	129
55	50	125
60	40	120
65	31	108
70	23	95



2 x 58 W
Efficiency 63.6%
NF C 71-121: 0.56 H + 0.07 T

CANDELA DISTRIBUTION		
	0-180	90-270
0	160	160
5	159	160
10	157	157
15	153	146
20	148	140
25	141	139
30	132	139
35	121	138
40	107	134
45	85	132
50	68	127
55	56	122
60	45	117
65	35	107
70	24	90



PB Series Floodlights IIB

Flameproof. Metal Halide, Sodium, Mercury Vapor, Halogen

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

Applications

- Designed for large area lighting in industrial outdoor and indoor hazardous areas.
- Ideal for use in Zones 1 and 2 and 21 and 22 in the oil and gas industry. In locations such as: refineries, pipelines, warehouses, offshore platforms and drilling rigs.

Features

- Gray epoxy painted light marine grade aluminum housing and door.
- Fast and easy lamp replacement via threaded cover on the side of the fixture. The cover is fitted with a short safety chain.
- Lampholder can be easily field-adjustable for either a narrow or wide beam.
- Fixtures operate safely in high ambient temperatures up to +55 °C and in low ambient temperature up to -20 °C.
- Electrical components (ballast, ignitor and capacitor) are thermally separated from the lighting compartment with a bulkhead, providing extended life.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto 2 captive terminals 2 x 6 mm²; 2 internal earth terminals capacity 6 mm² and 1 external earth terminal capacity 4 mm².
- 2 x M20 clearance holes throughwire cable entries supplied with:
 - One Ex e unarmored cable gland — sealing diameter 6.5 mm to 14.5 mm
 - One blanking plug
 - Two M20 locknuts
- For use with either tubular or ellipsoidal shape lamps. See ordering information for details.
- Choice of mounting with galvanized hinged bracket fixed mounting or tube/pole mounting with galvanized brackets.
- Thermoshock and impact-resistant glass factory sealed into the cover frame.
- Operates in any position.
- Reversible hinge allows for fixture access from either side.
- E40 or H3 lampholders for the 2 x 70 W Vac/Vdc halogen version.
- Internal symmetric reflector.

Standard Materials

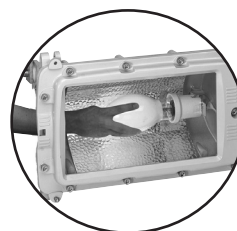
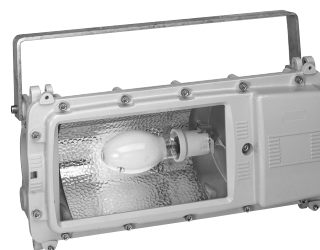
- Housing and door: copperfree marine-grade aluminum alloy
- Lens: toughened safety glass
- Reflector: bright highly polished aluminum
- Bolts: stainless steel bolt
- Cable gland and blanking plug: polyamide
- Locknut: nickel plated brass

Standard Finishes

- Housing and door: gray epoxy powder paint

Options

- Other voltages, please contact your sales representative.
- Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V (loop in/loop out wiring possible): add suffix **-T** at the end of the catalog number.
- Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.
- Screwed-on overhead diffuser out of galvanized steel with black painting (see accessories).
- Screwed-on zinc-coated protection guard (see accessories).



Certifications and Compliances

◆ATEX/IECEx Certification

- Certification Type: Pjd**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex de IIB
 - Temperature class: See Table on following page
 - Dust: Zone 21 - 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: 50207
 - ATEX Certificate: LCIE 99 ATEX 6002
 - IECEx Certificate: IECEx LCI 04.0020
 - Index of Protection according EN/IEC 60529: IP66 (Type PB)
 - Impact Resistance (shock): IK10

◆EURASEC Certification

- EURASEC N° TC RU C-FR.f505.B.00912

PB Series Floodlights IIB

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

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

Catalog Numbering Guide — PB Series Floodlights

PBA	H	15	XJ	B	I
Series: PBA - PB Series Floodlight IIB Zone 1, 2, 21, 22 ATEX/IECEx Certified	Lamp Type: H - Metal Halide L - High Pressure Sodium M - Mercury Vapor Z - Halogen	Lamp Wattage: 70 - 2 x 70 W Halogen ① 15 - 150 W 25 - 250 W 40 - 400 W 50 - 500 or 1000 W Halogen	Voltage: XJ - 230/240 Vac, 50 Hz (Magnetic Ballast) BT - 24 Vac/Vdc ①	Bracket: B - Hinged Bracket Included	Options: T - Extra Terminals ② A - Asymmetrical Optic

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

Lamp Type and Wattage	Gas Temperature Rating According to Ta			Dust Surface Temperature °C
	+40 °C	+50 °C	+55 °C	
2 x 70 W - H3 ①	T4	T4	T4	+130 °C
150 W High Pressure Sodium	T4	T3	T3	+145 °C
250 W High Pressure Sodium	T3	T3	T3	+195 °C
250 W Metal Halide	T3	T3	T3	+197 °C
250 W Mercury Vapor	T3	T3	T3	+194 °C
400 W High Pressure Sodium	T3	T3	T3	+189 °C
400 W Metal Halide	T3	T3	T3	+193 °C
400 W Mercury Vapor	T3	T3	T3	+195 °C
600 W High Pressure Sodium	T2	T2	T2	+257 °C
500 W Halogen	T2	T2	T2	+267 °C
1000 W Halogen	T1	T1	T1	+378 °C

① 2 x 70 W Halogen 24 Vac/Vdc.
② 3 Phase + Neutral.

PB Series Floodlights IIB

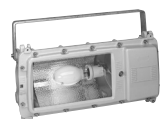
Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

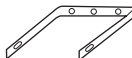
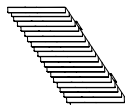
Ordering Information – IIB Versions

Floodlights supplied with hinged mounting bracket, 1 plug, 1 M20 cable gland — 6.5 mm to 14.5 mm diameter. Lamps are not included

	Lamp Wattages	Lampholder	Voltage (+/-10%)	Lamp Type		Weight kg	Volume dm³	Catalog Number ② ③
	High Pressure Sodium							
	150	E40	230/240 V, 50 Hz	x	x	29.3	79.4	PBAL15XJB
	250	E40	230/240 V, 50 Hz	x	x	30.3	79.4	PBAL25XJB
	400	E40	230/240 V, 50 Hz	–	x	31.8	79.4	PBAL40XJB
	Mercury Vapor							
	250	E40	230/240 V, 50 Hz	x	x	29.3	79.4	PBAM25XJB
	400	E40	230/240 V, 50 Hz	–	x	29.8	79.4	PBAM40XJB
	Metal Halide							
	250	E40	230/240 V, 50 Hz	x	x	30.3	79.4	PBAH25XJB
400	E40	230/240 V, 50 Hz	–	x	31.8	79.4	PBAH40XJB	
Halogen								
500/1000	E40	–	–	x	26.3	79.4	PBAZ50B	
2 x 70	H3	24 Vac/Vdc, 50 Hz	–	–	27.3	79.4	PBAZ70BTB ①	



Accessories

			Catalog Number
Galvanized Steel Hinged Brackets			
			PBHBG
Pole/Tube Mounting Galvanized Steel Brackets			
	1-1/4" to 1-1/2"		PNHC49G
	2"		PNHC60G
Flat Surface Mounting Galvanized Steel Brackets			
			PNSBG
Screwed-on Overhead Diffuser			
			PBGDG
Screwed-on Protective Guard			
			PBPGZ

① Supplied with 2 x 70 W H3 bulbs, 24 Vac/Vdc.

② Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V: add suffix **-T** at the end of the catalog number.

③ Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.

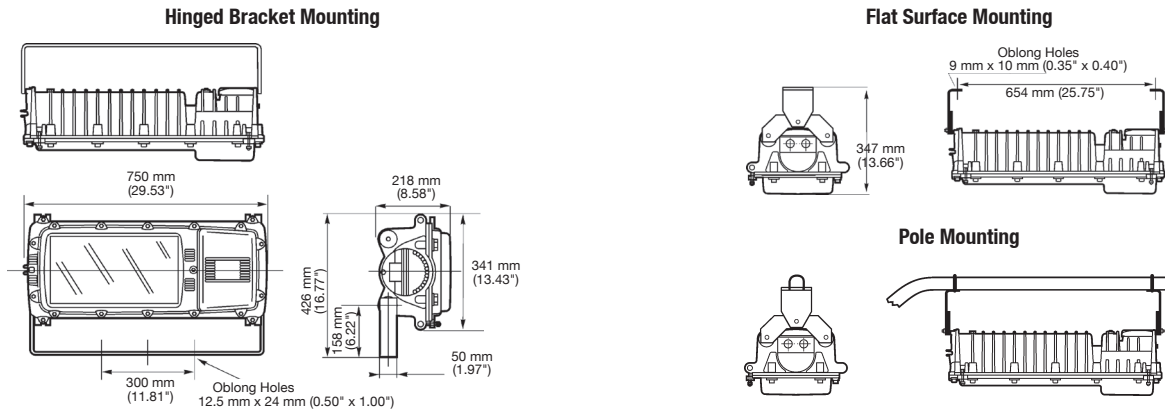
Shaded catalog numbers are normally stocked items. All other items are made to order.

PB Series Floodlights IIB

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

Dimensions in Millimeters (Inches)



Photometrics

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

--- Longitudinal
— Transverse

Narrow beam Metal Halide 250 W

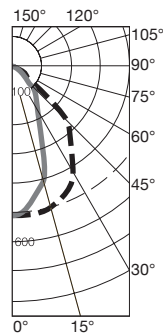
Efficiency 68.3%

NF C 71-121: 0.68B

CANDELA DISTRIBUTION

0-180 90-270

0	505	505
5	515	499
10	512	469
15	501	403
20	476	312
25	453	248
30	427	190
35	394	146
40	368	117
45	290	97
50	160	12
55	51	7
60	34	4
65	15	4
70	6	4



Narrow beam Metal Halide 400 W ①

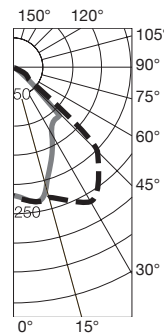
Efficiency 49.3%

NF C 71-121: 0.49C

CANDELA DISTRIBUTION

0-180 90-270

0	217	217
5	210	219
10	218	231
15	223	205
20	238	193
25	255	148
30	266	132
35	263	130
40	244	116
45	201	104
50	136	37
55	85	15
60	51	8
65	28	6
70	5	4



Narrow beam Halogen 1000 W

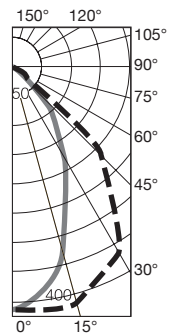
Efficiency 59.2%

NF C 71-121: 0.59B

CANDELA DISTRIBUTION

0-180 90-270

0	417	417
5	406	418
10	419	399
15	419	330
20	408	266
25	398	218
30	371	177
35	344	142
40	295	115
45	213	98
50	135	12
55	68	7
60	34	4
65	16	3
70	5	3



Wide beam Metal Halide 250 W

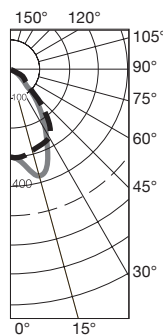
Efficiency 67.9%

NF C 71-121: 0.68C

CANDELA DISTRIBUTION

0-180 90-270

0	301	301
5	303	318
10	299	342
15	294	387
20	287	382
25	286	306
30	271	237
35	231	208
40	172	186
45	133	140
50	83	104
55	48	18
60	34	8
65	23	6
70	6	6



Wide beam Metal Halide 400 W ①

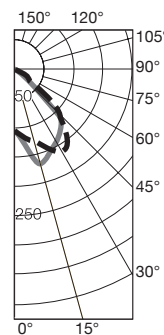
Efficiency 46.7%

NF C 71-121: 0.46C

CANDELA DISTRIBUTION

0-180 90-270

0	105	105
5	104	106
10	108	130
15	124	165
20	148	177
25	167	183
30	165	147
35	142	127
40	116	113
45	74	115
50	52	103
55	48	40
60	44	13
65	34	9
70	18	6



Wide beam Halogen 1000 W

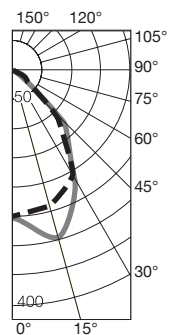
Efficiency 57.7%

NF C 71-121: 0.57C

CANDELA DISTRIBUTION

0-180 90-270

0	251	251
5	244	255
10	247	272
15	245	293
20	237	306
25	229	262
30	213	213
35	194	188
40	163	161
45	120	133
50	82	105
55	52	18
60	35	8
65	20	5
70	8	5



① 400 W Metal Halide: Efficiency rate lower than 250 W due to thermal deflector between glass and lamp, requested for T3.

PC Series Floodlights IIC

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

Applications

- Designed for large area lighting in industrial outdoor and indoor hazardous areas.
- Ideal for use in Zones 1 and 2 and 21 and 22 in the oil and gas industry. In locations such as: refineries, pipelines, warehouses, offshore platforms and drilling rigs.

Features

- Gray epoxy painted light marine grade aluminum housing and door.
- Fast and easy lamp replacement via threaded cover on the side of the fixture. The cover is fitted with a short safety chain.
- Lampholder can be easily field-adjusted for either a narrow or wide beam.
- Fixtures operate safely in high ambient temperatures up to +55 °C and in low ambient temperature up to -25 °C.
- Electrical components (ballast, ignitor and capacitor) are thermally separated from the lighting compartment with an insulating protection, providing extended life.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto 2 captive terminals 2 x 6 mm²; 2 internal earth terminals capacity 6 mm² and 1 external earth terminal capacity 4 mm².
- 2 x M20 clearance holes throughwire cable entries supplied with:
 - One Ex e unarmored cable gland — sealing diameter 6.5 mm to 14.5 mm
 - One blanking plug
 - Two M20 locknuts
- For use with either tubular or ellipsoidal shape lamps. See ordering information for details.
- Choice of mounting with galvanized hinged bracket fixed mounting or tube/pole mounting with galvanized brackets.
- Thermoshock and impact-resistant glass factory sealed into the floodlight body.
- Operates in any position.
- Reversible hinge allows for fixture access from either side.
- Internal symmetric reflector.

Standard Materials

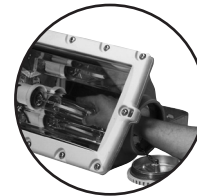
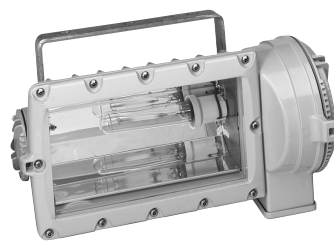
- Housing and door: copperfree marine-grade aluminum alloy
- Lens: toughened safety glass
- Reflector: bright highly polished aluminum
- Bolts: stainless steel bolt
- Cable gland and blanking plug: polyamide
- Locknut: nickel plated brass

Standard Finishes

- Housing and door: gray epoxy powder paint

Options

- Other voltages, please contact your sales representative.
- Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V (loop in/loop out wiring possible): add suffix **-T** at the end of the catalog number.
- Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.
- Screwed-on overhead diffuser out of galvanized steel with black painting (see accessories).
- Screwed-on zinc-coated protection guard (see accessories).



Certifications and Compliances

◆ ATEX/IECEx Certification

- Certification Type: Pjd**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: See Table on following page
 - Dust: Zone 21 - 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: standard fixture: -20 °C ≤ to ≤ +55 °C ; with asymmetrical optic "C": -25 °C
 - CE Declaration of Conformity: 50207
 - ATEX Certificate: LCIE 99/ ATEX 6002
 - IECEx Certificate: IECEx LCI 04.0020
 - Index of Protection according EN/IEC 60529: IP66/67
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.1505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC12.2098^①

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

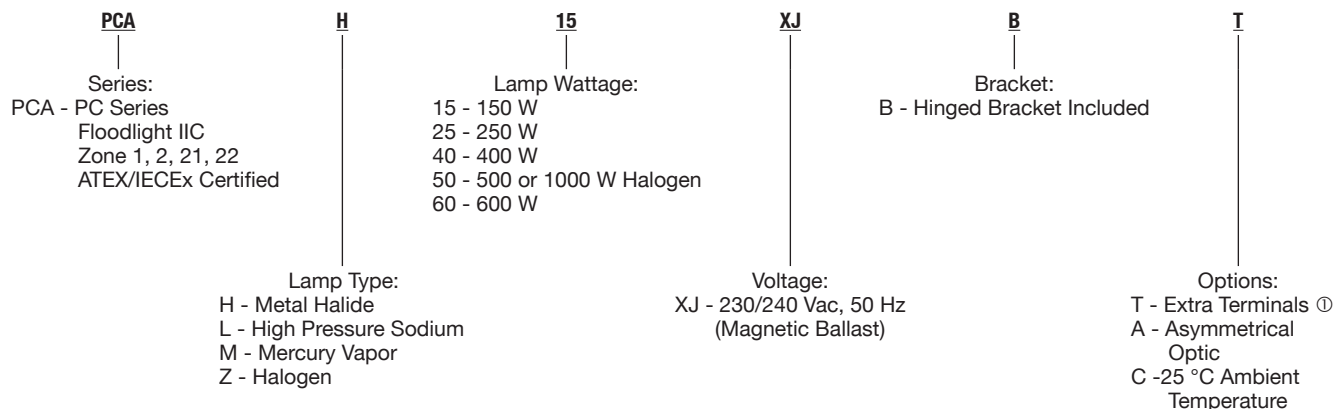
PC Series Floodlights IIC

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

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

Catalog Numbering Guide — PC Series Floodlights



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

Lamp Type and Wattage	Gas Temperature Rating According to Ta			Dust Surface Temperature °C
	+40 °C	+50 °C	+55 °C	
150 W High Pressure Sodium	T4	T3	T3	+145 °C
250 W High Pressure Sodium	T3	T3	T3	+195 °C
250 W Metal Halide	T3	T3	T3	+197 °C
250 W Mercury Vapor	T3	T3	T3	+194 °C
400 W High Pressure Sodium	T3	T3	T3	+189 °C
400 W Metal Halide	T3	T3	T3	+193 °C
400 W Mercury Vapor	T3	T3	T3	+195 °C
600 W High Pressure Sodium	T2	T2	T2	+257 °C
500 W Halogen	T2	T2	T2	+267 °C
1000 W Halogen	T1	T1	T1	+378 °C

① 3 Phase + Neutral.

PC Series Floodlights IIC

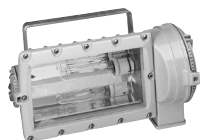
Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

Ordering Information – IIC Versions

Floodlights supplied with hinged mounting bracket, 1 plug, 1 M20 cable gland — 6.5 mm to 14.5 mm diameter. Lamps are not included.

	Lamp Wattages	Lampholder	Voltage (+/–10%)	Lamp Type		Weight kg	Volume dm³	Catalog Number ① ②
	High Pressure Sodium							
	150	E40	230/240 V, 50 Hz	x	x	29.0	104.4	PCAL15XJB
	250	E40	230/240 V, 50 Hz	x	x	30.0	104.4	PCAL25XJB
	400	E40	230/240 V, 50 Hz	—	x	32.0	104.4	PCAL40XJB
	600	E40	230/240 V, 50 Hz	—	x	35.0	104.4	PCAL60XJB
	Mercury Vapor							
	250	E40	230/240 V, 50 Hz	x	x	30.0	104.4	PCAM25XJB
	400	E40	230/240 V, 50 Hz	—	x	30.5	104.4	PCAM40XJB
	Metal Halide							
	250	E40	230/240 V, 50 Hz	x	x	30.0	104.4	PCAH25XJB
400	E40	230/240 V, 50 Hz	—	x	32.0	104.4	PCAH40XJB	
Halogen								
500/1000	E40	—	—	x	27.0	104.4	PCAZ50B	



① Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V: add suffix **-T** at the end of the catalog number.

② Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.

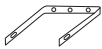
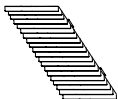
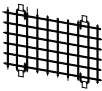
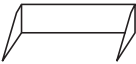
Shaded catalog numbers are normally stocked items. All other items are made to order.

PC Series Floodlights IIC

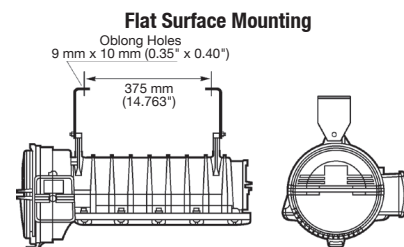
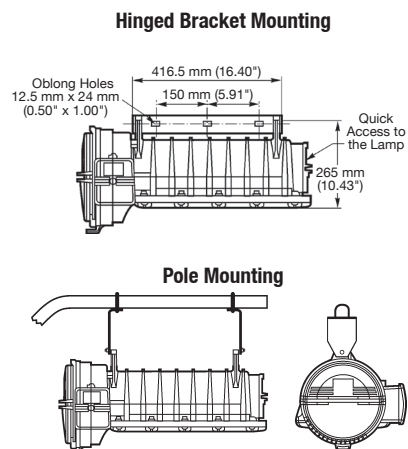
Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

Accessories

				Catalog Number
Standard Galvanized Steel Hinged Mounting Bracket Replacement Part				
				PCHBG
Optional Galvanized Steel Mounting Brackets				
		Pole/Tube Mounting	1-1/4" to 1-1/2"	PCHC49G
			2"	PCHC60G
Pole/Tube	Flat Surface	Flat Surface Mounting		PCSBG
Screwed-on Overhead Diffuser				
				PCGDG
Screwed-on Protective Guard				
				PCPGZ
Visor — Secured With 2 Screws				
				PCVG

Dimensions in Millimeters (Inches)



PC Series Floodlights IIC

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

Photometrics

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

Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

Narrow beam Metal Halide 250 W

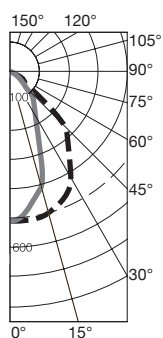
Efficiency 68.3%

NF C 71-121: 0.68B

CANDELA DISTRIBUTION

0-180 90-270

0	505	505
5	515	499
10	512	469
15	501	403
20	476	312
25	453	248
30	427	190
35	394	146
40	368	117
45	290	97
50	160	12
55	51	7
60	34	4
65	15	4
70	6	4



Narrow beam Metal Halide 400 W ①

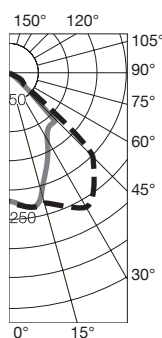
Efficiency 49.3%

NF C 71-121: 0.49C

CANDELA DISTRIBUTION

0-180 90-270

0	217	217
5	210	219
10	218	231
15	223	205
20	238	193
25	255	148
30	266	132
35	263	130
40	244	116
45	201	104
50	136	37
55	85	15
60	51	8
65	28	6
70	5	4



Narrow beam Halogen 1000 W

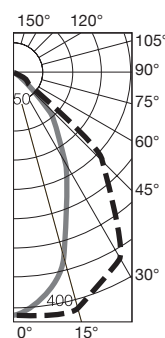
Efficiency 59.2%

NF C 71-121: 0.59B

CANDELA DISTRIBUTION

0-180 90-270

0	417	417
5	406	418
10	419	399
15	419	330
20	408	266
25	398	218
30	371	177
35	344	142
40	295	115
45	213	98
50	135	12
55	68	7
60	34	4
65	16	3
70	5	3



Wide beam Metal Halide 250 W

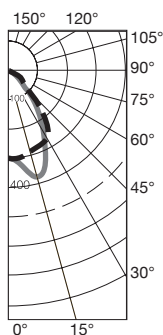
Efficiency 67.9%

NF C 71-121: 0.68C

CANDELA DISTRIBUTION

0-180 90-270

0	301	301
5	303	318
10	299	342
15	294	387
20	287	382
25	286	306
30	271	237
35	231	208
40	172	186
45	133	140
50	83	104
55	48	18
60	34	8
65	23	6
70	6	6



Wide beam Metal Halide 400 W ①

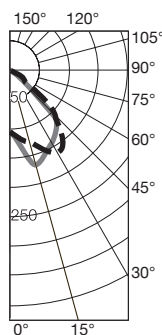
Efficiency 46.7%

NF C 71-121: 0.46C

CANDELA DISTRIBUTION

0-180 90-270

0	105	105
5	104	106
10	108	130
15	124	165
20	148	177
25	167	183
30	165	147
35	142	127
40	116	113
45	74	115
50	52	103
55	48	40
60	44	13
65	34	9
70	18	6



Wide beam Halogen 1000 W

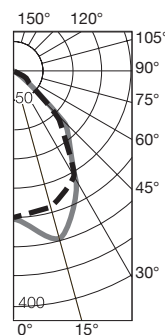
Efficiency 57.7%

NF C 71-121: 0.57C

CANDELA DISTRIBUTION

0-180 90-270

0	251	251
5	244	255
10	247	272
15	245	293
20	237	306
25	229	262
30	213	213
35	194	188
40	163	161
45	120	133
50	82	105
55	52	18
60	35	8
65	20	5
70	8	5



① 400 W Metal Halide: Efficiency rate lower than 250 W due to thermal deflector between glass and lamp, requested for T3.

