
















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-  **Quality**
-  **Performance**
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**Rota**



**P51** LED exit signs suitable for wall or ceiling mounting

ORBİK Electronics Ltd has a policy of constant product improvement, the right is therefore reserved to modify product specifications without prior notice.  
All products sold in accordance with our conditions of sale, copy on request.



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Concentrating their sales efforts on the lighting manufacturers in the UK, Orbik's reputation for supplying quality BSI approved emergency lighting control gear spread quickly.

Constant sales growth allowed the Company to expand and before long Orbik became a reputable name across Europe and the Middle East for emergency lighting products, including a comprehensive range of emergency luminaires.

Continual luminaire development created increased demand for metal work and in 1993 Orbik acquired Metalforms Engineering, a quality highly automated manufacturer of precision sheet metalwork with in-house powder coating facilities.

In 2001 **SPEL** was merged with Orbik Electronics to target the Electrical Wholesaler and specification markets with their own brand of emergency lighting and fire safety equipment.

**SPEL** have grown rapidly and are now recognised as one of the most rapidly expanding emergency lighting suppliers in the UK.



FM09128





# Think quality. Think Orbik.

Orbik's purpose built four acre site is situated in the West Midlands and now hosts 200 employees. Automated production processes allow for an efficient flexible supply of emergency lighting products to their global customers.

Encouraging sales in the Republic of Ireland has recently led to Orbik joining forces with Dublin based **Emergency Lighting and Fire (E.L.F)** who are now successfully promoting the Orbik range of products across the Emerald Isle with a local stockholding to ensure their customers are provided with an excellent service. Something that Orbik do naturally.

## New Products and Designs

P26 **Kalix**



P27 **Karis**



P37 **Monza**



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P53 **Romney**



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p13 **Chella**



p14 **Calabor**



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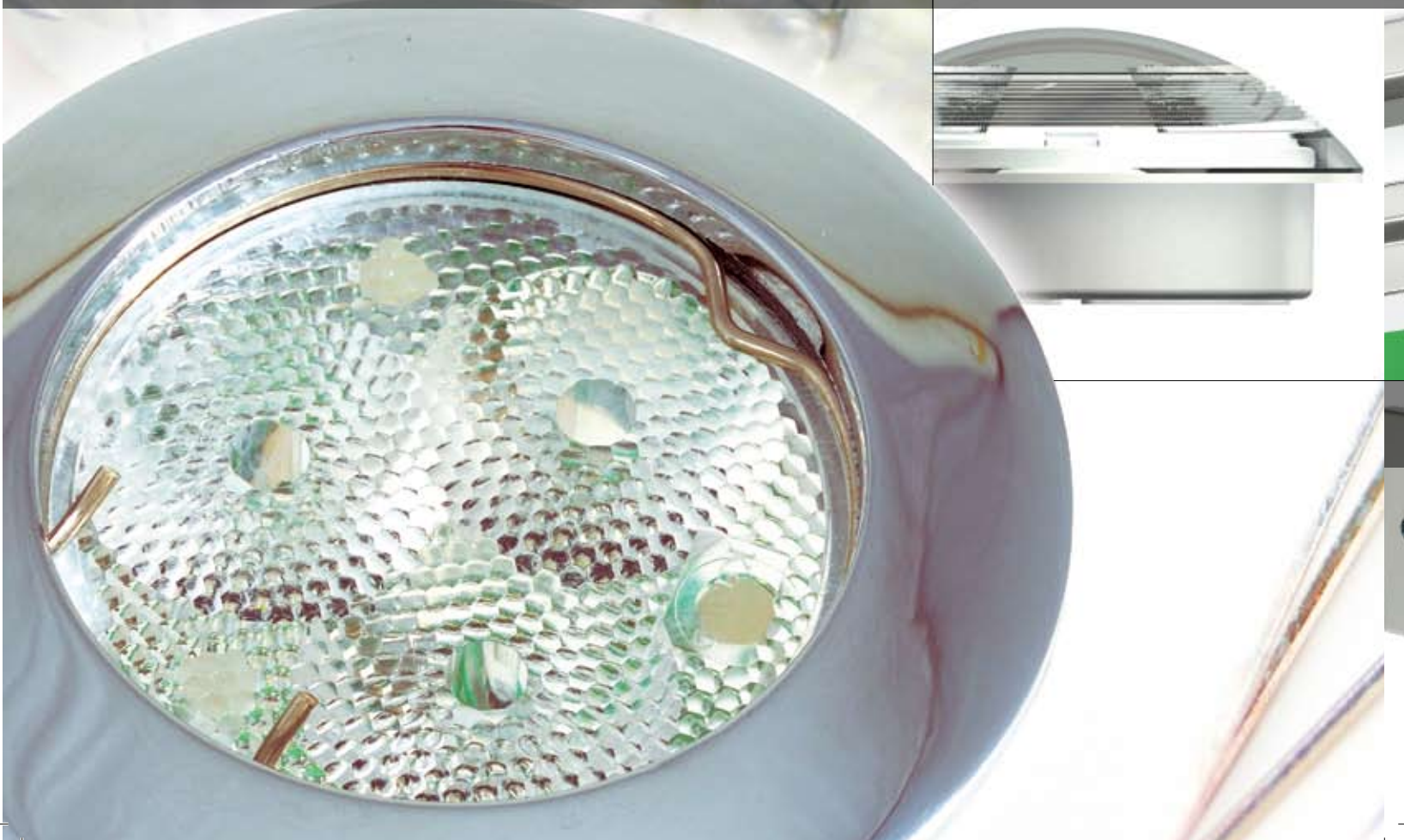
p19 **Eden**



p15 **Dart**

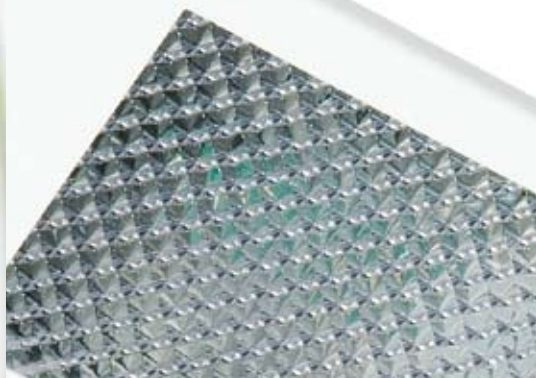


p21 **Elled**





p22 **Geneva**



p13 **Chella**

Stylish and versatile recessed polycarbonate luminaire or exit sign.

p14 **Calabor**

Fully recessed emergency luminaire for interior use

p15 **Dart**

Compact LED downlight range

p17 **Dyode**

Unique fully recessed LED emergency luminaire

p19 **Eden**

IP65 compact bulkhead with fresnel lens for improved light distribution with an LED option

p21 **Elled**

Distinctive ceiling mounted LED emergency luminaire

p22 **Geneva**

Stylish Recessed Fluorescent and LED Luminaire

p46 **Petina**



p46 **Petina**

Ultra-slim LED single and double-sided exit sign

p51 **Rota**

LED exit signs suitable for wall or ceiling mounting

p53 **Romney**

Flexible LED exit sign

p54 **Savona**

Edge-lit exit signs in single and double-sided versions

p55 **Savona Petite**

Compact suspended exit sign

p51 **Rota**



p54 **Savona**



p55 **Savona Petite**



p53 **Romney**



# Arc

## IP65 compact bulkhead with soft arc linear lens diffuser for improved performance

Completely manufactured in the UK, **Arc** was the first luminaire on the market to feature a Soft **Arc** Linear Lens Diffuser designed to provide maximum spacings between emergency luminaires. Even today, very few products are able to meet **Arc's** optical performance.

The lens also makes **Arc** an excellent mains lighting option with T5 or Compact Fluorescent lamps.

**Arc** offers many other features with its compact polycarbonate enclosure. These include a screw fixing diffuser located with brass threaded inserts, centre rear besa entry and 20mm conduit knockouts at each end plus a hinged steel gear tray for ease of installation. Making this product one of the most flexible and best performing luminaires on the market.

The **Arc** can be fitted with a self adhesive legend SAL 1 kit to create an exit sign or with a semi-recessing trim, suitable for use with suspended or plaster board ceilings.



Arc with brass semi-recessed trim

Arc surface mounting luminaire



SAL1 provides several options for an exit legend.

**Viewing distance 18 metres**

### Options Suffix:

<b>/E</b> Economy Output	<b>/O</b> Opal Diffuser
<b>/S</b> Standard Output	<b>/HF</b> High Frequency Ballast
<b>/H</b> High Output	<b>/ES</b> Electronic Start
<b>AR/WH</b> White Finished Semi-recess Trim	<b>/AD</b> Intelligent Addressable Luminaire (Non-Maintained Only)
<b>AR/BR</b> Brass Finished Semi-recess Trim	<b>/ST</b> Self Testing Luminaire (Non-Maintained Only)
<b>AR/CH</b> Chrome Finished Semi-recess Trim	<b>/TS</b> Push to Test Switch
<b>/SAL 1</b> Self-adhesive exit legend kit	
<b>/VR</b> Anti-tamper Screws	
<b>/HPF</b> Power Factor Corrected	

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
AR 8	1 x 8W 300mm	-	0.90
AR 2x8	2 x 8W 300mm	-	0.90
AR 11	11 W TC-S	-	0.90

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
AR8/NM3	NM3 8W 300mm	80E	1.20
		120S	
		180H	
AR8/M3	M3 8W 300mm	80E	1.45
		120S	
		180H	
AR2x8/NM3	NM3 2x8W 300MM	150S	1.70
		250H	

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
AR8/#/D	8W Slave Luminaire	275	0.85

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 350mm x Width 108mm x Depth 80mm

**Cut out dimensions:** Length 330mm x Width 90mm



# Bakarrac

## IP20 Steel and polycarbonate luminaire for interior use

**Bakarrac** is a high performance bulkhead for interior use featuring a white epoxy coated sheet steel base fitted with a prismatic polycarbonate diffuser. The base is available in a range of quality finishes including brass and chrome and an opal diffuser can be specified if preferred. All models have a hinged gear tray and rear centre besa entry.

The **Bakarrac** can be supplied with a semi-recessing bezel, in a range of finishes, is manufactured specifically for this purpose. **Bakarrac** has a high quality finish for locations where appearance is important.

The SAL2 legend kit transforms the **Bakarrac** into an equally high quality exit sign.

Bakarrac white surface mounting luminaire with opal diffuser



Bakarrac with white semi-recessed trim and clear diffuser

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
BA1x8	1x8W 300mm	-	1.90
BA2x8	2x8W 300mm	-	1.95
BA11	11W TC-S	-	1.95
BA2x11	2x11W TC-S	-	2.10

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
BA8/NM3	NM3 8W 300mm	80E	2.40
		120S	
		180H	
BA8/M3	M3 8W 300mm	80E	2.60
		120S	
		180H	
BA8/C3	C3 8W 300mm	80E	2.60
		120S	
		180H	
BA2x8/NM3	NM3 2x8W 300mm	150S	2.60

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
BA8/#/D	8W AC/DC Slave	275	1.90
BA8/#/H	8W Mains/Slave changeover	275	1.90

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 370mm x Width 150mm x Depth 100mm

**Cut out dimensions:** Length 375mm x Width 148mm



SAL2 provides several options for an exit legend.

**Viewing distance 22 metres**

### Options Suffix:

/H	High Output	/O	Opal diffuser
/S	Standard Output	/HF	High Frequency Ballast
/E	Economy Output	/ES	Electronic Start
BA/WH	White Recessing Flange	/AD	Intelligent Addressable Luminaire
/SAL2	Self-adhesive exit legend kit	/ST	Self Testing Luminaire
/VR	Anti-tamper Screws	/TS	Push to Test Switch
/HPF	Power Factor Corrected		

IP20  



# Bewdley

## Robust IP65 bulkhead for exterior or interior use

Designed for use as either a mains bulkhead, or as a robust solution to emergency lighting requirements, **Bewdley** has proven to be an outstanding performer.

Its tough all polycarbonate housing is combined with useful features including a hinged steel gear tray, rear centre besa entry drill starts and 20mm end conduit entries.

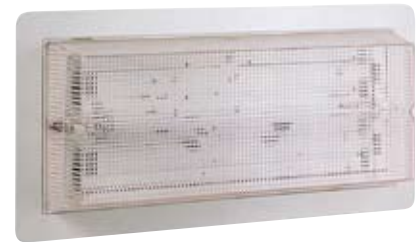
**Bewdley** is supplied with a white base and opal diffuser as standard and a black base, prismatic or fresnel diffuser are available as options.

An attractive metal base version sealed to IP65 is also available.



Bewdley with opal diffuser

Bewdley semi-recessed with prismatic diffuser



Bewdley with fresnel diffuser



SAL2 provides several options for an exit legend.

**Viewing distance 22 metres**

### Options Suffix:

<b>/S</b> Standard Output	<b>/HF</b> High Frequency Ballast
<b>/E</b> Economy Output	<b>/ES</b> Electronic Start
<b>/H</b> High Output	<b>/AD</b> Intelligent Addressable Luminaire
<b>BE/WH</b> White Finished Semi-recess Trim	<b>/ST</b> Self Testing Luminaire
<b>BE/BR</b> Brass Semi-recess Trim	<b>/TS</b> Push to Test Switch
<b>BE/CH</b> Chrome Recessing Flange	<b>/BK</b> Black Base
<b>SAL2</b> Self-adhesive exit legend	<b>/PR</b> Prismatic Diffuser
<b>/VR</b> Anti-tamper Screws	<b>/F</b> Fresnel Diffuser
<b>/HPF</b> Power Factor Corrected	<b>/M IP65</b> Metal Enclosure
<b>/PH</b> Dawn/Dusk Photo cell	

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
BE1x8	1x8W 300mm	-	1.20
BE2x8	2x8W 300mm	-	1.25
BE11	11W TC-S	-	1.25
BE2x11	2x11W TC-S	-	1.35
BE118	1x18W TC-L	-	1.50

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
BE8/NM3	NM3 8W 300mm	80E	1.70
		120S	
		180H	
BE8/M3	M3 8W 300mm	80E	1.90
		120S	
		180H	
BE8/C3	C3 8W 300mm	80E	1.90
		120S	
		180H	
BE2x8/NM3	NM3 2x8W 300mm	150S	2.20
		250H	

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
BE8/#/D	8W AC/DC Slave	275	1.00
BE8/#/H	8W Mains/Slave changeover	275	1.20

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 370mm x Width 140mm x Depth 105mm

**Cut out dimensions:** Length 365mm x Width 135mm



KM31508



# Cadiz

## Practical emergency bulkhead for interior use with clip-fit diffuser

**Cadiz** is the perfect solution to emergency lighting needs in all interior applications where a clip-fit diffuser is acceptable.

**Cadiz** is designed for rapid and easy installation with a hinged, clip-out steel gear tray with pre-formed centre rear besa entry with fixing holes. The body of the luminaire is injection moulded polycarbonate, along with the diffuser, which incorporates etched areas to partially obscure the lamp from view.

Robust, low cost, fast to install, easy to clean and maintain, **Cadiz** is an ideal product for offices, retail outlets and similar premises, particularly where cost is critical but a reliable and an efficient product is required.

The **Cadiz** semi-recessing trim provides a neat surround to this product and is available in white, brass or chrome.



Cadiz surface mounted

Cadiz semi-recessed with white trim

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
CAD8/NM3 ♥	NM3 8W 300mm	80E	1.20
		120S	
		180H	
CAD8/M3	M3 8W 300mm	80E	1.45
		120S	
		180H	
CAD2x8/NM3 ♥	NM3 2x8W 300mm	150E	1.75
		240S	

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
CAD8/#/D	8W Slave Luminaire	275	1.00

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 350mm x Width 108mm x Depth 80mm



SAL1 provides several options for an exit legend.

**Viewing distance 18 metres**

### Options Suffix:

/E	Economy Output	/HF	High Frequency Ballast
/S	Standard Output	/ES	Electronic Start
/H	High Output	/TS	Push to Test Switch
CAD/WH	White Finished Semi-recess Trim	/AD	Intelligent Addressable Luminaire (Non-Maintained Only)
CAD/BR	Brass Finished Semi-recess Trim	/ST	Self Testing Luminaire (Non-Maintained Only)
CAD/CH	Chrome Finished Semi-recess Trim		
/SAL1	Self-adhesive Exit Legend Kit		
/HPF	Power Factor Corrected		

IP42 ♥ F CE  
KM31508

Orbik.  
The best model for any location.





# Chella

**Stylish and versatile recessed polycarbonate luminaire or exit sign.**

**Chella** is an affordable recessed polycarbonate luminaire available with long life LED or 8w Fluorescent versions.

Supplied in White as standard, the **Chella** ranges of luminaires are available in chrome or brass versions to order.

**Chella** luminaires all utilise a hinged gear tray for ease of installation and the range of products includes mains, 3 hour maintained and non-maintained emergency versions with slave, addressable and self-test emergency options available.

**Chella's** design allows all versions to be utilised as a stylish edge-lit exit sign by specifying the optional legend. The attention-to-detail is illustrated with the effective light-pipe design, which enables the charge LED indicator to be clearly visible even during maintained mode.

Other options available for **Chella** include slave versions for central battery or static inverter systems and self test or intelligent addressable gear.



