

walsall

ELECTRICAL EQUIPMENT FOR
HAZARDOUS ENVIRONMENTS



walsall

ELECTRICAL EQUIPMENT FOR
HAZARDOUS ENVIRONMENTS



Walsall Limited ♦ Cornwallis Road ♦ West Bromwich ♦ West Midlands ♦ B70 7DX UK

Telephone: 0121 500 6161 (sales) 0121 500 6008 (accounts) Fax: 0121 500 6300
Email: sales@walsall-ltd.com Web: www.walsall-ltd.com

The information contained in this catalogue has been carefully compiled but we do not accept any responsibility for loss caused by any error contained herein.
We reserve the right to alter prices without prior notice.

EEx d, EEx de and EEx e Lighting Fittings

EEx d and EEx e Lighting Fittings

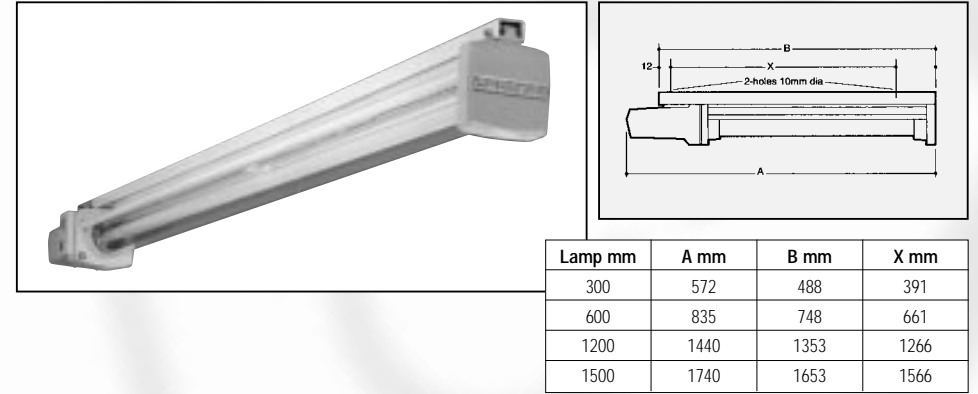
Features

- ◆ Range includes EEx d and EEx e fluorescent, floodlight, wellglass, high and low pendant, handlamp and xenon beacon luminaires.
- ◆ EEx d and EEx e fluorescent ranges include full emergency versions.
- ◆ Fluorescent luminaire for underground mining applications.

Contents

Page 2	Calstar EEx d IIB Flameproof Fluorescent Luminaire
Page 3	Calstar EEx d IIC Flameproof Fluorescent Luminaire
Page 4	Calstar EEx dm Flameproof Fluorescent Luminaire for Gaseous Mines and Tunnels
Page 5	Calstar EEx dm IIB Flameproof Emergency Fluorescent Luminaire
Page 6	Calstar EEx dm IIC Flameproof Emergency Fluorescent Luminaire
Page 7	Calstar EEx dm IIC Flameproof Emergency Fluorescent Luminaire
Page 8	Calstar EEx dm IIC Flameproof Emergency Fluorescent Luminaire
Page 9	E152 EEx edq IIC Fluorescent Luminaire
Page 10	E158 EEx s IIC Emergency Fluorescent Luminaire
Page 11	E158 EEx s IIC Emergency Fluorescent Luminaire
Page 12	E500 and E501 EEx d Small Wellglass
Page 13	D500 EEx de Wellglass
Page 14	D505 EEx de Tank Inspection Luminaire
Page 15	D630 EEx de Pendant Luminaire for 250 watts
Page 16	D640 EEx de Pendant Luminaire for 400 watts
Page 17	D274 and D275 EEx de Floodlight for 400 watts
Page 18	E830 Exe Hand Lamp
Page 19	Calstar EEx d Xenon Beacon
Page 20	E26 and E27 EEx de Bulk Head
Page 21	Photometric Data
Page 22	Photometric Data

Calstar EEx d IIB Flameproof Fluorescent Luminaire



Specification

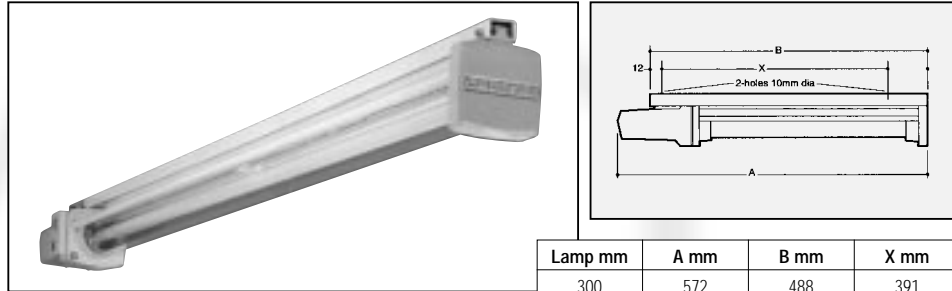
Classification	⊕ II 2 GD EEx d IIB T6 Certificate Number: SIRAOATEX1170
Control Gear	Electronic HF, Switch Start or Quick Start
Rated Voltage	220-254v 50/60Hz or 240v 50Hz
Power Factor	0.98 with HF, 0.9 with Switch Start and 0.9 with Quick Start ballasts
Tube Type - Tubular fluorescent	26 mm dia T8 or 35 mm T12 bi pin (not supplied)
Tube Type - Miniature Fluorescent	16 mm dia T5 bi pin
Tube Type - Compact Fluorescent	225mm and 415mm PL-L using 2GII lampholder
Flameproof Joint	Tapered spigot type
Reflector	White painted mounted externally
Mounting Method	In any position by removable mounting bar
Finishing	Polyester powder coated beige
Terminals	4 mm ² connection block for through wiring
Cable Entry	2 x M20 ISO, 1 x FLP blank supplied
Material - Housing	Zinc alloy to BS1004A
Material - Overtube	Borosilicate glass
Ingress Protection	IP67
Permissible Ambient Temperature	-20°C to +40°C Also available at 55°C for T5 and 70°C for T4

Ordering Information

Length mm	Lamp/s	Product Code	Length mm	Lamp/s	Product Code
600	1 x 18w x T8	500/0103	600	2 x 18w x T8	500/0121
1200	1 x 36w x T8	500/0109	1200	2 x 36w x T8	500/0127
1500	1 x 58w x T8	500/0115	1500	2 x 58w x T8	500/0133

Note: Lamps are not included. Versions with other voltages and frequencies are available on request.