PL Series Floodlights IIB Low temperature

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen Δ

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

Applications

- Designed for large area lighting in industrial outdoor and indoor hazardous areas.
- Ideal for use in Zones 1 and 2 and 21 and 22 in the oil and gas industry. In locations such as: refineries, pipelines, warehouses, offshore platforms and drilling rigs.

Features

- Gray epoxy painted light marine grade aluminum housing and door.
- The cover is fitted with a short safety chain.
- Lampholder can be easily field-adjustable for either a narrow or wide beam.
- Fixtures operate safely in high ambient temperatures up to +55 °C and in low ambient temperature up to -40 °C .
- Electrical components (ballast, ignitor and capacitor) are thermally separated from the lighting compartment with an insulating protection, providing extended life.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto 2 captive terminals 2 x 6 mm²; 2 internal earth terminals capacity 6 mm² and 1 external earth terminal capacity 4 mm².
- 2 x 20 mm clearance holes throughwire cable entries supplied with:
 - One Ex e unarmored cable gland — 6.5 mm to 14.5 mm sealing diameter.
 - One blanking plug.
 - Two M20 locknuts.
- For use with either tubular or ellipsoidal shape lamps. See ordering information for details.
- Choice of mounting with galvanized hinged bracket fixed mounting or tube/pole mounting with galvanized brackets.
- Thermoshock and impact-resistant glass factory sealed into the cover frame.
- Operates in wall-mounting or down lighting applications.
- Reversible hinge allows for fixture access from either side.
- E40 or H3 lampholders for the 2 x 70 W Vac/Vdc halogen version.
- Internal symmetric reflector.

Standard Materials

- Housing and door: copperfree marine-grade aluminum alloy
- Lens: toughened safety glass
- Reflector: bright highly polished aluminum
- Bolts: stainless steel bolt
- Cable gland and blanking plug: polyamide
- Locknut: nickel plated brass

Standard Finishes

- Housing and door: gray epoxy powder paint

Options

- 1000 W HP Sodium with separate Ex d housing for ballast.
- Other voltages, please contact your sales representative.
- Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V (loop in/loop out wiring possible): add suffix **-T** at the end of the catalog number.
- Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.
- Screwed-on overhead diffuser out of galvanized steel with black painting (see accessories).
- Screwed-on zinc-coated protection guard (see accessories).



ATEX/IECEx Certifications and Compliances

- **Certification Type: PJD**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ex II 2 G
 - Type of Protection: Ex de IIB
 - Temperature Class: See *Table on following page*
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ex II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See *Table on following page*
 - Ambient Temperature: -40 °C ≤ to ≤ +55 °C
 - CE Declaration of Conformity: 50207
 - ATEX Certificate: LCIE 99/ ATEX 6002
 - IECEx Certificate: IECEx LCI 04.0020
 - Index of Protection according EN/IEC 60529: IP66/67
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC12.2098^①

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

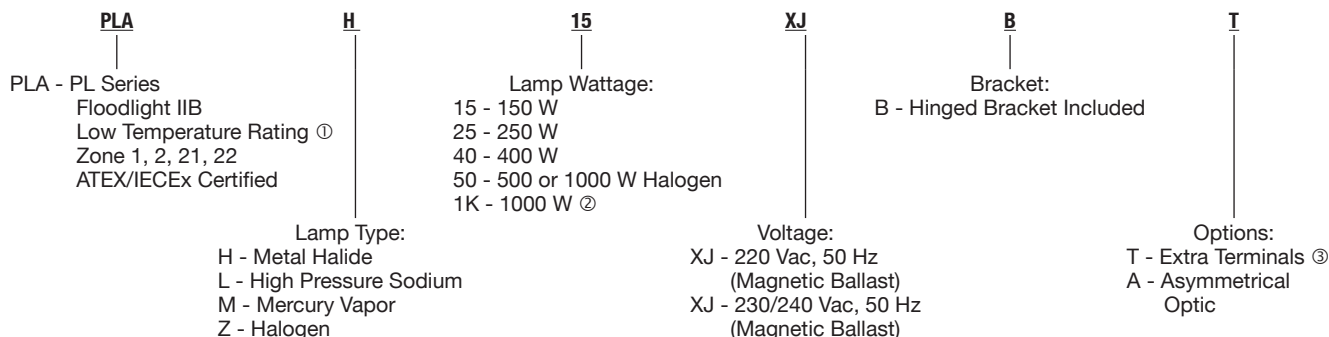
PL Series Floodlights IIB Low temperature

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

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

Catalog Numbering Guide — PL Series Floodlights



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

Lamp Type and Wattage	Gas Temperature Rating According to Ta			Dust Surface Temperature °C
	+40 °C	+50 °C	+55 °C	
150 W High Pressure Sodium	T4	T3	T3	+145 °C
250 W High Pressure Sodium	T4	T3	T3	+145 °C
250 W Metal Halide	T3	T3	T3	+197 °C
250 W Mercury Vapor	T3	T3	T3	+194 °C
400 W High Pressure Sodium	T4	T3	T3	+144 °C
400 W Metal Halide	T3	T3	T3	+193 °C
400 W Mercury Vapor	T3	T3	T3	+195 °C
600 W High Pressure Sodium	T2	T2	T2	+257 °C
500 W Halogen	T2	T2	T2	+267 °C
1000 W Halogen	T1	T1	T1	+378 °C

① Only for 250 W and 400 W Versions.

② Available for High Pressure Sodium Lamp Only + Separate Gear Box.

③ 3 Phase + Neutral.

PL Series Floodlights IIB Low temperature

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

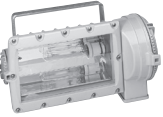
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lighting

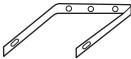
FLOODLIGHTS

Ordering Information – IIB Low Temperature Versions

Floodlights supplied with hinged mounting bracket, 1 plug, 1 M20 cable gland — 6.5 mm to 14.5 mm diameter. Lamps are not included

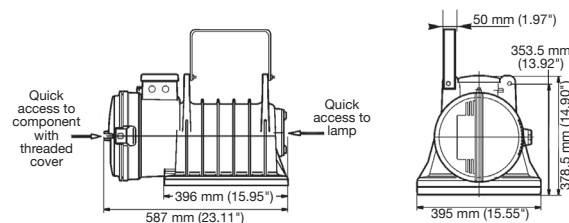
	Lamp Wattages	Lampholder	Voltage (+/-10%)	Lamp Type		Weight kg	Volume dm³	Catalog Number ① ② ③
				Ellipsoidal	Tubular			
	High Pressure Sodium							
	250	E40	230/240 V 50 Hz	x	x	37.5	104.4	PLAL25XJB
	400	E40	220 V 50 Hz	x	x	37.5	104.4	PLAL40XAB
	Halogen							
	500/1000	E40		—	x	34.0	104.4	PLAZ50B

Accessories and Replacement Parts

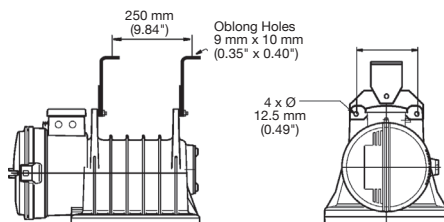
					Catalog Number
Galvanized Steel Hinged Brackets					
					PLHGB
Galvanized Steel Brackets					
		Pole/Tube Mounting	1-1/4" to 1-1/2"	PNHC49G	
			2"	PNHC60G	
Pole/Tube	Flat Surface	Flat Surface Mounting	PNSBG		

Dimensions in Millimeters (Inches)

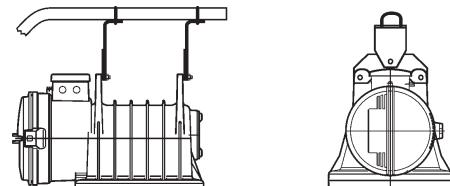
Hinged Bracket Mounting



Flat Surface Mounting



Pole Mounting



① Hinged bracket available: add suffix **-B** at the end of the catalog number.

② Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V: add suffix **-T** at the end of the catalog number.

③ Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.

PL Series Floodlights IIB Low temperature

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

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

Photometric Data

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

Luminaire symbol according to NF C 71-121

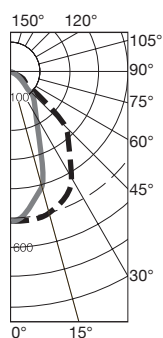
— Longitudinal
— Transverse

Narrow beam Metal Halide 250 W

Efficiency 68.3%
NF C 71-121: 0.68B

CANDELA DISTRIBUTION

	0-180	90-270
0	505	505
5	515	499
10	512	469
15	501	403
20	476	312
25	453	248
30	427	190
35	394	146
40	368	117
45	290	97
50	160	12
55	51	7
60	34	4
65	15	4
70	6	4

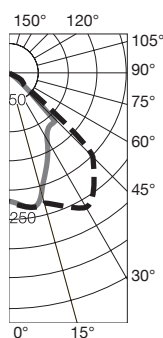


Narrow beam Metal Halide 400 W ①

Efficiency 49.3%
NF C 71-121: 0.49C

CANDELA DISTRIBUTION

	0-180	90-270
0	217	217
5	210	219
10	218	231
15	223	205
20	238	193
25	255	148
30	266	132
35	263	130
40	244	116
45	201	104
50	136	37
55	85	15
60	51	8
65	28	6
70	5	4

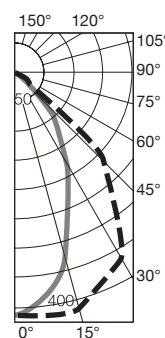


Narrow beam Halogen 1000 W

Efficiency 59.2%
NF C 71-121: 0.59B

CANDELA DISTRIBUTION

	0-180	90-270
0	417	417
5	406	418
10	419	399
15	419	330
20	408	266
25	398	218
30	371	177
35	344	142
40	295	115
45	213	98
50	135	12
55	68	7
60	34	4
65	16	3
70	5	3

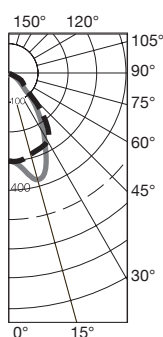


Wide beam Metal Halide 250 W

Efficiency 67.9%
NF C 71-121: 0.68C

CANDELA DISTRIBUTION

	0-180	90-270
0	301	301
5	303	318
10	299	342
15	294	387
20	287	382
25	286	306
30	271	237
35	231	208
40	172	186
45	133	140
50	83	104
55	48	18
60	34	8
65	23	6
70	6	6

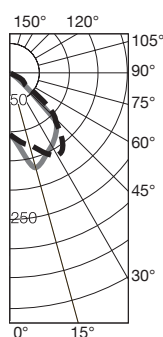


Wide beam Metal Halide 400 W ①

Efficiency 46.7%
NF C 71-121: 0.46C

CANDELA DISTRIBUTION

	0-180	90-270
0	105	105
5	104	106
10	108	130
15	124	165
20	148	177
25	167	183
30	165	147
35	142	127
40	116	113
45	74	115
50	52	103
55	48	40
60	44	13
65	34	9
70	18	6

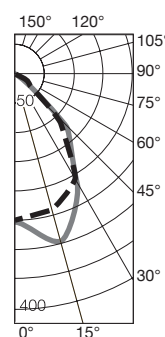


Wide beam Halogen 1000 W

Efficiency 57.7%
NF C 71-121: 0.57C

CANDELA DISTRIBUTION

	0-180	90-270
0	251	251
5	244	255
10	247	272
15	245	293
20	237	306
25	229	262
30	213	213
35	194	188
40	163	161
45	120	133
50	82	105
55	52	18
60	35	8
65	20	5
70	8	5



① 400 W Metal Halide: Efficiency rate lower than 250 W due to thermal deflector between glass and lamp, requested for T3.

PN Areamaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

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

Applications

- Powerful, efficient floodlights for large areas such as industrial complexes and ship loading areas.
- Rated for use in hazardous areas.

Features

- Highly efficient, integrally ballasted floodlight. Has compact, lightweight, yet rugged die cast aluminum construction.
- Simple installation and maintenance.
- Integral ballast: 230/240 V, 50 Hz
- One piece lens cover.
- Heavy duty, high temperature silicone rubber gasket, firmly seated.
- Socket: E40 (E27 for 70 W HPS version).
- Reflectors: double segment compound parabolic with finish for maximum efficiency.
- Mounting: yoke mount.
- 2 x M20 clearance entries with one plug

Standard Materials

- Ballast housing and lens door: copperfree (4/10 of 1% max.) aluminum
- Gasket: silicone rubber
- Socket: heavy duty porcelain with heavy gauge brass shell
- Reflector: finished aluminum
- Yoke mount: zinc plated steel
- Bolts: stainless steel

Standard Finishes

- Ballast housing, lens cover, yoke and pole mount: architectural bronze polyester
- Socket: porcelain

Certifications and Compliances

◆ATEX or ATEX/IECEX Certification

- **Certification Type: Pjn**
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓔ 3 G
 - Type of Protection: Ex nR IIC Gc
 - Temperature Class: T2 to T4
 - Ambient Temperature: -40 °C to +55 °C (-40 °C +50 °C for body size L)
 - ATEX Certificate: LCIE 08 ATEX 6035X
 - IECEX Certificate: IECEX LCI 04.0015
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 3 D
 - Type of Protection: Ex t IIIC Dc
 - Surface Temperature: T117 °C to T228 °C
 - Ambient Temperature: -40 °C to +55 °C (-40 °C +50 °C for body size L)
 - ATEX Certificate: LCIE 08 ATEX 6035X
 - IECEX Certificate: IECEX LCI 04.0015
 - Dust: Zone 21
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T65 °C to T182 °C
 - Ambient Temperature: -20 °C to +40 °C
 - CE Declaration of Conformity: 50274
 - ATEX Certificate: LCIE 02 ATEX 6246X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK07 with glass diffuser, IK08 with polycarbonate diffuser



◆EURASEC Certification

– EURASEC N° TC RU C-FR.Г505.B.00912

◆Others Certification

- **Size M - Certification Type: Pjn**
 - INMETRO Certificate: BVC 11.0394-X ①

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

PN Areamaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

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

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

Catalog Numbering Guide — Areamaster ATEX PN Series Floodlights

PN	M	1	L	25	A	G	XJ	S
Series: PN - PN Series Zone 21 ATEX certified Zone 2-22 ATEX/IECEx certified	Body Size: P - Small M - Medium L - Large	Mounting: 1 - Yoke 5 - Pole Slip-fit	Lamp Type: H - Metal Halide L - High Pressure Sodium M - Mercury Vapor	Wattage: 70 - 70 W 15 - 150 W 25 - 250 W 40 - 400 W ① 99 - 1000 W ②	Entry Size: A - M20	Diffuser: G - Glass P - Polycarbonate ②	Options: 225 - 220 Vac, 50 Hz (Magnetic Ballast) XJ - 230/240 Vac, 50 Hz (Magnetic Ballast)	Options: S - Stainless Steel Housing

① 400 Watt is rated for Zones 21-22 and 1000 Watt is rated for Zones 2-22 when used with large body. Select glass diffuser.

② Polycarbonate diffuser is not rated for use in Zones 2-22.

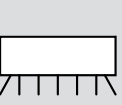
PN Areamaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

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

Zone 21 (Dust)

Dust Surface Temperatures for Ta = +40 °C			
Operating Position			
Lamp Type and Wattage	Glass Diffuser	Polycarbonate Diffuser	Time Before Opening in Minutes
70 W High Pressure Sodium	+75 °C	+65 °C	50
150 W High Pressure Sodium	+101 °C	+91 °C	25
Body Size: M 250 W High Pressure Sodium	+127 °C	+117 °C	15
250 W Metal Halide	+123 °C	+113 °C	15
250 W Mercury	+136 °C	+131 °C	15
400 W High Pressure Sodium	+126 °C	+121 °C	30
Body Size: L 1000 W High Pressure Sodium	+177 °C	–	30
1000 W Metal Halide	+182 °C	–	30

Zone 2 (Gas)

Lamp Type and Wattage	T° Class for Ta = +40 °C	T° Class for Ta = +50 °C	T° Class for Ta = +55 °C
70 W High Pressure Sodium	T4	T4	T4
150 W High Pressure Sodium	T4	T4	T4
150 W Metal Halide	T4	T4	T4
Body Size: M 250 W High Pressure Sodium	T3	T3	T3 — Cable T° = +82 °C
250 W Metal Halide	T3	T3	T3
250 W Mercury	T3	T3	T3 — Cable T° = +81 °C
400 W High Pressure Sodium	T3	T3 — Cable T° = +87 °C	T2 — Cable T° = +92 °C
400 W Metal Halide	T2	T2 — Cable T° = +84 °C	T2 — Cable T° = +89 °C
400 W Mercury	T2	T2 — Cable T° = +84 °C	T2 — Cable T° = +89 °C
Body Size: L 1000 W High Pressure Sodium	T3	T3	–
1000 W Metal Halide	T3	T3	–

Zone 22 (Dust)

Lamp Type and Wattage	Surface T° for Ta = +55 °C	Spreading cable for Ta = +50 °C	Spreading cable for Ta = +55 °C
70 W High Pressure Sodium	+117 °C	–	–
150 W High Pressure Sodium	+130 °C	–	–
150 W Metal Halide	+128 °C	–	–
Body Size: M 250 W High Pressure Sodium	+160 °C	–	Cable T° = +82 °C
250 W Metal Halide	+175 °C	–	–
250 W Mercury	+181 °C	–	Cable T° = +81 °C
400 W High Pressure Sodium	+198 °C	Cable T° = +87 °C	Cable T° = +92 °C
400 W Metal Halide	+228 °C	Cable T° = +84 °C	Cable T° = +89 °C
400 W Mercury	+227 °C	Cable T° = +84 °C	Cable T° = +89 °C
Body Size: L 1000 W High Pressure Sodium	+187 °C for Ta = +50 °C	Cable T° = +90 °C	–
1000 W Metal Halide	+192 °C for Ta = +50 °C	Cable T° = +90 °C	–

PN Areamaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

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

Lamp Type and Wattage	Weight kg	Volume dm ³	Permissible lamps (not supplied)	Socket	Body Size	Catalog Number ③
Standard with Lamp Glass Sealed on Frame						
70 W HPS	12.1	62.5	Ovoid/Tubular	E27	Medium	PNM1L70AGXJ
150 W HPS	12.9	62.5	Ovoid/Tubular	E40	Medium	PNM1L15AGXJ
250 W HPS	14.3	62.5	Ovoid/Tubular	E40	Medium	PNM1L25AGXJ
400 W HPS	16.0	62.5	Ovoid/Tubular	E40	Medium	PNM1L40AGXJ ①
400 W HPS	–	–	Ovoid/Tubular	E40	Large	PNL1L40AGXJ ①
150 W MH	12.9	62.5	Ovoid/Tubular	E40	Medium	PNM1H15AGXJ
250 W MH	14.3	62.5	Ovoid/Tubular	E40	Medium	PNM1H25AGXJ
400 W MH	16.0	62.5	Tubular	E40	Medium	PNM1H40AGXJ ①
400 W MH	–	–	Ovoid/Tubular	E40	Large	PNL1H40AGXJ ①
250 W MV	12.9	62.5	Ovoid	E40	Medium	PNM1M25AGXJ
400 W MV	13.8	62.5	Ovoid/Tubular	E40	Medium	PNM1M40AGXJ ①
With External Polycarbonate Weatherproof Protection ②						
70 W HPS	13.2	62.5	Ovoid/Tubular	E40	Medium	PNM1L70APXJ
150 W HPS	14.0	62.5	Ovoid/Tubular	E40	Medium	PNM1L15APXJ
250 W HPS	15.4	62.5	Ovoid/Tubular	E40	Medium	PNM1L25APXJ
400 W HPS	–	–	Ovoid/Tubular	E40	Large	PNL1L40APXJ ①
150 W MH	14.0	62.5	Ovoid/Tubular	E40	Medium	PNM1H15APXJ
250 W MH	15.4	62.5	Ovoid/Tubular	E40	Medium	PNM1H25APXJ
400 W MH	–	–	Ovoid/Tubular	E40	Large	PNL1H40APXJ
250 W MV	14.0	62.5	Ovoid	E40	Medium	PNM1M25APXJ ①

① 400 Watt is rated for Zones 21-22 and 1000 Watt is rated for Zones 2-22 when used with large body. Select glass diffuser.

② Polycarbonate diffuser is not rated for use in Zones 2-22.

③ For a 220 Vac, 50 Hz, magnetic ballast, replace the letters **XJ** in the 10th and 11th positions with the letters **225**; example: PNP1L70AG225.

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

PN Areamaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

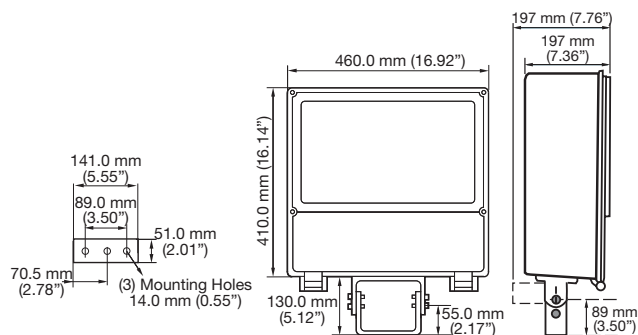
Zone 2 - 21 and 22
Gas (G) and Dust (D)

Accessories

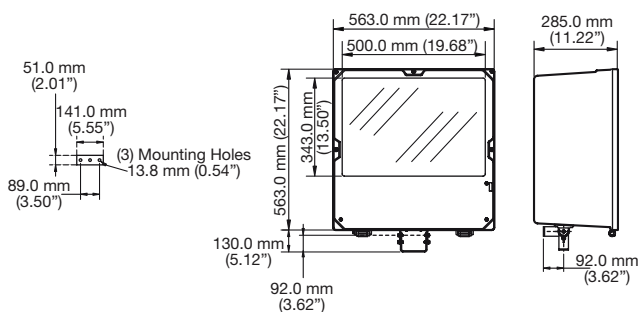
Description	Catalog Number
Fall Prevention Kit 1.2 m stainless steel chain for M20 cable entry	FESCM20
 Slip-Fitter Adapter — fits medium body (Size M)	GSF20
 Slip-Fitter Adapter — fits large body/1000 Watt floodlight (Size L)	GAM8SF

Dimensions in Millimeters (Inches)

Size M



Size L



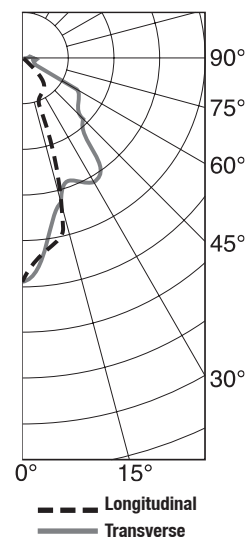
Photometric Data

Lamps: 70 W High Pressure Sodium

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

Degrees	Candelas (0-180)	Candelas (90-270)
0	487	487
5	439	461
10	416	387
15	372	324
20	208	290
25	129	294
30	116	319
35	111	318
40	101	289
45	86	193
50	70	150
55	84	141
60	62	132
65	22	88
70	9	15

Total Luminaire Efficiency = 74.6%



LDP Series Wellglass Luminaires

Flameproof. Compact Fluorescent, Halogen, Incandescent, Mixed

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

Applications

- For use in hazardous locations such as plants where plastics, paints, thinners and petrochemicals are manufactured.
- Ideal for street lighting on refinery sites or oil depots and for tank lighting purposes.

