

Lighting DATASHEET

JUNHO 2013

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BARTEC TECHNOR's low profile floodlights in stainless steel 316L were developed to withstand the harshest offshore environments, while designed to provide safe, powerful illumination with no glare (e.g. to pilots or crew).

Stainless steel 316L enclosure and high quality internal electronics provides a reliable and long lifetime light source to ensure maintenance is kept to a minimum.

- The floodlight is available in Ex or industrial version.
- Ideal suited for helicopter landing areas.
- Complies to the CAP directive for helicopter deck lighting.
- Customised version available upon request, to suit your application.
- Shock and vibration resistant.
- Available with an Ex e connection chamber, flying lead or direct entry.

General specification

Material	Stainless steel 316L
IP Rating	IP66, IP67/68 upon request
Ambient temperature	-50°C to +50°C
Approvals	DNV-2008-OSL-ATEX-27278
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN50281-1-1 CAP437
Ex-Code	Ⓔ II 2 G, T4, Ex d/de IIC, Suitable for Zone 1 and 2
Entries	M25 or M20 glands/blanking plugs
Lamp	Xenon D25 35 Watt
Operating voltage	220-230 VAC, 110-120 VAC, 254 VAC at 50/60 Hz or 12 VDC, 24 VDC
Power consumption	50 Watt
Weight	Approx. 10 Kg.
Lens	Glass



X	α	X	α	α	α	α	α	α	α = fill in value
									1 = IP66 2 = IP66/67 3 = IP68 (0,5 bar, 2 hours)
									Operating voltage: 1 = 12VDC 2 = 24VDC 3 = 110/120VAC 4 = 220/240VAC 5 = 254VAC
									E = Explosion Proof, I = Industrial (Non-Ex)
									Ex-code and entries: 1 = Ex de with TNCN junction box and 2xØ25 2 = Ex de c/w 5xØ25 bottom entries in Ex e box 3 = Ex d with 1xM25 bottom entry 4 = Ex d with 1xM25 bottom entry and flying lead (5m)
									Diameter (ø)130 = 130 mm
									X = Xenon light source
									Material types: C = SS316L, A = Aluminium
									TNX