Calstar EEx d IIC Flameproof Fluorescent Luminaire



Lamp mm	A mm	B mm	X mm
300	572	488	391
600	835	748	661
1200	1440	1353	1266
1500	1740	1653	1566

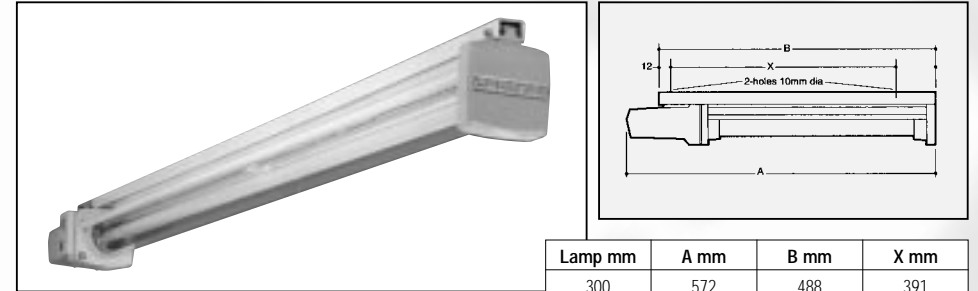
Specification	
Classification	II 2 GD EEx d IIB T6 Certificate Number: SIRA00ATEX1170
Control Gear	Electronic HF, Switch Start
Rated Voltage	220-254v 50/60Hz or 240v 50Hz
Power Factor	0.98 with HF, 0.9 with Switch Start
Tube Type - Tubular fluorescent	26 mm dia T8
Tube Type - Miniature Fluorescent	16 mm dia T5 bi pin
Tube Type - Compact Fluorescent	225 mm and 415 mm PL-L using 2GII lampholder
Flameproof Joint	Tapered spigot type
Reflector	White painted mounted externally
Mounting Method	In any position by removable mounting bar
Finishing	Polyester powder coated beige
Terminals	4 mm ² connection block for through wiring
Cable Entry	2 x M20 ISO, 1 x FLP blank supplied
Material - Housing	Zinc alloy to BS1004A
Material - Overtube	Borosilicate glass
Ingress Protection	IP67
Permissible Ambient Temperature	-20°C to +40°C Also available at 55°C for T5

Ordering Information					
Length mm	Lamp/s	Product Code	Length mm	Lamp/s	Product Code
600	1 x 18w x T8	600/0103	1500	2 x 58w x T8	600/0133
1200	1 x 36w x T8	600/0109	300	1 x 18w x T5	600/0211
1500	1 x 58w x T8	600/0115	300	1 x 18w x PL-L	600/0229
600	2 x 18w x T8	600/0121	600	1 x 38w x PL-L	600/0235
1200	2 x 36w x T8	600/0127	600	1 x 58w x PL-L	600/0347

Notes:

- T8 Lamps are not included.
- Versions with other voltages and frequencies are available on request.
- PL lamp versions include lamp.

Calstar EEx d Flameproof Fluorescent Luminaire for Gaseous Mines and Tunnels



Lamp mm	A mm	B mm	X mm
300	572	488	391
600	835	748	661
1200	1440	1353	1266
1500	1740	1653	1566

Specification	
Classification	EEx d IIC T6 Certificate Number: EX94C1486
Control Gear	Electronic HF, Switch Start
Rated Voltage	220-254v 50/60Hz or 240v 50Hz
Power Factor	0.98 with HF, 0.9 with Switch Start
Tube Type - Tubular fluorescent	26 mm dia T8
Flameproof Joint	Tapered spigot type
Reflector	White painted mounted externally
Mounting Method	In any position by removable mounting bar
Finishing	Polyester powder coated beige
Terminals	BC 691 socket
Cable Entry	2 x M20 ISO, 1 x FLP blank supplied
Material - Housing	Zinc alloy to BS1004A
Material - Overtube	Borosilicate glass
Ingress Protection	IP67
Permissible Ambient Temperature	-20°C to +40°C

Ordering Information				
Length mm	Voltage	Lamp/s	Product Code	
600	120v	1 x 18w x T8	98/0000/S	
600	240v	1 x 18w x T8	98/0001/S	
1500	120v	1 x 58w x T8	98/0003/S	
1500	240v	2 x 58w x T8	98/0004/S	

Notes:

- Lamps are not included.
- Versions with other voltages and frequencies are available on request.

Calstart EEx dm IIB Flameproof Emergency Fluorescent Luminaire



Specification

Classification - Luminaire	⊕ II 2 GD EEx dm IIB T6 Certificate Number: SIRA00ATEX1170
- Emergency Battery Pack	Certificate Number: SIRA00ATEX5108u
Control Gear	Electronic High Frequency
Rated Voltage	220-254v 50/60Hz or 240v 50Hz
Ballast Lumen Factor	Better than 0.41 on all models
Tube Type - Tubular fluorescent	26 mm dia T8 bi pin
Tube Type - Miniature Fluorescent	16 mm dia T5 bi pin
Tube Type - Compact Fluorescent	225 mm and 415 mm PL-L using 2GII lampholder
Flameproof Joint	Tapered spigot type
Reflector	White painted mounted externally
Mounting Method	In any position by removable mounting bar
Finishing	Polyester powder coated beige
Terminals	4 mm ² connection block
Cable Entry	1 x M20
Material - Housing	Zinc alloy to BS1004A
Material - Overtube	Borosilicate glass
Ingress Protection	IP66
Permissible Ambient Temperature	-20°C to +40°C
Emergency Operating Mode	Maintained or non-maintained
Emergency Operating Time	3 hours in both modes
Battery	Externally mounted approval number EX95C8067U
Recharge Duration	24 hours from fully discharged state
Egress Legend Pictogram Decal	300 mm exit left, exit right, and exit down (EC Directive) separately. Other languages e.g. Chinese and Arabic available on request.