Chella with white trim



Chella with chrome trim



Chella with brass trim and recessed legend

Viewing distance 32 metres

**Mains Luminaires**

Cat No.	Mode/Lamp	Lumens	Kg
CHE1X8	1X8W T5 300mm	-	1.00Kg
CHE2X8	2X8W T5 300mm	-	1.00Kg
CHE11	11W TC-S	-	1.00kg

**Emergency Luminaires**

Cat No.	Mode/Lamp	Lumens*	Kg
CHE8/NM3	NM3 8W T5 300mm	80E	1.50Kg
		120S	
		180H	
CHE8/M3	M3 8W T5 300mm	80E	1.80Kg
		120S	
		180H	
CHE2X8/NM3	NM3 2x8W T5 300mm	240S	1.55Kg
		360H	
CHE/LED/M3	White LED M3	-	1.80Kg

**Slave Luminaires**

Cat No.	Mode/Lamp	Lumens*	Kg
CHE8/#/D	8W AC/DC Slave	275	1.00Kg

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 380mm x Width 150mm

**Edge-Lit Versions:** Length 380mm x Width 150mm

**Cut-Out: Length:** Length 360 x Width 130 (70mm Min Ceiling Void)

**Viewing Distances:** 27 metres

**Legend -** Length 300 x Width 130mm



IP44



**Options Suffix:**

/H	High Output	/HF	High Frequency Ballast
/E	Economy Output	/ES	Electronic Start
/S	Standard Output	/AD	Intelligent Addressable
/BR	Brass Finish	/ST	Digital Self-Test
/CH	Chrome Finish	/EX	Exit Version
/HPF	Power Factor Corrected		

# Calabor

## Fully recessed emergency luminaire for interior use

**Calabor** is an attractive, fully recessed emergency luminaire available in white as standard with brass and chrome as options. The **Calabor** features a robust galvanised body which recesses fully into the ceiling and only requires a ceiling depth of 90mm. Within the fitting a hinged, removable gear tray facilitates easy fixing and maintenance whilst the front trim plate with a diffuser ensures a neat and attractive finish.

Standard models are supplied with a prismatic polycarbonate diffuser but can be supplied in opal if preferred.

**Calabor** is available as a recessed edge-lit exit sign, with an exit fascia manufactured from Plasi-Glas, a light conducting flame retardant plastic almost impossible to distinguish from glass, but with the strength of plastic. **Calabor** is also available with long life light emitting diode (LED) light sources.

A version with 11 watt TC-S lamps is available for use as a rectangular downlight mains luminaire.

Calabor in white finish



Calabor in brass finish



Calabor in chrome finish with exit legend

Viewing distance 32 metres

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
CAL 1x8	8W 300mm	-	2.20
CAL11	11W TC-S	-	2.25
CAL2x11	2x11W TC-S	-	2.40

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
CAL8/NM3	NM3 8W 300mm	80E	2.70
		120S	
		180H	
CAL2x8/NM3	NM3 2x8W 300mm	240S	3.00
		360H	
CAL8/M3	M3 8W 300mm	80E	2.90
		120S	
		180H	
CAL11/8/C3	C3 11W TC-S + 8W	120S	2.90
CAL/LED/M3	White LED	-	2.20

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
CAL8/#/D	8W AC/DC Slave	275	2.10
CAL11/#/H	11W Mains/Slave Changeover	650	2.10

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 410mm x Width 155mm x Depth 90mm

**Calabor Exit Dimensions:** Length 300mm x Width 160mm x Depth 150mm

**Cut out dimensions:** Length 325mm x Width 130mm Ceiling Void 85mm min

### Options Suffix:

/H	High Output	/HF	High Frequency Ballast
/E	Economy Output	/ES	Electronic Start
/S	Standard Output	/AD	Intelligent Addressable Luminaire
/CAL/BR	Brass Finish Fascia	/ST	Self Testing Luminaire
/CAL/CH	Chrome Finish Fascia	/EX	Exit Version
/HPF	Power Factor Corrected		
/OP	Opal diffuser		



IP20





# Dart

## Compact LED downlight range

**Dart** is a discreet mains or emergency downlight, designed to blend in with GU10 and GZ10 mains and low voltage luminaires.

Using the latest high output LED technology, it is aesthetically attractive, versatile and is virtually maintenance-free with a lamp life of approximately 50,000 hours.

The **Dart** packs feature high quality, high temperature Nickel Cadmium battery cells and a silicone coated woven glass fibre sleeving.

**Dart** is available in white as standard but can also be supplied in brass and chrome finishes.



Dart in white finish

Dart emergency pack



Dart in brass finish



Dart in chrome finish



### Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
DAR/LED/WH	White 3 x 1W Luminaire	-	0.50
DAR/LED/BR	Brass 3 x 1W Luminaire	-	0.50
DAR/LED/CH	Chrome 3 x 1W Luminaire	-	0.50

### Mains & Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
DAR/M3	M3 Emergency Pack	-	1.00
DAR/MAINS	Mains Pack	-	1.00

\* Mains and emergency packs will operate up to two LED downlights

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Ø 80mm x 40mm Depth

**Dimensions Mains and Emergency Packs:** Ø 75mm x 190mm

**Cut out dimensions:** Ø 75mm



IP20  

# Dalby

## Low profile emergency surface/recessed luminaire/exit sign

Manufactured from Flame-Retardant Polycarbonate, this elegantly designed IP55 Luminaire is suitable for almost any prestigious application.

**Dalby** can be used for surface or recessed mounting (when recessed only 25mm protrudes below the ceiling) and with the addition of a Self-Adhesive Legend, a simple but attractive Exit sign is created.

The **Dalby** design also offers an Edge-Lit Exit sign version which can be confidently specified for projects including Hotels and Reception areas.

**Dalby's** diffuser design incorporates a light-pipe ensuring the LED charge indicator is visible in all modes.



Dalby surface mounted



Dalby recessed with edge lit exit legend

Viewing distance 32 metres



SAL2 provides several options for an exit legend.

Viewing distance 22 metres

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
DAL8	8W 300mm Mains	-	1.35

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
DAL8/NM3	NM3 8W 300mm	80E	1.80
		120S	
		180H	
DAL2x8/NM3	NM3 2x8W 300mm	240S	3.00
		360H	
DAL8/M3	M3 8W 300mm	80E	2.00
		120S	
		180H	

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
DAL8/#/D	8W Slave Luminaires	275	1.10

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 but for 1 hour duration becomes /NM1

**Dimensions:** Length 355mm x Width 195mm x Depth 70mm

**Dalby Exit Dimensions:** Length 355mm x Width 195mm x Depth 220mm

**Cut out dimensions:** Length 335mm x Width 175mm

### Options Suffix:

/H	High Output	/AD	Intelligent Addressable Luminaires
/E	Economy Output	/ST	Self Testing Luminaires
/S	Standard Output	/TS	Push to Test Switch
/SAL2	Self-adhesive Exit Legend Kit	/EX/L+	Edge-lit Exit Kit
/HPF	Power Factor Corrected	/R	Recessing Kit
/HF	High Frequency Ballast		
/ES	Electronic Start		



IP55/IP20





# Dyode

## Unique fully recessed LED emergency luminaire.

At just 50mm in diameter **Dyode** is one of the smallest recessed LED based emergency luminaires currently available and the superbly designed refractor lens assembly which is incorporated into a high quality injection moulded housing offering an IP20 protection rating accentuates the virtues of the high power white LED light source. By utilizing a specially developed LED driver and advanced thermal engineering techniques to dramatically reduce the LED operating temperature the light output level from the LED is guaranteed throughout the full emergency duration, ensuring the life of the LED exceeds 50,000 hours.

Two versions of the advanced lens designs are available. One specifically for corridor lighting offers an elongated distribution pattern to efficiently illuminate the centre line of escape route corridors and extends the spacing distance between luminaires.

The second offers a more traditional cone distribution pattern for use in open areas or for specific task lighting. These unique features allow the emergency lighting scheme designer the option of incorporating **Dyode** into an existing mains only luminaire, to create an unobtrusive low maintenance integrated emergency luminaire.

Alternatively they can be used in standalone applications for emergency lighting.

The control circuitry is housed in a robust metal assembly and along with the Ni-MH battery pack is contained within a high quality flexible silicone sleeve which can easily pass through the 40mm cut out required for **Dyode** when mounted independently in a ceiling void.

All **Dyode** products are available with a self-test facility.

Dyode NM3 emergency pack



Actual size

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
DY/LED/NM3/OA	NM3 LED OPEN AREA	75	0.1
DY/LED/NM3/CR	NM3 LED CORRIDOR	75	0.1
DY/LED/NM3/OA/ST	NM3 LED OPEN AREA SELF TEST	75	0.1
DY/LED/NM3/CR/ST	NM3 LED CORRIDOR SELF TEST	75	0.1

\* Emergency Lumens

\* For other durations, specify the required time period e.g. /NM3 but for 1 hour duration becomes /NM1

**Dimensions:** Ø 50mm x 32mm depth (22mm above ceiling)

**Cut out dimensions:** Ø 40mm

### Options Suffix:

/BR Brass finish /CH Chrome Finish



# Ecos

## IP65 robust polycarbonate luminaire for interior and exterior use

Over 1.4 kilograms of UV stabilised, flame retardant polycarbonate is used in each **Ecos** body and its sheer toughness has been illustrated by its successful use in police and magistrates cells, military establishments, schools and public areas.

**Ecos** is sealed to IP65 as standard and has a choice of a clear 'Radial' lens for enhanced photometric performance and with a white base opal diffuser. It is available with 2D lamps ranging from 28 to 55 watts and 24w compact lamps. Versions up to 2 x 24w can have integral emergency gear.

All versions have a hinged steel gear tray, and a white base as standard. **Ecos** can also be recessed with an optional white trim.



Ecos with white base and clear diffuser



Ecos with white semi-recessing trim and opal diffuser

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
EC28	28W 2D	-	2.80
EC38	38W 2D	-	2.80
EC55	55W 2D	-	2.80
EC24	1x24W TC-F	-	2.80
EC2x24	2x24W TC-F	-	2.90
♥			
EC40	40W T5 Circular	-	2.80
EC40/22	40W and 22W T5 Circular	-	2.80

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
EC24/M3	M3 1x24W TC-F	120	3.10
♥			
EC2x24/M3	M3 2x24W TC-F	120	3.20
♥			
EC28/M3	M3 28W 2D	270	3.10
EC38/M3	M3 38W 2D	625	3.10

### Options Suffix:

<b>/ECR/WH</b> White Recessing Trim	<b>/HF</b> High Frequency Ballast
<b>/BK</b> Black base	<b>/ES</b> Electronic Start
<b>/VR</b> Anti-tamper Screws	<b>/HF</b> High Frequency Ballast
<b>/HPF</b> Power Factor Corrected	<b>/ES</b> Electronic Start
<b>/ST</b> Self Testing Luminaires	<b>/AD</b> Intelligent Addressable Luminaire
<b>/O</b> Opal Diffuser	<b>/TS</b> Push to Test Switch
<b>/PH</b> Dawn/Dusk Photo Cell	

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
EC28/#/H	28W 2D Mains/Slave	500	2.90
EC38/#/H	38W 2D Mains/Slave	500	2.90

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions Standard:** Ø 397mm x 132mm

**Dimensions With Recess Trim:** Ø 406mm x 86mm x 46mm into void



KM31508



# Eden

## IP65 compact bulkhead with fresnel lens for improved light distribution with an LED option

**Eden** is an attractive weatherproof IP65 luminaire available in both Non-Maintained and Maintained emergency modes. It can be supplied with an 8W T5 fluorescent lamp or alternatively using LED's with a life of approximately 50,000 hours.

The **Eden** body is manufactured in white flame retardant polycarbonate.

**Eden's** polycarbonate diffuser incorporates a Fresnel lens, ensuring excellent light distribution.

To aid rapid installation, **Eden** is fitted with a hinged geartray and has side and rear entry points moulded into the base.

**Eden** is available with a number of options including semi-recessing kits and self-adhesive exit legends.



Eden with white semi-recessing trim



SAL1 provides several options for an exit legend.

**Viewing distance 18 metres**

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
ED8/NM3/E	8 Watt NM3	80	1.20
ED8/M3/E	8 Watt M3	80	1.45
ED/LED/M3	LED NM/M3	-	1.20

\* Emergency Lumens

**Dimensions:** Length 350mm x Width 108mm x Depth 80mm

**Dimensions (Semi-Recess Cut-Out):** Length 330mm x Width 90mm

### Options Suffix:

<b>/ED/BR</b>	Brass Semi-Recess Kit	<b>/ED/WH</b>	White Semi-Recess Kit
<b>/ED/CH</b>	Chrome Semi-Recess Kit	<b>/SAL1</b>	Self-Adhesive Legend Kit





Small isn't just beautiful  
**It's gorgeous**



# Elled

## Distinctive ceiling mounted LED emergency luminaire

**Elled** is a fully self contained, high power white LED light sourced emergency lighting luminaire which has been designed to seamlessly blend into lighting schemes by imitating the design ethics of fire detection and CCTV head units.

Amongst its many innovative features is the use of an advanced design of LED driver, which provides a constant level of illumination throughout the emergency duration and ensure the LED operating temperature is at an optimum ensuring an LED life in excess of 50,000 hours. The use of Ni-MH cells and monitored charging combined with RoHS compliant components and a polycarbonate enclosure ensures a low in service environmental impact and easy disposal at the end of life.

To provide the ultimate spacing between luminaires on emergency exit corridor routes and to ensure the requirements of EN1838 can be easily met, the sophisticated photometrically optimised refractor lens gives a type 1 light distribution pattern, whereas, for open areas or specific task illumination a second lens option can be specified that provides the more traditional cone of light.

Automatic self-testing versions can be specified which conform to the requirements of BS EN62034:2006 and conduct testing in accordance with BS EN50172:2004. Self-testing versions provide both a visual and an audible test failure indication and the results of the last test are displayed via a multi-coloured LED indicator. A volt-free contact is made available allowing a simple system fault monitoring facility to be incorporated into the system.



### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
ELL/LED/NM3/OA	NM3 LED OPEN AREA	45	0.5
ELL/LED/NM3/CR	NM3 LED CORRIDOR	45	0.5
ELL/LED/NM3/OA/ST	NM3 LED OPEN AREA SELF TEST	45	0.5
ELL/LED/NM3/CR/ST	NM3 LED CORRIDOR SELF TEST	45	0.5

\* Emergency Lumens

**Dimensions:** Ø 120mm x 67mm depth (35mm above ceiling)

**Cut out dimensions:** Ø 100mm



IP55



# Geneva

## Stylish recessed fluorescent and LED luminaire

**Geneva** is an impressive design of high quality recessed emergency lighting luminaires.

Available in white, chrome or brass finishes, **Geneva** is manufactured in steel with an epoxy coating to create a robust, simplistic but unobtrusive and elegant luminaire, suitable for almost any prestigious retail application. The **Geneva** range of emergency luminaires can be specified as an 8W Fluorescent or LED Luminaire that offers long lamp life options of up to 50,000 hours. Its prismatic lens controller ensures optimised light distribution.

An optional exit legend is available for all versions transforming **Geneva** into a beautiful edge-lit exit sign with impressive uniform light distribution, which can be confidently specified for almost any prestigious project including hotels, conference centres and retail shopping centres.

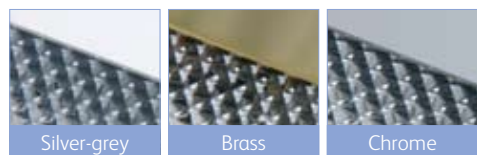
Available in 3 hour emergency non-maintained and maintained options, **Geneva** can also be specified as a slave luminaire for use on central battery and static inverter systems.

Geneva finished in white



Geneva LED Exit finished in white

Viewing distance 32 metres



Silver-grey

Brass

Chrome

### Options Suffix:

/BR Brass Finish      /SG Silver Grey Finish  
/CH Chrome Finish    /EX Edge-Lit Exit

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
GN/LED/M3	M3 LED Luminaire	-	1.00
GN8/NM3	NM3 8W 300mm	120	1.20
GN8/M3	M3 8W 300mm	120	1.50

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
GN8/#/D	8W Slave Luminaire	275	1.20

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 360mm x Width 90mm. Requires minimum ceiling void of 80mm

**Geneva Exit Dimensions:** Length 360mm x Width 90mm x Depth 160mm

**Cut out dimensions:** 325mm x 80mm





# Holt

## A rugged IP65 square luminaire

A robust IP65 luminaire suitable for interior and exterior applications supplied as standard with rear besa and side conduit entries.

Captive screws secure the prismatic diffuser to the white base, with options for an alternative opal diffuser, and black base.

**Holt's** all polycarbonate housing is robust enough to be used in a wide range of lighting applications and has the advantage of matching models with integral emergency control gear.