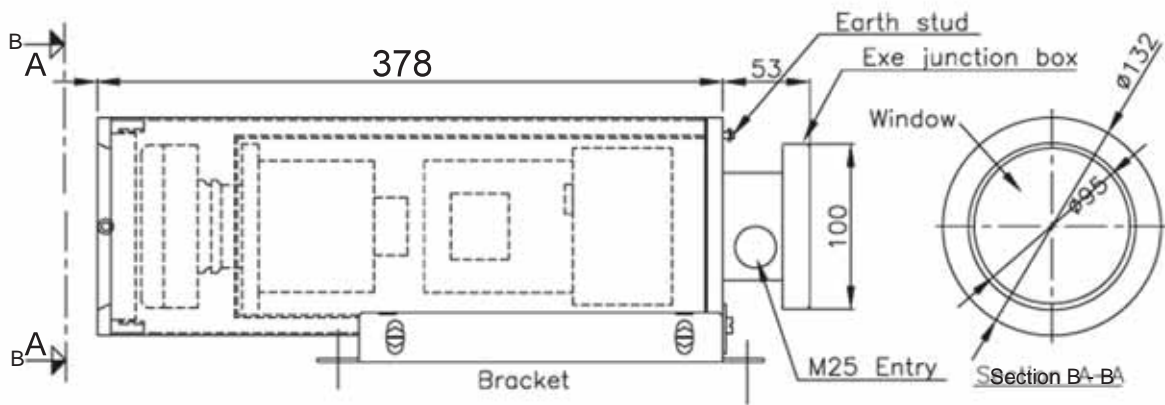


Lighting

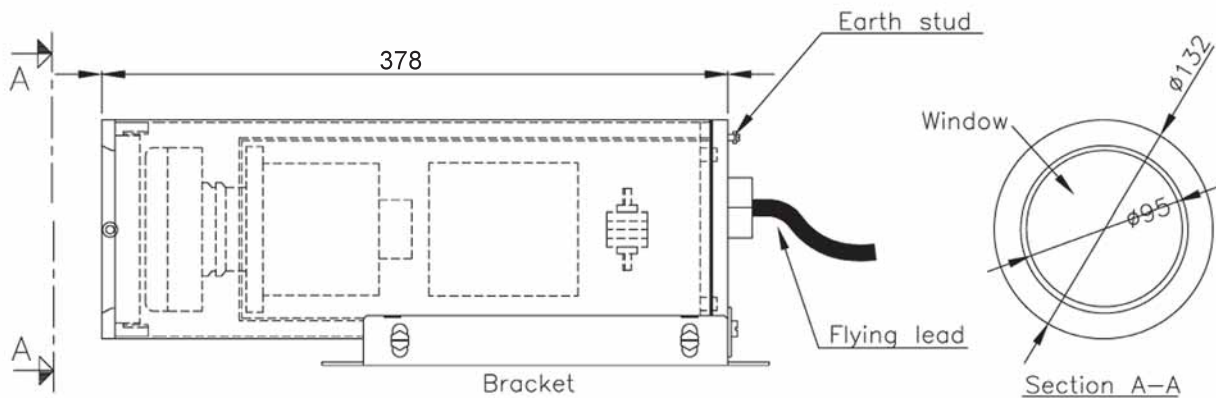
TNXCX, Flameproof Xenon Floodlight

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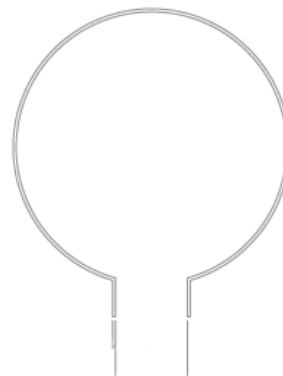
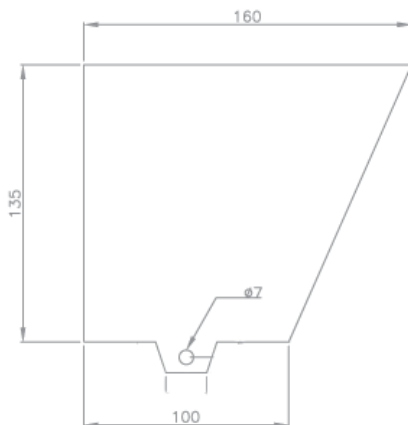
Ex de



Ex d Flying Lead



Accessories (Optional)



Canopy for extra protection against glaring



Lighting

TNXCX, Flameproof Xenon Floodlight

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Hazardous area information & terminology

ATEX Directive

The ATEX Directive, derived from the French “AT mosphères EXplosibles” and formally known as 94/9/EC, contains the ESR (Essential Safety Requirements) to which electrical equipment and protective systems used within potentially explosive atmospheres must conform.

The new ATEX Directive currently in place within the European Union was made mandatory on 1st July 2003. Primarily intended for manufacturers of hazardous area equipment for use in the presence of flammable gases, vapours, fumes or dusts, the new directive requires a quality management system to be implemented.

Procedures for the design, manufacture and verification of products are to be approved by a notified body (i.e. DNV, NEMKO, etc.) and all equipment conforming to the new directive will feature CE and Ex Marking.

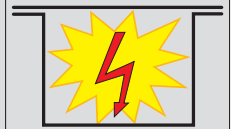
Zone Classification with the presence of GAS

Zone 1 (Category 2)	An area in which explosive gas is likely to be present during normal operation of the plant.
Zone 2 (Category 3)	An area in which explosive gas is not continuously present, but may exist for a short period of time.

Applicable EX protection

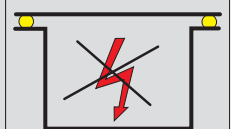
Ex d Protection

Parts, which can ignite a potentially explosive atmosphere, are surrounded by an enclosure, which are designed to withstand the pressure of an internal explosion and to prevent the propagation of the explosion to the atmosphere surrounding the enclosure.



Ex e Protection

for electrical components that do not spark under normal working conditions but where measures are applied to prevent high temperatures and the occurrence of arcs and sparks internally.





Lighting

TNCLS Backlights for Level Gauges



Lighting

TNCLS, Backlights for Level Gauges

BARTEC **TECHNOR**

Applications

The range of TNCLS Backlights are designed to meet all kinds of industry where Level Gauges are installed, and an explosive atmosphere may be present.



BARTEC TECHNOR's Backlight for Level Gauges is based on the use of LED technology. The Backlight is easy to install, and may be adapted to most types of Level Gauges.

Additionally, it has a very long lifetime, and the power consumption is low. The equipment is maintenance free.