Features

- Permissible lamps (not supplied):
 - 18 to 25 W compact fluorescent lamps
 - 70 to 150 W halogen lamps
 - Up to 200 W incandescent lamps
 - Up to 160 W mixed lamps
- E27 lamp holder.
- Threaded flame path.
- Connection to lampholder:
 - 2 x 2.5 mm² or to terminal block
 - 2 x 2.5 mm² supplied for through-wiring application.
- Suspension via integrated eye bolt for side cable entry versions.
- Supplied with one blanking plug for side cable entry versions.

Standard Materials

- Body and bezel: gray painted marine grade aluminum alloy
- Internal reflector: aluminum

Certifications and Compliances

◆ ATEX Certification

- **Certification Type: AB14**
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: See Table
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50231
 - ATEX Certificate: LCIE 02 ATEX 6053
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK08
 - Internal Volume: > 2 dm³ - 2 liters



Side Cable Entry Version

◆ EURASEC Certification

— EURASEC N° TC RU C-FR.Г505.B.00912

Lamp Type and Wattage	Temperature Class for Gas				Surface Temperature for Dust	
	Ambient Temperature Ta = +40 °C		Ambient Temperature Ta = +50 °C		Ambient Temperature Ta = +50 °C	
	Temperature Class	Cable Entry Temperature	Temperature Class	Cable Entry Temperature	Surface Temperature	Cable Entry Temperature
18 W Compact Fluorescent	T6	—	T5	—	+85°C	—
20 W Compact Fluorescent	T6	—	T5	—	+85°C	—
25 W Compact Fluorescent	T6	—	T5	—	+85°C	—
70 W Halogen	T4	—	T3	+90°C	+130°C	+90°C
150 W Halogen	T4	+85°C	T3	+95°C	+145°C	+95°C
160 W Mixed	T4	+115°C	T3	+125°C	+145°C	+125°C
100 W Incandescent	T4	+115°C	T3	+125°C	+145°C	+125°C
200 W Incandescent	T4	+115°C	T3	+125°C	+145°C	+125°C

LDP Series Wellglass Luminaires

Flameproof. Compact Fluorescent, Halogen, Incandescent, Mixed

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

Lighting

WELLGLASS LUMINAIRES

Flameproof Wellglass Luminaires for Hazardous Areas – Ex d IIC – LDP Series

Cable Entries	Weight kg	Volume dm ³	Catalog Number
2 x M20 side entries	5	35.5	LDP2M20
2 x 3/4" NPT side entries	5	35.5	LDP2075
1 x 3/4" NPT top entry	5	35.5	LDP1075

Accessories

Description	Weight kg)	Volume dm ³	Catalog Number
-------------	------------	------------------------	----------------

Protective Guard



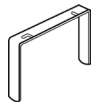
Zinc plated steel protective guard

0.4

97

LDPG3Z

Hinged Bracket



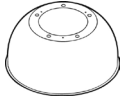
Zinc plated steel hinged bracket for installation on flat surface

1.4

3.5

LDPHBZ

External Reflector



External white polyester reflector

3.2

97

LDER1P

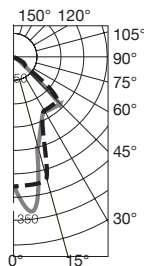
Photometric Data

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

200 W incandescent
Efficiency 66.5%
NF C 71-121: 0.60 H + 0.06 T

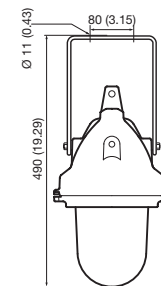
CANDELA DISTRIBUTION

0-180	90-270
0	274
5	318
10	328
15	268
20	130
25	104
30	85
35	123
40	104
45	99
50	94
55	93
60	94
65	99
70	91

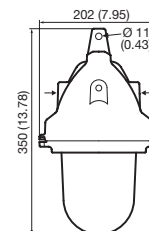


--- Longitudinal
— Transverse

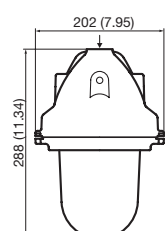
Dimensions in Millimeters (Inches)



Side Cable Entries with Hinged Bracket



Side Cable Entries



Top Cable Entry

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

LDM Series Wellglass Luminaires

Flameproof. HID, Compact Fluorescent, Halogen, Incandescent, Mixed

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

Applications

- For use in hazardous locations such as plants where plastics, paints, thinners and petrochemicals are manufactured.
- Ideal for street lighting on refinery sites or oil depots and for tank lighting purposes.

Features

- E27 or E40 lamp holder.
- High temperature internal wiring.
- Threaded flame path.
- Stainless steel fastenings.
- Closed by screwing on bezel.
- Operates in any position.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto two captive terminals capacity 2 x 6 mm².
- External earth terminal capacity 4 mm².
- 2 x M20 clearance holes through-wire cable entries supplied with one Ex e unarmored cable gland — sealing diameter 6.5 to 14.5 mm — and one blanking plug and two M20 locknuts.

Standard Materials

- Body and bezel: gray painted marine grade aluminum alloy
- Internal reflector: aluminum

Certifications and Compliances

◆ ATEX/IECEX Certification

• Certification Type: LTd (Model LT1d)

- Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature Class: *See Table on following page*
- Dust: Zone 21 - 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: -40 °C to +55 °C
- CE Declaration of Conformity: 50246
- ATEX Certificate: LCIE 02 ATEX 6165
- IECEx Certificate: IECEx LCI Ex 04.0019
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK08

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912



LDM Version



LDM Version with Guard

LDM Series Wellglass Luminaires

Flameproof. HID, Compact Fluorescent, Halogen, Incandescent, Mixed

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

Lighting

WELLGLASS LUMINAIRES

T Rating for Gas

Lamp Type and Wattage	Ambient Temperature					
	Lighting Downward			Lighting Upward		
	Ta = +40 °C	Ta = +50 °C	Ta = +55 °C	Ta = +40 °C	Ta = +50 °C	Ta = +55 °C
18 W Compact Fluorescent	T6	T6	T6	T6	T5	T5
150 W Halogen	T4	T4	T4	T4	T3	T3
70 W High Pressure Sodium	T5	T4	T4	T4	T4	T4
100 W High Pressure Sodium	T3	T3	T3	T3	T3	T3
150 W High Pressure Sodium	T3	T3	T3	T3	T3	T3
80 W Mercury	T4	T4	T4	T4	T4	T4
125 W Mercury	T3	T3	T3	T3	T3	T3
160 W Mixed	T3	T3	T3	T3	T3	T3
100 and 200 W Incandescent	T4	T3	T3	T3	T3	T3

Surface Temperature for Dust

Lamp Type and Wattage	Ambient Temperature for Ta = +55 °C	
	Lighting Downward	Lighting Upward
18 W Compact Fluorescent	+80 °C	+95 °C
150 W Halogen	+130 °C	+195 °C
70 W High Pressure Sodium	+130 °C	+130 °C
100 W High Pressure Sodium	+184 °C	+184 °C
150 W High Pressure Sodium	+184 °C	+184 °C
80 W Mercury	+130 °C	+130 °C
125 W Mercury	+195 °C	+195 °C
160 W Mixed	+195 °C	+195 °C
100 and 200 W Incandescent	+195 °C	+195 °C

Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIC – LDM Series

Supplied with 1 x M20 Ex e cable gland in polyamide diameter 6.5 to 14.5 mm and 1 x M20 blanking plug. Lamps are not supplied.

Supplied with 4 W, 120 and 250 wattage and in performance diameter 80 to 150 mm and 4 W, 120 wattage hanging plug. Lamps are not supplied.						
Lamp Wattages	Voltage (+/- 10%)	Lamp Type ④		Weight kg	Volume dm³	Catalog Number
		Ellipsoidal	Tubular			
High Pressure Sodium						
70 W ①②	230/240 Vac, 50 Hz	X	X	9	30	LDML70AG1XJ
100 W ①	230/240 Vac, 50 Hz	X	X	9	30	LDML10AG1XJ
150 W ①	230/240 Vac, 50 Hz	X	X	9	30	LDML15AG1XJ
Metal Halide						
100 W ①	230/240 Vac, 50 Hz	X	X	9	30	LDMH10AG1XJ
150 W ①	230/240 Vac, 50 Hz	X	X	9	30	LDMH15AG1XJ
Mercury Vapor						
80 W ①	230/240 Vac, 50 Hz	–	–	9	30	LDMM80AG1XJ
125 W ①	230/240 Vac, 50 Hz	–	–	9	30	LDMM12AG1XJ
Compact Fluorescent						
18 W	–	–	–	7.5	30	LDMF18AG1
Incandescent						
200 W max. ③	–	–	–	7.5	30	LDMI20AG1

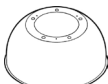
① Ballast supplied. ② For lamp with built-in ignitor. ③ 150 W halogen or 160 W mixed lamps can be used. ④ Only with lamp operating in any position.

LDM Series Wellglass Luminaires

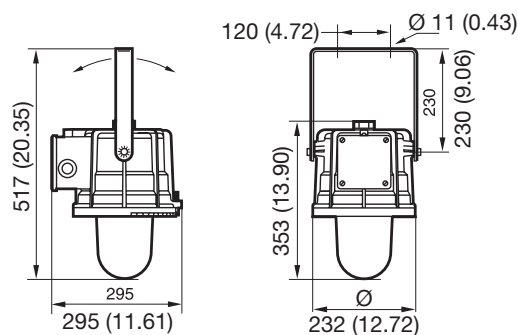
Flameproof. HID, Compact Fluorescent, Halogen, Incandescent, Mixed

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

Accessories

	Description	Weight kg	Volume dm ³	Catalog Number
Protective Guard				
	Zinc plated steel protective guard	0.4	9	LDPG1Z
External Reflector				
	External white polyester reflector	3.2	97	LDER1P
Hinged Bracket				
	Zinc plated steel hinged bracket for installation on flat surface	3.4	3	LDMHBZ
Eyebolt				
	Zinc plated steel M10 eyebolt for suspension	0.4	0.2	LDRBM10Z
Mounting Strap				
	Gray painted aluminum	0.9	0.6	LDMSBA

Dimensions in Millimeters (Inches) — LDM Version with Hinged Bracket



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

LDM Series Wellglass Luminaires

Flameproof. HID, Compact Fluorescent, Halogen, Incandescent, Mixed

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

Lighting

WELLGLASS LUMINAIRES

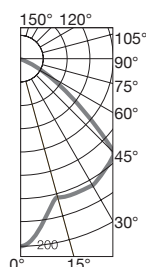
Photometric Data

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

70 W High Pressure Sodium

Efficiency 54.4%
NF C 71-121: 0.54 F

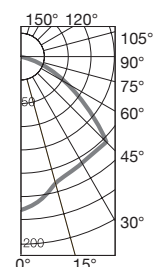
CANDELA DISTRIBUTION		
	90-270	0-180
0	195	195
5	179	179
10	166	166
15	151	151
20	149	149
25	153	153
30	156	156
35	157	157
40	158	158
45	159	159
50	148	148
55	116	116
60	77	77
65	54	54
70	37	37



80 W Mercury

Efficiency 46.8%
NF C 71-121: 0.47 F

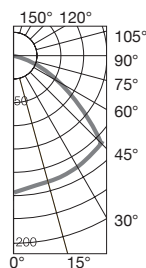
CANDELA DISTRIBUTION		
	90-270	0-180
0	158	158
5	154	154
10	145	145
15	138	138
20	136	136
25	135	135
30	134	134
35	133	133
40	133	133
45	133	133
50	125	125
55	98	98
60	67	67
65	45	45
70	31	31



125 W Mercury

Efficiency 48%
NF C 71-121: 0.48 F

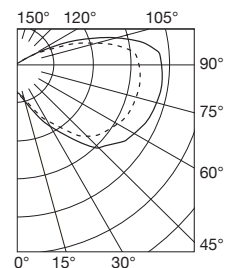
CANDELA DISTRIBUTION		
	90-270	0-180
0	147	147
5	143	143
10	138	138
15	133	133
20	133	133
25	136	136
30	138	138
35	137	137
40	136	136
45	134	134
50	126	126
55	104	104
60	74	74
65	50	50
70	32	32



150 W High Pressure Sodium

Efficiency 59.3%
NF C 71-121: 0.59 D

CANDELA DISTRIBUTION		
	90-270	0-180
0	19.72	19.72
5	18.82	17.47
10	21.50	19.13
15	25.63	23.75
20	32.78	30.06
25	40.19	36.76
30	47.77	43.14
35	55.50	48.77
40	67.88	59.97
45	77.18	66.78
50	81.09	71.22
55	87.05	74.58
60	90.17	77.82
65	92.66	79.70
70	94.77	81.16
75	95.68	82.02
80	96.17	82.11
85	96.18	81.94
90	95.10	80.31



LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

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

Applications

- For use in hazardous locations such as plants where plastics, paints, thinners and petrochemicals are manufactured.
- Ideal for street lighting on refinery sites or oil depots and for tank lighting purposes.

Features

- Compensated power supply.
- Power factor ≥ 0.9
- Flat joint for IIB version, threaded joint for IIC version.
- E40 lamp holder with lock thread.
- High temperature internal wiring.
- Operates in any position subject to lamp type.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto two captive terminals capacity 6 mm² and two internal earth terminals capacity 6 mm².
- External earth terminal capacity 4 mm².
- 2 x M20 clearance holes through-wire cable entries supplied with one Ex e unarmored cable gland — sealing diameter 6.5 to 14.5 mm — and one blanking plug and two M20 locknuts.

Standard Materials

- Body and bezel: gray painted marine grade aluminum alloy
- Internal reflector: aluminum
- External reflector: white painted zinc plated steel

Certifications and Compliances

◆ATEX/IECEX Certification

• Certification Type: LTd (Model LT2d)

- Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE:  II 2 G
 - Type of Protection: Ex de IIB (LDB series); Ex de IIC (LDG and LDR series)
 - Temperature Class: *See Table on following page*
- Dust: Zone 21 - 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: -40 °C to +55 °C
- CE Declaration of Conformity: 50246
- ATEX Certificate: LCIE 02 ATEX 6165
- IECEx Certificate: IECEx LCI Ex 04.0019
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK08

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912



LDB Version



LDB Version with Guard

LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

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

Lighting

WELLGLASS LUMINAIRES

T Rating for Gas

Lamp Type and Wattage	Ambient Temperature			
	Lighting Downward		Lighting Upward	
	Ta = +40 °C	Ta = +55 °C	Ta = +40 °C	Ta = +55 °C
85 W Induction	T6	T6	T6	T5
100 W High Pressure Sodium	T6	T5	T5	T4
150 W High Pressure Sodium	T6	T5	T4	T4
250 W High Pressure Sodium	T4	T4	T3	T3
250 W Metal Halide	T4	T4	T4	T3
250 W Mercury	T4	T4	T3	T3
250 W Mixes	T4	T4	T3	T3
300 W Incandescent	T5	T4	T3	T3
500 W Incandescent	T3	T3	T3	T2
400 W High Pressure Sodium	T4	T3	Not Available	Not Available
400 W Metal Halide	T4	T3	Not Available	Not Available

Surface Temperature for Dust

Lamp Type and Wattage	Lighting Downward	Lighting Upward
	°C	°C
85 W Induction	+80	+95
100 W High Pressure Sodium	+95	+130
150 W High Pressure Sodium	+95	+130
250 W High Pressure Sodium	+130	+195
250 W Metal Halide	+130	+195
250 W Mercury	+130	+195
250 W Mixes	+130	+195
300 W Incandescent	+130	+195
500 W Incandescent	+195	+290
400 W High Pressure Sodium	+134	Not Available
400 W Metal Halide	+134	Not Available

LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

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

Supplied with 1 x M20 Ex e cable gland in polyamide— 6.5 to 14.5 mm diameter — and 1 x M20 blanking plug. Lamps are not supplied, except for Induction version.

Lamp Wattages	Voltage (+/- 10%)	Lamp Type		Weight kg	Volume dm³	Catalog Number
		Ellipsoidal	Tubular			
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIB – LDB Series						
Electro Magnetic Induction ②						
85 W ①	230/240 Vac, 50/60 Hz	—	—	22.0	86.7	LDBQ85AG2BJ
High Pressure Sodium						
100 W ①④	230/240 Vac, 50 Hz	X	X	22.0	86.7	LDBL10AG2XJ
150 W ①④	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDBL15AG2XJ
250 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDBL25AG2XJ
Metal Halide						
250 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDBH25AG2XJ
Mercury Vapor						
250 W ①	230/240 Vac, 50 Hz	—	—	22.5	86.7	LDBM25AG2XJ
Incandescent						
300 W to 500 W ③	—	—	—	19.0	86.7	LDBI30AG2
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIC – LDG series						
Electro Magnetic Induction ②						
85 W (1)	230/240 Vac, 50/60 Hz	—	—	22.0	86.7	LDGQ85AG2BJ
High Pressure Sodium						
100 W ①	230/240 Vac, 50 Hz	X	X	22.0	86.7	LDGL10AG2XJ
150 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDGL15AG2XJ
250 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDGL25AG2XJ
Metal Halide						
250 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDGH25AG2XJ
Mercury Vapor						
250 W ①	230/240 Vac, 50 Hz	—	—	22.5	86.7	LDGM25AG2XJ
Incandescent						
300 W to 500 W ③	—	—	—	19.0	86.7	LDGI30AG2
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIC – LDR Series						
High Pressure Sodium						
400 W ①	220/230/240 Vac, 50 Hz	X	X	31.0	144	LDRL40AG2XJ
Metal Halide						
400 W ①	220/230/240 Vac, 50 Hz	X	X	31.0	144	LDRH40AG2XJ

① Ballast supplied.

② Service life 60,000 hours.

③ 250 W mixed lamps can be used.

④ Also available in LDM Series

LDB, LDG and LDR Series Wellglass Luminaires

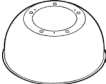
Flameproof. High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

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

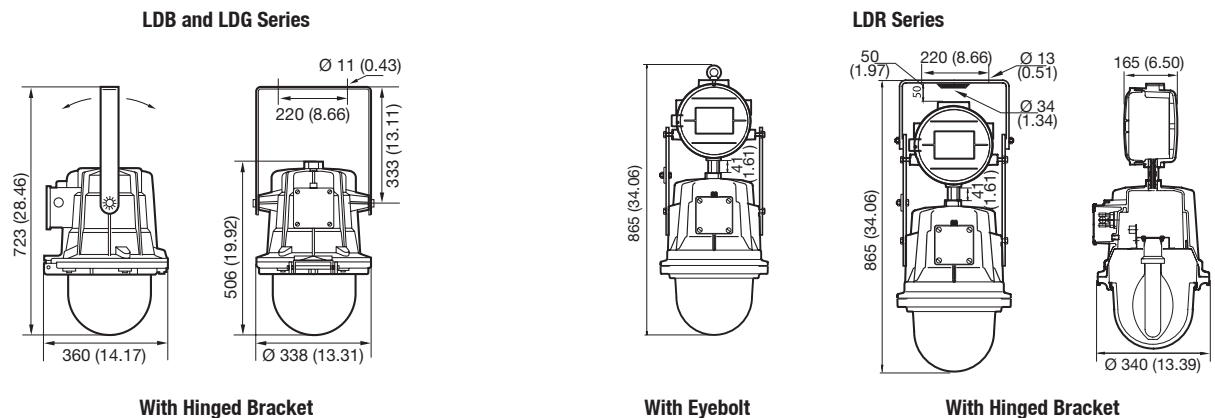
Lighting

WELLGLASS LUMINAIRES

Accessories

	Description	Weight kg	Volume dm ³	Catalog Number
Protective Guard				
	Zinc plated steel protective guard	1.2	27	LDPG2Z
External Reflector				
	White painted steel	3.4	108	LDER2Z
	White polyester	2.5	108	LDER2P
Hinged Bracket — Zinc plated steel hinged bracket for installation on flat surface				
	For LDB or LDG Series	3.4	8	LDGHBZ
	For LDR Series	3.4	8	LDRHBZ
Eyebolt — Zinc plated steel eyebolt for suspension				
	M10 — For LDB or LDG Series	0.1	0.2	LDRBM10Z
	M16 — For LDR Series	0.1	0.2	LDRBM16Z
Mounting Strap — Zinc plated steel mounting straps				
	For LDB or LDG Series	0.9	0.6	LDGSBZ
	For LDR Series	0.9	0.6	LDRSBZ

Dimensions in Millimeters (Inches)



LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

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

Photometric Data

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

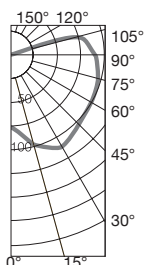
85 W Induction

Efficiency 85.9%

NF C 71-121: 0.62 J + 0.24 T

CANDELA DISTRIBUTION

	90-270	0-180
0	75	75
5	80	80
10	89	89
15	98	98
20	105	105
25	114	114
30	117	117
35	116	116
40	112	112
45	107	107
50	102	102
55	99	99
60	97	97
65	94	94
70	92	92



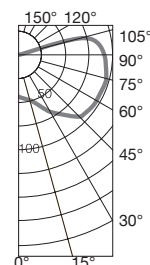
150 W High Pressure Sodium

Efficiency 70.6%

NF C 71-121: 0.50 J + 0.20 T

CANDELA DISTRIBUTION

	90-270	0-180
0	33	33
5	36	36
10	42	42
15	48	48
20	55	55
25	62	62
30	70	70
35	78	78
40	84	84
45	87	87
50	89	89
55	88	88
60	88	88
65	87	87
70	87	87



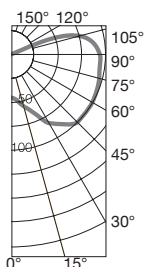
250 W High Pressure Sodium

Efficiency 79.3%

NF C 71-121: 0.56 J + 0.23 T

CANDELA DISTRIBUTION

	90-270	0-180
0	40	40
5	43	43
10	49	49
15	57	57
20	64	64
25	72	72
30	80	80
35	89	89
40	95	95
45	97	97
50	98	98
55	97	97
60	96	96
65	95	95
70	94	94



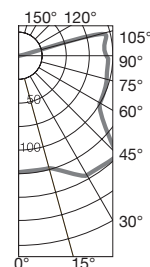
500 W Incandescent

Efficiency 98%

NF C 71-121: 0.71 H + 0.28 T

CANDELA DISTRIBUTION

	90-270	0-180
0	147	147
5	128	128
10	133	133
15	149	149
20	159	159
25	159	159
30	173	173
35	166	166
40	157	157
45	136	136
50	120	120
55	104	104
60	99	99
65	91	91
70	92	92



LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

Applications

- Enclosed and gasketed fixtures suitable for use in:
 - Marine and wet locations
 - Areas where flammable gases, vapors or combustible dusts are present under conditions defined by the IEC as Zone 2 and 22
 - Applications where energy efficient, high lumen output is required
 - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Manufacturing plants
 - Storage areas
 - Waste and sewage treatment
 - Other areas where dust, water, dirt and rough usage are a problem

Features

- Power supply 230/240 V (+6% - 10%) 50 Hz.
- Instant relighting with auxiliary halogen lamps, depending on model (lamps not supplied).
- Fast relighting for 70 W and 150 W high pressure sodium: 5 to 30 seconds depending on the duration of the mains power supply failure.
- Connection via terminal block — 2 x 4 mm² maximum.
- Superior corrosion-resistance: copperfree die-cast mounting hoods, ballast housing and guards have a gray epoxy powder coat, electrostatically applied for complete and uniform protection.
- Wide choice of light sources: high pressure sodium, metal halide, mercury vapor and incandescent.
- Six mounting arrangements to suit any lighting layout – pendant, ceiling, wall bracket, angled or straight stanchion and pendant cone (for dust applications).
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- All fixtures designed to perform in a -40 °C ambient temperature up to +55 °C.
- Standard dome or 30° angle reflectors made of fiberglass reinforced white polyester. Highly resistant to corrosive atmospheres and vented to improve fixture cooling characteristics.
- Fixture housing mounting hoods and guards are die-cast copperfree aluminum with epoxy powder coat finish.
- All exposed hardware is stainless steel and captive. Stainless thread inserts in the ballast bodies prevent “freezing” of the screws that affix guards and reflectors, simplifying removal for service.
- One piece ballast housing for each component provides even heat dissipation for cooler operation and longer ballast life.
- Fixture bodies are provided with two silicone rubber O-Ring style gaskets that will stay flexible and assure even compression around their circumference. They easily withstand high temperatures, moisture, dirt and dust for worry free operation.