Holt with black base and opal diffuser



Holt with white base and clear diffuser



### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
HT16A	16W 2D Size A	-	1.10
HT28B	28W 2D Size B	-	2.00

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
HT16B/M3	16W M3 Size B	200	3.00
HT28B/M3	28W M3 Size B	270	3.00
HT28B/24/3S	28W Mains + 2x4W NM3 Size B	160	3.00

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
HT16A/#/D	16W 2D Size A	400	1.10
HT28B/#/D	28W 2D Size B	500	1.50

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions Size A:** Length 210mm x Width 210mm x Depth 100mm

**Dimensions Size B:** Length 255mm x Width 255mm x Depth 90mm

### Options Suffix:

<b>/AD</b>	Intelligent Addressable Luminaire	<b>/HPF</b>	Power Factor Corrected
<b>/ST</b>	Self Testing Luminaire	<b>/O</b>	Opal diffuser
<b>/BK</b>	Black Base	<b>/PH</b>	Dawn/Dusk Photo Cell
<b>/VR</b>	Anti-tamper Screws	<b>/HF</b>	High Frequency Ballast
		<b>/ES</b>	Electronic Start



**Style and function  
in perfect balance**



# Idro

## A robust and attractive circular aluminium diecast IP65 exterior bulkhead

**Idro** is a range of robust but versatile circular die-cast IP65 exterior bulkheads. Suitable for wall and ceiling mounted applications, **Idro** luminaires can be specified with an optional decorative guard, or with an effective and attractive anti-light pollution eyelid or alternatively this luminaire can be selected for use with its toughened polycarbonate opal diffuser alone.

Supplied with vandal resistant screws as standard, **Idro** is available in black (as standard) or silver-grey, and can be used as a mains or 3 hour integral emergency non-maintained and maintained luminaire.

Other options available to **Idro** are as a slave luminaire for use with central battery or static inverter systems, with self-test or addressable emergency lighting gear.



Idro in black with guard option



Idro in silver-grey



Idro in silver-grey with eyelid option

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
IDR28	1x28W 2D Mains	-	6.0Kg
IDR38	1x38W 2D Mains	-	6.0Kg

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
IDR28/M3	M3 28W 2D	270	7.0kg
IDR38/M3	M3 38W 2D	625	7.0kg

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
IDR28/#/D	28W 2D AC/DC Slave	500	6.5Kg
IDR38/#/D	38W 2D AC/DC Slave	500	6.5kg

\* Emergency Lumens

Replace # with AC/DC system Voltage 24, 50, 110 or 230 Volts

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions:** 360mm x Depth 130mm

Depth 155mm With Optional Guard/Eyelid

### Options Suffix:

/SG	Silver-Grey Finish	/ES	Electronic Start
/EY	Eyelid Version	/AD	Intelligent Addressable
/GU	Guard	/ST	Digital Self-Test
/HPF	Power Factor Corrected		
/HF	High Frequency Ballast		





# Kalix

## Superbly designed wall light suitable for hotels and commercial buildings

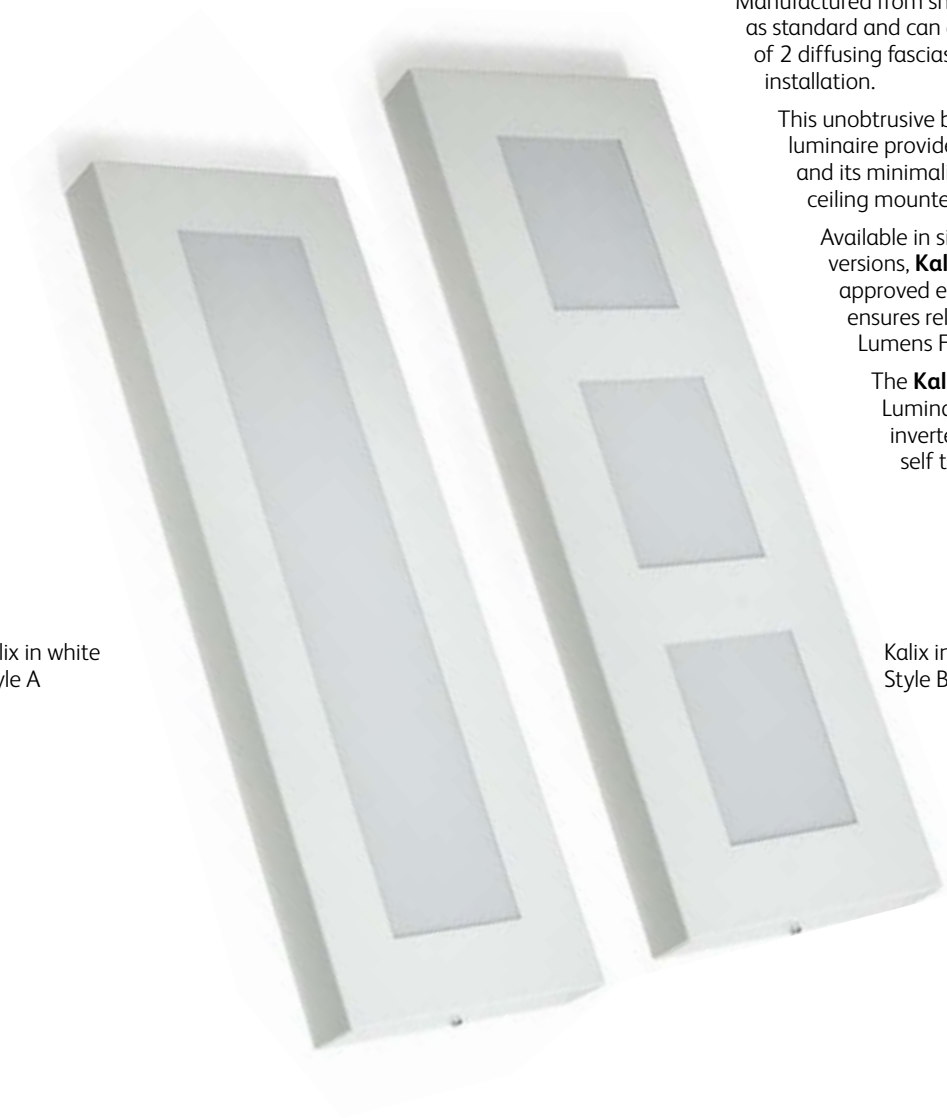
**Kalix** is an impressive and sleek range of elegantly profiled fluorescent luminaires which utilises the latest energy saving high performance 14W T5 lamps.

Manufactured from sheet steel, **Kalix** is available in white as standard and can also be supplied in silver-grey with a choice of 2 diffusing fascias to accommodate the ambience of their installation.

This unobtrusive but robust high quality high frequency luminaire provides an impressive soft diffused illuminance and its minimalistic low profile design creates a superb wall or ceiling mounted luminaire.

Available in single and twin 14W high-frequency mains versions, **Kalix** offers the option of integral 3 hour BSI approved emergency control gear which on mains failure ensures reliable emergency back up, achieving a Ballast Lumens Factor (BLF) of 32%.

The **Kalix** range of Luminaires are suitable as Slave Luminaires for use with central battery or static inverter systems and can be specified for use with self test or intelligent addressable emergency gear.



Kalix in white  
Style A

Kalix in white  
Style B

**Options Suffix:**

- /A Kalix Style A
- /B Kalix Style B
- /AD Intelligent Addressable
- /ST Digital Self-Test
- /SG Silver Grey

**Mains Luminaires**

Cat No.	Mode/Lamp	Lumens	Kg
KAL14	14W T5 HF Mains	-	2.60kg
KAL2X14	2X14W T5 HF Mains	-	2.70Kg

**Emergency Luminaires**

Cat No.	Mode/Lamp	Lumens*	Kg
KAL14/M3	14W T5 M3 Emergency	384	3.50Kg
KAL214/M3	2x14W T5 M3 Emergency	384	3.60Kg

**Slave Luminaires**

Cat No.	Mode/Lamp	Lumens*	Kg
KAL14/#/D	14W T5 AC/DC Slave	500	2.60Kg

\* Emergency Lumens

Replace # with AC/DC system voltage 24, 50, 110 or 230 Volts

\* For other durations, specify the required time period e.g. /M3 but for 1 hour duration becomes /M1

**Dimensions:** Length 585mm x Width 200mm x Depth 42mm

# Karis

## Stylish and contemporary luminaire ideal for prestigious applications

The **Karis** range of luminaires offer an elegant appearance with a host of options which creates flexibility suitable for most commercial applications.

**Karis** is a decorative but robust high quality luminaire using energy saving compact fluorescent lamps. Its steel base is supplied in white as standard with silver-grey as an option, with an elegant polycarbonate diffuser designed to evenly diffuse its luminance.

Supplied as a mains and integral emergency luminaire, **Karis** offers single and twin lamp versions as standard in mains mode with 1 lamp being used for emergency versions.

This stylish luminaire is suitable for ceiling or wall mounted applications and its facility to include an optional wire suspension kit enables this range of luminaires to be confidently specified for virtually all projects where matching mains and emergency luminaires are required.

**Karis** can be supplied as a slave luminaire for use with central battery systems or static inverters and can be supplied with self-test emergency and intelligent addressable emergency systems



Karis finished in white

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
KAR18	1 X 18W TC-D/E Mains	-	1.90Kg
KAR2X18	2 X 18W TC-D/E Mains	-	1.90Kg
KAR26	1 X 26W TC-D/E Mains	-	1.90Kg
KAR2X26	2 x 26w TC-D/E Mains	-	1.90Kg

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
KAR18/M3	1 X 18W TC-D/E M3	276	2.70Kg
KAR2X18/M3	2 X 18W TC-D/E M3	276	2.80Kg
KAR26/M3	1 X 26W TC-D/E M3	324	2.70Kg
KAR2X26/M3	2 x 26w TC-D/E M3	324	2.80Kg

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
KAR18/#D	1 X 18W TC-D/E Slave	420	1.90Kg
KAR2X18/#D	2 X 18W TC-D/E Slave	420	1.90Kg
KAR26/#D	1 X 26W TC-D/E Slave	540	1.90Kg
KAR2X26/#D	2 x 26w TC-D/E Slave	540	1.90Kg

\* Emergency Lumens

Replace # with AC/DC system Voltage 24, 50, 110 or 230v Volts

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions:** Length 345mm x Width 345mm x Depth 100mm



Karis finished in silver-grey with wire suspension kit

### Options Suffix:

<b>/SG</b>	Silver Grey	<b>/ST</b>	Digital Self-Test
<b>/HPF</b>	Power Factor Corrected	<b>/WS1</b>	Wire Suspension Kit
<b>/HF</b>	High Frequency Ballast	<b>/RS1</b>	Rod Suspension Kit
<b>/AD</b>	Intelligent Addressable		

# Kolour concepts

Kandel with white reflective trim



Blue Backlight



Green Backlight



Red Backlight



# Kandel

## Circular surface or semi-recessed IP54 luminaire

An attractive range of circular IP54 white polycarbonate luminaires, **Kandel** can be specified as a mains or emergency luminaire with integral emergency gear.

**Kandel** can be surface mounted or semi-recessed and now has the option of a rod or wire suspension kit enabling **Kandel** to be confidently specified for almost any interior application.

An attractive range of high quality surface trims are available in white brass or chrome, which transform **Kandel** into a stylish range of mains and emergency luminaires.

The optional choice of opal, green, red or blue halo effects for **Kandel** luminaires allows them to be confidently specified for several applications where a certain colour theme is required such as hotels, hospitals, restaurants etc. This is particularly effective when combined with the new wide angled reflecting trim.

Installation and maintenance is simplified due to the design of the twist-and-lock diffuser, which is supplied in opal as standard with an alternative prismatic diffuser available.



Kandel brass trim



Kandel chrome trim



Kandel white trim

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
KN16	16W 2D Mains	-	0.50
KN28	28W 2D Mains	-	0.50
KN38	38W 2D Mains	-	0.50

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
KN16/NM3	16W 2D NM3	160	2.90
KN16/M3	16W 2D M3	160	3.00
KN28/NM3	28W 2D NM3	280	3.00
KN28/M3	28W 2D M3	280	3.00
KN28/24/3S	28W Mains + 2x4W NM3	160	2.70

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
KN16/#/D	16W 2D Slave Emergency	420	2.30
KN28/#/D	28W 2D Slave Emergency	650	2.30
KN38/#/D	38W 2D Slave Emergency	650	2.30

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Ø 360mm x Depth 85mm

**Cut out dimensions:** Ø 335mm x 50mm Minimum Ceiling Void

IP54  

### Options Suffix:

/AD	Intelligent Addressable Luminaire	/RS2	Rod Suspension Kit (600mm)
/ES	Electronic Start	/HF	High Frequency
/R	Recessing Kit	/HPF	Power Factor Correction
/WS2	Wire Suspension Kit	/ST	Self Testing Luminaires

### Surface Trims Options Suffix:

KN/BR	Brass Surface Trim	KN/WH	White Surface Trim
KN/CH	Chrome Surface Trim		

### Reflecting Trims Options Suffix:

KRT/BR	Brass Reflecting Trim	KRT/WH	White Reflecting Trim
KRT/CH	Chrome Reflecting Trim		

### Back Light Effect Options (opal halo effect back light standard)

/BU	Blue Halo Effect	/RD	Red Halo Effect
/GN	Green Halo		

# Kea

## A stylish exit sign or wall luminaire for prestigious interior applications

**Kea** stylish appearance coupled with its distinctive symmetrical design makes it ideal for the most prestigious applications.

Suitable as an exit sign or a high frequency mains/emergency luminaire, **Kea** is available in white as standard with an attractive silver grey finish as an option.

Kea finished in silver-grey

Kea finished in white with exit legend

**Viewing distance  
30 metres**

### Options Suffix:

<b>/AD</b>	Intelligent Addressable Luminaire	<b>/ST</b>	Digital Self-Test
<b>/EX</b>	Exit Fascia	<b>/SG</b>	Silver Grey Finish

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
KE14	14W T5 HF Mains	-	3.20
KE36	36W TC-L HF Mains	-	3.30

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
KE14/M3	14W T5 M3 Emergency	384	4.20
KE36/M3	36W TC-L M3 Emergency	435	4.20

### Slave Luminaires

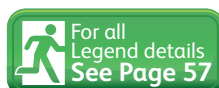
Cat No.	Mode/Lamp	Lumens*	Kg
KE14/#D	14W T5 Slave Emergency	384	3.20
KE36/#D	36W TC-L Slave Emergency	435	3.30

\* Emergency Lumens

Replace # with AC/DC 24, 50, 110 or 230 system Voltage

\* For other durations, specify the required time period e.g. /M3 but for 1 hour duration becomes /M1

**Dimensions:** 610mm Length x 200mm Width x 105mm Depth



IP20  

# Lavaine

## Classically styled decorative luminaire for energy saving lamps

The **Lavaine** range of luminaires feature a classic styling consisting of a steel gallery finished in either brass or chrome polished plate and an opal glass diffuser. The diffuser is held in place by three knuckle screws finished to match the gallery.

**Lavaine** features mains, emergency and slave luminaires available in two body sizes.

The elegant family is a popular choice for many applications where a prestigious, reliable range of matching mains and emergency luminaires are required.



Lavaine with brass finish

Lavaine with chrome finish



### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
LV16B	16W 2D Mains Luminaire Size B	-	2.00
LV28B	28W 2D Mains Luminaire Size B	-	4.00
LV38B	38W 2D Mains Luminaire Size B	-	4.00
LV28C	28W 2D Mains Luminaire Size C	-	4.80
LV38C	38W 2D Mains Luminaire Size C	-	4.80

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
LV16/3NM	16W 2D NM3 Emergency Size B	200	3.00
LV16/3M	16W 2D M3 Emergency Size B	200	3.00
LV28/3NM	28W 2D NM3 Emergency Size C	280	4.60
LV28/3M	28W 2D M3 Emergency Size C	280	4.60

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
LV16/#/D	16W 2D AC/DC Slave Luminaire Size B	400	1.80
LV28/#/D	28W 2D AC/DC Slave Luminaire Size C	500	3.80
LV38/#/D	38W 2D AC/DC Slave Luminaire Size C	500	3.80

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions Size B:** Ø 360mm x depth 140mm

**Dimensions Size C:** Ø 390mm x depth 180mm

### Options Suffix:

<b>/AD</b>	Intelligent Addressable Luminaire	<b>/HF</b>	High Frequency Ballast
<b>/BR</b>	Brass Finish	<b>/HPF</b>	Power Factor Corrected
<b>/CH</b>	Chrome Finish	<b>/ST</b>	Digital Self Test
<b>/ES</b>	Electronic Start		



# Larino

## Elegant circular lighting range

Designed for universal application within any lighting project, the **Larino** range of luminaires are available in three diameters: 330mm, 430mm and 525mm.

**Larino** luminaires feature a spun metal base containing the control gear and energy saving compact fluorescent lamps. Models can be either mains only operation or, in selected versions, incorporate integral emergency gear.

**Larino's** base is available in a range of epoxy coated and plated finishes and can be supplied with a smooth, polished opal or clear prismatic diffuser.

New options include wire and rod suspension kits for that added elegant touch.