- Enclosure material in stainless steel 316L.
- LEDs are very resistant against vibrations.
- High mechanical strength and corrosion resistance. Suitable for harsh environments.
- Tailor made installation bracket minimizes time spent on installation.
- High ingress protection, IP66.
- Special installation kits for high pressure and high/low temperatures.
- High operational reliability and low life cycle costs.
- ATEX approved.

General Specifications

Material	Stainless steel 316L
IP Rating	IP66
Temperature	-20°C to +45°C
Approvals	DNV-2002-OSL-ATEX-0195
Standards	EN/IEC: 60079-0, 60079-7, 60079-18
Ex-Code	Ex II 2 G / Ex em II T4
Surface treatment	Acidized
Earthing	M6 inside and outside
Humidity	100%
Illumination colour	Yellow
Voltage	220-240VAC or 254VAC Other voltages upon request
Frequency	50-60Hz
Power consumption	Approx. 3VA per module
Terminals	4x2,5mm ²
Cable entry	To be specified.
Option	Max 2xM25 in bottom and/or top, and/or entries in sides

Type key: TNCLS L-X

L = Module length

X = No. of modules

Total length: A = L * X

Other sizes upon request.

Size-qty. modules	Total length (A) mm	Light exposure (B) mm	Weight kg
27-1	270	250	2,3
30-1	300	280	2,5
34-1	340	320	2,7
36-1	360	340	2,8
27-2	540	520	4,3
30-2	600	580	4,6
34-2	680	660	5,1
36-2	720	700	5,3
27-3	810	790	6,2
30-3	900	880	6,7
34-3	1020	1000	7,3
36-3	1080	1060	7,5
27-4	1080	1060	7,9
30-4	1200	1180	8,5
34-4	1360	1340	9,3
36-4	1440	1420	9,6

Several units can be assembled to one unit.