Calstar EEx dm IIB Flameproof Emergency Fluorescent Luminaire

Installation Information

The externally mounted emergency supply is designed to overcome the problem of charging batteries in flameproof enclosures. As the gas produced by the batteries may be extremely explosive, any build-up could intensify the explosion pressure within the fitting beyond the capability of the enclosure to contain it, therefore rendering the fitting unsafe.

As the luminaire is supplied from a self-contained power source it must not be opened whilst a hazardous atmosphere is present.

It is recommended that the luminaires should not be stored for more than six months without being recharged.

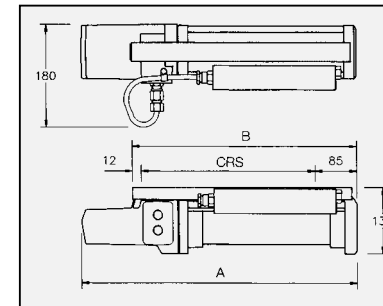
For non-maintained operation connect unswitched supply to L1, N & E of terminal block. For maintained operation where the lamp is to be continuously lit connect L1 to L2. Where switch facility is required connect the switched mains supply to terminal L2.

Ordering Information

Length mm	Lamp/s	Product Code	Optional Extras	Product Code
600	1 x 18w x T8	550/0103	Accessory Kit	550/0700
1200	1 x 36w x T8	550/0109	Pictogram Panel	550/2007
1500	1 x 58w x T8	550/0115	Wall Bracket	550/2008
600	2 x 18w x T8	550/0121	Pictogram Sheet (Euro style)	A5352
1200	2 x 36w x T8	550/0127		
1500	2 x 58w x T8	550/0133		

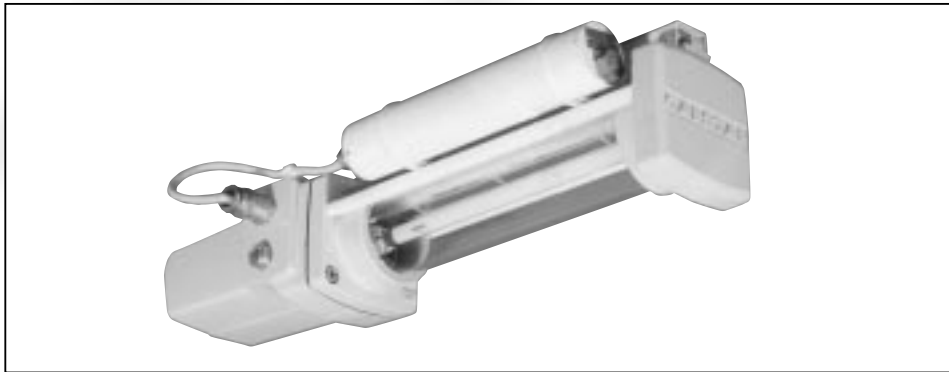
Notes:

1. T8 Lamps are not included.
2. Versions with other voltages and frequencies are available on request.
3. Accessory kit is for 300 mm version only.
4. Single and twin 58 watt versions have an emergency duration of two hours.
5. Pictogram panels incorporating text in other languages are available.



Nominal Length mm	A mm	B mm	Fixing CRS mm
300	572	488	391
600	835	748	661
1200	1440	1353	1266
1500	1740	1653	1566

Calstar EEx dm IIC Flameproof Emergency Fluorescent Luminaire



Specification

Classification	⊕ II 2 GD EEx dm IIC T6 Certificate Number: SIRA00ATEX1170
- Emergency Battery Pack	Certificate Number: SIRA00ATEX5108u
Control Gear	Electronic High Frequency
Rated Voltage	220-254v 50/60Hz
Ballast Lumen Factor	Better than 0.41 on all models
Tube Type - Tubular fluorescent	26 mm dia T8 bi pin
Tube Type - Miniature Fluorescent	16 mm dia T5 bi pin
Tube Type - Compact Fluorescent	225 mm and 415 mm PL-L using 2GII lampholder
Flameproof Joint	Tapered spigot type
Reflector	White painted mounted externally
Mounting Method	In any position by removable mounting bar
Finishing	Polyester powder coated beige
Terminals	4 mm ² connection block
Cable Entry	1 x M20
Material - Housing	Zinc alloy to BS1004A
Material - Overtube	Borosilicate glass
Ingress Protection	IP66
Permissible Ambient Temperature	-20°C to +40°C
Emergency Operating Mode	Maintained or non-maintained
Emergency Operating Time	3 hours in both modes
Battery	Externally mounted approval number EX95C8067U
Recharge Duration	24 hours from fully discharged state
Egress Legend Pictogram Decal	300 mm exit left, exit right, and exit down (EC Directive) separately. Other languages e.g. Chinese and Arabic available on request.

Calstar EEx dm IIC Flameproof Emergency Fluorescent Luminaire

Installation Information

The externally mounted emergency supply is designed to overcome the problem of charging batteries in flameproof enclosures. As the gas produced by the batteries may be extremely explosive, any build-up could intensify the explosion pressure within the fitting beyond the capability of the enclosure to contain it, therefore rendering the fitting unsafe.

As the luminaire is supplied from a self-contained power source it must not be opened whilst a hazardous atmosphere is present.

It is recommended that the luminaries should not be stored for more than six months without being recharged.

For non-maintained operation connect unswitched supply to L1, N & E of terminal block. For maintained operation where the lamp is to be continuously lit connect L1 to L2. Where a switch facility is required connect the switched mains supply to terminal L2.