**Larino** is available as standard with a white base and opal diffuser.



Larino finished in brass



Larino finished in chrome



### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
LAR16	16W Size A	-	1.10
LAR28A	28W Size A	-	2.00
LAR28	28W Size B	-	2.10
LAR38	38W Size B	-	2.10
LAR226HF	2x26W Size C	-	2.60
LAR55	55W Size C	-	2.60

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
LAR16/M3	16W M3 Size A	200	2.70
LAR28/M3	28W M3 Size B	270	3.00
LAR38/M3	38W M3 Size B	625	3.00
LAR226/M3	2x26W M3 Size C	324	3.70
LAR55/M3	55W M3 Size C	450	3.70

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
LAR16/#/D	16W Size A	400	1.00
LAR28/#/D	28W Size B	500	2.00
LAR38/#/D	38W Size B	500	2.00

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions Size A** Ø 330mm x 105mm

**Dimensions Size B:** Ø 430mm x 105mm

**Dimensions Size C:** Ø 525mm x 105mm

### Options Suffix:

/BR	Brass Finish	/AD	Intelligent Addressable Luminaire
/CH	Chrome Finish	/ST	Self Testing Luminaire
/PR	Prismatic Diffuser	/WS2	Wire Suspension Kit
/HPF	Power Factor Corrected	/RS2	Rod Suspension Kit (600mm)
/HF	High Frequency Ballast		
/ES	Electronic Start		



Simple elegance

# Lens

## Contemporary circular luminaire with a halo effect back light creating a touch of style to interior applications

**Lens** is a stylish range of circular polycarbonate luminaires available in mains and integral emergency versions.

Supplied as standard with an opal base, white straight sided clip-on metal trim and an opal diffuser. **Lens** luminaires offer a comprehensive range of options including a prismatic diffuser, with alternative clip-on trims which can be specified as curved or straight sided in white, brass, chrome or black chrome.

The optional choice of blue, green or red halo effects allows you to tailor this luminaire to meet your exacting requirements where a specific colour theme is required, enhancing any installation.

**Lens** is now available with a stylish broad deluxe trim in all colour options.

Lens with white straight trim



Lens with brass curved trim



### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
LN28	28W 2D White Mains	-	2.70
LN38	38W 2D White Mains	-	2.70

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
LN28/M3	28W 2D M3 White Emergency	384	3.60
LN38/M3	38W 2D M3 White Emergency	625	3.60

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
LN28/#D	28W 2D Slave White Emergency	500	2.60
LN38/#D	38W 2D Slave White Emergency	500	2.60

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Curved Trim Version Dimensions:** Ø 500mm x Depth 105mm

**Straight Sided Trim Version Dimensions:** Ø 490mm x Depth 105mm

**Broad Deluxe Trim Version Dimensions:** Ø 525mm x Depth 105mm

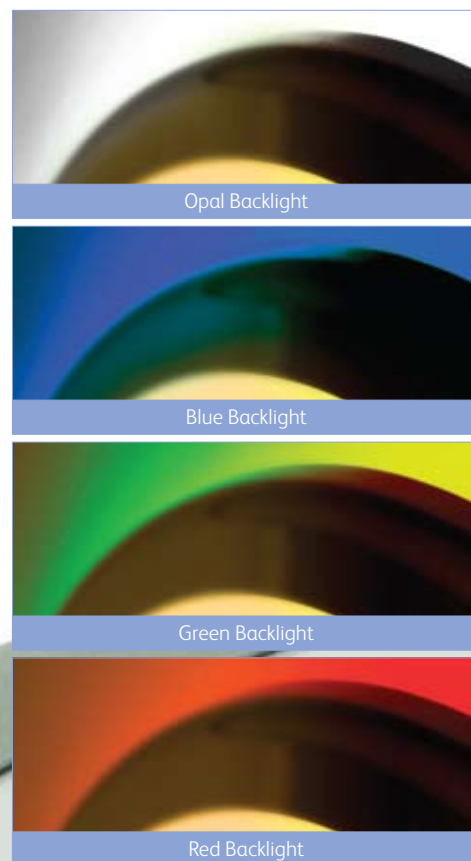




Lens with black chrome broad deluxe trim



Lens with chrome broad deluxe trim



**Metal Trim & Colour Finish Options  
(white straight sided trim standard)**

<b>/S/BR</b>	Brass Finish Straight Sided Metal Trim	<b>/C/GM</b>	Black Chrome Finish Curved Metal Trim
<b>/S/CH</b>	Chrome Finish Straight Sided Metal Trim	<b>/BD/WH</b>	White Finish Broad Deluxe Metal Trim
<b>/S/GM</b>	Black Chrome Finish Straight Sided Metal Trim	<b>/BD/BR</b>	Brass Finish Broad Deluxe Metal Trim
<b>/C/WH</b>	White Finish Curved Metal Trim	<b>/BD/CH</b>	Chrome Finish Broad Deluxe Metal Trim
<b>/C/BR</b>	Brass Finish Curved Metal Trim	<b>/BD/GM</b>	Black Chrome Broad Deluxe Sided Metal Trim
<b>/C/CH</b>	Chrome Finish Curved Metal Trim		

**Back Light Effect Options  
(opal halo effect back light standard)**

<b>/BU</b>	Blue Halo Effect Back Light	<b>/RD</b>	Red Halo Effect Back Light*
<b>/GN</b>	Green Halo Effect Back Light*		

\* Green and red back light effect luminaires are manufactured to order.

**Options Suffix**

<b>/AD</b>	Intelligent Addressable Luminaire	<b>/HPF</b>	Power Factor Correction
<b>/ES</b>	Electronic Start	<b>/ST</b>	Digital Self-Test
<b>/HF</b>	High Frequency Ballast	<b>/WS</b>	Wire Suspension Kit
		<b>/RS</b>	Rod Suspension Kit

# Mezzina

## IP65 circular polycarbonate utility luminaire for interior and exterior use

**Mezzina** is available as a mains/emergency bulkhead luminaire designed specifically for energy efficient compact fluorescent lamps to provide designers and installers with maximum flexibility.

**Mezzina** is sealed to IP65 and has a screw fit diffuser sealed to the body with a closed cell neoprene gasket for durability. **Mezzina's** pleasing appearance lends it to both exterior and interior applications.

The control gear is mounted on a removable steel gear tray and the all polycarbonate white housing has drill starts for both centre rear Besa entry or 20mm surface conduit entries. Three surface conduit entries are provided. It comes as standard with a clear diffuser and Techno Radial lens technology.

An opal diffuser and a black base can be supplied as options and an attractive recessing trim available in white finish, enables **Mezzina** to be confidently specified in a wide range of applications.



Mezzina with white base



Mezzina with white recessing trim



Mezzina with black base

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
MZ16	16W Mains Luminaire	-	1.10
MZ28	28W Mains Luminaire	-	1.10
MZ38/HF	38W HF Mains Luminaire	-	1.10

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
MZ16/M3	16W M3 Emergency Luminaire	200	2.70
MZ28/M3	28W M3 Emergency Luminaire	270	3.00

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
MZ16/#/D	16W 2D Slave Luminaire	400	1.10
MZ28/#/D	28W 2D Slave Luminaire	500	1.10

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions:** Ø 290mm x 79mm

**Dimensions (Below Ceiling) With Recess Trim:** 345mm x 50mm

**Cut out dimensions:** Ø 295mm

### Options Suffix:

<b>/MZR/W</b>	White Recessing Trim	<b>/HF</b>	High Frequency Ballast
<b>/BK</b>	Black Base	<b>/ES</b>	Electronic Start
<b>/O</b>	Opal Diffuser	<b>/AD</b>	Intelligent Addressable Luminaire
<b>/VR</b>	Anti-tamper Screws	<b>/ST</b>	Self Testing Luminaire
<b>/HPF</b>	Power Factor Corrected		
<b>/PH</b>	Dawn/Dusk Photo cell		

# Monza

## A range of miniature compact fluorescent downlights

A stylish range of affordable high quality recessed downlighters; the **Monza** range has been specifically designed to accommodate energy saving compact fluorescent lamps as mains luminaires.

Available as 13W or 18W TC-DE lamps (lamps not included), the **Monza** downlighter range offers a 3 hour emergency version for both lamps.

Orbik's BSI approved Kite Marked emergency control gear and Nickel Cadmium battery pack are contained in a silicone coated woven glass Fibre sleeve which can be offered into the ceiling via the cut out.

During emergency discharge, the high ballast lumen factors (BLF) achieved (29% for 13W, 17% for 18W) ensure reliable emergency lighting even when low-mercury lamps are in use.

The **Monza** range is available as standard in White with brass or chrome options and has optional attachments including drop-glass which ensures the **Monza's** range of recessed down lighters can be confidently specified in both mains and emergency lighting for most indoor applications.



Monza with white trim



Monza with chrome trim and drop glass



Monza with brass trim and drop glass



### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
MO13	13W TC-D/E Mains	-	0.40
MO18	18W TC-D/E Mains	-	0.50

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
MO13/M3	13W TC-D/E Downlight	260	1.30
MO18/M3	18W TC-D/E Downlight	200	1.40

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions: 13W:** Ø 96mm x Depth 145mm **18W:** Ø 96mm x Depth 160mm

**Cut out dimensions:** Ø 86mm

### Options Suffix:

<b>/BR</b>	Brass Trim	<b>/BR/DG</b>	Brass Trim with Drop Glass
<b>/CH</b>	Chrome Trim	<b>/CH/DG</b>	Chrome Trim With Drop Glass
<b>/WH/DG</b>	White Trim with Drop Glass		



# Multia

## A stylish range of compact fluorescent downlights

**Multia** is a comprehensive range of compact fluorescent downlighters offering a variety of options for almost every application.

Available from 18 to 26W in both single and twin lamp versions with 32 and 42W single lamp versions **Multia** is supplied with a white bezel as standard with interchangeable brass or chrome options also available.

Options include an attractive floating glass, IP44 opal polycarbonate cover and a range of polycarbonate emergency drop legends.

Emergency versions (mounted in a remote box) for all lamp options are available using BSI approved Perform™ control gear, specifically designed for use with low Mercury compact fluorescent lamps and high temperature Nickel Cadmium cells.



### Options Suffix:

<b>/AD</b>	Intelligent Addressable Luminaire	<b>/OPC</b>	IP44 Opal Polycarbonate Cover
<b>/ES</b>	Electronic Start	<b>/DG</b>	Clear Outer Ring With Frosted Centre Disc Floating Glass
<b>/HF</b>	High Frequency	<b>/L+</b>	Drop Legend (Replace + with Required Legend Panel)
<b>/HPF</b>	Power Factor Corrected		
<b>/ST</b>	Digital Self-Test		
<b>/BR</b>	Brass Trim		
<b>/CH</b>	Chrome Trim		

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
MU18	18W Mains Downlighter	–	2.42
MU218	2 x 18W Mains Downlighter	–	3.25
MU26	26W Mains Downlighter	–	2.42
MU226	2 x 26W Mains Downlighter	–	3.25
MU32	32W HF Mains Downlighter	–	2.28
MU42	42W HF Mains Downlighter	–	2.36

### Emergency Luminaires (Incorporating Perform™ Technology)

Cat No.	Mode/Lamp	Lumens*	Kg
MU18/M3	18W M3 Downlighter	276	2.42
MU218/M3	2 x 18W M3 Downlighter	276	3.25
MU26/M3	26W M3 Downlighter	324	2.42
MU226/M3	2 x 26W M3 Downlighter	324	3.25
MU32/M3	32W M3 HF Downlighter	480	2.28
MU42/M3	42W M3 HF Downlighter	416	2.36

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions:** Ø 226mm x 198mm (Minimum Ceiling Void)

**Cut-Out (All Versions):** Ø 208mm



IP20/44  

**Brass trim IP44**



**Chrome trim /DG**



Classic lines  
Classic product



<b>Karis</b>	
	
<b>P27</b>	Stylish and contemporary luminaire ideal for prestigious applications



# Napoli

## Slim profile injection moulded polycarbonate exit sign

**Napoli** exit signs lead the market in aesthetic design, ease of installation and maintenance.

The use of an injection moulded body has enabled us to create an exit sign superior in style to conventional versions but remains equally as competitively priced.

**Napoli's** body and base is made from flame retardant polycarbonate, features a threshold downlight and a screen-printed legend panel. Utilising clip fixings the **Napoli** is probably the quickest exit sign to install. IP44 protection makes **Napoli** suitable for use in sheltered exterior locations



Viewing distance  
40 metres

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
NA8/NM3/E	8W NM3 Emergency Exit Sign	60	2.30
NA8/M3/E	8W M3 Emergency Exit Sign	60	2.60
NA8/NM3	8W NM3 Emergency Exit Sign	120	2.30
NA8/M3	8W M3 Emergency Exit Sign	120	2.60

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
NA8/#/D	8W Slave Exit Sign	275	2.30

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** 420 mm x 221mm x 58mm

### Options Suffix:

/AD	Intelligent Addressable Luminaire	/ST	Digital Self Test
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IP44



# Odet

## Emergency floodlighting unit

**Odet** emergency floodlights incorporate a British Standard Approved Constant Voltage Charger. The chargers are fitted with thermal, current and short circuit protection devices. A low voltage disconnect circuit to prevent the batteries entering a deep discharge state in the event of prolonged power failure, maximising battery life.

Batteries are maintenance free, sealed lead acid types with a life expectancy of five years under normal conditions. The robust but stylish sheet steel enclosure is finished in a light grey epoxy coating. **Odet** is also available with an IP65 polycarbonate enclosure, for external requirements. We have extended the range to include a 2x55W NM3 version.

**Odet** is available as a deluxe version utilising 20 Watt and 50 Watt dichroic halogen lamps (not supplied). The various beam angles enable the client to tailor the light distribution to their specific requirements. The heads enable the lamps to be adjusted both horizontally and vertically giving total flexibility. Available as standard in silver grey finish, this stylish emergency luminaire is a popular choice for shopping malls and most interior applications.

An optional 15 minute timer enables **Odet** to continue to operate in the emergency mode after the main supply has been reinstated allowing discharge luminaires to re-ignite and provide a suitable light output.



ODS 20/NM1/TH



ODS Deluxe



Odet IP65



ODS 55/NM3/TH

### Options Suffix:

<b>/AD</b>	Intelligent Addressable Luminaire (not available in deluxe version)	<b>/IP65</b>	Weatherproof Enclosure
<b>/ST</b>	Self Testing Luminaire	<b>/T</b>	15 Minute Timer Delay Unit for use with Discharge Lamp Schemes

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
ODS20/NM1/TH	NM1 2x20W/TH	2x 340	5.88
ODS20/NM3/TH	NM3 2x20W/TH	2x 340	7.00
ODS21/NM1	NM1 2x21W	2x 280	5.88
ODS21/NM3	NM3 2x21W	2x 280	7.00
ODS55/NM1/TH	NM1 2x55W TH	2x 900	7.50
ODS55/NM3/TH <sup>†</sup>	NM3 2x55W TH	2x 900	16.00
ODS/DELUXE	20/50W* Dichroic	-	7.00

\* Deluxe versions give 3 hours emergency duration when used with 20W lamps and a 1 hour emergency duration when used with 50W lamps (lamps not supplied)

\* Emergency Lumens

<sup>†</sup> This product is supplied with the batteries packed separately

**Dimensions:** 20, 21 and 55W (NM1) Length 315mm x Height 310mm x Depth 110mm  
55W NM3 Length 440mm x Height 315mm x Depth 110mm

**Dimensions IP65 Version:** Length 400mm x Height 400mm x Depth 135mm

**Dimensions Deluxe Version:** Length 315mm x Height 200mm x Depth 75mm

# Orbe

## Compact fluorescent low bay

The **Orbe** loby is a robust, high quality luminaire utilising energy saving compact fluorescent lamps.

Supplied as standard with a choice of 4 x 55W TC-L or 4 x 80W TC-L compact fluorescent lamps, instant high-efficiency lighting with high-output integral 3 hour emergency lighting using 1 lamp enables the **Orbe** to be specified for applications which traditional high-pressure discharge lobays do not have a solution.

**Orbe** is suitable for surface mounting or suspension and is supplied with 4 fixing points and 3 BESA box entries as standard.

**Orbe's** high quality and intelligently designed reflector system provides precise and controlled optical performance resulting in impressive and superior spacing data (see photometric data), ideal for high mounting applications such as sports halls, warehouses, factories.

Independent switching circuits enable the **Orbe** luminaire the option of switching off 2 lamps when in mains operation enabling potential power savings.

Optional wire guard and polycarbonate covers offer added protection typically for sports halls or where damage may occur to the luminaire.

**Orbe** can be used as a Slave Luminaire operating from a central battery system or static inverter, and can be specified with self test emergency and intelligent addressable emergency lighting.



### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
OR455	4X55W TC-L	-	11.50
OR480	4X80W TC-L	-	11.50

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
OR455/M3	4 X 55W TC-L M3	1034	17.00
OR480/M3	4 X 80W TC-L M3	1020	17.00

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
OR455/#/D	55W TC-L	1034	11.50
OR480/#/D	80W TC-L	1020	11.50

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions:** Length 900 x Width 605 x Depth 100mm

### Options Suffix:

/WG	Wire Guard	/AD	Intelligent Address Luminaire
/CP	Clear Polycarbonate Diffuser	/ST	Self Testing Luminaire



# Pescara



Viewing distance  
40 metres



IP65 Pescara



Pescara with  
fret cut legend

## Fluorescent exit sign for internal and external use

The **Pescara** range of fluorescent single and double sided exit signs are manufactured from sheet steel and finished in a choice of either white, black, brass or chrome. **Pescara's** many features include a hinged internal steel gear tray, rear centre Besa entry, keyhole mounting slots and an opal threshold downlight panel to illuminate the area below the sign.

The double sided version of **Pescara** has a central top Besa entry for ease of fixing. The double-sided sign is no deeper than the standard **Pescara** exit sign and so co-ordinates with other **Pescara** models.