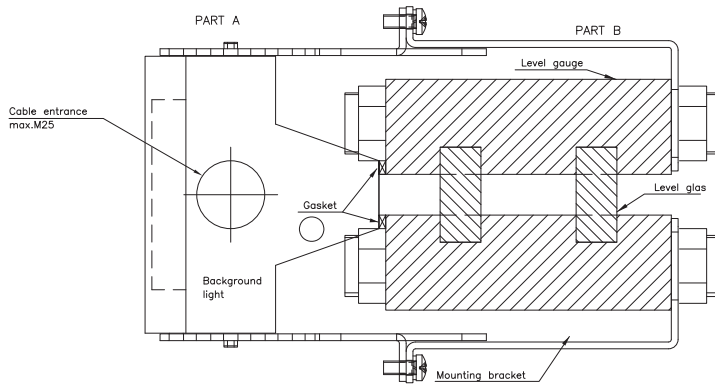


Lighting

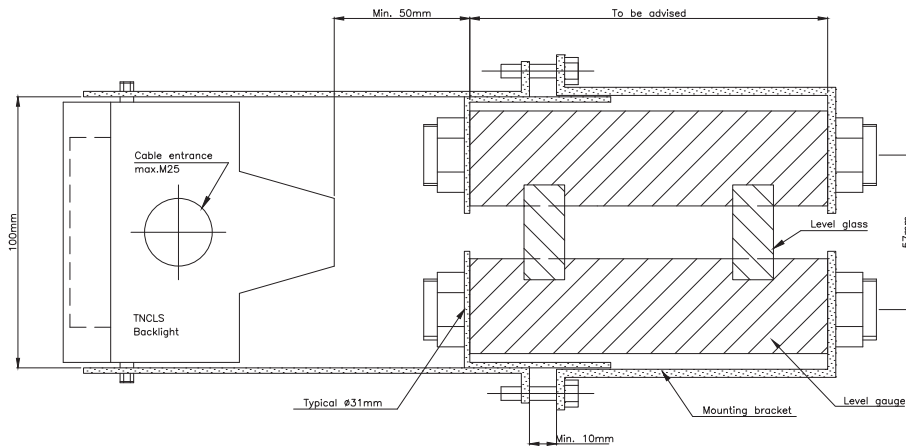
TNCLS, Backlights for Level Gauges

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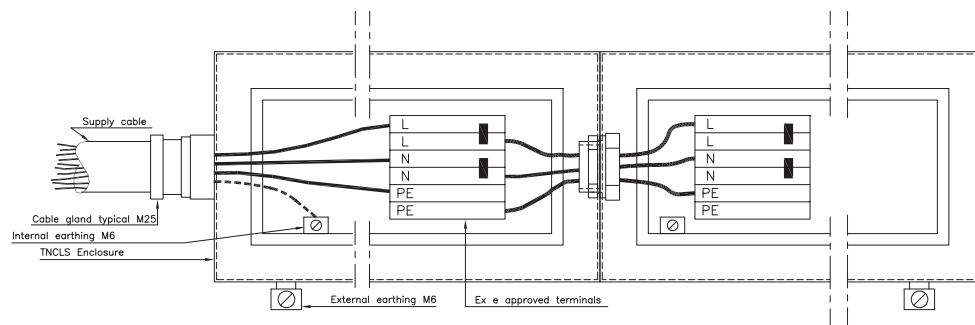
Installation with standard mounting brackets



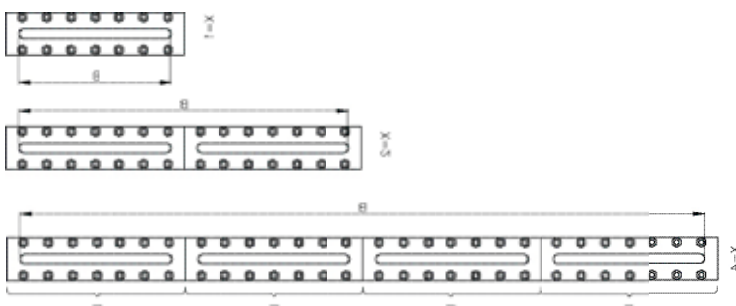
Installation with mounting brackets for high/low temperatures



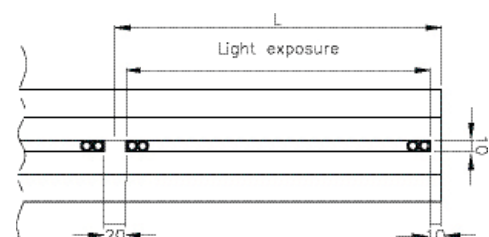
Electrical connection



Level Gauge



Module details





Lighting

TNCLS, Backlights for Level Gauges

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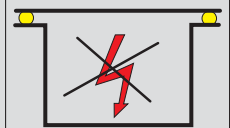
Zone Classification with the presence of GAS

Zone 1 (Category 2)	An area in which explosive gas is likely to be present during normal operation of the plant.
Zone 2 (Category 3)	An area in which explosive gas is not continuously present, but may exist for a short period of time.

Applicable EX protection

Ex e Protection

for electrical components that do not spark under normal working conditions but where measures are applied to prevent high temperatures and the occurrence of arcs and sparks internally.



Ex m Protection

Parts that could ignite a potentially explosive atmosphere by means of heat or sparks are embedded in a sealing compound such that the potentially explosive atmosphere cannot be ignited. The compound is resistant to physical, electrical, thermal and chemical influences.





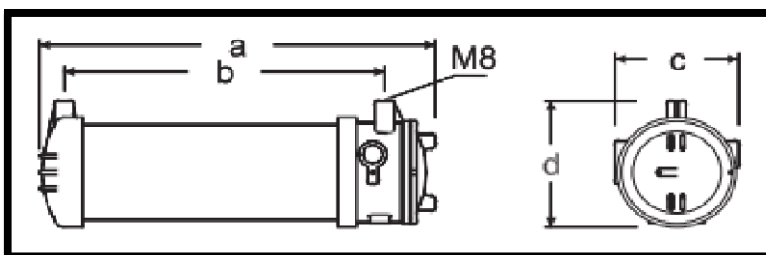
LEUTEX series Flameproof Fluorescent Lighting Fixtures

Description

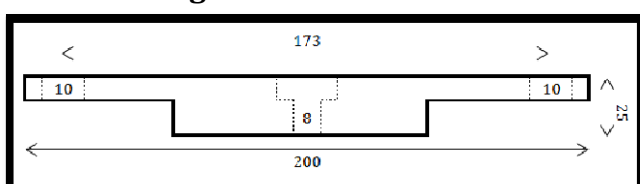
Housing in Copper free Aluminium casting.
Very light and solid Polycarbonate Diffuser with high impact resistance also available in Borosilicate Glass.
Stainless Steel fixings (i.e. screws).
Screwed side lid with Neoprene Gasket.
RAL-1003 Yellow anticorrosive Paint with Polyurethanes.
Provided with standard internal components, Lamps included.
Electronic ballast.
LED technology version available.
Sliding Mounting Plate in white colour used as reflector.