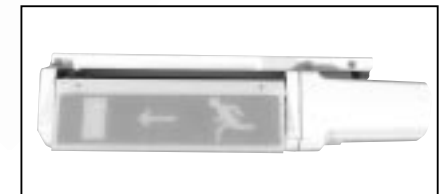
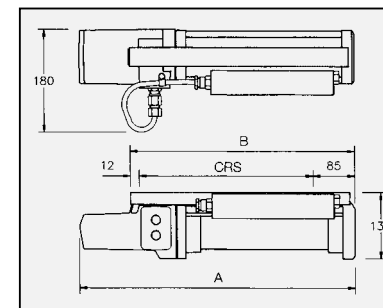
Ordering Information

Length mm	Lamp/s	Product Code	Length mm	Lamp/s	Product Code
600	1 x 18w x T8	650/0103	300	1 x 18w x T5	650/0211
1200	1 x 36w x T8	650/0109	300	1 x 18w x PL-L	650/0229
1500	1 x 58w x T8	650/0115	600	1 x 36w x PL-L	650/0235
600	2 x 18w x T8	650/0121	600	1 x 58w x PL-L	650/0347
1200	2 x 36w x T8	650/0127			
1500	2 x 58w x T8	650/0133			

Optional Extras	Product Code
Accessory Kit	550/0700
Pictogram Panel	550/2007
Wall Bracket	550/2008
Pictogram Sheet (Euro Style)	A5352

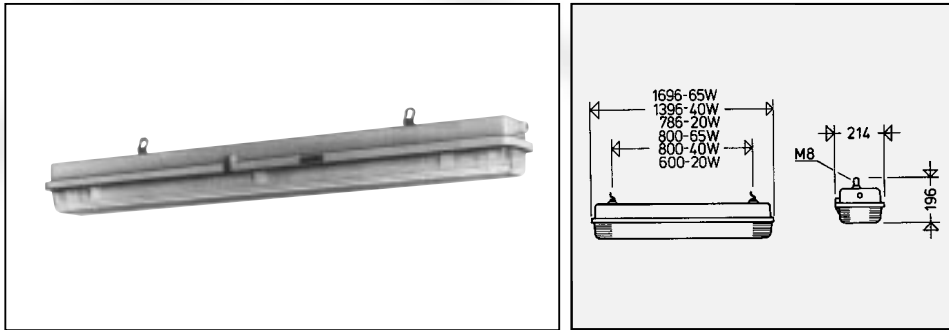
Notes:

1. T8 Lamps are not included.
2. Versions with other voltages and frequencies are available on request.
3. Accessory kit is for 300 mm version only.
4. Single and twin 58 watt versions have an emergency duration of two hours
5. Pictogram panels incorporating text in other languages are available.
6. PL lamp versions include lamp.



Nominal Length mm	A mm	B mm	Fixing CRS mm
300	572	488	391
600	835	748	661
1200	1440	1353	1266
1500	1740	1653	1566

E152 EEx edq IIC Fluorescent Luminaire



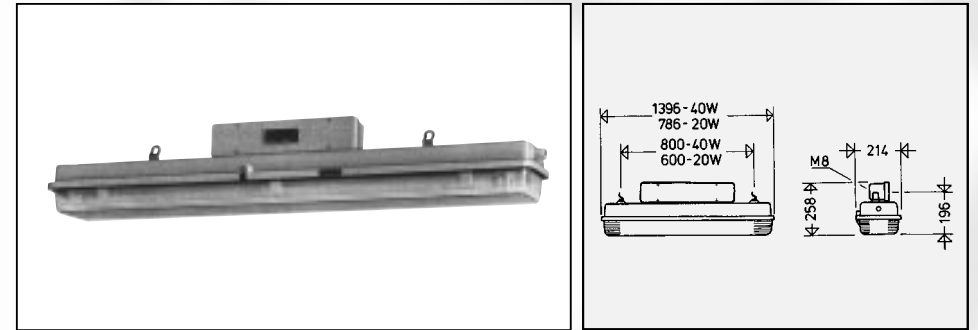
Specification	
Classification	⊕ II 2 G EEx edq IIC T4 Certificate Numbers: PTB97ATEX2223, 2224 and 2225
Control Gear	Electronic
Rated Voltage	220-240v 50/60Hz
Power Factor	0.95
Tube Type - Tubular fluorescent	26 mm dia T8 bi pin
Reflector	White hinged fibre-glass reinforced polyester
Mounting Method	Horizontal using either two galvanised brackets for ceiling mounting or two stainless steel hooks for suspension mounting
Terminals	L1 + N + PE 6.0 mm ² max, for through wiring 6 x 2.5 mm ² max + PE or 6 x 4 mm ² + PE
Cable Entry	2 x M20 cable glands, 1 plugged and 1 blind M25
Material - Housing	Glass fibre reinforced polyester
Material - Diffuser	Hinged shock-proof polycarbonate with central locking system
Ingress Protection	IP66
Permissible Ambient Temperature	-20°C to +50°C

Ordering Information

Length mm	Lamp/s	Produce Code	Accessories for Through Wiring (Gives an extra terminal block for connection at both ends)								
600	1 x 18w x T8	E15221									
1200	1 x 36w x T8	E15241									
1500	1 x 58w x T8	E15261									
600	2 x 18w x T8	E15222	<table border="1"> <thead> <tr> <th>Description</th> <th>Product Code</th> </tr> </thead> <tbody> <tr> <td>2 x 2.5 + E</td> <td>150110002</td> </tr> <tr> <td>3 x 2.5 + E</td> <td>150110005</td> </tr> <tr> <td>4 x 2.5 + E</td> <td>150110008</td> </tr> </tbody> </table>	Description	Product Code	2 x 2.5 + E	150110002	3 x 2.5 + E	150110005	4 x 2.5 + E	150110008
Description	Product Code										
2 x 2.5 + E	150110002										
3 x 2.5 + E	150110005										
4 x 2.5 + E	150110008										
1200	2 x 36w x T8	E15242									
1500	2 x 58w x T8	E15262									

- Lamps are not included.
- Versions with other voltages and frequencies are available on request.
- Types E15221 and E15222 are also available for temperature class T6. In this case 38 mm lamps are required and the ambient temperature must not exceed +40°C.