A special U shaped gear tray allows even illumination of both legend panels and an opal downlight panel ensures that illumination is also directed below the sign to the escape route and the door threshold.

The Cinema version of **Pescara** exit sign is fitted with a fret-cut legend panel to reduce light emission. They are designed for use in Theatres, Cinemas, School Halls and Discotheques.

The IP65 rated **Pescara** is of robust construction making it suitable for external and internal use. It is suitable for car parks, sports stadiums, livestock markets and many other applications.

Non-maintained, maintained and sustained (combined) models are BSI approved to EN60598, and all models are CE and F marked.

The legend panel can be removed from either end of the sign via removable endcaps making **Pescara** suitable for close fitting into corners where necessary.

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
PES8	8W 300mm Single Sided	-	2.60
PED8	8W 300mm Double Sided	-	2.60

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
PES8/NM3	NM3 8W 300mm Single Sided	120	2.75
♥			
PES8/M3	M3 8W 300mm Single Sided	120	3.00
♥			
PES8/C3	C3 8W 300mm Single Sided	120	3.00
♥			
PED8/NM3	NM3 8W 300mm Double Sided	120	2.75
PED8/M3	M3 8W 300mm Double Sided	120	3.00

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
PES8/#/D	8W Slave Exit Sign Single Sided	275	2.50
PED8/#/D	8W Slave Exit Sign Double Sided	275	2.50

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions: Length 385mm x Width 200mm x Depth 95mm (Low Profile 65mm)**

**Dimensions IP65 Version:**

Length 445mm x Width 225mm x Depth 95mm

### Options Suffix:

/C	Fret Cut Legend	/VR	Anti-tamper Screws
/BK	Black Finish	/HPF	Power Factor Corrected
/BR	Brass Finish	/HF	High Frequency Ballast
/CH	Chrome Finish	/ES	Electronic Start
/E	Economy Version	/AD	Intelligent Addressable Luminaire
/IP65	IP65 Version (Does not have a Downlight Panel)	/ST	Self Testing Luminaire
/LP	Single sided signs available in low profile	/TS	Push to Test Switch



IP20/65       
KM31508

# Pescara-G

## Large exit sign with a 90 metre viewing distance

To compliment our **Pescara** range, we have introduced a large exit sign **Pescara-G** for applications where greater viewing distances are required.

The **Pescara-G** is available in single and double sided versions and incorporate many of the features of the **Pescara** range.

The 'U' channel geartray ensures even illumination in both single and double sided versions and the double downlight panel illuminates directly below the sign to the escape route and door threshold.

Available in white as standard and non-maintained and maintained emergency modes, the **Pescara-G** is ideal for supermarkets, car parks and warehouses.



Viewing distance  
90 metres

### Emergency Exit Signs

Cat No.	Mode/Lamp	Lumens	Kg
PES18/NM3	18W T8 Single Sided NM3	320	9.30
PES18/M3	18W T8 Single Sided M3	320	9.40
PED18/NM3	18W T8 Double Sided NM3	320	9.30
PED18/M3	18W T8 Double Sided M3	320	9.40

### Options Suffix:

/AD	Intelligent Addressable Luminaire	/HPF	Power Factor Correction
/ES	Electronic Start	/ST	Digital Self-Test
/HF	High Frequency		

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
PES18/#D	18W T8 Single Sided Slave	320	9.30
PED18/#D	18W T8 Double Sided Slave	320	9.30

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 620mm x Width 455mm x Depth 155mm



IP20  

# Petina

Viewing distance  
35 metres



## Ultra-slim LED single and double-sided exit sign

At only 30mm the single sided version of **Petina** is one of the slimmest emergency exit signs available on the market.

The **Petina's** new clean square profile allows it to be considered as one of the most stylish emergency luminaires available and with new wire-suspension kits and end-mounting black brackets now available double-sided **Petina** can also be confidently considered for almost any internal application as wall or ceiling mounted.

Beautifully designed, this elegantly styled LED emergency luminaire utilises advanced optical design, which ensures its Light Conducting Legend receives an even spread of illumination from its LEDs with a life of approximately 50,000 hours.

Suitable for non-maintained and maintained modes, this 3 hour emergency luminaire is available in white, black, brass or chrome and can now also be supplied as a double-sided version which at 45mm is probably one of the slimmest double sided exit signs ever designed.

This new edition to the range has the facility for right angled mounting and wire suspension enabling the **Petina** to be confidently specified for most applications.



Petina double-sided  
in Silver-Grey



### Options Suffix:

- /WS** Wire Suspension Kit
- /RB** Right angled Mounting Bracket

### Dimensions:

Single - Length 360mm x Width 235mm x Depth 30mm  
Legend - 280mm x 155mm  
Double - 377mm x 255mm x 45mm

### Emergency single-sided Luminaires

Cat No.	Mode/Lamp	Kg
PE/M3/WH	NM/M3 White LED Sign Single Sided	2.00
PE/M3/BK	NM/M3 Black LED Sign Single Sided	2.00
PE/M3/SG	NM/M3 Silver Grey LED Sign Single Sided	2.00
PE/M3/BR	NM/M3 Brass LED Sign Single Sided	2.00
PE/M3/CH	NM/M3 Chrome LED Sign Single Sided	2.00

### Emergency double-sided Luminaires

Cat No.	Mode/Lamp	Kg
PD/M3/WH	NM/M3 White LED Sign Double Sided	2.60
PD/M3/BK	NM/M3 Black LED Sign Double Sided	2.60
PD/M3/SG	NM/M3 Silver Grey LED Sign Double Sided	2.60
PD/M3/BR	NM/M3 Brass LED Sign Double Sided	2.60
PD/M3/CH	NM/M3 Chrome LED Sign Double Sided	2.60

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration





# Pico

## Low profile single sided emergency exit box

The **Pico** range of low-profile single sided fluorescent exit signs are manufactured from sheet steel and are available in high quality white, brass or chrome options.

This competitively priced high quality exit luminaire is available as a mains option, with 3 hour non-maintained and maintained emergency versions.

**Pico** luminaires are only 65mm deep and are supplied as standard with a rear center BESA entry, keyhole mounting slots and an opal threshold downlight panel to illuminate the area below the sign.

**Pico** luminaires are supplied with removable end-caps, which enable the legend to be removed via either end of the luminaire allowing the **Pico** to be suitable for cornered installations.

(For Double Sided Versions See **Pescara** on Page 44)



Viewing distance  
40 metres

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
PIC8	8W 300mm Single Sided		2.50

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
PIC8/NM3	NM3 8W 300mm Single Sided	80E 120S	2.60
PIC8/M3	M3 8w 300mm Single Sided	80E 120S	2.90

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
PIC8/#/D	8W Slave Exit Sign Single Sided	275	2.50

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

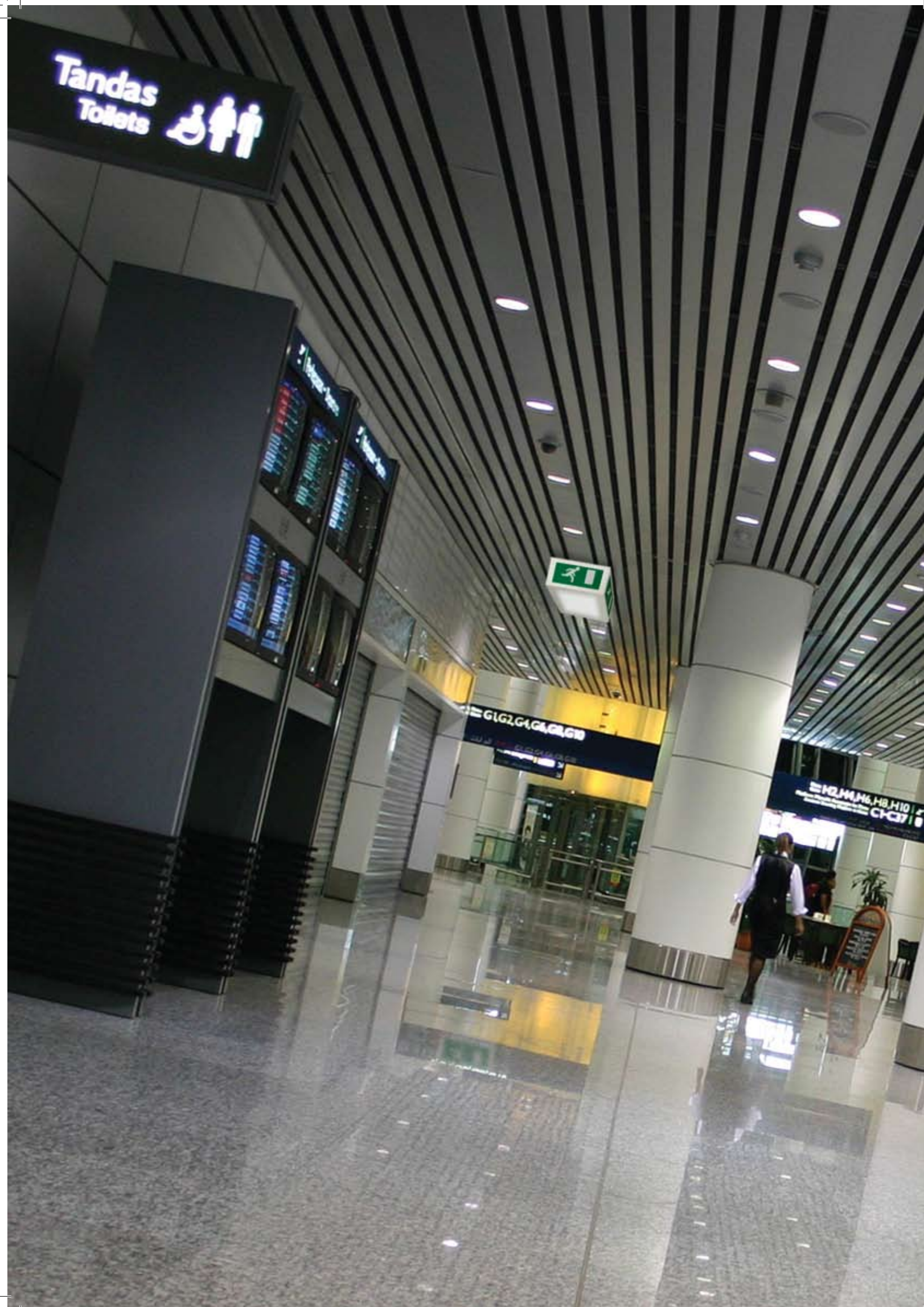
\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 385mm x Width 200mm x Depth 65mm

### Options Suffix:

/E	Economy Version	/HF	High Frequency Ballast
/S	Standard Version	/ES	Electronic Start
/CH	Chrome Finish	/AD	Intelligent Addressable Luminaire
/BR	Brass Finish		
/HPF	Power Factor Corrected		





Tandas  
Toilets



G1G2, G4, G6, G8, G10

H2, H4, H6, H8, H10  
CFC37



# Quarto

## Robust 4 sided exit sign

**Quarto** is an impressively robust 4 sided white emergency exit sign manufactured from high quality sheet steel which is suitable for either surface mounting or for large open tall buildings such as railway stations and airports **Quatro** can be suspended using rod suspension kits available (750mm and 1200mm white rod lengths as standard).

Optional blanking plates are available for **Quarto** for situations when less than four legends are required

Its energy saving compact fluorescent lamp ensures each of the legends and downlight panel receives an impressive even illumination creating a reliable and highly visible exit sign.

Available as a mains or 3 hour non-maintained and maintained emergency luminaires, **Quarto** is also available as a slave unit operating from a Central battery or Static Inverter System.

Self Test and Intelligent Addressable Emergency versions are also available as options for this flexible exit sign enabling it to be confidently specified for the largest of projects.



Viewing distance  
40 metres

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
QU16	Mains 16W	-	6.40

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
QU16/NM3	16W NM3	200	7.00
QU16/M3	16W M3	200	7.30

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
QU16/#/D	Slave 16W	400	6.40

\* Emergency Lumens

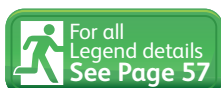
# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 420mm x Depth 420mm x Width 230mm

### Options Suffix:

/HPF	Power Factor Corrected	/ST	Digital Self Test
/HF	High Frequency Ballast	/RS1	Rod Suspension Kit (600mm)
/ES	Electronic Start	/RS2	Rod Suspension Kit (1.2m)
/AD	Intelligent Addressable Luminaire	/BP	White Blanking Plate



IP20  



# Retz

## A decorative curved exit sign

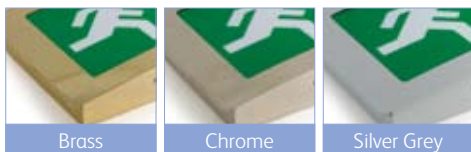
A superbly styled low profile exit sign suitable for almost any prestigious application.

The elegant design of **Retz** utilises an attractive curved fascia which is supplied in white finish as standard with silver grey, brass and chrome finishes providing a comprehensive range of options.

An opal downlight panel is incorporated into **Retz** to illuminate the escape route and door threshold.



Viewing distance  
40 metres



Brass

Chrome

Silver Grey

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
RZ8	8W Mains	-	1.60

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
RZ8/NM3	8W NM3 Emergency	120	2.00
RZ8/M3	8W M3 Emergency	120	2.20

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
RZ8/#D	8W Slave Emergency	275	2.00

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 440mm x Height 220mm x Depth 65mm

### Options Suffix:

<b>/BR</b>	Brass Finish	<b>/AD</b>	Intelligent Addressable Luminaire
<b>/CH</b>	Chrome Finish	<b>/HPF</b>	Power Factor Correction
<b>/SG</b>	Silver Grey Finish	<b>/ST</b>	Digital Self-Test
<b>/ES</b>	Electronic Start		
<b>/HF</b>	High Frequency Ballast		



IP20  

# Rota

## LED exit signs suitable for wall or ceiling mounting

The **Rota** is a superbly designed range of LED Exit Signs, which combines long-life LED Technology with High Quality engineering.

The versatile design of the **Rota** allows wall or ceiling mounting with a range of high quality finishes including white, brass, chrome, black or silver-grey (RAL-9006)

Suitable for non-maintained and maintained modes this 3 hour exit sign also includes a new recessed version suitable for almost any prestigious project.

Both the surface and recessed versions utilise the unique high quality plasi-glas legends with flame polished edges which ensure that the light distribution is effectively and evenly diffused across the legend resulting in a high performance, impressive and reliable emergency luminaire.

Can be used with single and double-sided legends (please specify when ordering)



Rota finished in chrome

**Viewing distance**  
32 metres

Rota recessed  
finished  
in white



### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
RO/LED/M3/WH	M3 White LED Exit Sign	-	2.00
RO/LED/M3/BR	M3 Brass LED Exit Sign	-	2.00
RO/LED/M3/CH	M3 Chrome LED Exit Sign	-	2.00
RO/LED/M3/BK	M3 Black LED Exit Sign	-	2.00
RO/LED/M3/SG	M3 Silver Grey LED Exit Sign	-	2.00

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 310mm x Height 240mm x Depth 40mm

**Cut out dimensions:** Length 310mm x Height 60mm x Depth 35mm



### Options Suffix:

/R Recessed Version



# Romney. The ultimate solution.

Right angle mount



Wall mount



Wire suspension





# Romney

## Flexible LED exit sign

**Romney** is an affordable, robust flexible exit sign featuring LED's with a 50,000-hour lamp-life. This economically designed 3 hour emergency luminaire has been specifically engineered to ensure **Romney** benefits from the latest LED technology.

**Romney** is available in white and has the choice of two legend sizes (135mm as standard and an optional 180mm version) with optional wire mounting suspension kits for high-ceiling applications.

Additional end or wall mounting kits can be specified to enable **Romney** to be used as a single or double-sided exit sign emphasising the wide range of variations.

Viewing distance 20 metres  
(135mm legend)

Viewing distance 30 metres  
(180mm legend)



Romney with optional wire suspension kit

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
ROM/LED/M3	M3 LED Exit Sign	-	1.60

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions:** Length 300mm x Width 195mm x Depth 40mm (135mm Legend)

Length 300mm x Width 240mm x Depth 40mm (180mm Legend)

### Options Suffix:

<b>/RAB</b>	Right Angled Mounting Bracket	<b>/WS</b>	Wire Suspension Kit
<b>/WMB</b>	Wall Mounting Bracket		



IP20 CE

# Savona

## Edge-lit exit signs in single and double-sided versions

**Savona** is an edge-lit exit sign available in a range of high quality finishes. The smooth lines of the new **Savona** create a product of contemporary design which lends itself for use in many prestigious installations.

Models featuring both fluorescent and high output white light emitting diodes (LED) are available. LED's have the advantage of a long life combined with a very low maintenance requirement. Whichever light source you choose, **Savona** offers an elegant exit sign with superb performance.

The flame retardant Plasi-Glas legend panel suspends below the lamp and its light conducting properties ensure even and clear illumination of the panel.

The **Savona** body is supplied separately from the legend which is assembled with just two screws. This makes ordering single or double-sided signs very simple. If you require a single sided sign simply add the relevant legend number to the product code e.g.. SAV8/NM3/L19. If you require a double-sided sign the product code would be SAV8/NM3/L19/D.

There are 2 Legend depths available - 270mm (standard) or 135mm for areas where height is restricted.