General dimensions for the different housings (in mm) (identify housing type in selection table)

	a	b	c	V100 Brackets
LEU10	478	391	156	391x173
LEU20	750	656	156	656x173
LEU30	1360	1266	156	391x173
LEU40	1650	1553	156	391x173



V100 Fixing brackets dimensions



Explosion Protection

Protection Type

Ex II2 GD Ex d IIC o IIB T6 Gb
Ex t IIIC T85°C Db

Approval

LOM 12 ATEX 2075X

Valid for

Zones 1, 2, 21 and 22

Directive 94/9/CE

EN.60079-0:2009
EN.60079-1:2009
EN.60079-31:2009

Technical Data

IP Degree

IP 67 acc. EN-60529

Impact resistance

IK 07 acc. EN-50102

Power Supply

220/240V AC 50/60Hz

EMC Directive

EN.55015.2006
EN.61000-3-2:2006
EN.61547:1995

Connection Entries

2x3/4"NPT

Ambient temperature range

-20°C to 40°C (T6) (T85 °C)

Options

Fixing Methods

Wall/ceiling mounting brackets
Suspension hook
Pole mounting brackets up to 2"
Handlamp Conversion Kit

Other accessories under request

Protection rack
Colour Diffusers
Other RAL colours

Other Power supply values

Under request

Recommended accessories

Cable Gland types:
BAE1WBF/20s/075NPT
Stopping Plug: SPMH/25/075NPT
Fixing brackets: V100

**Selection table, with fluorescent tubes (included)**

Type	Diffuser	Subgroup	Lamp	Housing	Weight (Kg)
BZC-1111-V	Glass	IIC	PL 11W 2 G7	LEU10VC	7,64
BZC-1118-V	Glass	IIC	PL 18W 2 G11	LEU10VC	7,24
BZC-2118-V	Glass	IIC	TL 18W G13	LEU20VC	8,70
BZB-2118-V	Glass	IIB	TL 18W G13	LEU20VB	6,71
BZC-2218-V	Glass	IIC	2TL 18W G13	LEU20VC	8,57
BZB-2218-V	Glass	IIB	2TL 18W G13	LEU20VB	6,58
BZC-2155-V	Glass	IIC	PL 55W 2 G11	LEU20VC	8,80
BZB-2155-V	Glass	IIB	PL 55W 2 G11	LEU20VB	6,81
BZC-3136-V	Glass	IIC	TL 36W G13	LEU30VC	10,92
BZB-3136-V	Glass	IIB	TL 36W G13	LEU30VB	6,97
BZC-3236-V	Glass	IIC	2TL 36W G13	LEU30VC	11,82
BZB-3236-V	Glass	IIB	2TL 36W G13	LEU30VB	7,87
BZB-4158-V	Glass	IIB	TL 58W G13	LEU40VB	12,90
BZB-4258-V	Glass	IIB	2TL 58W G13	LEU40VB	13,70
BZC-1111-P	Polycarbonate	IIC	PL 11W 2 G7	LEU10PC	6,93
BZC-1118-P	Polycarbonate	IIC	PL 18W 2 G11	LEU10PC	6,53
BZC-2118-P	Polycarbonate	IIC	TL 18W G13	LEU20PC	5,24
BZC-2218-P	Polycarbonate	IIC	2TL 18W G13	LEU20PC	5,11
BZC-2155-P	Polycarbonate	IIC	PL 55W 2 G11	LEU20PC	3,54
BZC-3136-P	Polycarbonate	IIC	TL 36W G13	LEU30PC	4,43
BZC-3236-P	Polycarbonate	IIC	2TL 36W G13	LEU30PC	5,33
BZB-4158-P	Polycarbonate	IIB	TL 58W G13	LEU40PC	4,80
BZB-4258-P	Polycarbonate	IIB	2TL 58W G13	LEU40PB	5,60