Low Profile Ceiling Mount with
Prismatic Globe and Optional Guard



50–200 Watt 25° Stanchion Mount
with Prismatic Globe



50–200 Watt 90° Stanchion Mount
with Prismatic Globe and
Optional Guard



400 Watt Straight Stanchion Mount
with Prismatic Glass Globe and
Optional Guard

Standard Materials

- Mounting hoods and ballast bodies: die-cast copperfree (4/10 of 1% max.) aluminum
- Hardware and catch assemblies: stainless steel
- Globe: heat and impact resistant internally fluted glass
- Gasket: high temperature silicon
- Reflector: fiberglass reinforced polyester
- Guards: polyester powder coat finished cast copperfree aluminum (LN1 and LN2 sizes) or stainless steel (LN3 and LN4 sizes)

Standard Finishes

- Mounting hoods, ballast bodies and guards: epoxy powder coat finish, electrostatically applied for complete, uniform surface protection
- Reflectors: white polyester finish

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

Certifications and Compliances

◆ATEX/IECEX Certification

• Certification Type: LN

- Gas: Zone 2
- Conforming to ATEX 94/9/CE: Ⓔ II 3 G
- Type of Protection: Ex nR IIC Gc
- Dust: Zone 22
- Conforming to ATEX 94/9/CE: Ⓔ II 3 D
- Type of Protection: Ex tc IIIC Dc
- Ambient Temperature: +40 °C to +55 °C
- CE Declaration of Conformity: 50217
- ATEX Certificate: LCIE 08 ATEX 6036X
- IECEX Certificate: IECEX LCI 10.0041X
- Index of Protection according EN/IEC 60529: IP66

◆EURASEC Certification

- EURASEC N° TC RU C-FR.1505.B.00912

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

Catalog Numbering Guide for LN Series Luminaires

LN	1	A	H	70	A	G2	XA	P
Series: LN - LN Series Zone 2 and 22 ATEX/IECEX Certified		Mounting: A - Pendant (Rigid Mounting) C - Ceiling D - Pendant Cone F - Pendant (Flexible Mounting) R - Straight Stanchion S - 25° Stanchion W - Wall		Lamp Wattage: 70 - 70 W 80 - 80 W 85 - 85 W Induction only 10 - 100 W 12 - 125 W 15 - 150 W 25 - 250 W 40 - 400 W		Globe: G2 - Glass Globe VPGL-2HR G4 - Glass Globe VPGL-4HR		Options: P - PTFE Coating
	Body Size: 1 - Size 1 (MLBG) 2 - Size 2 (KPB) 3 - Size 3 (KPBR) 4 - Size 4 (KPB400)	Lamp Type: H - Metal Halide L - High Pressure Sodium M - Mercury Vapor Q - Induction Z - Halogen/ Incandescent			Hub Size: A - M20 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT 5 - 1-1/2" NPT		Voltage (Magnetic Ballast): XA - 220 Vac, 50 Hz XJ - 230/240 Vac, 50 Hz	

LN Mercmaster Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

T Rating

		Gas			Dust	
		Zone 2 T Rating acording Ambient Temperatures			Zone 22 Surface Temperature for Ambient T° = +55 °C	
		+40 °C	+50 °C	+55 °C	Dust Surface	Cable
70 W HPS	T Rating	T4	T4	T4	+113 °C	—
100 W HPS	T Rating	T4	T3	T3	+143 °C	—
100 W Incandescent	T Rating	T4	T3	T3	+143 °C	—
100 W Halogen	T Rating	T4	T3	T3	+143 °C	—
125 W Mercury	T Rating	T4	T3	T3	+143 °C	—
150 W HPS	T Rating	T4	T3	T3	+143 °C	—
150 W Halide	T Rating	T4	T3	T3	+143 °C	—
150 W Incandescent	T Rating	T4	T3	T3	+143 °C	—
150 W Halogen	T Rating	T4	T3	T3	+143 °C	—
250 W HPS	T Rating	T4	T4	T3	+137 °C	—
250 W Halide	T Rating	T4	T3	T3	+143 °C	—
250 W Mercury	T Rating	T4	T3	T3	+143 °C	—
400 W HPS	T Rating	T3	T3	T3	+167 °C	+89 °C
	Cable T°	—	+84 °C	+89 °C		
400 W Halide	T Rating	T3	T3	T3	+171 °C	+87 °C
	Cable T°	—	+82 °C	+87 °C		
400 W Mercury	T Rating	T3	T3	T3	+171 °C	+89 °C
	Cable T°	—	+84 °C	+89 °C		

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22. High Pressure Sodium

Zone 2 and 22
Gas (G) and Dust (D)

Version : High Pressure Sodium

	Lamp Type	Cable Entry	Lamp Watts	Lampholder	Weight kg	Volume dm³	Catalog Number
Pendant							
	HPS	1 x 3/4" NPT	70 W	E27	7.4	39	LN1AL702G2XJ
			100 W	E40	9.0	55	LN2AL102G2XJ
			150 W	E40	9.0	55	LN2AL152G2XJ
			250 W	E40	16.0	70	LN3AL252G4XJ
			400 W	E40	19.0	85.2	LN4AL402G4XJ
Pendant Cone							
	HPS	1 x 3/4" NPT	70 W	E27	7.4	39	LN1DL702G2XJ
			100 W	E40	9.0	55	LN2DL102G2XJ
			150 W	E40	9.0	55	LN2DL152G2XJ
			250 W	E40	16.0	70	LN3DL252G4XJ
			400 W	E40	19.0	85.2	LN4DL402G4XJ
Ceiling							
	HPS	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	70 W	E27	7.4	39	LN1CL70AG2XJ
			100 W	E40	9.0	55	LN2CL10AG2XJ
			150 W	E40	9.0	55	LN2CL15AG2XJ
			250 W	E40	16.0	70	LN3CL25AG4XJ
			400 W	E40	19.0	85.2	LN4CL40AG4XJ
Wall							
	HPS	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	70 W	E27	7.4	39	LN1WL70AG2XJ
			100 W	E40	9.0	55	LN2WL10AG2XJ
			150 W	E40	9.0	55	LN2WL15AG2XJ
			250 W	E40	16.0	70	LN3WL25AG4XJ
			400 W	E40	19.0	85.2	LN4WL40AG4XJ
25° Angled Stanchion							
	HPS	1 x 1- 1/4" NPT	70 W	E27	7.4	39	LN1SL704G2XJ
			100 W	E40	9.0	55	LN2SL104G2XJ
			150 W	E40	9.0	55	LN2SL154G2XJ
			250 W	E40	16.0	70	LN3SL254G4XJ
			400 W	E40	19.0	85.2	LN4SL404G4XJ
Straight Stanchion							
	HPS	1 x 1- 1/4" NPT	70 W	E27	7.4	39	LN1RL704G2XJ
			100 W	E40	9.0	55	LN2RL104G2XJ
			150 W	E40	9.0	55	LN2RL154G2XJ
			250 W	E40	16.0	70	LN3RL254G4XJ
			400 W	E40	19.0	85.2	LN4RL404G4XJ

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22. Incandescent/Halogen

Zone 2 and 22
Gas (G) and Dust (D)

Version : Halogen/Incandescent

	Lamp Type	Cable Entry	Lamp Watts	Lampholder	Weight kg	Volume dm³	Catalog Number
Pendant							
	Inc./ Halogen	1 x 3/4" NPT	100 W	E27	7.4	39	LN1AZ102G2
			150 W	E27	7.4	39	LN1AZ152G2
Pendant Cone							
	Inc./ Halogen	1 x 3/4" NPT	100 W	E27	7.4	39	LN1DZ102G2
			150 W	E27	7.4	39	LN1DZ152G2
Ceiling							
	Inc./ Halogen	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	100 W	E27	7.4	39	LN1CZ10AG2
			150 W	E27	7.4	39	LN1CZ15AG2
Wall							
	Inc./ Halogen	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	100 W	E27	7.4	39	LN1WZ10AG2
			150 W	E27	7.4	39	LN1WZ15AG2
25° Angled Stanchion							
	Inc./ Halogen	1 x 1-1/4" NPT	100 W	E27	7.4	39	LN1SZ104G2
			150 W	E27	7.4	39	LN1SZ154G2
Straight Stanchion							
	Inc./ Halogen	1 x 1-1/4" NPT	100 W	E27	7.4	39	LN1RZ104G2
			150 W	E27	7.4	39	LN1RZ154G2

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22. Mercury Vapor

Zone 2 and 22
Gas (G) and Dust (D)

Version : Mercury Vapor

	Lamp Type		Cable Entry	Lamp Watts	Lampholder	Weight kg	Volume dm ³	Catalog Number
Pendant								
	MV	1 x 3/4" NPT	150 W	E27	7.4	39	LN1AM122G2XJ	
			250 W	E40	14.0	70	LN3AM252G4XJ	
			400 W	E40	19.0	85.2	LN4AM402G4XJ	
Pendant Cone								
	MV	1 x 3/4" NPT	150 W	E27	7.4	39	LN1DM122G2XJ	
			250 W	E40	14.0	70	LN3DM252G4XJ	
			400 W	E40	19.0	85.2	LN4DM402G4XJ	
Ceiling								
	MV	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	150 W	E27	7.4	39	LN1CM12AG2XJ	
			250 W	E40	14.0	70	LN3CM25AG4XJ	
			400 W	E40	19.0	85.2	LN4CM40AG4XJ	
Wall								
	MV	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	150 W	E27	7.4	39	LN1WM12AG2XJ	
			250 W	E40	14.0	70	LN3WM25AG4XJ	
			400 W	E40	19.0	85.2	LN4WM40AG4XJ	
25° Angled Stanchion								
	MV	1 x 1-1/4" NPT	150 W	E27	7.4	39	LN1SM124G2XJ	
			250 W	E40	14.0	70	LN3SM254G4XJ	
			400 W	E40	19.0	85.2	LN4SM404G4XJ	
Straight Stanchion								
	MV	1 x 1-1/4" NPT	150 W	E27	7.4	39	LN1RM124G2XJ	
			250 W	E40	14.0	70	LN3RM254G4XJ	
			400 W	E40	19.0	85.2	LN4RM404G4XJ	

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22. Metal Halide

Zone 2 and 22
Gas (G) and Dust (D)

Lighting

WELLGLASS LUMINAIRES

Version : Metal Halide

	Lamp Type	Cable Entry	Lamp Watts	Lampholder	Weight kg	Volume dm³	Catalog Number
Pendant							
	MH	1 x 3/4" NPT	150 W	E40	9.0	55	LN2AH152G2XJ
			250 W	E40	16.0	70	LN3AH252G4XJ
			400 W	E40	19.0	85.2	LN4AH402G4XJ
Pendant Cone							
	MH	1 x 3/4" NPT	150 W	E40	9.0	55	LN2DH152G2XJ
			250 W	E40	16.0	70	LN3DH252G4XJ
			400 W	E40	19.0	85.2	LN4DH402G4XJ
Ceiling							
	MH	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	150 W	E40	9.0	55	LN2CH15AG2XJ
			250 W	E40	16.0	70	LN3CH25AG4XJ
			400 W	E40	19.0	85.2	LN4CH40AG4XJ
Wall							
	MH	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	150 W	E40	9.0	55	LN2WH15AG2XJ
			250 W	E40	16.0	70	LN3WH25AG4XJ
			400 W	E40	19.0	85.2	LN4WH40AG4XJ
25° Angled Stanchion							
	MH	1 x 1-1/4" NPT	150 W	E40	9.0	55	LN2SH154G2XJ
			250 W	E40	16.0	70	LN3SH254G4XJ
			400 W	E40	19.0	85.2	LN4SH404G4XJ
Straight Stanchion							
	MH	1 x 1-1/4" NPT	150 W	E40	9.0	55	LN2RH154G2XJ
			250 W	E40	16.0	70	LN3RH254G4XJ
			400 W	E40	19.0	85.2	LN4RH404G4XJ

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

		Item	Description	Catalog Number
White Polyester Reflectors				
For Globe Fixtures – LN1 and LN2 sizes				
			Standard Dome	KR2ST
			30° Angle	KR2AN
For Glass Refractor Fixtures – LN3 and LN4 sizes				
			Standard Dome	CMR4ST
			30° Angle	CMR4AN
Guards				
For Globe Fixtures – LN1 and LN2 sizes				
			Aluminium	KRGU2
		For Glass Refractor Fixtures – LN3 and LN4 sizes		
			Stainless Steel	KPGU400

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

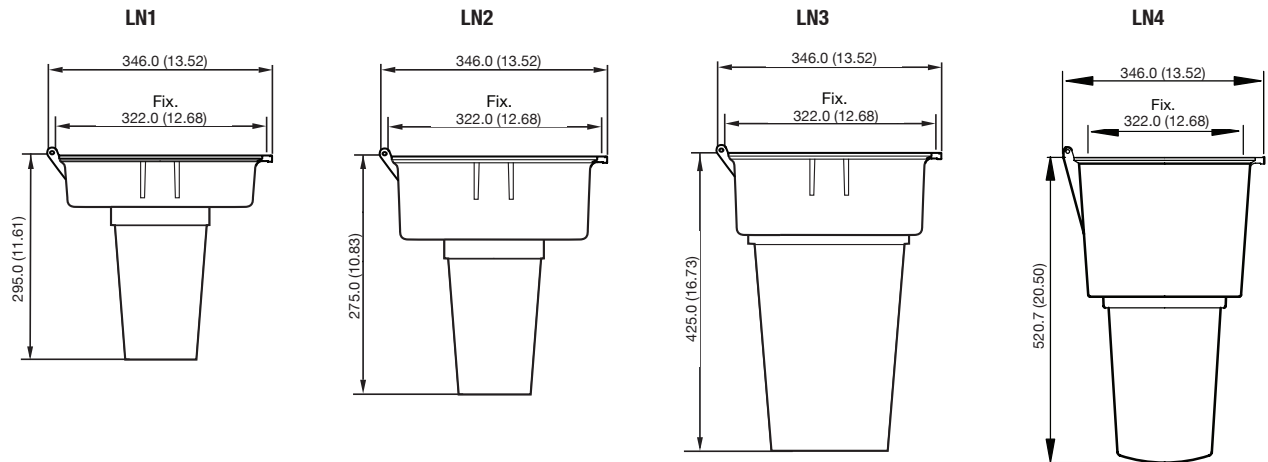
Zone 2 and 22
Gas (G) and Dust (D)

Lighting

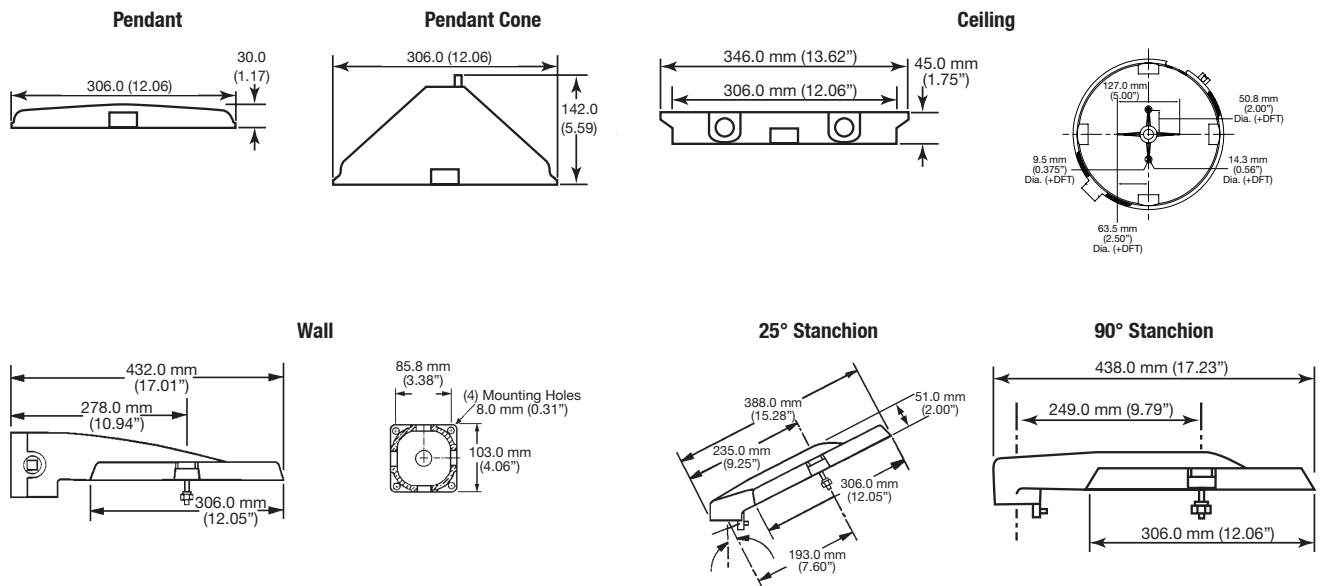
WELLGLASS LUMINAIRES

Dimensions in Millimeters (Inches)

Ballast Body with Globe



Mounting Hoods



LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

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

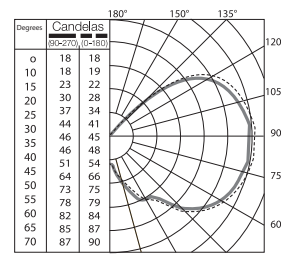
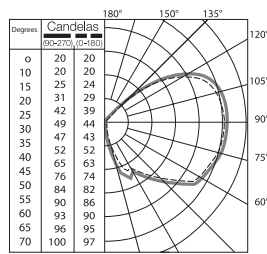
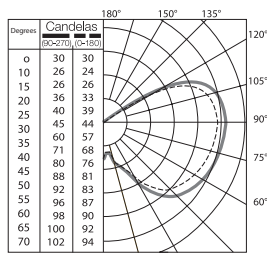
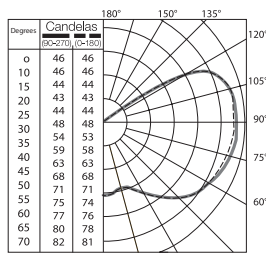
High Pressure Sodium

70 W HP Sodium — Efficiency 74.6%

150 W HP Sodium — Efficiency 87.3%

250 W HP Sodium — Efficiency 89.1%

400 W HP Sodium — Efficiency 82.3%

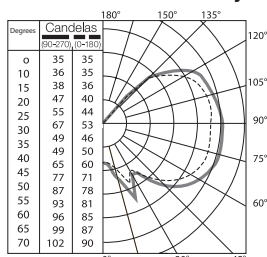
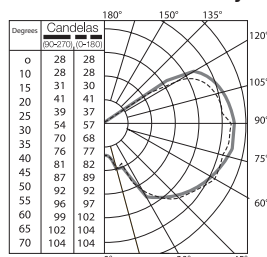
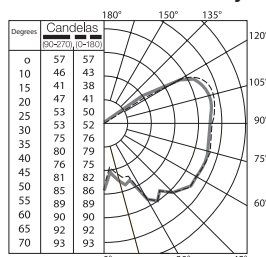


Metal Halide

150 W Metal Halide — Efficiency 82.4%

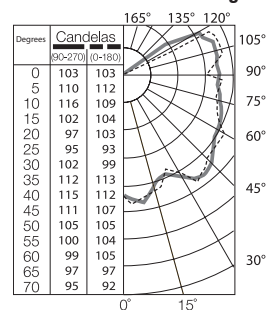
250 W Metal Halide — Efficiency 96.2%

400 W Metal Halide — Efficiency 89.8%



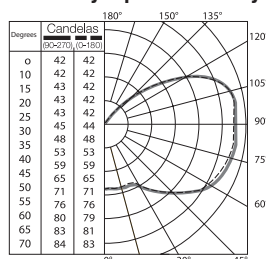
Incandescent or Halogen

150 W HP Incandescent Halogen — Efficiency 90.6%



Mercury Vapor

250 W Mercury Vapor — Efficiency 76%



HBE Series Round Bulkhead Luminaires

Increased Safety. Incandescent

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

Applications

- Suitable for use in:
 - Stairways
 - Small areas
 - Emergency exit

Features

- For incandescent lamps 60 W to 150 W maximum, mixed lamp 100 W maximum. Lamps not supplied.
- E27 lampholder.
- Screw locking mechanism.
- Operates in all positions.
- Connection to lampholder via two 2 x 2.5 mm² terminals.
- Internal earth two terminals 2 x 2.5 mm². External earth 1 x 4 mm².
- Three M20 entries in "T" formation. Supplied with one M20 cable gland [6.5 to 14.5 mm diameter] and two M20 blanking plugs.

Standard Materials

- Body: gray painted aluminum alloy
- Diffuser: glass
- Sealing gasket: silicone
- Guard: zinc plated steel
- Cable gland and blanking plug: polyamide

Certifications and Compliances

◆ATEX Certification

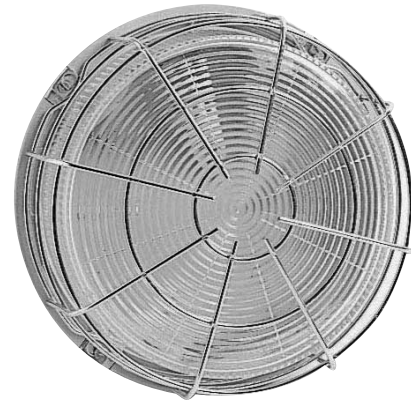
- **HBRD - Certification HBe150**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex e II
 - Temperature Class: *See Table on following page*
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T102 °C to T137 °C
 - Ambient Temperature: -40 °C to +50 °C
 - CE Declaration of Conformity: 50244
 - ATEX Certificate: LCIE 02 ATEX 6228X
 - Index of Protection according EN/IEC 60529: IP65

◆EURASEC Certification

- EURASEC N° TC RU C-FR.г505.B.00912

◆Others Certification

- INMETRO Certificate: BVC 11.0494-X ^①



HBERI15 and HBEPGZ

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

HBE Series Round Bulkhead Luminaires

Increased Safety. Incandescent

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



Weight kg

3

Volume dm³

15

Catalog Number

HBER115

Accessories

Catalog Number

Protective Guard

HBEPGZ

Spare Lamp Glass

HBEGD

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

Lamp Type and Wattage			Gas				Dust
Wattage	Type	Operating Positions	For Ta = +40° C		For Ta = +50° C		Surface T° for Ta = +50° C
			T Rating	T° at Cable Entry	T Rating	T° at Cable Entry	
60	Incandescent	Any Position	T2	①	T2	①	+102 °C
			T3	①	T3	①	
			T4	①	T4	①	
75	Incandescent	Any Position	T2	①	T2	①	+107 °C
			T3	①	T3	①	
			T4	①	T4	①	
100	Mercury	Any Position	T2	①	T2	+83 °C	+117 °C
			T3	①	T3	+83 °C	
			T3	①	T3	①	
100	Incandescent	Any Position	T1	+90 °C	T1	+100 °C	+137 °C
			T3	+90 °C	T2	+100 °C	
			T3	①	T3	①	
150	Mixed	Any Position	T2	+82 °C	T2	+92 °C	+130 °C
			T3	+82 °C	T3	+92 °C	
			T3	①	T3	①	

① Not Applicable, no need for high temperature cable for cable entry temperature less than +80 °C.

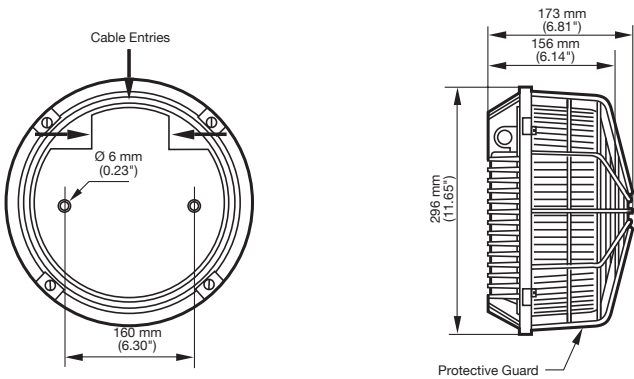
Shaded catalog numbers are normally stocked items. All other items are made to order.