Savona with chrome finish



Savona recessed with brass finish



Viewing distances 27 metres  
(135mm legend)

Viewing distances 40 metres  
(270mm legend)

### Options Suffix:

/R	Recessed Trim	/AD	Intelligent Addressable Luminaire
/CH	Chrome Finish	/ST	Digital Self Test
/WH	White Finish		
/BR	Brass Finish		

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
SAV8	8W 300mm	-	2.90

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
SAV8/NM3	NM3 8W 300mm	120	3.00
SAV8/M3	M3 8W 300mm	120	3.20

### Emergency LED Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
SAV/LED/M3	M3 LED	-	3.20

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
SAV8/#/D	8W 300mm Slave Sign	275	2.90

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 445mm x Width 90mm x Depth 340mm

**Recess Version Dimensions:** Length 502mm x Width 152mm

**Recess Version Dimensions Cut Out:** Length 428mm x Width 135mm x Depth 85mm



IP20  

# Savona Petite

## Compact suspended exit sign

**Savona Petite** is a compact suspended emergency exit sign, which utilises the latest LED technology to ensure a long lamp-life of up to 50,000 hours.

Extensive thermal engineering has enabled the **Savona Petite** to be suitable as a 3 hour non-maintained/maintained emergency luminaire.

Available in white as standard with optional brass or chrome high quality finishes, this exceptionally luxurious suspended exit sign can be confidently specified as a single or double-sided emergency luminaire with additional options including an end-mounting wall bracket, creating a reliable universal LED exit sign.



Viewing distances  
32 metres

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
SP/LED/M3	M3 LED Exit Sign	-	2.70

\* For other durations, specify the required time period e.g. /M3 becomes /M1 for 1 hour duration

**Dimensions:** Length 340mm x Depth 275mm x Width 85mm including legend

**Ceiling Bar:** Length 325mm x Depth 20mm x Width 63mm



### Options Suffix:

/CH Chrome Finish /BR Brass Finish





# Tiel

## IP65 single or double sided exit sign

**Tiel** is a robust IP65 ceiling mounted single or double sided white polycarbonate exit sign. Suitable for surface or semi-recessed installations.

Its IP65 rating and optional tamper resistant screws, make the **Tiel** a unique single or double sided sign for all public areas.

**Tiel** is supplied complete with two self-adhesive legends as standard (please specify) so that the installer can make up either a single sided or double sided sign.



Tiel recessed

Viewing distances  
28 metres

### Options Suffix:

<b>/E</b>	Economy Output	<b>/HF</b>	High Frequency Ballast
<b>/S</b>	Standard Output	<b>/ES</b>	Electronic Start
<b>/H</b>	High Output	<b>/AD</b>	Intelligent Addressable Luminaire (Non-Maintained Only)
<b>/TI/WH</b>	White Finished Semi-recess Trim	<b>/ST</b>	Digital Self Test (Non-Maintained Only)
<b>/TI/BR</b>	Brass Finished Semi-recess Trim	<b>/TS</b>	Push to Test Switch
<b>/TI/CH</b>	Chrome Finished Semi-recess Trim		
<b>/VR</b>	Anti-tamper Screws		
<b>/HPF</b>	Power Factor Corrected		

### Mains Luminaires

Cat No.	Mode/Lamp	Lumens	Kg
TI8	1x8W 300mm	-	0.90
TI2x8	2x8W 300mm	-	0.90
TI11	11W TC-S	-	0.90

### Emergency Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
TI8/NM3	NM3 8W 300mm	80E	1.20
		120S	
		180H	
TI8/M3	M3 8W 300mm	80E	1.45
		120S	
		180H	
TI2X8/NM3	NM3 2X8W 300mm	150S	1.70
		250H	

### Slave Luminaires

Cat No.	Mode/Lamp	Lumens*	Kg
TI8/#/D	8W Slave Luminaire	275	0.85

\* Emergency Lumens

# Specify 24, 50, 110 or 230 Volts AC/DC System Voltage

\* For other durations, specify the required time period e.g. /NM3 becomes /NM1 for 1 hour duration

**Dimensions:** Length 350mm x Width 108mm x Depth 204mm

**Cut out dimensions:** Length 330mm x Width 90mm



IP65



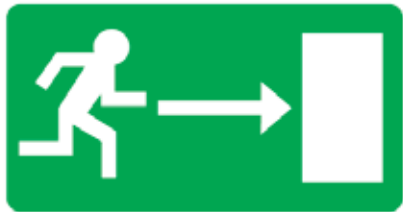


Savona



P54

Edge-lit exit sign  
in single and  
double-sided versions



L16



L19

Legends



L17



L20



L22



L18



L21



L23



CAT Number	Mounting height (m)	Transverse to wall			Transverse spacing			Axial to wall		
		0.2	0.5	1.0	0.2	0.5	1.0	0.2	0.5	1.0
<b>CAD8/NM3/E (M3)</b>	2.5	4.17	2.45	1.63	10.92	7.94	5.29	3.28	2.01	1.34
<b>AR8/NM3/E (M3)</b>	4.0	4.18	N/A	N/A	12.01	5.60	3.73	3.48	N/A	N/A
<b>ED8/NM3/E (M3)</b>	6.0	3.34	N/A	N/A	11.73	N/A	N/A	2.69	N/A	N/A
<b>CAD8/NM3/S (M3)</b>	2.5	4.80	3.20	2.10	12.40	8.60	6.30	3.70	2.60	1.80
<b>AR8/NM3/S (M3)</b>	4.0	5.00	2.80	N/A	13.70	8.70	5.40	4.10	2.40	N/A
	6.0	4.50	N/A	N/A	14.00	7.10	N/A	3.80	N/A	N/A
<b>CAD8/NM3 (M3)/H</b>	2.5	5.90	4.10	3.00	15.20	10.70	8.10	4.40	3.20	2.40
<b>AR8/NM3 (M3)/H</b>	4.0	6.50	4.10	1.30	17.00	11.50	8.00	5.10	3.40	2.00
	6.0	6.50	3.00	N/A	18.20	11.10	7.30	5.40	2.50	N/A
<b>DAL8/NM3</b>	2.5	5.30	3.80	2.90	13.30	9.70	7.50	5.00	3.60	2.80
<b>DAL8/M3</b>	4.0	6.00	3.90	1.30	15.30	10.80	7.80	5.70	3.80	1.50
	6.0	6.20	N/A	N/A	16.80	10.50	N/A	6.00	N/A	N/A
<b>BE8/NM3+BA/NM3</b>	2.5	4.00	2.70	1.70	10.10	7.40	5.30	3.50	2.40	1.50
<b>BE8/M3+BA/M3</b>	4.0	4.20	1.90	N/A	11.40	7.30	4.00	3.90	1.60	N/A
<b>BE8/C3+BA/C3</b>	6.0	3.40	N/A	N/A	11.50	4.60	N/A	3.10	N/A	N/A
<b>CAL8/NM3/M3</b>	2.5	3.90	3.10	2.70	8.90	7.10	7.20	2.90	2.70	1.40
<b>GN8/NM3/M3</b>	4.0	4.90	3.80	1.40	12.20	10.10	4.90	3.20	2.90	0.50
<b>CHE8/NM3/M3</b>	6.0	4.70	2.00	0.50	11.80	8.80	2.90	3.00	1.50	N/A
<b>MZ28/M3</b>	2.5	5.40	4.00	3.10	13.40	10.00	7.80	5.40	4.00	3.10
<b>EC28/M3</b>	4.0	6.30	4.40	3.00	15.90	11.50	8.60	6.30	4.40	3.00
	6.0	6.70	4.40	2.50	17.00	12.10	8.60	6.70	4.40	2.50
<b>EC38/M3</b>	2.5	5.60	4.20	3.20	13.80	10.40	8.20	5.60	4.20	3.20
	4.0	6.60	4.50	3.10	16.50	11.90	8.90	6.60	4.50	3.10
	6.0	7.60	5.20	3.40	19.10	13.80	10.20	7.60	5.20	3.40
<b>MZ16/M3</b>	2.5	4.30	3.00	2.20	10.60	7.80	5.90	4.30	3.00	2.20
<b>LA16/M3</b>	4.0	4.60	2.70	N/A	12.30	8.30	5.30	4.70	2.70	N/A
<b>LV16/M3 + HT16/M3</b>	6.0	4.40	N/A	N/A	13.00	7.00	N/A	4.30	N/A	N/A
<b>HT28/M3 + LN28/M3</b>	2.5	4.40	3.20	2.30	11.10	8.10	6.10	4.50	3.10	2.10
<b>LV28/M3 + KN28/M3</b>	4.0	4.80	2.80	N/A	12.80	8.60	5.50	4.80	2.80	N/A
<b>IDR28/M3</b>	6.0	4.40	N/A	N/A	13.60	7.40	N/A	4.40	N/A	N/A
<b>LA38/M3</b>	2.5	5.60	4.20	3.00	13.80	10.40	7.50	5.60	4.20	3.00
<b>IDR38/M3</b>	4.0	6.60	4.50	3.30	16.50	11.90	8.40	6.60	4.50	3.30
	6.0	6.90	4.50	N/A	17.70	12.50	9.00	6.90	4.50	N/A
<b>DAR/LED/M3</b>	2.5	3.20	2.20	1.80	8.20	5.80	4.90	3.20	2.20	1.80
	4.0	3.50	2.80	2.10	8.50	6.80	5.20	3.50	2.80	2.10
	6.0	3.60	2.70	2.40	9.90	6.10	5.40	3.60	2.70	2.40
<b>ED/LED/M3</b>	2.5	3.70	2.90	2.50	10.00	7.10	5.80	3.10	2.20	1.40
	4.0	4.70	3.10	N/A	10.90	7.70	5.10	3.20	2.40	N/A
	6.0	5.60	N/A	N/A	13.50	5.80	N/A	3.00	N/A	N/A
<b>GN/LED/M3</b>	2.5	3.90	2.80	1.80	8.90	5.70	6.10	2.70	2.40	1.00
<b>CHE/LED/M3</b>	4.0	4.70	2.10	0.50	11.30	7.70	3.00	2.80	1.60	N/A
	6.0	4.50	N/A	N/A	11.10	N/A	N/A	2.00	N/A	N/A
<b>MULTIA18W</b>	2.5	4.60	3.70	3.00	9.40	7.70	7.00	4.60	3.70	3.00
	4.0	5.60	4.20	3.20	12.40	9.50	7.40	5.60	4.20	3.20
	6.0	6.30	4.30	2.20	14.70	10.60	7.60	6.30	4.30	2.20
<b>MULTIA26W</b>	2.5	5.00	4.10	3.40	10.00	6.90	7.20	5.00	4.10	3.40
	4.0	6.00	4.70	3.80::	13.00	9.80	8.90	6.00	4.70	3.80
	6.0	7.20	5.70	3.50	16.80	10.30	7.30	7.20	5.70	3.50
<b>MULTIA32W</b>	2.5	3.70	2.40	3.20	8.20	7.30	7.10	3.70	2.40	3.20
	4.0	5.40	3.30	3.80	11.80	10.40	9.60	5.40	3.30	3.80
	6.0	7.40	3.90	3.60	16.30	13.80	11.20	7.40	3.90	3.60
<b>MULTIA42W</b>	2.5	4.20	2.90	4.10	9.10	7.90	7.80	4.20	2.90	4.10
	4.0	6.10	3.90	4.90	12.90	11.40	10.70	6.10	3.90	4.90
	6.0	9.10	5.30	5.90	17.90	16.10	14.30	9.10	5.30	5.90
<b>OR455/M3</b>	4.0	9.30	7.00	5.50	22.30	17.20	13.80	6.50	5.60	4.90
<b>OR480/M3</b>	6.0	10.80	7.90	5.80	26.60	19.90	15.60	8.60	7.20	6.00
	8.0	11.80	8.20	5.40	29.70	21.70	16.20	10.30	8.30	6.60
<b>DY/LED/OA</b>	2.5	4.10	1.40	0.60	11.90	6.80	4.20	4.10	1.40	0.60
	3.0	3.70	-	-	12.00	6.00	-	3.70	-	-
	4.0	2.10	-	-	10.80	1.40	-	2.10	-	-
<b>DY/LED/CR</b>	2.5	4.10	0.50	1.30	16.00	7.30	5.10	3.40	0.80	0.60
	3.0	4.30	-	-	14.70	5.10	-	2.50	-	-
	4.0	0.70	-	-	11.60	-	-	0.80	-	-
<b>ELL/LED/OA</b>	2.5	4.10	2.20	-	10.40	7.20	4.10	4.10	2.20	-
	3.0	4.00	1.30	-	11.00	6.80	2.40	4.00	1.30	-
	3.5	3.70	-	-	11.30	5.90	-	3.70	-	-
<b>ELL/LED/CR</b>	2.5	4.80	2.90	0.90	11.70	8.60	5.70	3.80	2.30	0.90
	3.0	4.90	2.50	-	12.70	8.70	4.60	3.80	1.90	-
	3.5	4.90	-	-	13.30	8.20	2.50	3.70	1.30	-





Axial spacing			Transverse to axial spacing		
0.2	0.5	1.0	0.2	0.5	1.0
8.23	6.62	4.41	9.59	7.28	4.85
9.57	4.56	3.04	10.73	5.07	3.38
9.77	N/A	N/A	10.76	N/A	N/A
8.90	6.70	5.10	8.50	5.80	3.90
10.60	7.20	4.60	9.10	5.20	N/A
11.50	5.80	N/A	8.30	N/A	N/A
10.30	8.00	6.30	9.70	6.90	4.90
12.70	9.30	6.70	10.80	6.80	3.50
14.50	9.30	4.20	10.70	3.90	N/A
13.00	9.40	7.50	12.60	9.00	7.30
14.90	10.60	7.60	14.40	10.40	7.50
16.50	10.40	N/A	16.00	10.50	N/A
8.80	6.50	4.90	9.40	7.00	5.00
10.10	6.50	3.30	10.80	6.90	3.70
10.40	4.00	N/A	11.00	4.30	N/A
7.40	6.40	4.50	8.10	6.80	5.70
8.10	6.90	3.10	10.70	7.30	4.30
7.90	6.70	2.00	10.80	6.10	N/A
13.40	10.00	7.80	13.40	10.00	7.80
15.90	11.50	8.60	15.90	11.50	8.60
17.00	12.10	8.60	17.00	12.10	8.60
13.80	10.40	8.20	13.80	10.40	8.20
16.50	11.90	8.90	16.50	11.90	8.90
19.10	13.80	10.20	19.10	13.80	10.20
10.70	7.80	5.90	10.70	7.80	5.90
12.30	8.90	5.30	12.40	8.40	5.30
13.00	7.00	N/A	13.00	7.00	N/A
11.10	8.10	6.10	11.00	8.00	6.00
12.70	8.60	5.50	12.70	8.60	5.50
13.60	7.40	N/A	13.60	7.40	N/A
13.80	10.40	7.50	13.80	10.40	7.50
16.50	11.90	8.40	16.50	11.90	8.40
17.70	12.50	9.00	17.70	12.50	9.00
8.20	5.80	4.90	8.20	5.80	4.90
8.50	6.80	5.20	8.50	6.80	5.20
9.90	6.10	5.40	9.90	6.10	5.40
9.00	6.20	4.80	8.10	6.90	3.90
9.80	6.60	3.50	8.80	7.20	3.40
11.00	4.00	N/A	8.60	5.30	N/A
6.90	5.50	3.80	8.10	5.60	5.00
7.80	6.20	2.00	10.10	N/A	N/A
6.80	N/A	N/A	10.30	N/A	N/A
9.40	7.70	7.00	9.40	7.70	7.00
12.40	9.50	7.40	12.40	9.50	7.40
14.70	10.60	7.60	14.70	10.60	7.60
10.00	6.90	7.20	10.00	6.90	7.20
13.00	9.80	8.90	13.00	9.80	8.90
16.80	10.30	7.30	16.80	10.30	7.30
8.20	7.30	7.10	8.20	7.30	7.10
11.80	10.40	9.60	11.80	10.40	9.60
16.30	13.80	11.20	16.30	13.80	11.20
9.10	7.90	7.80	9.10	7.90	7.80
12.90	11.40	10.70	12.90	11.40	10.70
17.90	16.10	14.30	17.90	16.10	14.30
13.80	12.40	11.10	17.40	14.30	12.20
18.90	16.40	14.20	22.00	17.80	14.70
23.10	19.40	16.50	25.80	20.30	16.10
11.90	6.80	4.20	11.30	6.80	4.20
12.00	6.00	-	12.00	6.00	-
10.80	1.40	-	10.80	-	-
8.20	4.80	2.60	12.10	5.10	3.2
8.80	3.10	-	9.80	3.20	-
7.50	-	-	8.00	-	-
10.40	7.20	4.10	10.40	7.20	4.10
11.00	6.80	2.40	11.00	6.80	2.40
11.30	5.90	-	11.30	5.90	-
9.30	6.60	4.40	10.50	7.60	5.10
10.00	6.60	3.70	11.30	7.60	3.80
10.40	6.30	2.40	11.80	7.20	2.30

### Notes: These tables are based on the following factors:

Light output ratios measured to BS5225 and lamp lumen outputs are from GE Lighting Warm white lamps.