Selection table, with LED technology

Type	Diffuser	Subgroup	Lamp	Housing	Weight (Kg)
BZCL-2118-P	Polycarbonate	IIC	1 x LED 11W (830Lm)	LEU20PC	6,91
BZCL-2218-P	Polycarbonate	IIC	2 x LED 11W (830Lm)	LEU20PC	8,90
BZCL-3136-P	Polycarbonate	IIC	1 x LED 21W (1650Lm)	LEU30PC	7,13
BZCL-3236-P	Polycarbonate	IIC	2 x LED 21W (1650Lm)	LEU30PC	9,12
BZBL-4158-P	Polycarbonate	IIB	1 x LED 25,5W (2050Lm)	LEU40PB	10,57
BZBL-4258-P	Polycarbonate	IIB	2 x LED 25,5W (2050Lm)	LEU40PB	14,59
BZBL-2118-V	Glass	IIB	1 x LED 11W (830Lm)	LEU20VB	10,93
BZBL-2218-V	Glass	IIB	2 x LED 11W (830Lm)	LEU20VB	14,95
BZCL-2118-V	Glass	IIC	1 x LED 11W (830Lm)	LEU20VC	17,35
BZCL-2218-V	Glass	IIC	2 x LED 11W (830Lm)	LEU20VC	17,35
BZBL-3136-V	Glass	IIB	1 x LED 21W (1650Lm)	LEU30VB	5,99
BZBL-3236-V	Glass	IIB	2 x LED 21W (1650Lm)	LEU30VB	6,21
BZCL-3136-V	Glass	IIC	1 x LED 21W (1650Lm)	LEU30VC	8,73
BZCL-3236-V	Glass	IIC	2 x LED 21W (1650Lm)	LEU30VC	9,09
BZBL-4158-V	Glass	IIB	1 x LED 25,5W (2050Lm)	LEU40VB	10,09
BZBL-4258-V	Glass	IIB	2 x LED 25,5W (2050Lm)	LEU40VB	10,57



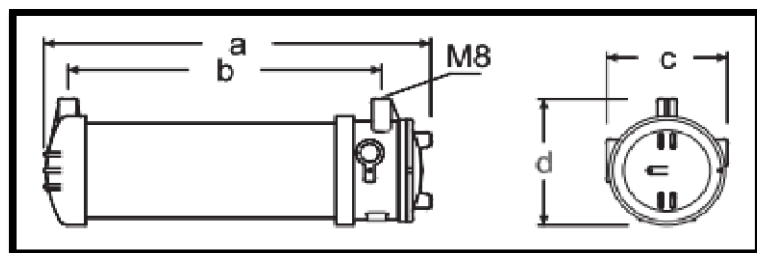
LEUTEX series flameproof fluorescent Emergency Lighting Fixtures

Description

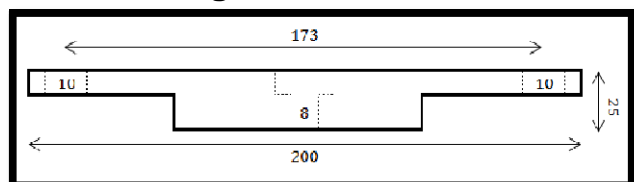
Housing in Copper free Aluminum casting.
 Very light and solid Polycarbonate Diffuser with high impact resistance also available in Borosilicate Glass.
 Stainless Steel fixings (i.e. screws).
 Screwed side lid with Neoprene Gasket.
 RAL-1003 Yellow anticorrosive Paint with Polyurethanes.
 Electronic ballast.
 Provided with standard internal components, Lamps included.
 Standalone Emergency equipment (see selection table).
 Sliding Mounting Plate in white colour used as reflector.

General dimensions for the different housings (in mm) (identify housing type in selection table)

	a	b	c	V100 Brackets
LEU10	478	391	156	391x173
LEU20	750	656	156	656x173
LEU30	1360	1266	156	391x173
LEU40	1650	1553	156	391x173



V100 Fixing brackets dimensions



Explosion Protection

Protection Type

Ex II2 GD Ex d IIC o IIB T6 Gb
 Ex t IIIC T85°C Db

Approval

LOM 12 ATEX 2075X

Valid for

Zones 1, 2, 21 and 22

Directive 94/9/CE

EN.60079-0:2009
 EN.60079-1:2009
 EN.60079-31:2009

Technical Data

IP Degree

IP 67 acc. EN-60529

Impact resistance

IK 07 acc. EN-50102

Power Supply

220/240V AC 50/60Hz

EMC Directive

EN.55015.2006
 EN.61000-3-2:2006
 EN.61547:1995

Connection Entries

2x3/4"NPT

Ambient temperature range

0°C to 40°C (T6) (T85 °C)