HBE Series Round Bulkhead Luminaires

Increased Safety. Incandescent

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

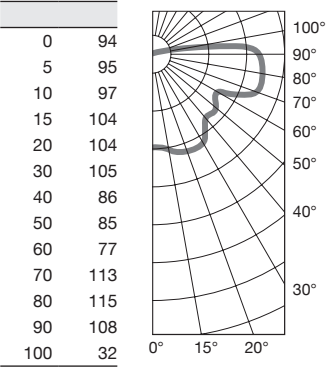
Dimensions in Millimeters (Inches)



Photometric Data ①

150 W Incandescent
NF C 71-120: .062 J + 0.10 T

CANDELA DISTRIBUTION



① Polar curves for a 1000 lm flux, according to NF C 71-120. Luminaire symbol according to NF C 71-121.

HBN Series Round Bulkhead Luminaires

Flameproof. Incandescent

Zone 2 and 22
Gas (G) and Dust (D)

Applications

- Suitable for use in:
 - Stairways
 - Small areas
 - Emergency exit

Features

- For incandescent lamps 60 W to 150 W maximum, mixed lamp 100 W maximum, mercury 80 W maximum (remote mercury ballast not supplied). Lamps not supplied.
- E27 lampholder.
- Screw locking mechanism.
- Operates in all positions.
- Connection to lampholder via two 2 x 2.5 mm² terminals.
- Internal earth two terminals 2 x 2.5 mm². External earth 1 x 4 mm².
- Three M20 entries in "T" formation. Supplied with one M20 cable gland [6.5 to 14.5 mm diameter] and two M20 blanking plugs.

Standard Materials

- Body: gray painted aluminum alloy
- Diffuser: glass
- Sealing gasket: silicone
- Guard: zinc plated steel
- Cable gland and blanking plug: polyamide

Certifications and Compliances

◆ATEX Certification

• Certification Type: HBN150

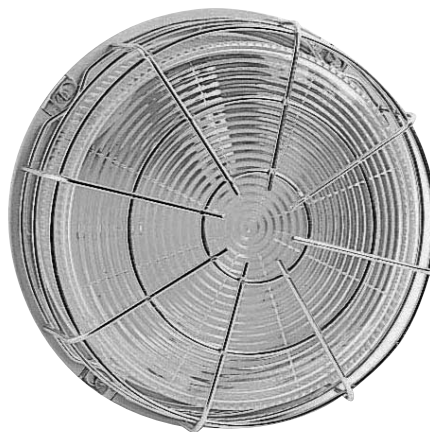
- Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 3 G
 - Type of Protection: Ex nR II
 - T Rating: *See Table on following page*
- Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 3 D
 - Type of Protection: Ex tD A22
 - Surface Temperature: *See Table on following page*
- Ambient Temperature: -20 °C ≤ Ta ≤ +50 °C
(-20 °C ≤ Ta ≤ +40 °C for 80 W Mercury)
- CE Declaration of Conformity: 50220
- ATEX Certificate: LCIE 03 ATEX 6167X
- Index of Protection according EN/IEC 60529: IP65

◆EURASEC Certification

- EURASEC N° TC RU C-FR.ГБ.05.B.00912

◆Others Certification

- INMETRO Certificate: BVC 11.0462-X ^①



HBNRI15 and HBEPGZ

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

HBN Series Round Bulkhead Luminaires

Flameproof. Incandescent

Zone 2 and 22
Gas (G) and Dust (D)

	Weight kg	Volume dm ³	Catalog Number
	3	15	HBNRI15

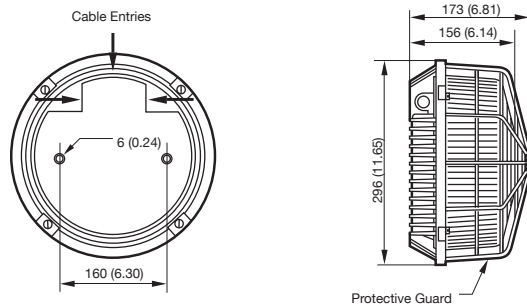
Accessories

	Catalog Number
Protective Guard	HBEPGZ
Spare Lampglass	HBEGD

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

Lamp Type and Wattage		T Rating for Ta = +40 °C	Gas T Rating for Ta = +50 °C	T° at Cable Input	Dust Surface T° for Ta = +50 °C
Wattage	Type				
60	Incandescent	T5	T4	—	+101 °C
75	Incandescent	T5	T4	—	+104 °C
80	Mercury	T3	—	—	+131 °C Ta = +40 °C
100	Incandescent	T4	T4	+83 °C	+114 °C
100	Mixed	T4	T4	+100 °C	+125 °C
150	Incandescent	T4	T4	+92 °C	+120 °C

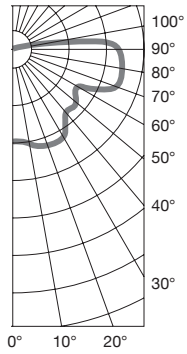
Dimensions in Millimeters (Inches)



Photometric Data ①

Incandescent
NF C 71-120: .062 J + 0.10 T

CANDELA DISTRIBUTION

0	185	
5	178	
10	171	
15	156	
20	132	
30	110	
40	97	
50	87	
60	90	
70	100	
80	96	
90	58	
100	58	

① Polar curves for a 1000 lm output according to NF C 71-120. Luminaire symbol according to NF C 71-121.

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

HBD Series Bulkhead Luminaires

Flameproof. Incandescent, Compact Fluorescent, Mixed

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

Applications

- Suitable for use in:
 - Stairways
 - Small areas
 - Emergency exit

Features

- HBDR**
 - Lamps (not supplied)
 - Incandescent 200 W maximum
 - Compact Fluorescent 23 W maximum
 - Mixed 160 W maximum
 - Threaded flameproof joint.
 - Operates on ceiling and wall.
- HBDO**
 - Incandescent 60 W to 100 W maximum
 - Compact fluorescent 15 W maximum
 - Operates in any position.
 - For incandescent 60 W and 100 W a high temperature cable 106 °C is required.
- Lamps are not supplied.
- E27 lampholder.
- Fixing by two integrated brackets.
- Connection to lampholder via two terminals 2.5 mm².
- Internal earth two terminals 2.5 mm²
- External earth one 4 mm².
- 3 x M20 threaded entries in "T" formation.
- Supplied with two blanking plugs M20.
- Supplied with Protective Guard

Standard Materials

- Body and bezel: gray painted aluminum
- Glass: sealed toughened lamp glass
- Protective guard: zinc plated steel

Certifications and Compliances

◆ATEX Certification

- HBRD - Certification Type HBRd**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: See Table on following page
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex td A21
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50242
 - ATEX Certificate: LCIE 02 ATEX 6163
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK08
 - Internal Volume: > 2 dm³ -2 liters
- HBDO - Certification Type HBOD**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature Class: See Table on following page
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex td A21
 - Ambient Temperature: -20 °C to + 40 °C



HBDR
Round Bulkhead (supplied with Protective Guard)



HBDO
Oval Bulkhead (supplied with Protective Guard)

- CE Declaration of Conformity: 50234
- ATEX Certificate: LCIE 02 ATEX 6162
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ -2 liters

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆Others Certification

- HBDO - Certification Type HBOD**
 - INMETRO Certificate: BVC11.0597 ①

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

HBDR Series Bulkhead Luminaires

Flameproof. Incandescent, Compact Fluorescent, Mixed

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

	Weight kg	Volume dm ³	Catalog Number
	7.5	23.4	HBDR

Spare Parts

	Catalog Number
Protective Guard	HBDRPGZ

T Rating for Gas ①

Lamp Type and Wattage			Operating Positions					
			Ceiling			Wall		
Wattage	Type	Ambient Temperature	+40° C	+50° C	+55 °C	+40° C	+50° C	+55 °C
8	Compact Fluorescent	T Rating	T6	T6	T6	T6	T6	T6
15	Compact Fluorescent	T Rating	T6	T6	T6	T6	T6	T6
23	Compact Fluorescent	T Rating	T6	T6	T6	T5	T5	T4
100	Incandescent	T Rating	T5	T4	T4	T5	T4	T4
200	Incandescent	T Rating	T4	T4	T4	T4	T4	T4
		T° at cable entry	—	+84° C	+89° C	—	+84° C	+89° C
100	Mixed	T Rating	T4	T4	T4	T4	T4	T4
180	Mixed	T Rating	T3	T3	T3	T3	T3	T3
		T° at cable entry	—	+87 C	+92° C	—	+87 C	+92° C

Surface Temperature for Dust ①

Lamp Type and Wattage		Operating Positions			
		Ceiling		Wall	
Wattage	Type	Surface T° for Ta = +55 °C	T° at Cable Entry Ta= +55 °C	Surface T° for Ta= +55 °C	T° at Cable Entry Ta= +55 °C
8	Compact Fluorescent	+60 °C	—	+70 °C	—
15	Compact Fluorescent	+64 °C	—	+76 °C	—
23	Compact Fluorescent	+69 °C	—	+96 °C	—
100	Incandescent	+105 °C	—	+105 °C	—
200	Incandescent	+130 °C	+89 °C	+130 °C	+89 °C
100	Mixed	+130 °C	—	+130 °C	—
160	Mixed	+149 °C	+92 °C	+149 °C	+92 °C

① No need for high temperature cable for cable entry temperature less than +80 °C .

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

HBDO Series Bulkhead Luminaires

Flameproof. Incandescent, Compact Fluorescent

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

	Weight kg	Volume dm ³	Catalog Number
	3	9	HBDO

Spare Parts

	Catalog Number
Protective Guard	HBDOPGZ
Terminal block For through wiring 2 x 2.5 mm ² with high temperature sleeve	094784

T Rating for Gas ①

Lamp Type and Wattage		Temperature Class for Ta = +40 °C	T° at Cable Input for Ta = +40 °C
Wattage	Type		
7	Compact Fluorescent	T6	—
11	Compact Fluorescent	T6	—
15	Compact Fluorescent	T6	—
60	Incandescent	T4	+106 °C
100	Incandescent	T4	+106 °C

T Rating for Dust ①

Lamp Type and Wattage		Temperature Class for Ta = +40 °C
Wattage	Type	
7	Compact Fluorescent	+76 °C
11	Compact Fluorescent	+76 °C
15	Compact Fluorescent	+76 °C
60	Incandescent	+119 °C
100	Incandescent	+119 °C

① No need for high temperature cable for cable entry temperature less than +80 °C .

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

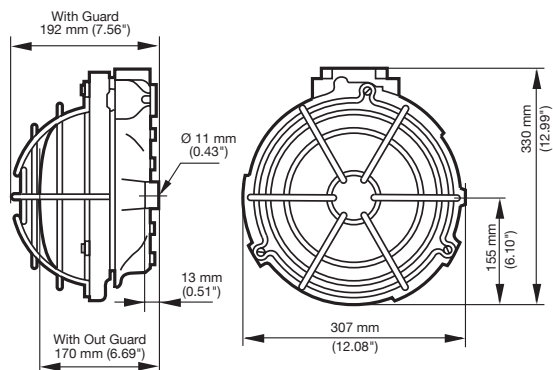
HBD Series Bulkhead Luminaires

Flameproof. Incandescent, Compact Fluorescent, Mixed

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

HBDR Series Bulkhead Luminaires — Incandescent, Compact Fluorescent, Mixed

Dimensions in Millimeters (Inches)

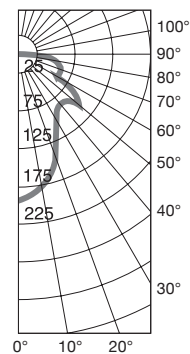


Photometric Data ①

Incandescent
NF C 71-120: .068 G + 0.01 T

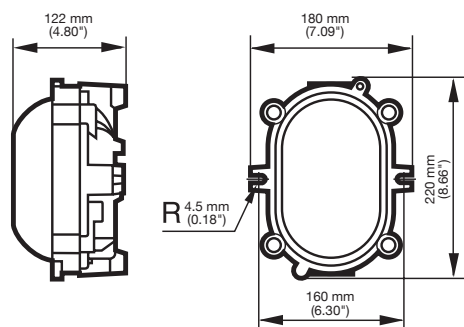
CANDELA DISTRIBUTION

0	185
5	178
10	171
15	156
20	132
25	110
30	97
35	87
40	90
45	100
50	96
60	58
70	58



HBDO Series Bulkhead Luminaires — Incandescent, Compact Fluorescent

Dimensions in Millimeters (Inches)

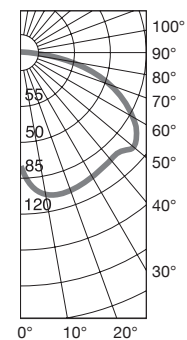


Photometric Data ①

Incandescent
NF C 71-120: .068 H

CANDELA DISTRIBUTION

0	67
5	94
10	96
15	99
20	99
25	97
30	95
35	96
40	91
45	91
50	98
60	87
70	69



① Polar curves for a 1000 lm output according to NF C 71-120. Luminaire symbol according to NF C 71-121.

HBDC Series Cylindrical Bulkhead Luminaires

Flameproof. Incandescent, Fluorescent, High Pressure Sodium

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

Applications

- For illumination of:
 - Stairways
 - Small areas
 - Emergency exit

Features

- For lamps:
 - 70 W high pressure sodium (ovoid type E27 lampholder)
 - 18/20 W compact fluorescent lamp (E27 lampholder)
 - 2 x 40 W incandescent lamp (E27 lampholder)
 - 8 W fluorescent bulb (G5 lampholder) (lamp supplied)
- HPS version: compensated power supply (+/-10%) with power factor 0.9:
 - 230/240 V, 50 Hz
- Connection to plug-in terminal block via 2 x 3 terminals 2.5 mm²
- Operates in any position.
- Threaded access cover with O-ring seal.
- Two integrated mounting lugs.
- 1 external earth via 4 mm² bracket.
- 2 x M20 threaded cable entries.
- Supplied with 1 plug M20 (cable gland not supplied).

Standard Materials

- End cap and cover: Zamak, anticorrosion treated and painted gray
- Sealed tube: toughened glass
- External reflector: galvanized steel painted white
- Protective guard: zinc plated steel
- Lamps are not supplied except for 8 W fluorescent bulb

Options

- Fixing accessories available in 316 stainless steel or zinc plated steel.
- Fall prevention fixing kit in stainless steel.

Certifications and Compliances

◆ATEX/IECEX Certification

• Certification Type: FLd

- Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIB/IIC
 - Temperature Class: See Table on following page
- Dust: Zone 21 - 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 ≤ Ta ≤ +50 °C ;
for 70 W HPS: -40 °C ≤ Ta ≤ +50 °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 (10 m)
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ - 2 liters



70 W High Pressure Sodium Version



Compact Fluorescent Version

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Γ505.B.00912

◆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

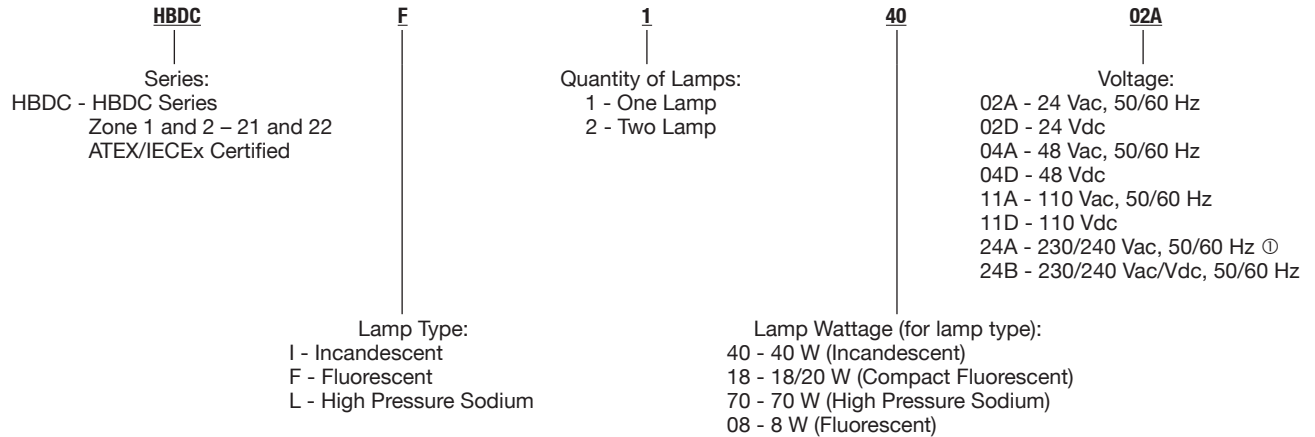
HBDC Series Cylindrical Bulkhead Luminaires

Flameproof. Incandescent, Fluorescent, High Pressure Sodium

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

Order using catalog numbering guide below to decipher the catalog number logic on the following page.

Catalog Numbering Guide — HBDC Series Cylindrical Bulkhead Luminaires



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

Versions	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 = +40 °C	Ta = +55 °C	°C	°C
Incandescent lamp (2 x 40 W) ②	T5	T5	T5	T5	+95°C	+95°C
Compact Fluorescent lamp (20 W max)	T6	T5	T5	T4	+95°C	+130°C
Fluorescent (8 W - G5 lampholder)	T6	T5	T5	T4	+95°C	+130°C
High Pressure Sodium Lamp (70 W ovoid) ②	T4 for Ta = +50 °C		–	–	+122°C	–

① 50 Hz only for the 70 W HPS Version.

② Lamp not supplied.

HBDC Series Cylindrical Bulkhead Luminaires

Flameproof. Incandescent, Fluorescent, High Pressure Sodium

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

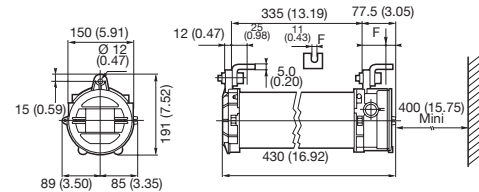
Lamp	Lampholder	Voltage	Weight kgs	Volume dm ³	Catalog Number
2x40 W Incandescent ①	E27	—	7.1	31	HBDCI240
70 W High Pressure Sodium ①	E27	230/240 Vac, 50 Hz	7.1	33	HBDCI17024A
1 x 8 W Fluorescent	G5	24 Vdc	8.3	31	HBDCF10802D
1 x 8 W Fluorescent	G5	48 Vdc	8.3	31	HBDCF10804D
1 x 8 W Fluorescent	G5	110 Vdc	8.3	31	HBDCF10811D
1 x 8 W Fluorescent	G5	230/240 Vac, 50/60 Hz 198/254 Vdc	8.3	31	HBDCF10824B
2 x 8 W Fluorescent	G5	230/240 Vac, 50/60 Hz 198/254 Vdc	8.3	31	HBDCF20824B
1 x 18/20 W Compact Fluorescent ①	E27	—	7.1	33	HBDCF118

	Description	Catalog Number
	External reflector in galvanized steel (painted white) (not compatible with 70 W HPS version)	FDER1G
	Protective guard in zinc plated steel	FDPG1Z
	Protective guard in zinc plated steel for 70 W HPS version	FDPG5Z
	Quick one-hand fixing (Set of 2 brackets) in zinc plated steel	FDFBZ
	Quick one-hand fixing (Set of 2 brackets) in 316 stainless steel	FDFBS
	Fixing unit on flat surface (Set of 2 brackets) in zinc plated steel	FDSBZ
	Fixing unit on flat surface (Set of 2 brackets) in 316 stainless steel	FDSBS
	Fixing unit in zinc plated steel for 1-1/2" tube [49 mm diameter] or for 1-1/4" tube [42 mm diameter]	FDHC49Z
	Fixing unit in 316 stainless steel for 1-1/2" tube [49 mm diameter] or for 1-1/4" tube [42 mm diameter]	FDHC49S
	Fixing unit in zinc plated steel for 2" tube [60 mm diameter]	FDHC60Z
	Fixing unit in stainless steel for 2" tube [60 mm diameter]	FDHC60S
	Fall prevention fixing kit in stainless steel [1.2 m chain]	FDSCS

① Lamp not supplied.

Lighting

BULKHEAD LUMINAIRES

HBDCL17024A (70 W HP High Pressure Sodium)

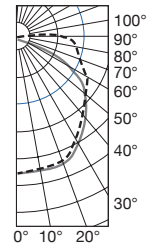
Polar curves for a 1000 lm flux, according to NF C 71-120.
Luminaire symbol according to NF C 71-121.

 Longitudinal
 Transverse

2x40 W Incandescent
Efficiency: 75.6%
NFC 71-121: 0.74G + 0.02T

CANDELA DISTRIBUTION

	0-180	90-270
0	196	196
5	197	198
10	196	196
15	193	194
20	189	190
25	181	185
30	176	179
35	170	172
40	163	164
45	155	153
50	145	128
60	123	91
70	99	43



HBDA Series Rectangular Bulkhead Luminaires

Flameproof. Compact Fluorescent, Incandescent

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

Applications

- For illumination of:
 - Stairways
 - Small areas
 - Emergency exit

Features

- Lamps (not supplied):
 - Incandescent 2 x 40 W
 - Compact fluorescent 1 x 18/20 W
- E27 lampholder.
- Operates in any position.
- Fixing by 2 brackets.
- Connection on two terminals 1 x 4 mm².
- Internal earth 1 x 4 mm².
- External earth 1 x 4 mm².
- Two M20 threaded entries.
 - Supplied with one aluminum blanking plug.

Standard Materials of Fixtures

- Body: gray painted cast aluminum
- Lens: sealed toughened lamp glass

Certifications and Compliances

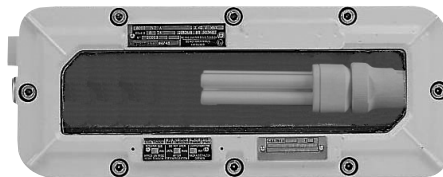
◆ATEX Certification

• Certification Type: BRI40

- Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIB+H2
 - Temperature Class:
 - T4 Incandescent
 - T6 Compact Fluorescent
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature:
 - T135 °C Incandescent,
 - T85 °C Compact Fluorescent
- Ambient Temperature: -20 °C to +40 °C
- CE Declaration of Conformity: 50252
- ATEX Certificate: LCIE 03 ATEX 6098X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK09
- Internal Volume: > 2 dm³ - 2 liters

Related Products

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



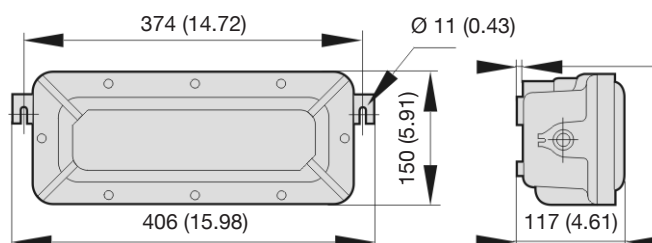
HBDA Series Rectangular Bulkhead Luminaires

Flameproof. Compact Fluorescent, Incandescent

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

Number of Lamps (not supplied)	Lamp Type and Wattage	Cable Entries	Weight kg	Volume dm ³	Catalog Number
1	18/20 W Compact Fluorescent	M20	5.7	9	HBDAF118
2	40 W Incandescent	M20	5.7	9	HBDAI240

Dimensions in Millimeters (Inches)

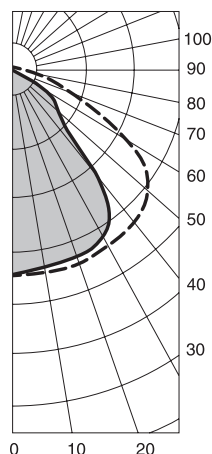


Photometric Data

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

--- Longitudinal
— Transverse

Degree	Candela Distribution	
	(0–180)	(90–270)
0	134	134
5	129	133
10	127	135
15	126	136
20	125	135
25	119	131
30	109	127
35	89	122
40	69	119
45	51	114
50	39	105
60	26	84
70	11	35



HRD Series Tank Inspection Lights

Flameproof. Incandescent, Halogen

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

Applications

- Designed to illuminate the interiors of boilers, tanks, bunkers, silos, mixers, separators, pipelines and other vessels or reactors that are normally closed.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

Features

- Type IIB version:
 - 40 W to 100 W incandescent or 50 W halogen lamp (lamp not supplied).
 - Internal aluminum reflector.
 - Operates in any position.
 - E27 lampholder.
 - Terminals: 2.5 mm².
 - Internal and external earth: 2.5 mm².
 - High temperature cable to be used.
 - Fixing by three integrated lugs.
 - One M20 threaded cable entry.
- Type IIC version:
 - 20 W to 50 W halogen lamp (lamp supplied).
 - Internal aluminum reflector.
 - Operates in any position.
 - G4 lampholder for 20 W and BA 15d for 50 W.
 - Power supply: 230 V 50/60 Hz.
 - Fitted with transformer 230/12 V for 12 V halogen lamp.
 - Terminals: 2.5 mm² terminals.
 - Internal earth: 2.5 mm².
 - External earth: 4 mm².
 - Supplied with a set of rocker hinges for mounting with DN 50 to DN 150 sightglass fittings (according to DIN 28 120).
 - One M20 threaded cable entry (via increased safety "e" box).