Requirements from BS5266/EN1838

### Permanently unobstructed escape routes:

Require minimum 0.2 lux along the centre line of the escape route, where there is a possibility of an obstruction occurring along the route 1 lux minimum is required.

### Undefined, Open areas:

The minimum level of illumination required throughout the area is 0.5 lux excluding a half metre border around the edge of the room which can be at a lower level.

### TWINSPOT SPACING DATA (1 LUX AVERAGE)

Mounting Height	Spacing to Wall	Between Units
-----------------	-----------------	---------------

#### 2 x 21 Watt Tungsten Versions

2.5 metres	3m	9m
4 metres	4m	11m
6 metres	3m	12m
8 metres	3m	10m

#### 2 x 20 Watt Tungsten Halogen Versions

2.5 metres	5m	15m
4 metres	6m	16m
6 metres	5m	16m
8 metres	4m	15m

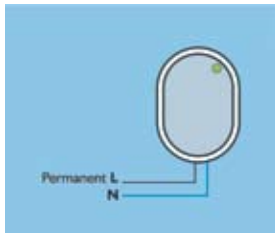
#### 2 x 55 Watt Tungsten Halogen Versions

8 metres	8m	20m
10 metres	8m	20m

These tables are to be used as a guide only.

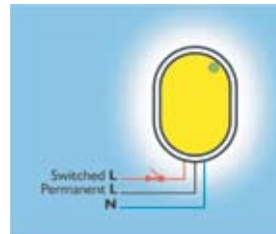
Please refer to [www.relux.biz](http://www.relux.biz) for accurate photometric planning

# Design Guide



## NON -MAINTAINED

The lighting only operates when the normal mains supply fails (emergency lighting only).



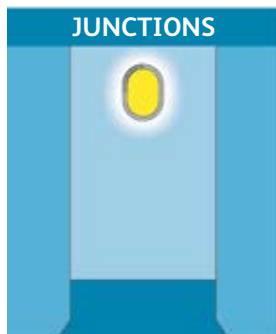
## MAINTAINED

The lighting operates normally and continues to operate when the normal mains supply fails (mains lighting and emergency lighting).



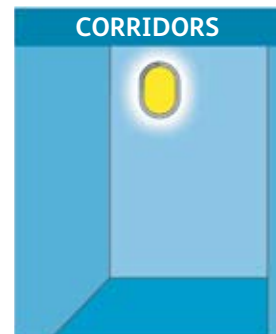
### FINAL EXIT

To provide illumination of escape routes.



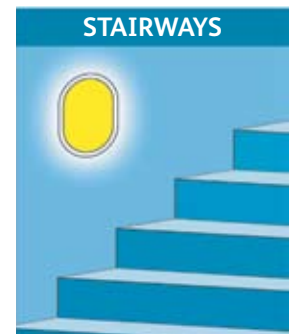
### JUNCTIONS

Install within 2 metres of escape route junctions.



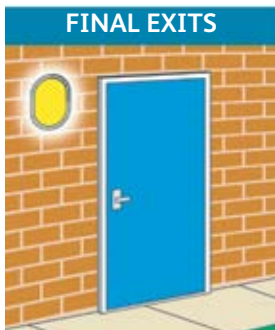
### CORRIDORS

Install within 2 metres horizontal distance of a change of direction in an escape route.



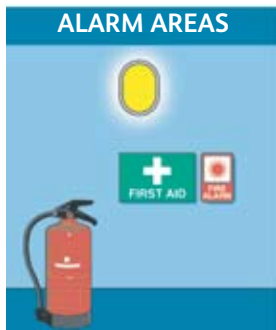
### STAIRWAYS

Install within 2 metres horizontal distance of change in floor level or stairs (each tread to receive direct light).



### FINAL EXITS

Install externally within 2 metres horizontal distance of any final exits. Please note that sufficient light will be needed to muster a roll call.



### ALARM AREAS

Fire alarms, first aid points and fire-fighting equipment, install within 2 metres horizontal distance.



### ESCALATORS

Should not be used as an escape route, but requires the same illumination to protect users on it when the supply fails.



### TOILETS

Install in all toilets exceeding 8m<sup>2</sup> area or where natural light is not present.



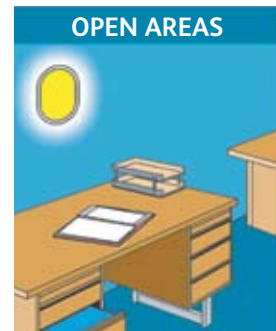
### LIFTS

To provide emergency illuminations in all lifts.



### CONTROL ROOMS

Motor generator, control and plant rooms for essential and safety services.



### OPEN AREAS

Open rooms either with a particular hazard, an escape route passing through or larger than 60m<sup>2</sup>.



### HAZARDOUS AREAS

Areas of high risk should be illuminated to 10% of normal lighting or 15 lux, whichever is greater.

## Lighting requirements

When luminaires have been sited to cover the locations above, additional luminaires may be required to ensure minimum lighting levels are achieved. We provide spacing tables for this purpose. Spacing tables advise how far to locate the first luminaire, then how far apart other luminaires should be located for a given mounting height. Installation to the spacings will ensure the lighting levels will be achieved.

Escape route corridors etc: 1 lux minimum on the centre line of the escape route.

Open Areas: 0.5 lux minimum in the central core to within 0.5m of the walls.

Exit signs – Signs should apply to the European Signs Directive and be either back illuminated or have an emergency luminaire within 2m of horizontal height. Signs should be of the same format throughout the building.

# Relux

## Orbik is a fully registered member of Relux

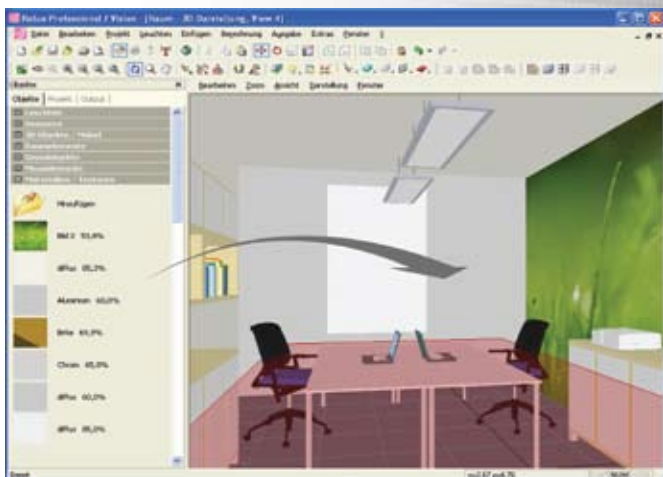
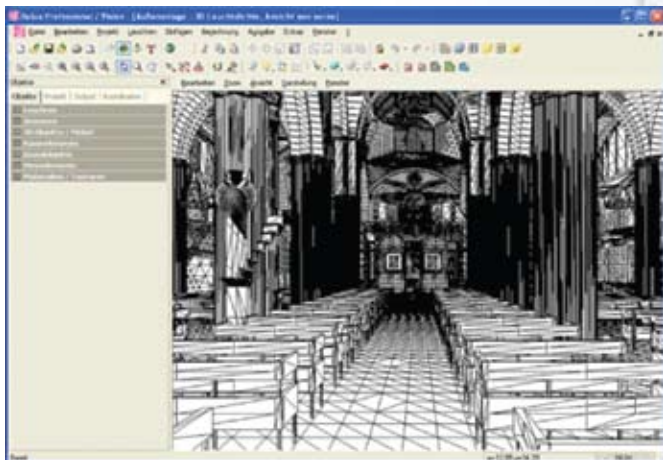
Powered by **Relux** the full comprehensive range of ORBIK products is available free of charge to be downloaded via our website [www.orbik.co.uk](http://www.orbik.co.uk) or at [www.relux.biz](http://www.relux.biz) in a UK format.

Orbik are able to offer the most technical advanced and user friendly lighting design software available in todays market. Our built in database has a full technical library on all of our products, including photometric data and product data sheets.

A complete lighting design solution which is fast and simple to create, the **Relux** express mode will guide you through the lighting calculation on an intuitive, step by step basis.

Once the design is complete the results can be compiled into an impressive structured report, table results and 3D computer generated visualisations.

Designs can be competed to meet the requirements of the latest European and British standards, using dedicated emergency luminaires, converted mains lighting luminaires or a combination of mains and emergency luminaires for a complete design solution.







Power is nothing  
without control

## Revolutionary technology for low Mercury and Amalgam lamps

In recent years, as a direct result of environmental concerns, the Mercury content of fluorescent lamps has been steadily reduced to lessen the impact on the environment when the lamps reach their end of life and require recycling or safe disposal. The RoHS directive imposes strict limits on the amount of potentially hazardous substances that can be used in the manufacture of products and Mercury is one of the six hazardous substances identified in this directive. Lamp manufacturers are required to comply with these limits and have initiatives to remove all Mercury from fluorescent lamps in the near future.

Since its introduction five years ago, Orbik's **Perferm™** technology range of emergency modules, which incorporate enhanced striking technology and permanent heating of the lamp cathodes in emergency mode, have gained favour with many of the major emergency lighting companies within Europe and the Middle and Far Eastern countries. **Perferm™** modules operate with most standard Mercury, reduced Mercury and Amalgam based fluorescent lamp types and thus offer customers who supply emergency lighting luminaires a safeguard against potential compatibility problems when lamps are replaced with lower Mercury level lamps, at a later date.

This is becoming more of an issue because as the Mercury levels in fluorescent lamps continue to fall, conventional modules without **Perferm™** technology are already failing to provide correct emergency operation, which at best dramatically reduces the lamp life and can lead to poor colour rendition or 'pink limbs' on some compact fluorescent lamps and in some extreme instances, no light from the lamp in emergency conditions.

We now offer two alternative versions of the **Perferm™** with the PH4000 and PL4000 series offering all the advantages of **Perferm™** without the additional mains ballast delay control relay found in the PLR5000 and PHR5000 **Perferm™** Plus modules. These have been designed specifically for use with multi-lamp or dimmable electronic ballasts where 'lock out' can be a problem (supply present but the ballast has shut down because the emergency lamp has been temporarily disconnected from the ballast during testing). This is the case where a keyswitch is used to fail the permanent supply (to test the emergency lighting), whilst the switched supply is still present at the electronic ballast. The additional relay introduces a small time delay before the power is reconnected to the electronic ballast, allowing it time to reset correctly after the emergency test.





# Technical Specification

## Ballast lumen factors for control gear incorporating Perform™ technology (suitable for all lamps including low Mercury & Amalgam lamps)

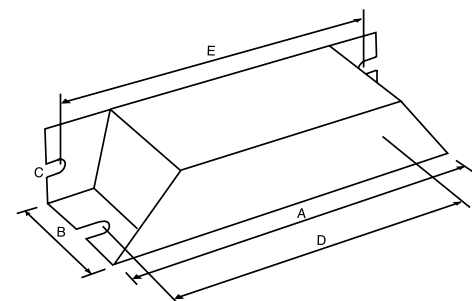
Module Number			Battery Cells	T8/T12							T5									
				18W	20W	30W	36W	40W	58W	70W	100W	8W	14W	21W	24W	28W	35W	39W	49W	54W
PH4003P3	PL4003P3	PLR5003P3	3 x 4Ah	12	12	9	9	9					24							
PH4005P3	PL4005P3	PLR5005P3	4 x 4Ah	11	11	10	10	10					20							
		MT5414P3	4 x 4Ah										32							
PH4007P3	PL4007P3	PLR5007P3	4 x 4Ah						10											
PH4403P3	PL4403P3	PLR5403P3	4 x 4Ah																	
PH4418P3	PL4418P3	PLR5418P3	4 x 4Ah	25	25								42	32						
PH4009P3	PL4009P3	PLR5009P3	5 x 4Ah	13	13															
PH4506P3	PL4506P3	PLR5506P3	5 x 4Ah												28	25	26			
PH4011P3	PL4011P3	PLR5011P3	5 x 4Ah						10	7										
		MT5528P3	5 x 4Ah												28	25	26			
		PHR5607P3	6 x 4Ah			18	18	18												
		PHR5608P3	6 x 4Ah						11	10										
		PHR5809P3	8 x 4Ah						15	14	9					27	24	20	17	
		MT5854P3	8 x 4Ah												27	24	20	17		
		PHR5108P3	10 x 4Ah							17	10									10

## Ballast lumen factors for emergency control gear (not suitable for low Mercury and Amalgam lamps)

Module Number			Battery Cells	T5/T8								
				8W	18W	20W	30W	36W	40W	58W	70W	
M2019/3(NM)	MS2020/3(M3)		2 x 4Ah	26								
M2001P3(NM)	MS2001P3(M3)		3 x 4Ah	34	24							
MS2001P3			3 x 4Ah	34	24	24						
MS2003P3			3 x 4Ah				14	14	14			
MS2007P3			4 x 4Ah	29					12	10		
MS2011P3			5 x 4Ah					13	13	10	9	

## Fixing centres

Module	A	B	C	D	E	Kg
PH	154	42	35	144	138	0.33
PL	203	42	28	193	187	0.34
PLR	216	42	28	206	200	0.35
PHR	216	42	35	206	200	0.54
MT5	350	28	28	230	-	0.34
M/MS	154	42	35	144	138	0.33





# Technical Specification

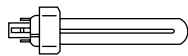
T5 Circular



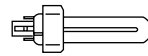
2D



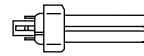
TC-L



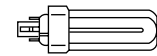
TC-S/E



TC-D/E



TC-T/E Amalgam



22W	40W	55W	16W	21W	28W	38W	55W	18W	24W	34W	36W	40W	55W	5W	7W	9W	11W	10W	13W	18W	26W	13W	18W	26W	32W	42W	57W
			16		13			12	13					20	22	23	20	20	29	12							
11					11			18	13		12	12			25	26	24	26	29	17	16						
	11	9				9	11					13	12														
			23		16									40	37	38	40										
						13	11	24	29	14	15	14	11						33								
																		30	28	25	22	23	22	20			
11	9					10	11																				
					16					13		14													20		
							12						12														
												30	15													18	
													11														
																										13	

- Perform™ technology is an ongoing development involving the latest lamp technology and as such is subject to change as and when further lamps/data become available.
- We strongly recommend that modules incorporating Perform™ technology are used in all emergency luminaires and conversions to provide the ultimate future proofing against lamp evolution.
- Most modules and PCB's are tested and approved to BE/EN61347-2-7. They are EMC compliant to EN55015 and carry the British Standard Kitemark and CE mark.
- They incorporate over temperature and charger short circuit protection.
- Mains supply 230V - 6% + 10% 50/60 Hz power consumption 8VA (other supply Voltages available on request).
- Output circuitry uses a high efficiency sinusoidal inverter, with nominal operating current of 1 Amp.
- Available as standard in 3 hour operation (other durations to order).
- All modules have battery over discharge protection as standard (DDP) to prevent discharge below 1 Volt per cell.
- Reverse battery polarity protected.
- All connections are via terminal blocks with a green light emitting diode (LED), to indicate correct charging conditions. All products are supplied with LED indicators.
- Operating temperature range module 0 to 70°C (centre side of case)
- Printed circuit boards 0 to 90°C (coil/core of charging transformer)
- All ballast lumen factors are shown as worst case.
- All products listed above are for 3 hours duration.
- All figures are based on an ambient temperature of 25°C.



# Joule range

## Combined mains and emergency lighting ballasts for single compact lamps

Features:

- Combined electronic ballast and emergency modules for compact lamps
- Incorporating our PERFERM™ technology to ensure optimum operation of low mercury and amalgam construction lamps from both 'cold start' and warm start applications
- The electronic ballast circuit has a lamp failure protection circuit to prevent damage occurring to the ballast when a lamp falls
  - Sine-wave output in emergency prevents unpleasant visual lamp effects and ensures maximum lamp cathode life
  - Advanced battery charging circuit exploits energy absorption charging technology which reduces power losses in the unit, is reverse polarity protected and provides stable charge conditions to maximise battery life
  - Joule combined units have Deep Discharge Protection to further help in preventing damaging operating conditions for the battery pack and are suitable for use with Ni-Cad and Ni-MH cells
  - Designed to comply with the requirements of the European product standards EN 60924, EN 60925, EN 60929, EN55015, EN61000.3.2, EN 61547, EN61347-2-7 and EN 61347-2-3
  - Produced in our UK manufacturing plant which is registered and audited by BSI to BS EN ISO 9001:2000



Cat No.	Cells	16W 2D	Single 18W TC-D	22W T5	Single 26W TC-D	28W 2D	36W TC-F	38W 2D	40W T5 C
MCP4100P3	3x4AH	15	-	-	-	-	-	-	-
MCP4097P3	3x4AH	-	19	-	-	12	-	-	-
MCP4099P3	4x4AH	21	-	-	18	-	-	-	-
MCP4098P3	4x4AH	-	21	17	-	15	-	-	-
MCP4101P3	5x4AH	-	-	-	-	-	10	13	12

\*\*Cold start' deemed to be temperatures above 10°C  
All modules supplied with green LED.

All of the products are for 3 hour duration, for other durations, specify the required time period e.g. P3 becomes P1 for 1 hour duration

**Dimensions:** 180mm x 70mm x 35mm

**Fixing Centres:** 170mm

**Weight:** 0.54Kg

All modules are BSI Kitemarked.