E158 EEx s IIC Emergency Fluorescent Luminaire



Specification	
Classification	EEx s IIC T4 Zones 1 and 2 Certificate Number: EX92.Y.1629 and EX92.Y.1628
Control Gear	Electronic
Rated Voltage	220-240v 50/60Hz
Power Factor	0.95
Tube Type - Tubular fluorescent	26 mm dia T8 bi pin
Reflector	White hinged fibre-glass reinforced polyester
Mounting Method	Horizontal using either two galvanised brackets for ceiling mounting or two stainless steel hooks for suspension mounting
Terminals	L1 + L1' + N + PE max 2.5 mm ²
Cable Entry	2 x M20 cable glands, 1 plugged and 1 blind M25
Material - Housing	Glass fibre reinforced polyester
Material - Diffuser	Hinged shock-proof polycarbonate with central locking system
Ingress Protection	IP66
Permissible Ambient Temperature	-10°C to +50°C

Electrical Design for Emergency Operation

Lamps

In this twin lamp fitting, one lamp is for mains operation only and the other for mains and emergency operation.

Maintained or Non-maintained Versions

For 1 hour emergency operation with 4 ah battery capacity.
 For 1.5 or 2 hour emergency operation with 7 ah battery capacity.
 In all cases approximately 50% of the rated lamp luminous flux is achieved. For 3 hour emergency operation with 7 ah battery capacity approximately 25% of the rated luminous flux of one tube is achieved.

Discharge Protection

The emergency unit is fitted with deep discharge protection and a luminescence diode is fitted to allow visual monitoring of the electronic battery charger.

Batteries

Maintenance free NiCd batteries of 6v/4ah or 6v/7ah are located inside their own housing either on top or away from the lighting fitting. When this housing or the diffuser of the luminaire are opened the batteries are electronically separated from the mains.

Recharging Time

About 20 hours to reach 90% of the capacity for rated operation.

E158 EEx s Emergency Fluorescent Luminaire

Basic Wiring Diagram

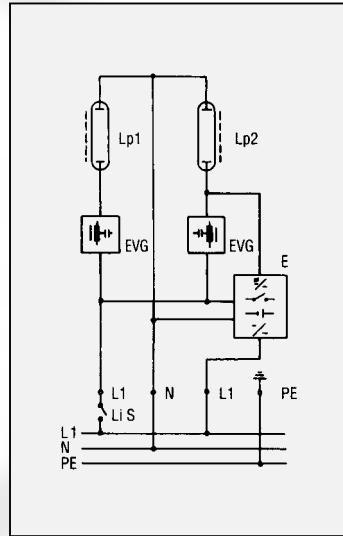
Lamp Lp1 operates via mains only

Lamp Lp2 operates via the mains and in case of mains failure via the batteries.

By opening the light switch LIS the emergency light is interrupted.

EVG = Electronic Ballast

E = Emergency Electronic Light Device



Connection Leads Required

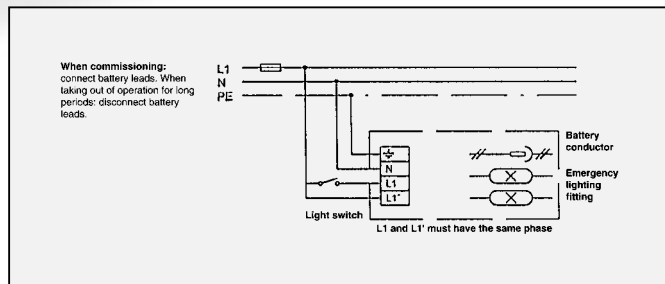
1. Direct Phase L1 (or L2 or L3) goes from the circuit fuse directly (not via the switch) to terminal L1 (or L2 or L3) the charging phase. Consequently the lighting fitting is live when switched off unless the fuses are open or unscrewed.
2. Switched Phase L1' (L2' or L3') goes to terminal L1' (or L2' or L3') via the switch and must be electronically identical with the direct phase L1 (or L2 or L3).
3. Neutral Conductor N in the case of a mains voltage of 230v between the outer conductors such as outer conductor (e.g. L2 or L3) is selected instead of N.
4. Earth Conductor PE.

Wiring Diagram

A typical wiring diagram for a mixed

installation of emergency and

standard lighting fittings is shown below.



Ordering Information

Length mm	Emergency Lamp	Lamp/s	Emergency Time	Product Code
600	1 x 18w x T8	2 x 18W x T8	1 Hour	E15822
1200	1 x 36w x T8	2 x 36w x T8	1 Hour	E15843
600	1 x 18w x T8	2 x 18w x T8	3 Hours	E5822/3
1200	1 x 36w x T8	2 x 36w x T8	3 Hours	E5842/3

E500 and E501 EEx d - Flameproof Small Wellglass



Dimensions	
Side Entry	94 mm dia x 78 mm x 158 mm (170 mm with guard or filter)

Specification

Classification	EEx d Flameproof T5. Zones 1 and 2. Apparatus Groups IIA and IIB
Certificate Number	EX811262
Rate Voltage	Up to 250v
Lamp Type	Incandescent
Mounting Method	Side entry
Terminals	2 x 2.5 mm ² or 1 x 4.0 mm ²
Cable Entry	Side Entry 2 x 20 mm 1 plugged
Material - Housing	Cast iron hot dipped galvanised
Material - Diffuser	Temperature resistant toughened wellglass
Ingress Protection	IP65
Weight	2 kg
Lampholder	BC, SBC or ES