Standard Materials

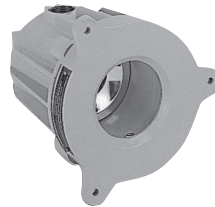
- Body and bezel: gray painted marine grade aluminum alloy
- Lens: toughened sealed lamp glass
- Reflector: internal aluminum

Certifications and Compliances

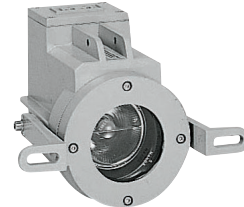
◆ ATEX Certification

• IIB Version - Certification Type: HRCd

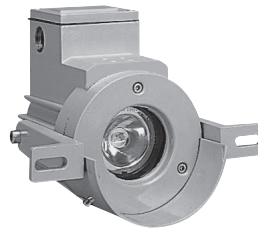
- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T4 to T3
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T130 °C to T195 °C
- Ambient Temperature: -40 °C to +40 °C
- CE Declaration of Conformity: 50241
- ATEX Certificate: LCIE 02 ATEX 6232
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ -2 liters



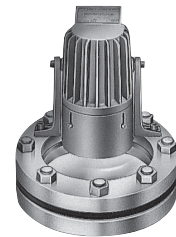
IIB Version



IIC Version (50 W)



IIC Version (20 W)



IIB Version Fitted with
DN Model Sightglass Fitting

• IIC Version - Certification Type: HRC 20WH (20W), HRC 50 (50W)

- Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T4 (20W), T3 (50W)
- Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: 20 W: T130 °C, 50 W: T195 °C
- Ambient Temperature: -20 °C to +40 °C
- CE Declaration of Conformity: 50260 (20W), 50661 (50W)
- ATEX Certificate: LCIE 03 ATEX 6110 (20W), LCIE 03 ATEX 6109 (50W)
- Index of Protection according EN/IEC 60529: IP65

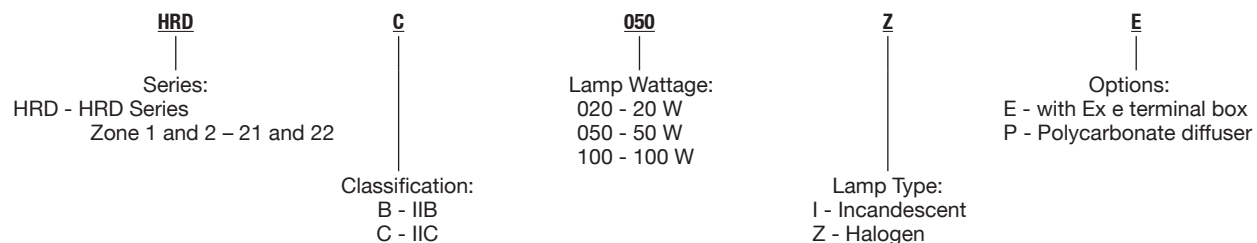
HRD Series Tank Inspection Lights

Flameproof. Incandescent, Halogen

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

Order using catalog numbering guide below or select catalog number from table below

Catalog Numbering Guide — HRD Series Tank Inspection Lights



Description	Type	Weight kg	Volume dm ³	Catalog Number
40 W to 100 W incandescent or 50 W halogen ①	IIB	2.90	8.10	HRDB100I
20 W halogen ② 230 V, 50/60 Hz	IIC	2.30	3.00	HRDC020ZE
50 W halogen ② 230 V, 50/60 Hz	IIC	4.00	3.60	HRDC050ZE

Technical Data

Catalog Number	Version	Lamp Type and Wattage	T Rating	Ambient Temperature = +40 °C	
				Gas Cable Temperature	Dust Surface Temperature
HRDB100I (lamp not supplied)	IIB	40 W Incandescent	T4	N.A.	+130 °C
		60 W Incandescent	T3	+87 °C	+137 °C
		100 W Incandescent	T3	+107 °C	+195 °C
		50 W Halogen	T3	+82 °C	+149 °C

① Can also be used with compact fluorescent lamp.

② Lamp supplied.

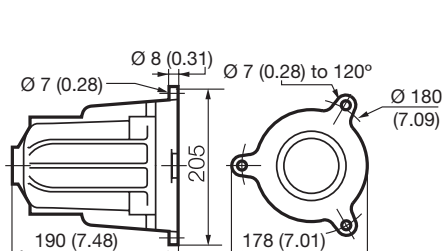
Shaded catalog numbers are normally stocked items. All other items are made to order.

HRD Series Tank Inspection Lights

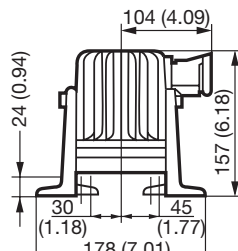
Flameproof. Incandescent, Halogen

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

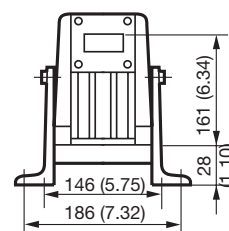
Dimensions in Millimeters (Inches)



HRDB100I



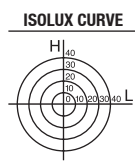
HRDC020ZE



HRDC050ZE

Photometric Data

IIC Versions



20 W Version		Illuminance E (lux)				
Height (m)	Distance (cm)	0	10	20	30	40
1	L	3000	1000	125	–	–
	H	3000	900	75	–	–
2	L	1150	750	300	100	50
	H	1150	750	300	100	50

50 W Version		Illuminance E (lux)				
Height (m)	Distance (cm)	0	10	20	30	40
1	L	12000	2300	375	50	–
	H	12000	2700	250	50	–
2	L	2550	1550	600	200	–
	H	2550	1800	800	200	–

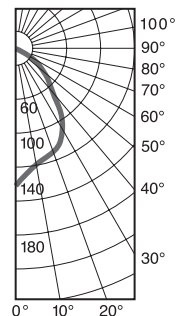
IIB Versions

Polar curves for a lumen output of 1000 lm flux,
according to NF C 71-120
Luminaire symbol as per NF C 71-121

100 W Incandescent

CANDELA DISTRIBUTION

Degree	Candelas
0	155
5	145
10	136
15	135
20	133
25	127
30	112
35	90
40	66
45	54
50	46
60	29
70	11



TCH Series Safety Flashlights

Increased Safety. Halogen, Incandescent

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

Applications

- To provide maintenance staff with task specific portable lighting in Zone 1 hazardous areas.
- Ideal for persons requiring task specific portable lighting in refineries, oil and gas process and chemical plants, FPSO, FLNG, ...

Features

- Type TCH1:
 - Luminescent switch facilitates locating flashlight in dark.
 - Can be used to transmit a Morse code.
 - Halogen version provides twice the lumen output of incandescent lamps.
 - Hook for hands free operation.
 - Uses R20 or LR20 batteries (not included).
 - Supplied with 1 lamp.
- Type TCH2:
 - Dual optics (one at the end and one on the side) permitting:
 - Focused beam for safe movement.
 - Wide angle side beam for task specific focused lighting.
 - Ergonomic design permits easy manipulation: User can select one of the two beams with one hand.
 - Two beams can be switched on separately and not simultaneously.
 - Should one lamp fail, the second lamp will still provide illumination.
 - Flashlight is stable when placed upright on a horizontal surface.
 - Pocket clip allows for hands free work.
 - Luminescent ring allows easy locating of flashlight in dark.
 - Suspension hook for hands free use.
 - Uses 2 R20 or LR20 batteries (not included).
 - Supplied with one halogen lamp for main beam and one incandescent lamp for side beam.
 - Supplied with one special opening tool.

Standard Materials

- Type TCH1:
 - Housing: shockproof and antistatic polyamide
 - Internal reflector: polished
 - Lens: polycarbonate
 - Hardware: stainless steel
 - Switch: luminescent
- Type TCH2:
 - Housing: black polycarbonate
 - Internal reflector: polished
 - Lens: polycarbonate
 - Hardware: stainless steel
 - Ring: luminescent

Certifications and Compliances

◆ATEX Certification

• Certification Type: TCH1

- Gas: Zones 1–2
 - Conforming to ATEX 94/9/CE: II 2 G
 - Type of Protection: Ex eib IIC
 - Temperature Class: T4
- Dust: Zone 21-22
 - Conforming to ATEX 94/9/CE: II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: +95 °C



TCH1



TCH2

- Ambient Temperature: -20 °C ≤ To ≤ +40 °C
- CE Declaration of Conformity: 50259
- ATEX Certificate: LCIE 03 ATEX 6064
- Index of Protection according EN/IEC 60529: IP66

• Certification Type: TCH2

- Gas: Zones 1–2
 - Conforming to ATEX 94/9/CE: II 2 G
 - Type of Protection: Ex eib IIC
 - Temperature Class:
 - Incandescent PR6:T4 (+55°C)
 - Krypton PR102: T4 (+55°C)
 - Halogen HPR52: T4 (+40°C) - T3 (+55°C)
 - Halogen HPR01: T4 (+55°C)
- Dust: Zone 21-22
 - Conforming to ATEX 94/9/CE: II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: +130 °C
- Ambient Temperature: -20 °C ≤ To ≤ +55 °C
- CE Declaration of Conformity: 50238
- ATEX Certificate: LCIE 02 ATEX 6229
- Index of Protection according EN/IEC 60529: IP66/68 (25m)

◆Others Certification

• Certification Type: TCH1 / TCH2

- INMETRO Certificate: BVC11.0419 (TCH1) and BVC11.0420 (TCH2) ^①

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

TCH Series Safety Flashlights

Increased Safety. Halogen, Incandescent

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

Ordering Information:

Number of lamps (included)	Type of Lamps (not included)	Number of Battery Cells	Weight kgs	Volume dm ³	Catalog Number
1	Incandescent — 2.5 V – 0.3 A	2	0.4	3.4	TCH12C
1	Incandescent — 3.7 V – 0.3 A	3	0.4	3.4	TCH13C
1	Halogen — 2.8 V – 0.5 A	2	0.4	3.4	TCH12H
2	Incandescent — 2.5 V – 0.3 A Halogen — 2.8 V – 0.5 A	2	0.4	1.9	TCH22M

Spare Lamps for Replacement (Lamp Holder P13, 5S)

Lamp Type	Rating	Catalog Number
Incandescent (PR6)	2.5 V – 0.3 A	TCHL25C
Incandescent (PR7)	3.7 V – 0.3 A	TCHL37C
Halogen (HPR01)	2.8 V – 0.5 A	TCHL28H

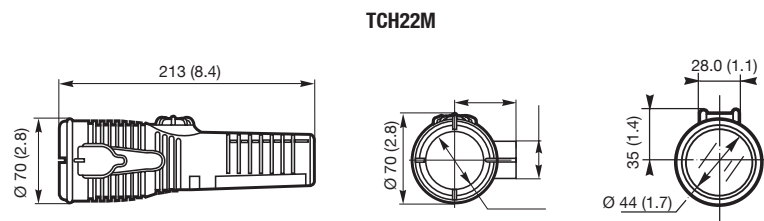
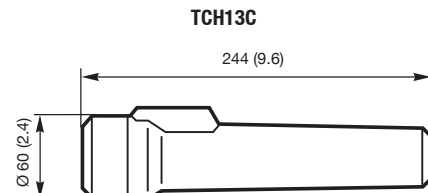
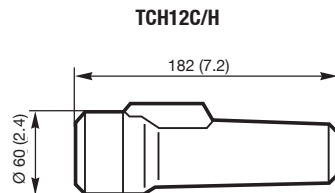
Shaded catalog numbers are normally stocked items. All other items are made to order.

TCH Series Safety Flashlights

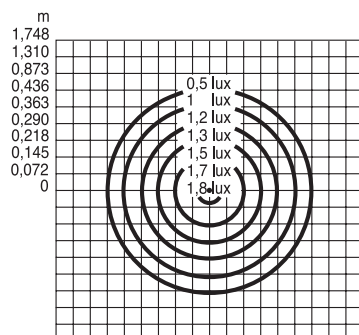
Increased Safety. Halogen, Incandescent

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

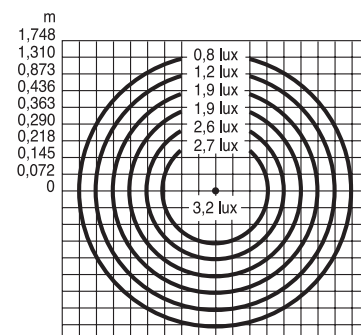
Dimensions in Millimeters (Inches)



Photometric Data



Catalog Number TCH12C (at 25 meters) Incandescent



Catalog Number TCH13C (at 25 meters) Incandescent

HLD Series Handlamps

Flameproof. Incandescent, Halogen

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

Applications

- To provide maintenance staff with task specific portable lighting in Zone 1 hazardous locations.
- Ideal for persons requiring task specific portable lighting in refineries, oil and gas process and chemical plants.

Features

- To be supplied with SELV (Service Extra Low Voltage) 24 Vac or 30 Vdc.
- 75 W maximum for incandescent lamp.
- 70 W maximum for halogen lamp.
- E27 lamp holder for incandescent lamp (not supplied).
- PK22S lamp holder for H3 lamp (supplied).
- Connection via two terminals — 1 x 2.5 mm².
- One M20 threaded entry.
- Protective guard.
- Fitted with suspension hook.

Standard Materials

- Body and bezel: gray painted aluminum alloy
- Lamp glass: sealed borosilicate glass
- Protective guard: white zinc plated steel

Certifications and Compliances

◆ ATEX Certification

• Certification Type: BLd

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: T3 to T5 [See Table]
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T110 °C to T138 °C [See Table]

- Ambient Temperature: -20 °C to +55 °C
- CE Declaration of Conformity: 50240
- ATEX Certificate: LCIE 02 ATEX 6164
- Index of Protection according EN/IEC 60529: IP66
- Internal Volume: < 2 dm³ - 2 liters



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

		Gas				Dust
Type	Ambient T°	Lamp glass facing up		Lamp glass facing down		Surface Temperature
		Ta = +40 °C	Ta = +55 °C	Ta = +40 °C	Ta = +55 °C	
40 W Incandescent	T Rating	T5	T4	T5	T4	+110 °C
	Cable T°	+56 °C	+71 °C	+66 °C	+81 °C	N.A.
60 W Incandescent	T Rating	T4	T4	T4	T4	+130 °C
	Cable T°	+61 °C	+76 °C	+73 °C	+88 °C	N.A.
75 W Incandescent	T Rating	T4	T3	T4	T4	+138 °C
	Cable T°	+67 °C	+82 °C	+79 °C	+94 °C	N.A.
55 W Halogen	T Rating	T4	T4	T4	T4	+122 °C
	Cable T°	+67 °C	+82 °C	+79 °C	+94 °C	N.A.
70 W Halogen	T Rating	T4	T4	T4	T4	+122 °C
	Cable T°	+67 °C	+82 °C	+79 °C	+94 °C	N.A.

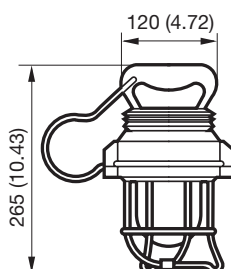
HLD Series Handlamps

Flameproof. Incandescent, Halogen

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

Lamp Type, Wattage and Voltage	Weight kg	Volume dm ³	Catalog Number
75 W Maximum for Incandescent Lamp	2.8	13	HLD7502B
55 W Halogen 12 Vac/Vdc ^①	2.8	13	HLD5501B
70 W Halogen 24 Vac/Vdc ^①	2.8	13	HLD7002B

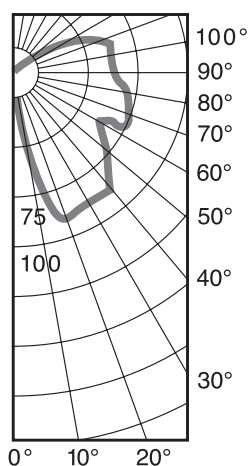
Dimensions in Millimeters (Inches)



Photometric Data

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

Degrees	Candelas
0	23
5	37
10	51
15	68
20	83
25	82
30	82
35	82
40	82
45	77
50	72
60	61
70	73



^① Lamp supplied.

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

PJ Series Portable Floodlights

Flameproof. Halogen

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

Applications

- Typical applications include aircraft manufacturing and maintenance facilities, refineries, chemical and petrochemical plants and where the permanent mounting of a fixture is not practical.

Features

- 55-70 W H3 halogen lamp.
- PK22S lamp holder.
- Connection via two terminals 1 x 2.5 mm².
- Internal earth connection 1 x 2.5 mm².
- External earth connection 1 x 4 mm².
- One M20 threaded rear entry.
- Operates in any position.
- Installed on cradle to allow horizontal and vertical adjustment.
- Lamp supplied

Standard Materials

- Body and bezel: gray painted aluminum alloy
- Lamp glass: sealed toughened glass
- Carrying handle: plastic covering

Certifications and Compliances

◆ ATEX Certification

• Certification Type: PJ70

- Gas: Zones 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: T3 to T4 See Table
- Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T120 °C to T142 °C See Table

- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50239
- ATEX Certificate: LCIE 02 ATEX 6227
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10
- Internal Volume: < 2 dm³ - 2 liters



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

Lamp Type and Wattage	Position	Gas Temperature Rating			Dust Surface Temp at Ta = +55 °C
		Ta = +40 °C	Ta = +50 °C	Ta = +55 °C	
55 and 70 Watt Halogen		T4	T3	T3	+142 °C
		T4	T4	T3	+135 °C
		T4	T4	T4	+120 °C

PJ Series Portable Floodlights

Flameproof. Halogen

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

Catalog Number Logic

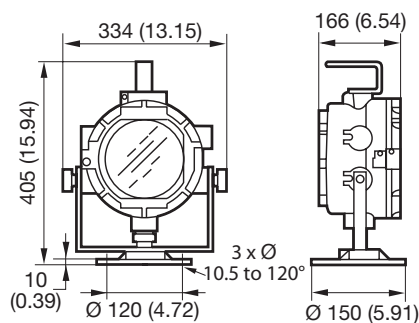
PJ
Series:
PJ - PJ Series
Zone 1 and 2 - 21 and 22
ATEX Certified

55
Lamp Type:
55 - 55 Watt Halogen
70 - 70 Watt Halogen

01B
Supply Voltage:
01B - 12 Vac/Vdc
02B - 24 Vac/Vdc
11A - 110 Vac, 50/60 Hz
23A - 230 Vac, 50/60 Hz

Lamp Type, Wattage and Voltage (Lamp supplied)	Weight kg	Volume dm ³	Catalog Number
55 W Halogen 12 Vac/Vdc	8	27	PJ5501B
70 W Halogen 24 Vac/Vdc	8	27	PJ7002B
70 W Halogen 110 V, 50/60 Hz ①	8	27	PJ7011A
70 W Halogen 230 V, 50/60 Hz ②	8	27	PJ7023A

Dimensions in Millimeters (Inches)



① With transformer 110/24 V (+6% -10%)

② With transformer 230/24 V (+6% -10%)

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

FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

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

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 and 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 (emergency).
- 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.
- Battery pack.
- Escape route lighting: 2.4 V - 1.5 Ah (2 cells - Nicd)
- Space lighting: 7.2 V - 2.2 Ah (6 cells - NiMh) - Flameproof
- Padlockable switch is available on switched models which individually cuts off power supply and remote control.
- Charge indicator by 1 green LED (life time over 10 years).
- Operates in any position.
- Connection to plug-in terminal block via 2 x 5 x 2.5 mm² 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 (maximum 300 units) for visual inspection of their operation.
- Escape route lighting: 55 lumens, 0.50 wattage.
- Space lighting: 540 lumens, 0.95 wattage.

Addressable versions:

- Operates without additional control lines. Communication between units and the control system is realized via mains borne signals that utilize the existing electrical wiring.
- Standard control system capacity: one control system for up to 200 emergency lighting units.
- Optional increased control system capacity: booster (repeater unit) is used to increase the length of the network allowing up to 1000 emergency lighting units to be on one control system. This allows for the use of a single computer to centralize the management of the facilities emergency lighting system. For more information, please contact your local sales representative.

Standard Materials

- End caps and cover: aluminum
- O-ring seal: Nitrile
- Lens: tempered borosilicate glass
- Fixing brackets: zinc plated steel or 316 stainless steel
- Accessories: white painted galvanized steel
- Guard: zinc plated steel



FDBAESLEDEM

Options

- Addressable monitoring software, please consult your local sales representative.
- Low temperature application, please consult your local sales representative.

Certifications and Compliances

◆ATEX/IECEx Certification

- **Certification Type: FLd**
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: 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
- Index of Protection according EN/IEC 60529: IP66/68
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ (2 liters)
- Conforming to NF AEAS

◆EURASEC Certification

- EURASEC N° TC RU C-FR.ГБ05.B.00912

◆Others Certification

- INMETRO Certificate: BVC 11.0492 ②

Related Products

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

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

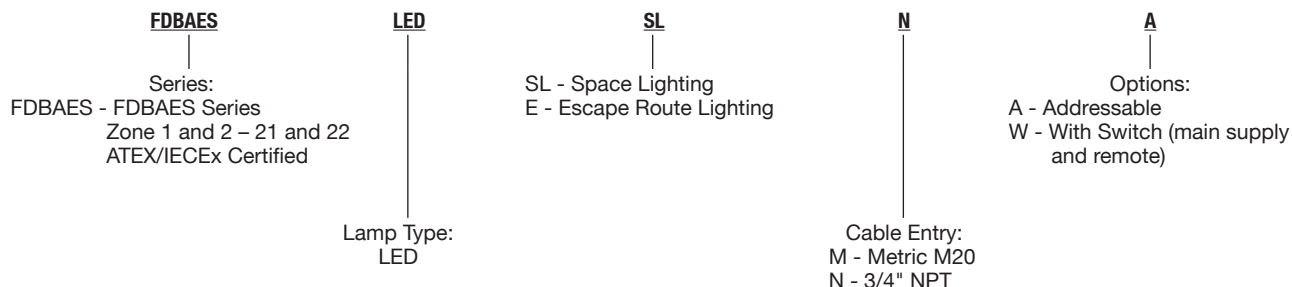
② Inmetro certification available on special request only. Contact your local sales for more information

FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

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

Catalog Numbering Guide



Type	Lamp	Lumen Output	Cable Entries	Weight kg	Volume dm³	Catalog Number
Unswitched Version — 1 hour duration — Non-maintained — Two threaded cable entries with one blanking plug						
Space Lighting	LED Array	540 lm ①	M20	8.1	37.1	FDBAESLEDSLM
			3/4" NPT	8.1	37.1	FDBAESLEDSLN
Escape Route Lighting	LED Array	55 lm ②	M20	8.1	37.1	FDBAESLEDEM
			3/4" NPT	8.1	37.1	FDBAESLEDEN
Switched Version — 1 hour duration — Non-maintained — One threaded cable entry						
Space Lighting	LED Array	540 lm	M20	10	40.4	FDBAESLEDSLMW
			3/4" NPT	10	40.4	FDBAESLEDSLNW
Escape Route Lighting	LED Array	55 lm	M20	10	40.4	FDBAESLEDEMw
			3/4" NPT	10	40.4	FDBAESLEDENw
Addressable and Unswitched Version — 1 hour duration — Non-maintained — Two threaded cable entries with one blanking plug						
Space Lighting	LED Array	540 lm	M20	8.1	37.1	FDBAESLEDSLMA
			3/4" NPT	8.1	37.1	FDBAESLEDSLNA
Escape Route Lighting	LED Array	55 lm	M20	8.1	37.1	FDBAESLEDEMA
			3/4" NPT	8.1	37.1	FDBAESLEDENA
Addressable and Switched Version — 1 hour duration — Non-maintained — One threaded cable entry						
Space Lighting	LED Array	540 lm	M20	10	40.4	FDBAESLEDSLMAW
Escape Route Lighting	LED Array	55 lm	M20	10	40.4	FDBAESLEDEMAW

① Value measured after 1 hour duration - required value by standard is 400 lm.

