



1 **TYPE EXAMINATION CERTIFICATE**

2 **Equipment Intended for use in Potentially Explosive Atmospheres**  
3 **Directive 94/9/EC**

4 Type Examination Certificate Number : **BAS01ATEX3276**

5 Equipment: **PROTECTA RANGE OF FLUORESCENT LUMINAIRES**

6 Manufacturer: **CHALMIT LIGHTING**

7 Address: **Glasgow, G52 4BL**

8 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

9 The Electrical Equipment Certification Service certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment of Category 3 intended for use in potentially explosive atmospheres given in Annex II to European Union Directive 94/9/EC of 23 March 1994.

The examination and test results are recorded in confidential Report N°

**01(C)0670 dated 30 October 2001**

10 Compliance with the Essential Health and Safety Requirements has been assessed by reference to:

**EN 50021: 1999**

**EN 50281-1-1: 1998**

except in respect of those requirements listed at item 18 of the Schedule.

11 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

12 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured.

13 The marking of the equipment shall include the following:-

**Ex II 3 GD T95°C EEx nA II 150°C (T3) T<sub>amb</sub> -20°C to +55°C**

or when fitted with optional isolating switch

**Ex II 3 GD T95°C EEx nC IIC 150°C (T3) T<sub>amb</sub> -20°C to +55°C**

In both cases ambient range and T class vary depending on model, see certificate schedule.

This certificate may only be reproduced in its entirety and without any change, schedule included.

File No: **EECS 0068/03/047**

This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances.



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**I M CLEARE**  
DIRECTOR  
21 November 2001



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**Schedule**

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**TYPE EXAMINATION CERTIFICATE N° BAS01ATEX3276**

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**Description of Equipment**

The Protecta range of luminaires designed for fitting T8 bi-pin fluorescent tubes comprises single and twin versions for 18W and 36W tubes designed for connection to supplies of 200V-254V 50/60Hz. The range is available with copper/iron and high frequency electronic ballasts. When supplied with electronic ballasts an emergency version is available incorporating an internal battery and inverter/charger module.

The luminaire body is of glass reinforced polyester resin with a polycarbonate diffuser hinged at one side and held at the other side by a quick release snap-on channel along the entire length of the luminaire. Ingress protection of IP66/7 is assured by an EPDM gasket secured in a groove in the body.

The control gear and components are mounted on a removable steel gear tray attached to the body by moulded inserts. One of these components is an optional isolating switch allowing relamping without isolating the luminaire. If the isolating switch is omitted then isolation is required.

The standard Hylec Type PA44WP may be replaced by fused terminal blocks manufactured by EFA Type FTB1/N or Hylec Type 1003Si as described on sheet 3 of drawing D2052. As an alternative Weidmuller Type MK6 terminals (BASEEFA Certificate BAS99ATEX2123U) or WAGO Type 262 terminals (PTB Certificate PTB98ATEX3125 suitable for up to 6mm<sup>2</sup> conductors may be used.

Entry holes are provided at each end of the body suitable for M20 cable/conduit entries. Any cable entry device used must maintain the ingress protection rating of the enclosure. Any unused entries must be filled with suitable blanking plugs which must also maintain the degree of protection provided by the enclosure.

The following components are used within the luminaire using copper iron control gear:

Component	Manufacturer	Part No.	Specification	Standard
Ballast	Transtar	C18P	T <sub>w</sub> 130°C, Δt 35°C	EN 60920: 1991
		C36P	T <sub>w</sub> 130°C, Δt 30°C	EN 60921: 1991
	Alternative ballasts may be used provided they are made to the same standards (guaranteed by the BSI Kite Mark) and have identical, or better, specification. The terminals must comply with the requirements of EN50021.			
Starter	Arlen	EFS120P EFS600P	T <sub>c</sub> 75°C T <sub>c</sub> 75°C	BS 4533: pt.102.51: 1986 (BAS. Cert. No. 4024U)
Capacitor (optional)	various		T <sub>c</sub> 85°C (Dry metalised film construction)	EN61048:1993 (BSI Kite Marked)
Lamp holder	Vossloh	Type 27700		BS EN60400: 1992
	Alternative lampholders may be used provided they are made to the same standards (guaranteed by the BSI Kite Mark) and have centre contact support. The terminals must comply with the requirements of EN50021			
Isolating switch (optional)	Bartec	07-1541	250V 2A	EN 50018 PTB Ex89C1022U



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Through wiring is fitted as standard on 36W versions and may be used on 18W also. This uses either 2.5mm<sup>2</sup> high temperature PVC cable fitted within a glass fibre sheath rated at 155°C or 4mm<sup>2</sup> high temperature PVC cable without the sheath. On models fitted with HF electronic control gear 2.5mm<sup>2</sup> cable can be used without the protective sheath.