Ordering Information

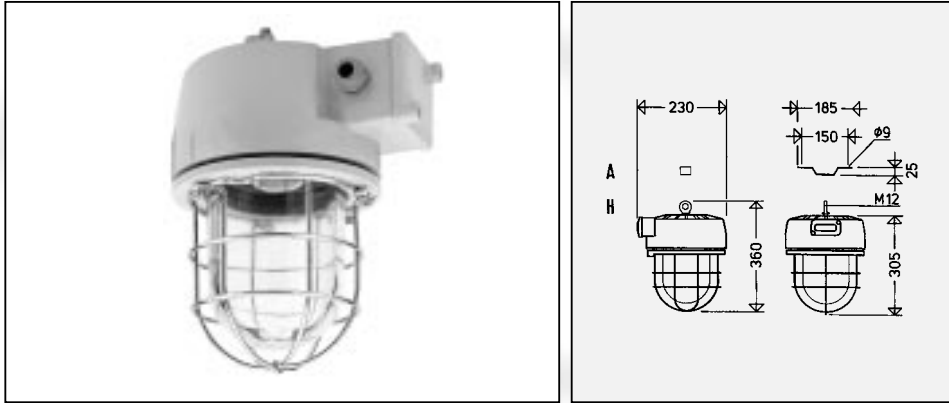
Type	Lampholder	Product Code
Side Entry	BC	E501004
Side Entry	SBC	E501006
Side Entry	ES	E501008

Note:

Optional extras include a protective clear polycarbonate guard for the wellglass and a range of five coloured polycarbonate filters to enable the fitting to be used as a pilot lamp.

To order any of these apply the following suffix to the product codes above. Guard - /X, Red filter - /R, Green Filter - /G, Blue filter - /B, Amber Filter - /A Opal Filter - /O.

D500 EEx de Wellglass



Specification

Classification	EEx de IIC T4-T5-T6 (Depending on Lamp) Certificate Number: INIEX83.103.2.86
Rated Voltage	Up to 250v
Lamp Type	High Pressure mercury vapour, High pressure sodium vapour and Energy saving compact
Mounting Method	M12 eye bolt or ceiling bracket both made from galvanised steel
Terminals	2 terminals 2.5 mm ² + internal and external earth connection
Cable Entry	2 x M25 entries, 1 plugged
Material - Housing	Powder coated grey cast iron, flameproof connection between housing and bezel ring
Material - Diffuser	Temperature resistant wellglass
Ingress Protection	IP66
Weight	11 KG

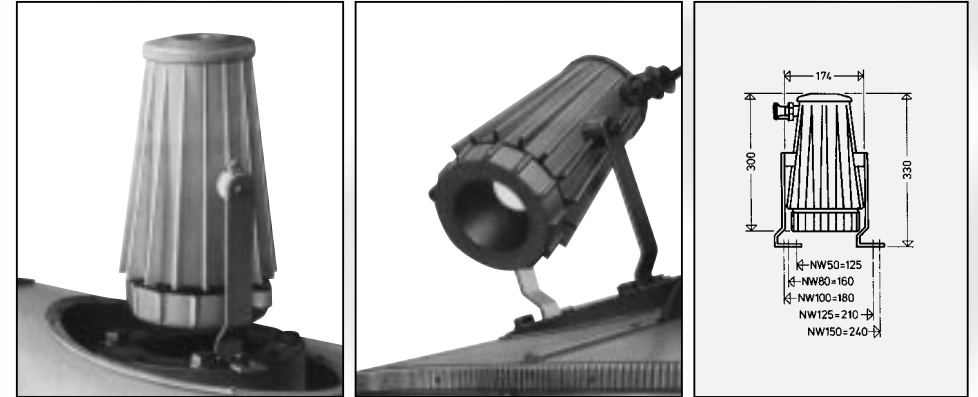
Ordering Information

Lamp Type	Temperature Class	Product Code
Incandescent 80/200w	T4	D500
Compact Lamp 13w	T6	D501
Compact Lamp 26w	T6	D502
High Pressure Mercury 50w	T6	D503
High Pressure Mercury 80w	T5	D504
High Pressure Mercury 125w	T4	D505
High Pressure Sodium 50w (internal ignitor)	T6	D506
High Pressure Sodium 70w (internal ignitor)	T5	D507

Note:

The fitting can be supplied with a flameproof switch that disconnects the fitting electrically when the bezel ring is opened.

D505 EEx de Tank Inspection Luminaire



Specification

Classification	EEx de IIC T3 or T5 Zones 1 and 2 Certificate Number INIEX85.103.465
Rated Voltage	230-240v with integral transformer for 12v
Lamp Type	Reflector tungsten halogen 20w or 50w
Mounting Method	Two mounting brackets attached to the inspection glass flanges
Terminals	2 x 2.5 mm ² and internal and external earth connections
Cable Entry	1 x 20 mm
Material - Housing	Powder coated grey cast iron
Material - Diffuser	Thermal glass
Ingress Protection	IP65
Permissible Ambient Temperature	-20°C to +40°C
Weight	13.2 Kg

Ordering Information

Lamp Type	Temperature Class	Product Code
Reflector Tungsten Halogen 1 x 20w	T5	D5051
Reflector Tungsten Halogen 1 x 50w	T3	D5052