Options

Fixing Methods

Wall/ceiling mounting brackets
 Suspension hook
 Pole mounting brackets up to 2"
 Handlamp Conversion Kit

Other accessories under request

Protection rack
 Colour Diffusers
 Other RAL colours

Other Power supply values

Under request

Recommended accessories

Cable Gland types:
 BAE1WBF/20s/075NPT
 Stopping Plug: SPMH/25/075NPT

**Selection table, with fluorescent tubes (included)**

Type	Diffuser	Subgroup	Lamp	Housing	Weight (Kg)	Aut	Lm	Type
BZC-8202-V/EM	Glass	IIC	TF 8W G5	LEU10VC	5,33	1h	150	N.P.
BZC-8352-V/EM	Glass	IIC	TF 8W G5	LEU10VC	5,50	1h	280	N.P.
BZC-1602-V/EM	Glass	IIC	PL 11W 2G7	LEU10VC	5,60	1h	460	N.P.
BZC-1902-V/EM	Glass	IIC	PL 11W 2G7	LEU10VC	5,79	1h	615	N.P.
BZC-8203-V/EM	Glass	IIC	TF 8W G5	LEU10VC	5,33	3h	150	N.P.
BZC-2118-V/EM	Glass	IIC	TL 18W G13	LEU20VC	9,35	1h	500	N.P.
BZB-2118-V/EM	Glass	IIB	TL 18W G13	LEU20VB	7,36	1h	500	C
BZC-2218-V/EM	Glass	IIC	TL 2x18W G13	LEU20VC	9,49	1h	500	C
BZB-2218-V/EM	Glass	IIB	TL 2x18W G13	LEU20VB	7,44	1h	500	N.P.
BZC-2155-V/EM	Glass	IIC	PL 55W 2G7	LEU20VC	9,35	1h	1000	N.P.
BZB-2155-V/EM	Glass	IIB	PL 55W 2G7	LEU20VB	7,36	1h	1000	N.P.
BZC-3136-V/EM	Glass	IIC	TL 36W G13	LEU30VC	14,99	1h	1000	N.P.
BZB-3136-V/EM	Glass	IIB	TL 36W G13	LEU30VB	10,97	1h	1000	C
BZC-3236-V/EM	Glass	IIC	TL 2x36W G13	LEU30VC	15,16	1h	1000	C
BZB-3236-V/EM	Glass	IIB	TL 2x36W G13	LEU30VB	11,14	1h	1000	N.P.
BZB-4158-V/EM	Glass	IIB	TL58W G13	LEU40VB	17,67	1h	1100	C
BZB-4258-V/EM	Glass	IIB	TL 2x58W G13	LEU40PC	17,88	1h	1100	N.P.
BZC-8202-P/EM	Polycarbonate	IIC	TF 8W G5	LEU10PC	4,83	1h	150	N.P.
BZC-8352-P/EM	Polycarbonate	IIC	TF 8W G5	LEU10PC	4,99	1h	280	N.P.
BZC-1602-P/EM	Polycarbonate	IIC	PL 11W 2G7	LEU10PC	5,09	1h	460	N.P.
BZC-1902-P/EM	Polycarbonate	IIC	PL 11W 2G7	LEU10PC	5,28	1h	615	N.P.
BZC-8203-P/EM	Polycarbonate	IIC	TF 8W G5	LEU10PC	4,83	3h	150	N.P.
BZC-2118-P/EM	Polycarbonate	IIC	TL 18W G13	LEU20PC	6,44	1h	500	N.P.
BZC-2218-P/EM	Polycarbonate	IIC	TL 2x18W G13	LEU20PC	6,53	1h	500	C
BZC-2155-P/EM	Polycarbonate	IIC	PL 55W 2G7	LEU20PC	6,44	1h	1000	N.P.
BZC-3136-P/EM	Polycarbonate	IIC	TL 36W G13	LEU30PC	9,13	1h	1000	N.P.
BZC-3236-P/EM	Polycarbonate	IIC	TL 2x36W G13	LEU30PC	9,30	1h	1000	C
BZB-4158-P/EM	Polycarbonate	IIB	TL 58W G13	LEU40PB	10,41	1h	1100	NP
BZB-4258-P/EM	Polycarbonate	IIB	TL 2x58W G13	LEU40PB	10,62	1h	1100	C

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