All internal wiring is made from 1/0.8mm<sup>2</sup> high temperature PVC insulated cable. Where two wire are required to be fitted in one terminal way a crimp-on blade connector is used.

The following models with copper/iron ballasts are included in the range:

Model	Lamps T8	Ballast	Capacitor $\mu$ F	Starter	Circuit	T <sub>amb</sub> -20°C to ___(°C)	T Class	Max Surface temperature (°C)
400336	1x36W	1x36	4	EFS600P	parallel	55	T4	95
400436	2x36W	2x36	8	2xEFS600P	parallel	40	T4	95
						55	150°C (T3)	95
400136	1x18W	1x18		EFS120P	parallel	55	T4	95
		2x18	8	2xEFS120P	parallel	45	150°C (T3)	95
400236	2x18W	1x36	8	EFS600P	series	50	150°C (T3)	95
		1x36		EFS600P	series	52	150°C (T3)	95

**ELECTRONIC BALLAST AND INVERTER UNITS**

The luminaire may alternatively be fitted with sealed high frequency electronic ballasts and inverters covered by BASEEFA Certificate BAS01ATEX3211U. The following models are included:

Model	Type	Lamps T8	Sealed Control Gear BAS01ATEX3211U	T <sub>amb</sub> °C	T Class	Max Surface temperature (°C)
400331	Standard	1x36W	electronic ballast	-10 to 50	T4	95
400431		2x36W				
400131		1x18W				
400231		2x18W				
400531	Spigot entry	1x18W	electronic ballast	-10 to 40	T4	95
400631		2x18W				
402431	Emergency	2x36W	electronic ballast and inverter	0 to 50	T4	95
402331		1x36W				





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Due to the properties of the rechargeable batteries the emergency versions are only suitable for ambient temperatures above 0°C. Five NiCd cells, either Sanyo type KR-DHL or SAFT Type VT70, are welded together and contained within plastic sleeving. The batteries are rated at 6V 4Ah. The cells do not gas in normal operation and the charging system limits the charging rate and provides under voltage protection of 1v/cell.

16 **Report No.**

01(C)0670

17 **Special Conditions For Safe Use**

None.

18 **Essential Health and Safety Requirements**

All requirements are covered by compliance with EN 50021: 1999 and EN 50281-1-1: 1998.

19 **DRAWINGS**

Number	Issue	Sheet	Date	Description
D2052	0	1	1/8/01	Certification details and control gear ratings
D2052	0	2	1/8/01	Enclosure outlines
D2052	0	3	1/8/01	Non-emergency control gear layout
D2052	0	4	1/8/01	Component details
D2052	0	5	1/8/01	Emergency control gear layout
D2052	0	6	1/8/01	Non-emergency HF ballast 18W pole mounted

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BASEEFA List Keywords  
2FLUOLUM



1 **SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment Intended for use in Potentially Explosive Atmospheres**  
3 **Directive 94/9/EC**

3 Supplementary Type Examination **BAS01ATEX3276/1**  
Certificate Number:

4 Equipment: **Protecta Range of Fluorescent Luminaires**

5 Manufacturer: **Chalmit Lighting**

6 Address: **Glasgow, G52 4BL**

7 This supplementary certificate extends Type Examination Certificate No. BAS01ATEX3276 to apply to equipment designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

The original certificate was issued by The Electrical Equipment Certification Service, which retains responsibility for its original documentation. Baseefa (2001) Ltd. is responsible only for the additional work relating to this supplementary certificate and any other supplementary certificate it has issued.

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. 0068

Project File No. 05/0468

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

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Registered in England No. 4305578 at the above address

**R S SINCLAIR**  
**DIRECTOR**  
On behalf of  
Baseefa (2001) Ltd.



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## Schedule

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Certificate Number BAS01ATEX3276/1

### 15 Description of the variation to the Equipment

#### Variation 1.1

To add a resistor in the supply line to reduce the incoming voltage by a maximum of 24V, and in the emergency supply line if required. The maximum values and minimum power ratings are indicated below.

Lamp Circuit	Resistor Value ( $\Omega$ )	Resistor Rated Power (W)
18W	270	25
2x18W	150	50
36W	150	50
2x36W	68	100
58W	100	100
2x58W	47	150
Emergency	560	25

### 16 Report Number

None

### 17 Special Conditions for Safe Use

None

### 18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

### 19 Drawings and Documents

Number	Sheet	Issue	Date	Description
D6026	1	-	24.06.05	Resistor Details - EEx nA Fluorescent Circuits

This drawing is common to Certificates BAS01ATEX3277X and BAS01ATEX3052X.