D630 EEx de Pendant Luminaire for 250 watts

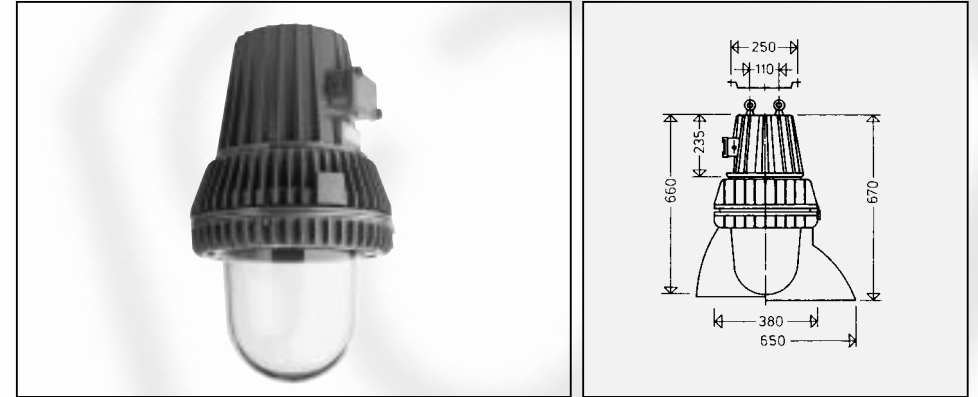


Specification	
Classification	II 2 G EEx de IIC Zones 1 and 2 T4-T5-T6 Certificate Number: PTB 98 ATEX1122
Rated Voltage	220-240v 50/60Hz
Lamp Type	High pressure mercury vapour, Metal halide and High pressure sodium
Reflector	High bay reflector and wire guard available as optional extra
Mounting Method	2 x M10 eye bolts or ceiling bracket
Terminals	2 bow type terminals 6 mm ² and internal and external earth connection
Cable Entry	1 or 2 M25 entries
Material - Housing	Powder coated weather resistant cast aluminium
Material - Diffuser	Thermal glass globe
Ingress Protection	IP66/67
Permissible Ambient Temperature	-20°C to +40°C
Weight	16.3 Kg
Lampholder	E27 to E40

Ordering Information

Lamp Type	Temperature Class	Product Code
High Pressure Mercury 250w uncompensated	T4	D631
High Pressure Mercury 250w compensated	T4	D632
Metal Halide 250w uncompensated	T4	D633
Metal Halide 250w compensated	T4	D634
High Pressure Sodium 250w uncompensated	T4	D635
High Pressure Sodium 250w compensated	T4	D636

D640 EEx de Pendant Luminaire for 400 watts



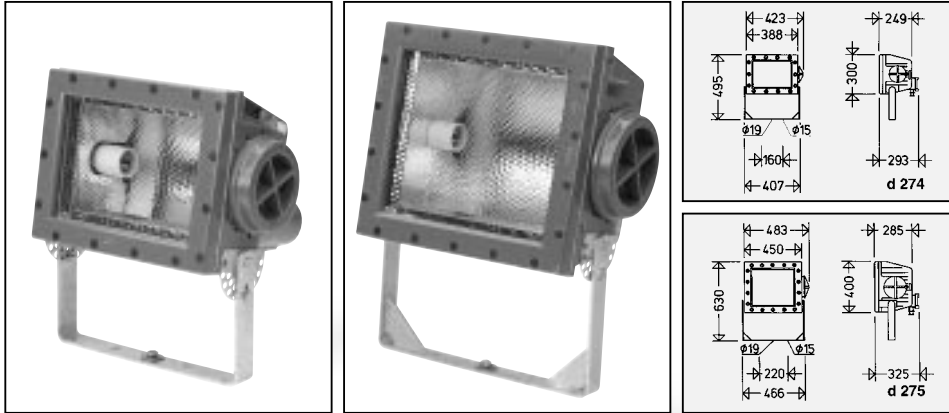
Specification	
Classification	EEx de IIC T4 to T5 Zones 1 and 2 Certificate Number: ISSeP93.C.103.1074x
Rated Voltage	230-277v 50/60Hz
Lamp Type	High pressure mercury vapour, Metal halide and High pressure sodium
Reflector	High bay and low bay reflectors available as optional extra
Mounting Method	2 x M10 eye bolts or ceiling bracket available optional extras
Terminals	2 bow type terminals 2.5 mm ² and internal and external earth connection
Cable Entry	2 or M25, 1 plugged
Material - Housing	Powder coated sea water resistant cast aluminium
Material - Diffuser	Thermal resistant protective glass
Ingress Protection	IP65
Weight	40 Kg
Lampholder	E40

Ordering Information

Lamp Type	Temperature Class	Product Code
High Pressure Mercury 250w	T5	D641
High Pressure Mercury 400w	T4	D642
Metal Halide 250w	T5	D643
Metal Halide 400w	T4	D644
High Pressure Sodium 250w	T5	D645
High Pressure Sodium 400w	T4	D646

Optional Extras:
 Mounting Bracket 62A
 High Bay Reflector 64B
 Low Bay Reflector 65T

D274 and D275 EEx de Floodlight for 400 watts



Specification

Classification	EEx de IIB T2-T3-T4 Zones 1 and 2
Certificate Numbers	D274 EX-93.C.2106 and EX93C.2105x D275 EX-93.C.2107 and EX93.C.2108x
Rated Voltage	240v 50Hz
Lamp Type	High pressure sodium, High pressure mercury
Reflector	High anodised mirror, reflector from purest aluminium
Ballasts	Located inside the housing
Mounting Method	1 fork-shaped bracket as standard finished in hot dipped galvanised
Terminals	L1 + N + PE 6.0 mm ² max
Cable Entry	2 x M25, 1 plugged
Material - Housing	Powder coated sea water resistant cast aluminium
Material - Diffuser	Temperature resistant glass
Ingress Protection	IP66/67
Permissible Ambient Temperature	-30°C to +40°C
Weight	D274 - 28 Kg D275 - 43 Kg
Lampholder	E40