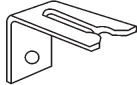
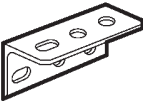
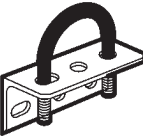
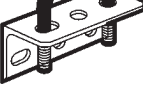
② Value measured after 1 hour duration - required value by standard is 45 lm.

FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

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

Accessories

	Description	Catalog Number
	Reflector	
	White painted galvanized steel	FDER5G
	Protective Guard	
	Zinc plated steel	FDPG5Z
	Fixing Brackets – set of two brackets for ease of surface installation	
	Zinc plated steel	FDFBZ
	316 stainless steel	FDFBS
	Surface Mounting Brackets – set of two brackets for ease of installation	
	Zinc plated steel	FDSBZ
	316 stainless steel	FDSBS
	Half Clamps – set of two	
	Zinc plated steel versions:	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	FDHC49Z
	For 60 mm pole (2" tube)	FDHC60Z
	316 stainless steel versions:	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	FDHC49S
	Fall Prevention Kit	
	1.20 m stainless steel chain	FDSCS

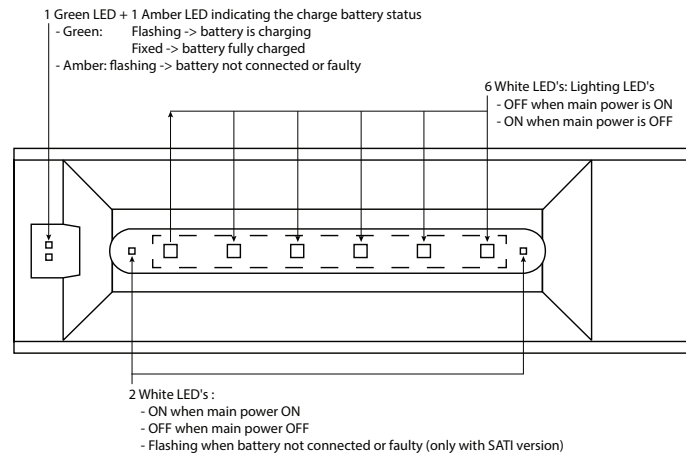
FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

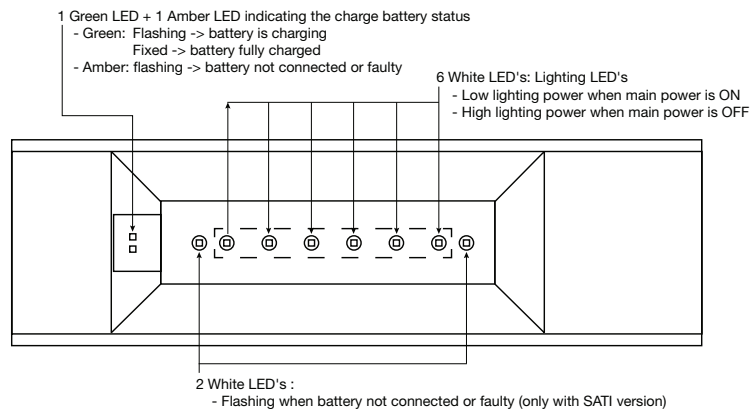
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

LED Indicator

Space Lighting — Replaces Fluorescent Version



Escape Lighting — Replaces Incandescent Version



Main Status	Non Maintained	
	Space Lighting	Escape Route Lighting
Switched On	☀ ● ● ● ● ● ● ☀	● ✕ ✕ ✕ ✕ ✕ ✕ ●
Switched Off	● ☀ ☀ ☀ ☀ ☀ ☀ ●	● ☀ ☀ ☀ ☀ ☀ ☀ ●

- OFF
- ☀ ON (high lighting power)
- ✕ ON (low lighting power)

Battery not Connected or Faulty	Main Power ON	
	Space or Escape Route Lighting	
SATI	⚠ ● ● ● ● ● ● ⚠	⚠ ● ● ● ● ● ● ⚠
Addressable	⚠ ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●

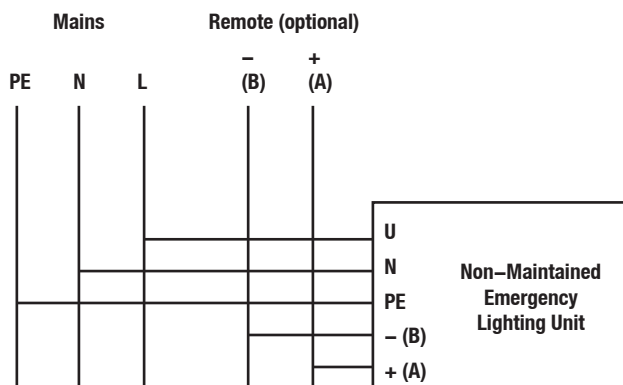
- OFF
- ⚠ ON — Flashing — White LED
- ⚠ ON — Flashing — Amber LED

FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

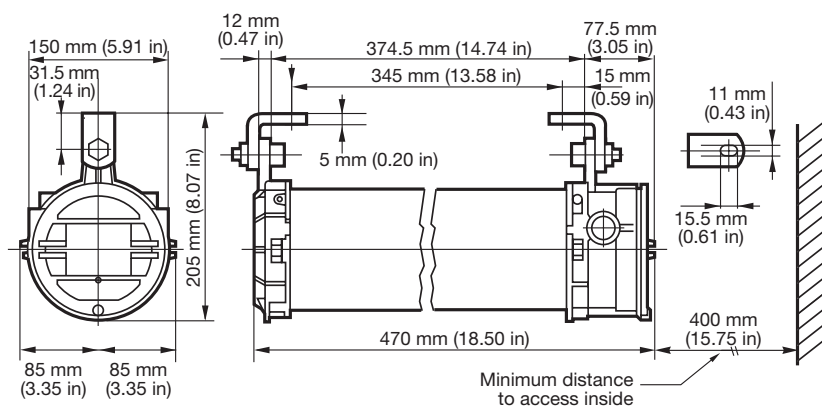
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Electrical Wiring Diagram

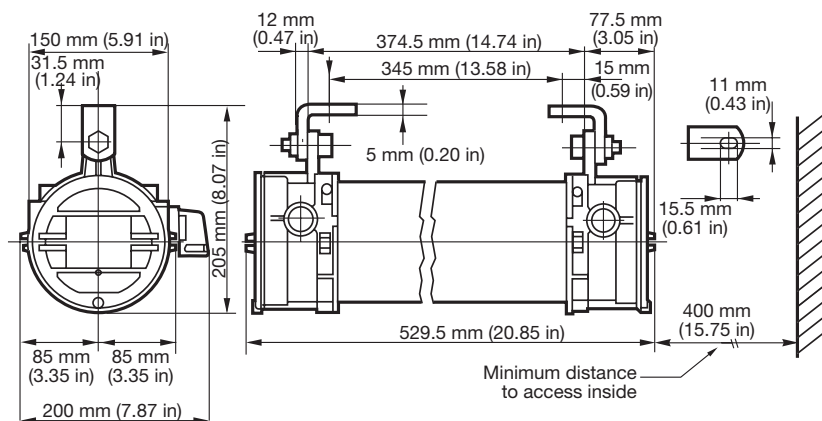


Dimensions in Millimeters (Inches)

Unswitched Versions



Switched Versions



FDES Series Self-Contained Emergency Lighting Units

Flameproof. Fluorescent

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

Applications

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

Features

- Power supply from 110 to 240 Vac 50/60 Hz versions.
- 3-hour duration.
- Threaded access cover with O-ring seal.
- Operates in any position.
- 8 W Fluorescent (1 or 2 lamps supplied).
- Charge indicator by 1 red LED (life time over 10 years).
- Termination 3 or 4 x 2.5 mm² terminals.
- Supplied with two fixing lugs.

Standard Materials

- End caps and cover: aluminum
- O-ring seal: Nitrile
- Lens: tempered borosilicate glass
- Fixing brackets: zinc plated steel or 316 stainless steel
- Accessories: white painted galvanized steel
- Guard: zinc plated steel

Certifications and Compliances

◆ ATEX/IECEx Certification

- **Certification Type: FLd**
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE:  II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE:  II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -40 °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



2 x 8 W Fluorescent Sustained

◆ EURASEC Certification

– EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

– INMETRO Certificate: BVC11.0492 ^①

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

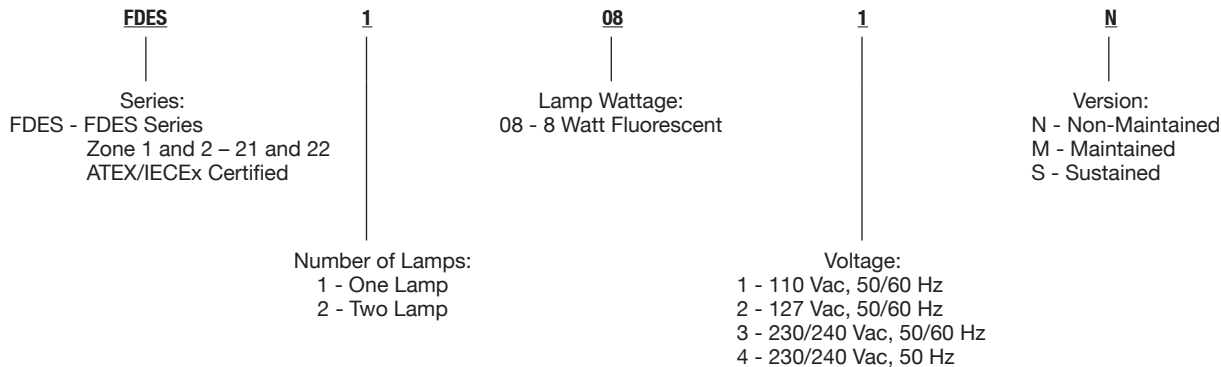
FDES Series Self-Contained Emergency Lighting Units

Flameproof. Fluorescent

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

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

Catalog Numbering Guide — FDES Series Self-Contained Emergency Units



3 Hour Duration — Two M20 Threaded Cable Entries With One M20 Blanking Plug

Type	Lumen Output	Voltage	Frequency	Weight kg	Volume dm ³	Catalog Number
1 x 8 W Fluorescent Non-Maintained	230 lm	230/240 Vac	50/60 Hz	7.8	36	FDES1083N
		127 Vac	50/60 Hz			FDES1082N
		110 Vac	50/60 Hz			FDES1081N
1 x 8 W Fluorescent Maintained	180 lm	230/240 Vac	50/60 Hz	7.8	36	FDES1084M
		127 Vac	50/60 Hz			FDES1082M
		110 Vac	50/60 Hz			FDES1081M
2 x 8 W Fluorescent Sustained	230 lm	230/240 Vac	50 Hz	7.8	36	FDES2084S

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

FDES Series Self-Contained Emergency Lighting Units

Flameproof. Fluorescent

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

Accessories and Replacement Parts		
	Description	Catalog Number
	Reflector White painted galvanized steel	FDER1G
	Protective Guard Zinc plated steel	FDPG1Z
	Fixing Brackets: Set of two for ease of surface installation Zinc plated steel 316 stainless steel	FDFBZ FDFBS
	Surface Mounting Brackets: Set of two Zinc plated steel 316 stainless steel	FDSBZ FDSBS
	Half Clamps: Set of two Zinc plated steel versions: Diameter for 1-1/4 to 1-1/2" pole: 42 mm to 49 mm Diameter for 2" pole: 60 mm 316 stainless steel versions: Diameter for 1-1/4 to 1-1/2" pole: 42 mm to 49 mm Diameter for 2" pole: 60 mm	FDHC49Z FDHC60Z FDHC49S FDHC60S
	Spare Lamps 8 W fluorescent G5	LF008G5
	Fall Prevention Kit 1.20 m stainless steel chain	FDSCS

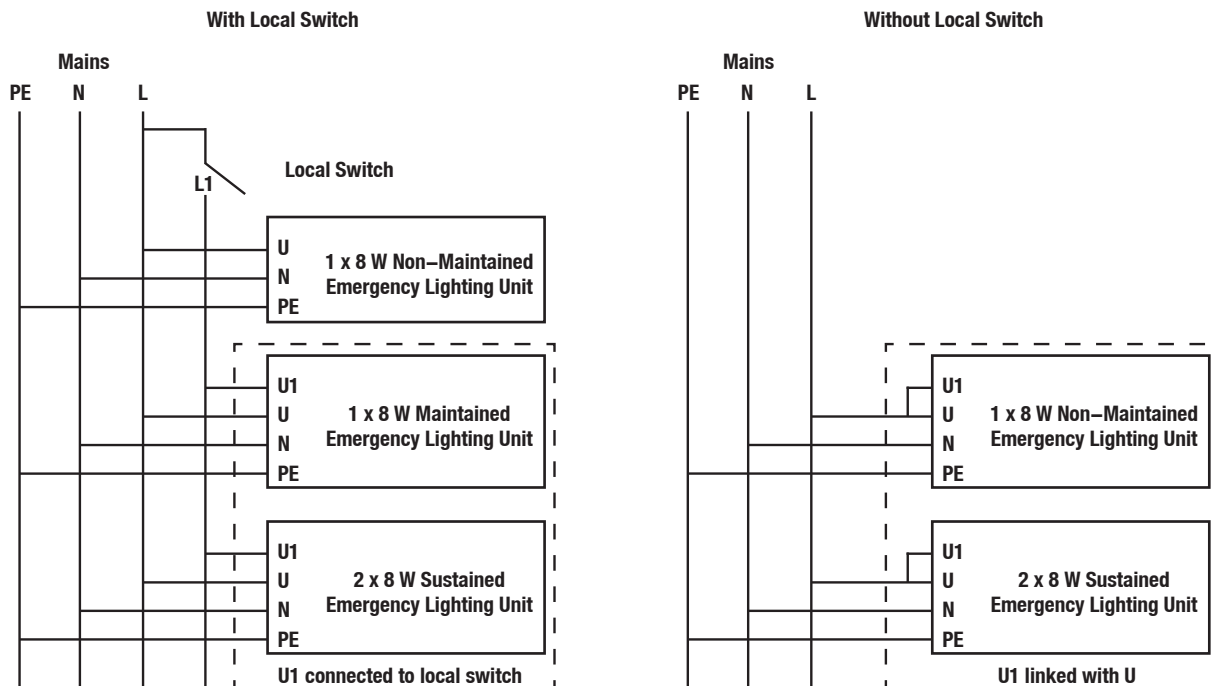
Shaded catalog numbers are normally stocked items. All other items are made to order.

FDES Series Self-Contained Emergency Lighting Units

Flameproof. Fluorescent

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

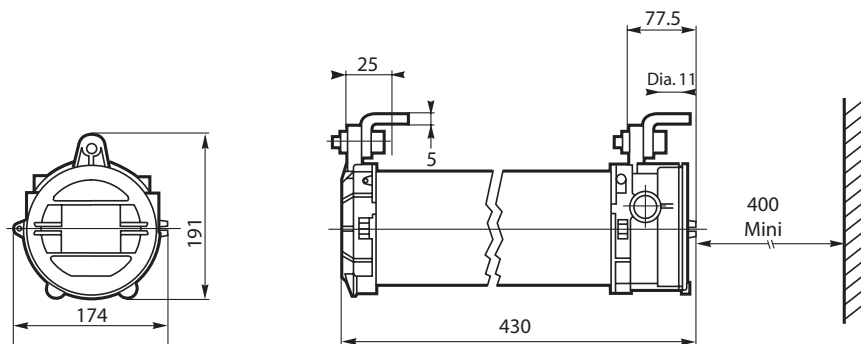
Electrical Wiring Diagram



Emergency Function Diagram

Mains	1 x 8 W Maintained			2 x 8 W Sustained	
	1 x 8 W Non-Maintained	Local Switch OFF or No Link	Local Switch ON or Link Present	Local Switch OFF or No Link	Local Switch ON or Link Present
Switched ON					
Switched OFF					

Dimensions in Millimeters (Inches)



FNES LED Series Self-Contained Emergency Lighting with Self-Test System

Zone 2 - 21 and 22

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

Applications

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

Features

- Power supply 230 Vac, 50/60 Hz.
- 3 hour duration (emergency).
- Non-maintained.
- Operates in any position.
- Battery pack.
 - Escape route lighting: 2.4 V - 1.5 Ah (2 cells - Nicd).
 - Space lighting: 7.2 V - 2.2 Ah (6 cells - NiMH) - Flameproof.
- Open and close using an Allen key (size 10) or a 6 mm flat screwdriver.
- Connection to plug-in terminal block via 2 x 5 x 2.5 mm² terminals.
- Two M20 clearance holes supplied with one cable gland — diameter 6.5 to 14.5 mm one blanking plug and two locknuts.
- Charge indicator by green LED (lifetime over 10 years).
- 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 duration 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.
- Escape route lighting: 55 lumens, 0.50 wattage.
- Space lighting: 540 lumens, 0.95 wattage.

Standard Materials

- Body: fiberglass reinforced polyester
- Diffuser (hinged to body): polycarbonate
- Gasket: elastomer
- Fixing brackets: zinc plated steel, gray painted aluminum or 316 stainless steel
- Cable gland and blanking plug: polyamide
- Locknut: nickel-plated brass

Options

- Addressable versions:
 - Operates without additional control lines. Communication between units and the control system is realized via mains borne signals that utilize the existing electrical wiring.
 - Standard control system capacity: one control system for up to 200 emergency lighting units.



FNES LED

- Optional increased control system capacity: booster (repeater unit) is used to increase the length of the network allowing up to 1000 emergency lighting units to be on one control system. This allows for the use of a single computer to centralize the management of the facilities emergency lighting system. For more information, please contact your local sales representative.
- Addressable monitoring software is available, please consult your local sales representative.
- Low temperature application, please consult your local sales representative.

Certifications and Compliances

◆ATEX or ATEX/IECEx Certification

- **Certification Type: FLn**
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection 'nA' : Ex nA IIC T6 Gc
 - Type of Protection 'nR' : Ex nR IIC T4 Gc
 - Temperature class: T6 (nA) or T4 (nR)
 - Ambient Temperature: -20 °C to +55 °C ①
 - Dust: Zone 21
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -40 °C to +55 °C ①
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex t IIIC Dc
 - Surface Temperature: T75 °C
 - Ambient Temperature: -20 °C to +55 °C ①
- CE Declaration of Conformity: 50212
- ATEX Certificate:
 - Zone 2-22: LCIE 03 ATEX 6072
 - Zone 21: LCIE 02 ATEX 6067
- IECEx Certificate:
 - Zone 2-22: IECEx LCI 04.0021
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK10
- Conforming to NF AEAS

◆EURASEC Certification

- EURASEC N° TC RU C-FR.1505.B.00912

◆Others Certification

- INMETRO Certificate: BVC11.0815 ②

Related Products

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

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

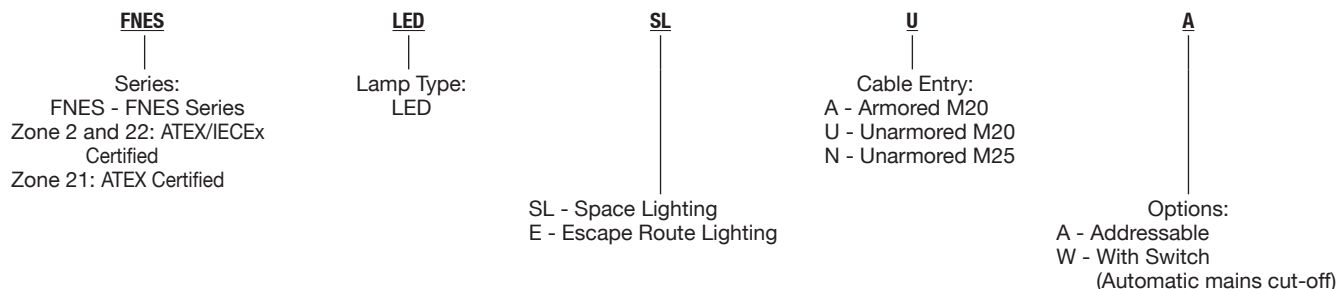
② Inmetro certification available on special request only. Contact your local sales for more information

FNES LED Series Self-Contained Emergency Lighting with Self-Test System

Zone 2 - 21 and 22

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

Catalog Numbering Guide



Unswitched Version – 1 hour duration - Non-maintained - Two Unarmored M20 clearance entries

Type	Lamp Type	Lumen Output	Weight kg	Volume dm ³	Catalog Number
Space Lighting	LED Array	540 lm	7.2	32.3	FNESLEDSLU
Escape Route Lighting		55 lm	7.2	32.3	FNESLEDEU

Accessories

	Description	Catalog Number
	Half Clamps Brackets - Set of Two	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
	M8 Ring Bolts - Set of Two	
	Zinc plated steel	FERBM8Z
	Hinged Brackets - Set of two brackets for adjusting luminaire when wall-mounted	
	Aluminium (gray painted)	FEHBA
	316 stainless steel	FEHBS
	Brackets for Surface Mounting - Set of two	
	Aluminium (gray painted)	FESBA
	316 stainless steel	FESBS
	Fixing Brackets - Set of two brackets for ease of surface installation	
	Zinc plated steel	FEFBZ
	316 stainless steel	FEFBS

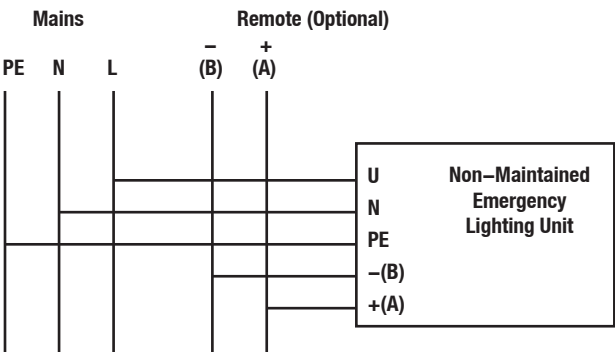
Shaded catalog numbers are normally stocked items. All other items are made to order.

FNES LED Series Self-Contained Emergency Lighting with Self-Test System

Zone 2 - 21 and 22

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

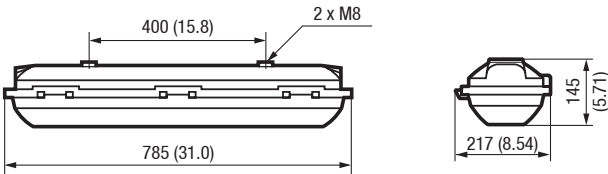
Electrical Wiring Diagram



LED Indicator

Main Status	Non Maintained		Battery not Connected or Faulty	Main Power ON	
	Space Lighting	Escape Route Lighting		Space or Escape Route Lighting	
Switched On	☀ ● ● ● ● ● ☀	● ✕ ✕ ✕ ✕ ✕ ●	SATI	⬆ ⬆ ● ● ● ● ● ⬆	
Switched Off	● ☀ ☀ ☀ ☀ ☀ ●	● ☀ ☀ ☀ ☀ ☀ ●	Addressable	⬆ ● ● ● ● ● ● ●	
● OFF ☀ ON (high lighting power) ✕ ON (low lighting power)			● OFF ⬆ ON — Flashing — White LED ⬆ ON — Flashing — Amber LED		

Dimensions in Millimeters (Inches)



Self-Adhesive Signaling Labels for Emergency Lighting Units

For use on Appleton/ATX emergency lighting luminaires: FDBAES, FDES and FNES Series

Features

- Select styles available in French, English, Spanish, Portuguese and version which conform to Directive CEE 77-576.