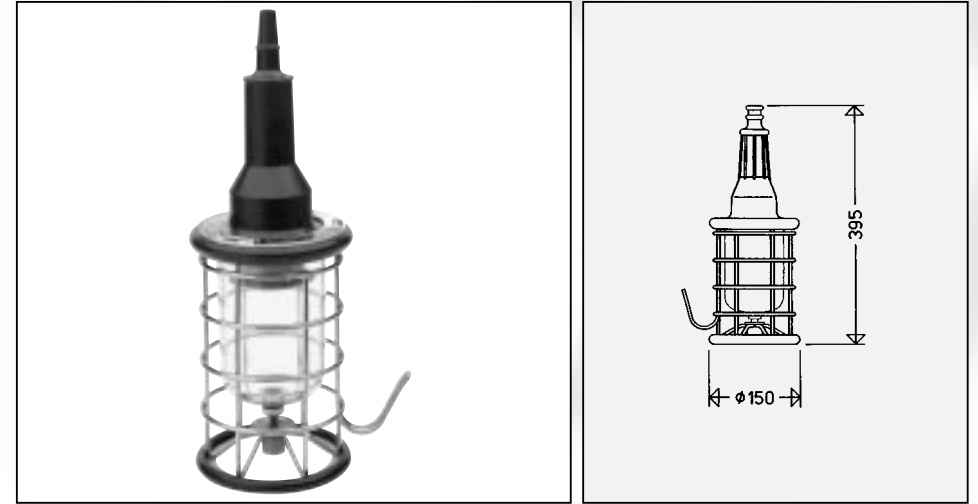
Ordering Information

Lamp Type	Temperature Class	Product Code
High Pressure Mercury 250w	T3	D2741
High Pressure Sodium 250w	T3	D2742
High Pressure Mercury 250w	T4	D2751
High Pressure Sodium 250w	T4	D2752
High Pressure Mercury 400w	T3	D2753
High Pressure Sodium 400w	T3	D2754

Note:

For lamp replacement the lateral screw cap has to be opened. It is locked by means of a special screw the mains must be switched off before replacing lamps

E830 Exe Hand Lamp



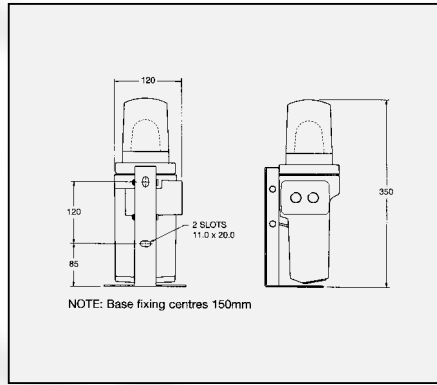
Specification

Classification	Exe II T2 - T4 Certificate Number: PTBEX-94.C.2031
Lamp Type	HT incandescent
Material - Housing	Rubber handle (EPDM), Galvanised wire guard
Material - Diffuser	Glass globe resistant against temperature changes
Ingress Protection	IP55
Lampholder	E27 with brake spring to prevent movement of the lamp
Accessories	Rubber coated suspension hook and rubber ring supplied as standard

Ordering Information

Lamp Type	Temperature Class	Volts/Watts	Product Code
Incandescent	T4	220-230/25	E831
Incandescent	T3	220-230/40	E831
Incandescent	T3	220-230/60	E831

Calstar EEx d Xenon Beacon



Specification

Classification	EEx d IIB T4 Zones 1 and 2, IIA and IIB. EEx d 1 Certificate Number: Ex96D1074
Control Ger	Electronic trigger circuit housed in xenon module
Rated Voltage	220-254v 50/60Hz alternative voltages available i.e. 110-130v 50/60Hz and 24v/49v DC
Lamp Type	Plug in helical 20 joule xenon tube
Mounting Method	In any position with removable bracket
Terminals	6 x 6.0 mm ² or 10 x 2.5 mm ² with telephone initiation
Cable Entry	2 x M20, 1 plugged. EE xe termination chamber with 4 x 20 mm available as optional extra
Material - Housing	Polyester powder coated zinc alloy to BS1004A
Material - Diffuser	Toughened borosilicate glass
Ingress Protection	IP67
Permissible Ambient Temperature	-20°C to +40°C
Weight	7 Kg
Flameproof joint	Tapered spigot type

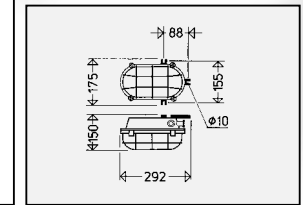
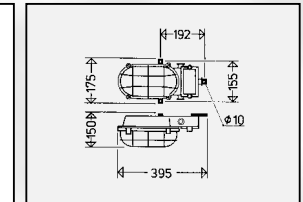
Ordering Information

Description	Group	24v DC	48v DC	110v AC	240v AC	Group	24v DC	48v DC	110v AC	240v AC
EEx d	I	400/0010	400/0015	400/0020	400/0025	IIB	450/0010	450/0015	450/0020	450/0025
EEx de	I	400/0110	400/0115	400/0120	400/0125	IIB	450/0110	450/0115	450/0120	450/0125
EEx de with telephone initiation	I	400/0111	400/0116	400/0121	400/0126	IIB	450/0111	450/0116	450/0121	450/0126
EEx de with relay initiation	I	400/0112	400/0117	400/0122	400/0127	IIB	450/0112	450/0117	450/0122	450/0127

Description	Group	24v DC	48v AC	110v AC	240v AC
EEx d	IIC	450/0030	450/0035	450/0040	450/0045
EEx de	IIC	450/0130	450/0135	450/0140	450/0145
EEx de with telephone initiation	IIC	450/0131	450/0136	450/0141	450/0146
EEx de with relay initiation	IIC	450/0132	450/0137	450/0142	450/0147

Note:
 Lens colour add the following suffix red - R,
 Yellow - Y, Blue - B, Green - G, Amber - A, Clear - C
 Wire guard available as optional extra.

E26 and E27 EEx de Bulk Head



Specification

Classification	EEx de IIC and Exe
Certificate Numbers	E26 PTB EEx -93.C.2084 and E27 PTB 111B/E11611
Rated Voltage	240v 50Hz
Lamp Type	Incandescent
Mounting Method	3 External lugs
Cable Entry	The E26 with connection box that is part of the main housing 2 x 25 mm entries one plugged The E27 without connection box 1 x 25 mm entry
Material - Housing	Cast Iron powder coated grey. Galvanised wire guard.
Material - Diffuser	Temperature resistant press glass
Ingress Protection	IP65
Permissible Ambient Temperature	-20°C to +40°C
Lampholder	Explosion proof E27

Ordering Information

Type	Temp Class, Ign Group	Wattage	Product Code
With connection box	T1	100	E26
With connection box	T2	60	E26
With connection box	T3	40/25	E26
Without connection box	G2	100	E27
Without connection box	G3/G5	40/25	E27

photometric Data Calstar Range