Standard Materials

- Plastic coated
- White lettering.
- Green background.

	Length mm	Width mm	Units per Pack	Catalog Number
French				
	237	53	10	094904
	237	53	10	094905
	237	109	10	094906
	172 + 57	57	10	094907
	237	109	5	094908
	237	109	5	094909
	237	109	5	094910
English				
	230	45	5	094915
	230	90	5	094916
	230	45)	5	094917
Spanish				
	237	109	5	094919
	175 + 57	57	5	094918
Portuguese				
	237	109	5	094913
	175 + 57	57	5	094914
Conforming to Directive CEE 77-576				
	237	109	5	094911
	237	109	5	094912

ELS Series Self-Contained Emergency Lighting Unit

Incandescent

Zone 2 and 22
Gas (G) and Dust (D)

Applications

- Enclosed and gasketed, non-metallic emergency lighting system suitable for use where flammable gases, vapors or dusts may become present due to abnormal conditions defined as Zone 2 and 22.
- Typical applications include manufacturing plants, refineries, petrochemical and chemical plants, waste and sewage treatment facilities, food processing facilities and other industrial manufacturing or process facilities subject to wet or corrosive conditions.

Features

- Provides 90 minutes of emergency lighting.
- The electronics consists of a solid state charger, transfer circuit and low voltage disconnect circuit.
- A LED pilot light indicates the presence of AC line voltage, and a test switch is provided for testing transfer operation.
- Upon restoration of normal power, the charger will begin a recharge cycle. It will bring the battery to full capacity.
- 6 A fuse provided as standard.
- 12 Vdc, 10 W or 21 W incandescent lamps.
- Lamp base BA15D.
- Battery capacity 7 A/h.
- Connections on 2.5 mm² terminals.

Standard Materials

- Fiberglass reinforced polyester housing, carbon loaded for low resistivity
- Aluminium glass sealed spotlight

Certifications and Compliances

◆ ATEX Certification

• Certification Type: ELS

- Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 3 G
 - Type of Protection: Ex nAR II
 - Temperature class: T2
- Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 3 D
 - Type of Protection: Ex tD A22
 - Surface Temperature: T121 °C
- Ambient Temperature: -20 °C to +55 °C
- CE Declaration of Conformity: 50282
- ATEX Certificate: LCIE 02 ATEX 6046
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10 (housing)

◆ Others Certification

- INMETRO Certificate: BVC11.0643-X ①



2 Lamp Version — ELS 2100712A

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

ELS Series Self-Contained Emergency Lighting Unit

Incandescent

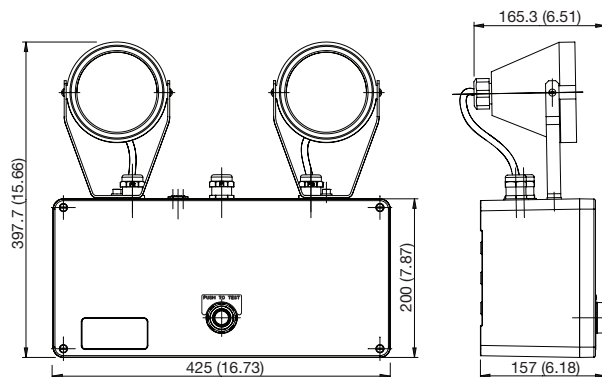
Zone 2 and 22
Gas (G) and Dust (D)

EMERGENCY

2 x M20 entries at the top, supplied with one M20 polyamide cable gland [cable diameter 6.5 to 14.5 mm] and one M20 blanking plug.

Number of Lamps	Wattage W	Weight kg	Volume dm ³	Catalog Number	
				205–254 Vac, 50/60 Hz	110 – 120 Vac, 50/60 Hz
1	10 W	8.50	4.55	ELS1100712A	ELS1100712B
2	10 W	7.70	4.80	ELS2100712A	ELS2100712B
1	21 W	8.50	4.55	ELS1210712A	ELS1210712B
2	21 W	7.70	4.80	ELS2210712A	ELS2210712B

Dimensions in Millimeters (Inches)



SBD0 Series Signaling and Lighting Bulkheads

Flameproof. Compact Fluorescent, Incandescent

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

Applications

- For lighting and signaling.

Features

- For 7, 11, 15 Watt compact fluorescent or up to 100 Watt (maximum) incandescent (lamps not supplied).
- E27 lampholder.
- Operating in any position.
- Fixing by 2 integrated brackets.
- Connection to lampholder via two terminals 1 x 2.5 mm².
- Internal earth two terminals 2.5 mm², external earth 1 x 4 mm².
- Two M20 entries through feed.
- Supplied with 1 blanking plug M20.

Standard Materials

- Body and bezel: gray painted aluminum
- Sealed toughened lamp glass
- Guard: zinc plated steel

Certifications and Compliances

◆ ATEX/IECEX Certification

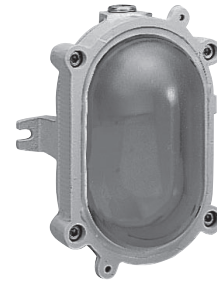
- **Certification Type: HBOd**
 - Zone 1 - 2
 - Conforming to ATEX 94/9/CE:  II 2 G
 - Type of Protection: Ex d IIB
 - Temperature Class:
 - Incandescent: T4,
 - Compact Fluorescent: T6
 - Zone 21 - 22
 - Conforming to ATEX 94/9/CE:  II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature:
 - Incandescent: T119 °C,
 - Compact Fluorescent: T76 °C
 - Ambient Temperature: -20 °C to +40 °C
 - CE Declaration of Conformity: 50234
 - ATEX Certificate: LCIE 02 ATEX 6162
 - IECEX Certificate: IECEX LCI Ex 12.0006
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK08
 - Internal Volume: ≤ 2 dm³ – 2 liters

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC11.0597 ^①



Compact Fluorescent
Painted Glass Version

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

SBD0 Series Signaling and Lighting Bulkheads

Flameproof. Compact Fluorescent, Incandescent

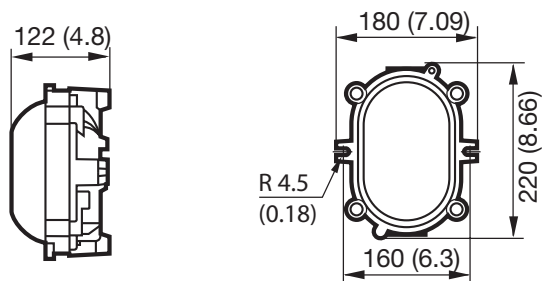
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Color (Painted Glass)	Weight kg	Volume dm ³	Catalog Number
7 W to 15 W Compact Fluorescent or up to 60 W Incandescent			
Red	3	9	SBDOSR
Green	3	9	SBDOSG

Accessories and Replacement Parts

Description	Catalog Number
Zinc Plated Steel Protective Guard	HBDOPGZ
Terminal block for through wiring 2 x 2.5 mm ² with high temperature sleeve	094784

Dimensions in Millimeters (Inches)



SBDS Series Beacon Lighting Units

Flameproof

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

Applications

- For use in hazardous locations in a wide range of plants.
- In areas where audible signals cannot be heard.

Features

- Fixtures operate in any position.
- Suspension via integral bolt.
- Threaded flame path.
- Internal earth terminal 2 x 4 mm².
- External earth terminal 1 x 4 mm².
- Two M20 threaded entries with one blanking plug.
- Globe available in four colors: red, amber, green and clear (to be ordered separately).
- Static Beacon:
 - E27 lamp holder.
 - Permissible lamps not supplied:
 - 100 W incandescent max.
 - 18/20/25 W compact fluorescent
 - Connection to lamp holder via two terminals 1 x 2.5 mm² or 2 x 4 mm² terminal block supplied.
- Rotating Beacon:
 - E14 lamp holder.
 - 40 W incandescent lamp supplied.
 - Rotating speed: approximately 170 rotations per minute.
 - Beaten mirror to reinforce bright effect.
 - Connection via two terminals 2 x 4 mm².

Standard Materials

- Body and bezel: gray painted marine aluminum
- Glass: colorless sealed shock resistant
- Reflector for static beacon: internal aluminum
- Globe: colored polymethacrylate
- Protective guard: zinc plated steel
- Mounting bracket: zinc plated steel

Certifications and Compliances

◆ ATEX Certification

- **Certification Type: AB14**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature Class: See Table below



Static Beacon with Red Globe



Rotating Beacon

- 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:
 - Static: -40 °C to +50 °C
 - Rotating: -20 °C to +50 °C
- CE Declaration of Conformity: 50231
- ATEX Certificate: LCIE 02 ATEX 6053
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Internal Volume: ≤ 2 dm³ (2 liters)

◆ Others Certification

- INMETRO Certificate: BVC11.0480 ①

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

Lamp Type and Wattage	T Rating for Gas				Surface Temperature for Dust	
	Ta = +40 °C		Ta = +50 °C		Ta = +50 °C	
	T Rating	Cable Entry Temperature	T Rating	Cable Entry Temperature	Surface Temperature	Cable Entry Temperature
18 W Compact Fluorescent	T6	–	T5	–	+85 °C	–
20 W Compact Fluorescent	T6	–	T5	–	+85 °C	–
25 W Compact Fluorescent	T6	–	T5	–	+85 °C	–
100 W Incandescent	T4	+115 °C	T3	+125 °C	+145 °C	+125 °C
40 W Rotating	T5	–	T4	–	+110 °C	–

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

SBDS Series Beacon Lighting Units

Flameproof

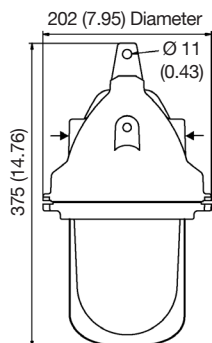
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

	Lamp Type and Wattage	Supply	Frequency (Hz)	Rating (Amps)	Weight kg	Volume dm ³	Catalog Number
Clear Static Beacon							
	100 W maximum	—	—	—	7.5	30	SBDSSC
Clear Rotating Beacon							
	40 W Incandescent	48 V ±10%	50/60 Hz	1 A	8.5	30	SBDSRC4004A
	40 W Incandescent	48 Vdc ±10%	—	1 A	8.5	30	SBDSRC4004D
	40 W Incandescent	110 V ±10%	50/60 Hz	0.5 A	8.5	30	SBDSRC4011A
	40 W Incandescent	230/240 V ±10%	50/60 Hz	0.23 A	8.5	30	SBDSRC4024A

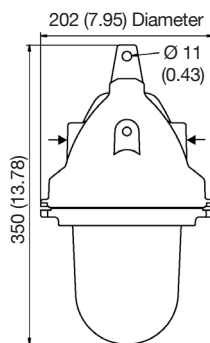
Accessories and Replacement Parts

	Type	Catalog Number
Polymethacrylate Globe		
	Red	SBDGR
	Green	SBDGG
	Amber	SBDGA
	Clear	SBDGC
Zinc Plated Steel Protective Guard		
	Not to be used if a colored globe is used.	LDPG3Z
Zinc Plated Steel Hinged Bracket		
	For installation on flat surface	LDPHBZ

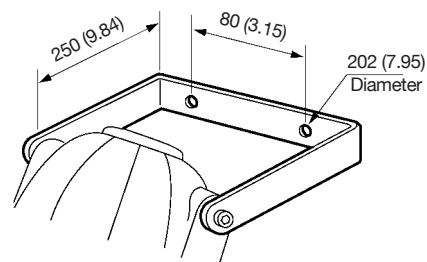
Dimensions in Millimeters (Inches)



Lighting Unit with Globe



Lighting Unit



LDPHBZ Mounting Bracket

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

SBDB Series Beacon and Strobe Lighting Units

Flameproof

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

Applications

- For use in hazardous locations in a wide range of plants.
- In areas where audible signals cannot be heard.
- To warn of unsafe conditions and other communication needs.

Features

- Fixtures operate in any position.
- Mounting strap for surface mounting supplied.
- High temperature internal wiring.
- Threaded flame path.
- Stainless steel fastenings.
- Closed by screwing on bezel.
- Connection through an increased safety Exe compartment with terminal block
 - Two 2 x 6 mm² and two earth terminal 1 x 4 mm².
- External earth terminal 1 x 4 mm².
- Two side M20 threaded entries supplied with:
 - 1 x M20 plastic cable-gland for unarmored cable — 6.5 to 14.5 mm sealing diameter.
 - 1 x M20 blanking plug.
- Static Beacon:
 - E27 lamp holder.
 - Permissible lamps not supplied:
 - 100 W incandescent max.
 - 18 W compact fluorescent.
 - Globe available in four colors:
 - Red, amber, green and clear (to be ordered separately).
- Rotating Beacon:
 - E14 lamp holder.
 - 40 W incandescent lamp supplied.
 - Rotating speed: approximately 170 rotations per minute.
 - Beaten mirror to reinforce bright effect.
 - Globe available in four colors:
 - Red, amber, green and clear (to be ordered separately).
- 5 Joules Strobe Beacon:
 - Xenon lamp supplied.
 - Instantaneous illuminance: 50,000 candles.
 - Strobe 60 flashes per minute.
 - Operating factor 100%.
 - Life duration: 70% efficiency after 8 million flashes.
 - Internal red colored lens supplied as standard.
 - Other lenses available in five colors:
 - Amber, blue, green, yellow and clear (factory installed).

Standard Material of Fixtures

- Body and bezel: gray painted marine aluminum
- Lens: colorless sealed shock resistant glass
- Internal reflector for static beacon: aluminum
- Mounting strap: gray painted aluminum

Standard Material of Accessories

- Globe: colored Polymethacrylate
- Protective guard: zinc plated steel

Options

- Other lens colors for strobe beacon



Strobe Lighting

Beacon Lighting

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: LTd (model (LT1d))**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature Class: *See Table on following page*
 - Dust: Zone 21-22
 - Conforming to ATEX 94/9/CE: Ⓜ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: *See Table on following page*
 - Ambient Temperature:
 - Strobe: -40 °C to +55 °C
 - Rotating Beacon: -20 °C to +50 °C
 - CE Declaration of Conformity: 50246
 - ATEX Certificate: LCIE 02 ATEX 6165
 - IECEx Certificate: IECEx LCI Ex 04.0019
 - Index of Protection according EN/IEC 60529: IP66/67
 - Impact Resistance (shock): IK08

◆ Others Certification

- INMETRO Certificate: BVC11.0417 ①

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

SBDB Series Beacon and Strobe Lighting Units

Flameproof

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

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

Catalog Numbering Guide — SBDB Series Beacon and Strobe Lighting Units

SBDB	R	C	40	04A
Series: SBDB - SBDB Series Zone 1 and 2 – 21 and 22 ATEX/IECEx Certified	Type: S - Static F - Flashing R - Rotating	Color: C - Clear R - Red A - Amber G - Green B - Blue Y - Yellow	Wattage/Joules: 40 - 40 W 10 - 100 W 05 - 5 Joules	Voltage: 02D - 24 Vdc 02A - 24 Vac, 50/60 Hz 04D - 48 Vdc 04A - 48 Vac, 50/60 Hz 11A - 110 Vac, 50/60 Hz 11D - 110 Vdc 24A - 230/240 Vac, 50/60 Hz

Temperature Class — Gas

Lamp Type and Wattage	Positions					
	Lighting Downwards			Lighting Upwards		
	Ta =+40 °C	Ta =+50 °C	Ta =+55 °C	Ta =+40 °C	Ta =+50 °C	Ta =+55 °C
18 W Fluorescent Compact	T6	T6	T6	T6	T5	T5
100 W Incandescent	T4	T3	T3	T3	T3	T3
40 W Rotating	T5	T4	T4	T5	T4	T4
Strobe 5 Joules	T6	T6	T6	T6	T6	T6

Temperature Rating — Dust

Lamp Type and Wattage	Positions	
	Lighting Downwards	Lighting Upwards
	Ta =+55 °C	Ta =+55 °C
18 W Fluorescent Compact	T80 °C	T95 °C
100 W Incandescent	T195 °C	T195 °C
40 W Rotating	T130 °C	T130 °C
Strobe 5 Joules	T80 °C	T80 °C

SBDB Series Beacon and Strobe Lighting Units

Flameproof

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

Lighting

SIGNALING

Type	Supply			Rating (Amps)	Weight kg	Volume dm ³	Catalog Number
Clear Static Beacon							
100 W Maximum	—	—	—	—	7.5	30	SBDBSC
Clear Rotating Beacon							
40 W	48 Vac	+-10%	50/60 Hz	1A	8.5	30	SBDBRC4004A
40 W	48 Vdc	+-10%	—	1A	8.5	30	SBDBRC4004D
40 W	110 Vac	+-10%	50/60 Hz	0.5A	8.5	30	SBDBRC4011A
40 W	230/240 Vac	+-10%	50/60 Hz	0.23A	8.5	30	SBDBRC4024A
Red Strobe Beacon							
5 joules	24 Vac	20-30 V	50/60 Hz	220 mA	8.5	30	SBDBFR0502A
5 joules	24 Vdc	18-35 V	—	230 mA	8.5	30	SBDBFR0502D
5 joules	48 Vac	40-54 V	50/60 Hz	180 mA	8.5	30	SBDBFR0504A
5 joules	48 Vdc	40-60 V	—	150 mA	8.5	30	SBDBFR0504D
5 joules	110 Vac	90-135 V	50/60 Hz	110 mA	8.5	30	SBDBFR0511A
5 joules	110 Vdc	88-132 V	—	90 mA	8.5	30	SBDBFR0511D
5 joules	230/240 Vac	185-255 V	50/60 Hz	55 mA	8.5	30	SBDBFR0523A

Accessories and Replacement Parts

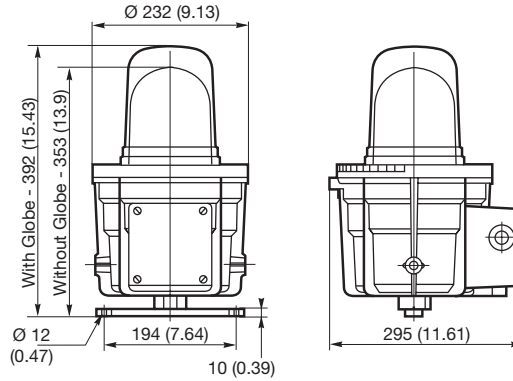
	Description	Catalog Number
Polymethacrylate Globe		
	Red	SBDGR
	Green	SBDGG
	Amber	SBDGA
	Clear	SBDGC
Zinc Plated Steel Protective Guard		
	Using without colored globe	LDPG1Z
Zinc Plated Steel Hinged Bracket		
	Bracket for installation on flat surface	LDMHBZ
Zinc Plated Steel M10 Eyebolt		
	Eyebolt for suspension	LDRBM10Z

SBDB Series Beacon and Strobe Lighting Units

Flameproof

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

Dimensions in Millimeters (Inches)



SBDC Series Strobe Lighting and Static Triple Indicator

Flameproof

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

Lighting

SIGNALING

Applications

- For use in hazardous locations in a wide range of plants.
- In areas where audible signals cannot be heard.
- To warn of unsafe conditions and other communication needs.

Features

- Threaded access cover with O-ring seal.
- Supplied with two external fixing lugs.
- Fixtures operate in any position.
- External earth terminal 1 x 4 mm².
- Two side M20 threaded entries supplied with 1 x M20 blanking plug.
- 15 Joules Strobe Beacon:
 - Xenon lamp supplied.
 - Instantaneous illuminance: 150,000 candelas.
 - Strobe 45 flashes per minute.
 - Operating factor: 10 min. stop after one hour operation.
 - Life duration: 70% efficiency after 8 million flashes.
 - Internal red colored lens supplied as standard.
 - Other lenses available in five colors:
 - Amber, blue, green, yellow and clear (factory installed).
 - Connection to plug-in terminal block via 2 x 3 x 2.5 mm² terminal.
- Static Triple Indicator Unit:
 - Ba15d lamp holders.
 - Permissible lamps not supplied:
 - 7 W incandescent or multi LED lamps.
 - Operating factor 100%.
 - Supplied with three colored interchangeable modules:
 - Red, yellow and green.
 - Each module is controlled separately.
 - Possibility of coupling two modules for simultaneous operation.
 - Connection to plug-in terminal block via 2 x 5 x 2.5 mm² terminal.

Standard Materials

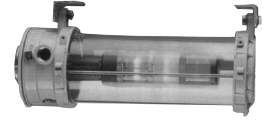
- End caps and cover: anti-corrosive gray painted Zamak
- O-ring seal: Nitrile
- Sealed toughened glass.
- Fixing lug: zinc plated steel
- Protective guard: zinc plated steel

Options

- Other colored module for static triple indicator unit.
- Other lens colors available for strobe lighting



Strobe Lighting



Multiple Static Indicator

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: FLd**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: 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: -40 °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 (10 meters)
 - Impact Resistance (shock): IK08
 - Internal Volume: ≤ 2 dm³ — 2 liters

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ 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.*

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

Ambient Temperature	Gas		Dust
	Ta = +40 °C	Ta = +55 °C	Ta = +55 °C
Strobe 15 Joules	T6	T5	T95 °C
Static Indicator	T6	T6	T80 °C

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

SBDC Series Strobe Lighting and Static Triple Indicator

Flameproof

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

SIGNALING

Catalog Numbering Guide

SBDC	F	R	15	02D
Series: SBDC - SBDC Series Zone 1 and 2 – 21 and 22 ATEX/IECEx Certified	Type: S - Static F - Flashing	Color: C - Clear R - Red A - Amber G - Green B - Blue Y - Yellow M - Red/Yellow/Green	Wattage/Joules: 15 - 15 Joules LD - LED Lamp 07 - 7 W	Voltage: 02D - 24 Vdc 02A - 24 Vac, 50/60 Hz 04D - 48 Vdc 04A - 48 Vac, 50/60 Hz 11A - 110 Vac, 50/60 Hz 23A - 230/240 Vac, 50/60 Hz

Red Strobe Beacon

					Rating (Amps)	Weight kg	Volume dm ³	Catalog Number ① ②
Type	Supply							
	15 joules	24 Vdc	18-30 V	—	700 mA	6.8	31	SBDCFR1502D
	15 joules	48 Vdc	40-60 V	—	350 mA	6.8	31	SBDCFR1504D
	15 joules	110 Vac	95-127 V	50/60 Hz	350 mA	6.8	31	SBDCFR1511A
	15 joules	230 Vac	185-255 V	50/60 Hz	190 mA	6.8	31	SBDCFR1523A

Triple Static Indicator

Type	Lamp Holder	Wattage	Weight kg	Volume dm ³	Catalog Number ②
Red, yellow and green 230 Vac, 50/60 Hz	Ba15d	7 W	6.8	31	SBDCSM0723A

① For lens color other than Red on the IECEx certified product change the replace the letter **R** in the 5th position to the appropriate option: **C** for Clear, **A** for Amber, **G** for Green, **B** for Blue or **Y** for Yellow. Example for clear lens: SBDCFC1502D.

② For LED lamp on the IECEx certified product change the replace the letters **15** or **07** with the letters **LD** in the 7th and 8th positions. Example: SBDCFRLD02D.

SBDC Series Strobe Lighting and Static Triple Indicator

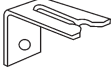
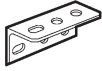
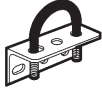
Flameproof

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

Lighting

SIGNALING

Accessories and Replacement Parts

Type	Weight kg	Volume dm ³	Catalog Number
Mounting Brackets – Quick One Hand Fixings: Set of Two			
 Zinc plated steel	0.40	0.7	FDFBZ
Stainless steel			FDFBS
Surface Mounting Brackets: Set of Two			
 Zinc plated steel	0.55	0.5	FDSBZ
Stainless steel			FDSBS
Half Clamps – Set of Two – Zinc Plated Steel			
 42 mm to 49 mm	0.80	0.5	FDHC49Z
60 mm			FDHC60Z
Protective Guard			
 Zinc plated steel	0.55	8.0	FDPG1Z

Dimensions in Millimeters (Inches)