KM21518

## Emergency conversions within quality systems ISO9001: 2000 and ICEL 1004 approved

Orbik manufacture a comprehensive range of BSI approved emergency control gear within their ISO9001: 2000 approved factory in the UK.

One of the many added-value services ORBIK/ELF/SPEL offer to their customers is the re-engineering of third party mains only luminaires into emergency versions. This operation is carried out and tested by highly skilled personnel working within a ISO9001:2000 quality environment and registered to ICEL and approved to its ICEL 1004 Luminaire re-engineering scheme.

Facilities on site include testing for thermal endurance and EMC compliance for re-engineered luminaires so that customers can be confident that these luminaires remain compliant with European product safety and performance standards and comply with the CE regulations.

Orbik's BSI approved emergency control gear ensures the highest quality products are used to convert free issued luminaires with a choice of integral or remote solutions for most 4 pin fluorescent lamps and 12V halogen dichroic lamps.

With reduced mercury lamps being standardised on by most leading lamp manufacturers, Orbik's BSI approved Perform emergency modules are specified for these lamp types as their in-house design ensures reliable striking of the latest generation of 4 pin compact and linear fluorescent lamps.

## Emergency Conversions





Lighting industry  
for over 25 years...

Orbe



P43

Compact  
fluorescent  
lobay

## A full range of pre-wired emergency control remote boxes

With the constant development of low-energy compact fluorescent lamps, luminaire designers are now able to design smaller low profile luminaires. With the increasing requirements of emergency lighting in Public Buildings, these smaller luminaires can present problems where they are physically too small and hot to house integral emergency lighting control gear and batteries. For such applications we offer a full range of pre-wired emergency control remote boxes which can be mounted adjacent to the luminaire and simply connected via a flexible 0.5 metre, flame retardant, loom. Constructed in a galvanised finish steel enclosure without side panels for easy access.

If you require this service simply prefix the product with RB/ i.e. PL4003P3 = RB/PL4003P3.

### Dimensions (mm)

Size	L	W	H
Upto 3 cell	290	95	40
Upto 5 cell	425	100	45
Upto 10 cell	430	150	50

## Remote Emergency Systems



## Printed Circuit Boards

PCB ranges are generally for self contained luminaires where price is a significant factor. As with most of our products the printed circuit board range are approved to the British/European Standard EN60924/60925.

PCB Suffix/T have fold over LED. Suffix/TL have an LED terminal block

All of the above products are for 3 hour duration, for other durations, specify the required time period e.g. P3 for 1 hour duration becomes P1

### Dimensions (mm)

Printed Circuit boards	A	B	C	D	Height
Non-Maintained	123	40	114	31	30
Maintained with C/O Relay	123	40	114	31	30



Non-Maintained PCB's	Maintained PCB's for external gear Circuits	No. of Cells	4W 150mm	6W 225mm	7W TC-S 4 Pin	8W 300mm	9W TC-S 4 Pin	10W TC-D 4 Pin	11W TC-S 4 Pin	13W TC-D 4 Pin	16W 2D 4 Pin	18W TC-D 4 Pin	28W 2D 4 Pin	38W 2D 4 Pin
P400/3/TL	P404/3/TL*	2 x 4AH	45	22	30	26								
P226/3/TL	P232/3/TL*	3 x 4AH	45	33	33	37	28	37	24	30	20	19		
PERFORM	P1028/3/TL	3 x 4AH									20		12	
PERFORM	P1038/3/TL	5 x 4AH												13

\* Only suitable for Switchstart circuits.

PCB suffix/T have a fold over LED. Suffix/TL have an LED terminal block. All PCBs supplied with a green LED.

All of the above products are for a three hour duration, for other durations specify the required time period e.g. for 1 hour duration change part number from /3 to /1.



## Nickel Cadmium Batteries



In today's competitive environment it is often the hidden elements of a product where "savings" are made. In the case of self contained emergency lighting luminaires, it is often the Nickel Cadmium battery which is judged to be an item where money can be saved, often to the detriment of product performance, life, maintenance, and ultimately safety of lives.

We have a policy of using quality, high temperature Nickel Cadmium batteries manufactured by world class companies using premium materials and graded to the demanding standards of IEC285, and when installed and operated in accordance with EN60598.2-22 meet the requirements for a 4 year life.

In addition to the many standard battery configurations illustrated in this catalogue, we are able to offer special battery configurations to assist in the layout of components within luminaires having restricted space.

Redesigned endcaps now allow for inline batteries to be dove-tailed together creating dual-in-line packs.

## Nickel Metal Hydride The Green Alternative



Anticipating the growing awareness for the need to care more for our environment, we have had an "alternative" battery development program in place since 1996. Whilst the nickel cadmium battery is still specified in the majority of our emergency lighting products, there is no doubt that it is becoming expensive to dispose of both financially and environmentally due to the heavy metals and other pollutants which form part of the chemistry of each cell.

We have been working closely with both sealed recombination lead acid battery manufacturers and nickel metal hydride battery manufacturers to find the most economical and practical alternative to nickel cadmium. Our experience with nickel metal hydride battery packs used in self contained luminaires sited in locations with elevated temperatures, is second to none and we are confident that these batteries, when used in the correct way, have many advantages over other battery technologies.

These are supplied in 2 and 3 Cell variations to enable most Cell combinations to be easily constructed.

- NiMh batteries are kinder to the environment than NiCd and are cheaper to dispose of at the end of life.
- NiMh batteries have a better power density than NiCd and lead acid batteries from a smaller size cell, so can be used in products where space is limited.
- High temperature NiMh batteries are particularly designed for emergency lighting applications which some alternative battery technologies cannot provide.
- NiMh batteries have a lower cost and longer active life than Lithium batteries, which means being environmentally friendly is not too costly.
- NiMh battery technology is advancing all the time and there is little doubt they will become increasingly popular, so designing battery and product layouts using NiMh can sizes is an investment in the future.

Whether the future of your next emergency lighting installation or the future of the World is your prime consideration, NiMh batteries should feature high on your list of priorities.



# Technical Details For battery packs

Battery Pack	Cat No.	Duration (Hours)	Length A	Width B	Depth C	Fixing Centre D	Style	Battery Weight (Kgs)
2x4 AH NMH	BH164	3	140	20	20	70	IN-LINE	0.14
3x4 AH NMH	BH167	3	210	20	20	70	IN-LINE	0.21
2x1.5 AH Nicad	B163/215	1	125	27	25	113	IN-LINE	0.10
2x4 AH Nicad	B164/24	3	164	36	36	149	IN-LINE	0.29
2x4 AH Nicad	B161/2 x 4	3	65	72	36	-	SidexSide	0.28
3x1.5 AH Nicad	B165/315	1	167	27	25	155	IN-LINE	0.15
3x4 AH Nicad	B166/3x4	3	99	65	34	40x33	PLATE	0.47
3x4 AH Nicad	B167/34	3	226	36	36	214	IN-LINE	0.43
4x1.5 AH Nicad	B168/415	1	209	27	25	197	IN-LINE	0.20
4x4 AH Nicad	B169/4x4	3	130	65	34	40x65	PLATE	0.59
4x4 AH Nicad	B702/4x4	3	123	75	36	108	DUAL	0.58
4x4 AH Nicad	B170/44	3	285	36	36	270	IN-LINE	0.57
5x1.5 AH Nicad	B171/515	1	251	27	25	239	IN-LINE	0.25
5x4 AH Nicad	B172/5x4	3	163	65	34	40x97	PLATE	0.78
5x4 AH Nicad	B173/54	3	346	36	36	331	IN-LINE	0.70
6x1.5 AH Nicad	B174/615	1	293	27	25	281	IN-LINE	0.30
6x4 AH Nicad	B176/64	3	406	36	36	391	IN-LINE	0.83
6x4 AH Nicad	B701/6x4	3	182	75	36	167	DUAL	0.84
8x4 AH Nicad	B878/84	3	525	36	36	510	IN-LINE	1.00
8x4 AH Nicad	B879/8x4	3	242	75	36	227	DUAL	1.35
10x1.5 AH Nicad	B177/1015	1	451	54	25	239	DUAL	0.50
10x4 AH Nicad	B178/104	3	648	36	36	633	IN-LINE	1.40
10x4 AH Nicad	B179/10x4	3	300	75	36	285	DUAL	1.35

All dimensions in mm

## Cells

1.5AH Nicad for 1 hour duration modules/PCB's. 4AH Nicad + NMH for 3 hour duration modules/PCB's

## Permitted cell temperature

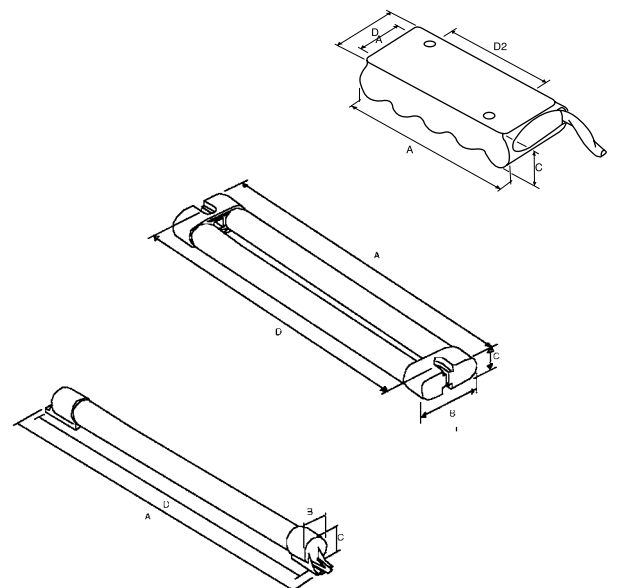
Minimum 0°C. Maximum 54°C, to give the specified performance for an expected life of 4 years

## Battery connections

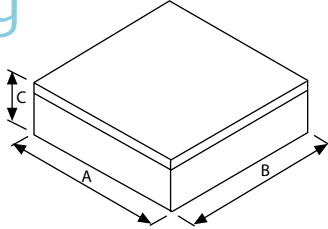
Batteries are supplied with tag connections with the exception of dual in-line and plate versions, which are fitted with a non-reversible plug. The appropriate connections are supplied with the batteries.

## Battery fixing

Batteries are supplied with plastic end caps or metal plates with screws with provision for screw fixings.



# Low Voltage Emergency Lighting



## Emergency lighting kits to operate 12 volt tungsten halogen lamps in the event of a power failure

These are available in three modes:

- Non-maintained (NM) where the lamp is only illuminated when power fails
- Remote Maintained where a separate transformer is used, ideal for dimming installations or where matching mains operation characteristics are critical.
- Maintained (M) where the unit is supplied with an integral transformer.

All units incorporate a BSI Approved Charger Circuit to maximise battery life and deep discharge battery protection, essential for Lead Acid batteries. They are housed in a white epoxy coated sheet steel enclosure, and are supplied with 5 year life sealed Lead Acid batteries.

### LOW-VOLTAGE EMERGENCY BOX - ECONOMY VERSION (BALLAST LUMEN FACTOR 20W - 6% 50W - 10%)

Cat No.	Mode	1 Hour	Duration			Dimensions (Size in mm)			Fixing Centres	Kg
			2 Hours	3 Hours	A	B	C			
R931/50	Non-Maintained	2 x 20W 5 x 20W	1 x 50W 3 x 20W	1 x 50W 2 x 20W	250	230	72	187	4.0	
R932/50	Maintained with Maintaining Transformer	1 x 50W 2 x 20W	1 x 50W 2 x 20W	1 x 50W 2 x 20W	250	230	72	187	5.0	
R942/50	Maintained without Maintaining Transformer	2 x 50W 5 x 20W	1 x 50W 3 x 20W	1 x 50W 2 x 20W	250	230	72	187	4.0	

### LOW-VOLTAGE EMERGENCY BOX - 12V VERSION (BALLAST LUMEN FACTOR = 100%)

Cat No.	Mode	1 Hour	Duration			Dimensions (Size in mm)			Fixing Centres	Kg
			2 Hours	3 Hours	A	B	C			
R939/50	Non-Maintained	1 x 50W 2 x 20W	1 x 20W	1 x 20W	250	230	72	187	5.2	
R940/50	Maintained with Maintaining Transformer	1 x 50W 2 x 20W	1 x 20W	1 x 20W	250	230	72	187	6.7	
R943/50	Maintained without Maintaining Transformer	1 x 50W 2 x 20W	1 x 20W	1 x 20W	250	230	72	187	5.5	
R760/50	Non-Maintained	2 x 20W 1 x 50W	1 x 20W	1 x 20W	315	270	110	120	5.2	
R759/50	Non-Maintained	5 x 20W 2 x 50W	3 x 20W 1 x 50W	2 x 20W 1 x 50W	315	270	110	120	10.7	
R757/50	Maintained with Maintaining Transformer	2 x 20W 1 x 50W	2 x 20W	1 x 20W	315	270	110	120	6.7	
R758/50	Maintained with Maintaining Transformer	2 x 20W 1 x 50W	2 x 20W 1 x 50W	2 x 20W 1 x 50W	315	270	110	120	12.2	
R700/50	Maintained with 2x 50W Maintaining Transformer	5 x 20W 2 x 50W	-	-	315	270	110	120	13.5	
R835/50	Maintained without Maintaining Transformer	2 x 20W 1 x 50W	1 x 20W -	1 x 20W -	315	270	110	120	5.2	
R836/50	Maintained without Maintaining Transformer	5 x 20W 2 x 50W	2 x 20W 1 x 50W	2 x 20W 1 x 50W	315	270	110	120	10.9	

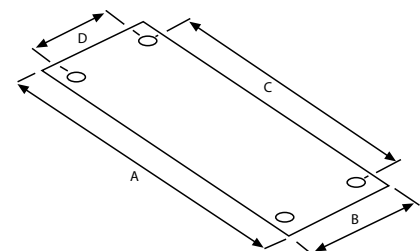
# 6V & 12V dc Charger PCB

## Emergency lighting PCB's to operate 12 volt tungsten halogen lamps in the event of a power failure

The 6V and 12V DC charger circuits incorporated into our tungsten lead acid remote boxes are also available as separate printed circuit boards to give users full flexibility with their choice of housings, batteries and maintaining components. The facility of a 10A terminal block on each PCB offers a greater degree of flexibility for installation within a remote box/twinspace/luminaire.

### Dimensions

Cat No.	Voltage	Battery Type	Mode	Lamp Range	No. of Outlets
CB112	12V	VP Lead Acid	Maintained or	10-100W	2
CB106	6V		Non Maintained		
Dimensions in mm					
	A	B	C	D	Height
	147	68	135	50	45



### A new train with each element housed in a separate galvanised metal box

To compliment our low voltage emergency lighting product range, we have introduced a new product in the form of a train where each element is housed in a separate galvanised metal box. This will operate lamps up to 50W at 6 Volts in emergency mode, giving a ballast lumen factor of 10% for a 50W and 6% for a 20W lamp. The compact size allows it to fit through a 85mm cut-out and the standard non-maintained (or maintained via an external transformer) is in two sections. If required we can supply a maintaining transformer in a third box. All units provide 3-hour duration in the emergency mode from the valve regulated lead acid batteries.

## VRLA Low Voltage Lighting Train



#### Catalogue Numbers

Maintained: R959/50/M3,  
Non-Maintained: R959/50/NM3  
For shorter durations, specify the required time period e.g. /NM3 for 1 hour duration becomes /NM1

#### Dimensions (millimetres)

Charger and LV transformer enclosure:  
Length 230mm x Width 74mm x Height 60mm  
Valve regulated lead acid battery enclosure:  
Length 350mm x Width 74mm x Height 60mm

### Nickel Cadmium Emergency Conversion Kits for 12 Volt Lamps up to 50W 3 hours:

Our low voltage lighting train enables 12 volt Tungsten Halogen lamps to operate in the event of a power failure. The ability to feed the lighting train through ceiling aperture cut-outs of 60mm ensures easy installation.

The lighting train is available in Non-Maintained mode, where the lamp is only illuminated when the power fails and also Maintained mode, which is supplied with an integral transformer which operates the lamp in mains healthy and in the event of a power failure.

The low voltage lighting train features high quality, high temperature Nickel Cadmium battery cells and a silicone coated woven glass fibre sleeving ensuring the product is manufactured to BS/EN60924. The lighting train also allows dimming of the Halogen lamps if required.

## NICAD Low Voltage Lighting Train



#### Dimensions (millimetres)

Overall Length 800mm  
Lighting Train can fit through Ceiling Cut-Outs of 60mm or above

Cat No.	Mode	Lamp	Duration (1x20W)	Duration (1x50W)	Ballast Lumen Factor
R960/50/NM1	Non-Maintained	50/20W 12V	3 Hours	1 Hour	50W - 10% / 20W - 6%
R960/50/M1	Maintained (with transformer)	50/20W 12V	3 Hours	1 Hour	50W - 10% / 20W - 6%
R961/50/M1	Maintained (without transformer)	50/20W 12V	3 Hours	1 Hour	50W - 10% / 20W - 6%
R962/50/NM3	Non-Maintained	50/20W 12V	3 Hours	3 Hour	50W - 10% / 20W - 6%
R962/50/M3	Maintained (with transformer)	50/20W 12V	3 Hours	3 Hour	50W - 10% / 20W - 6%
R963/50/M3	Maintained (without transformer)	50/20W 12V	3 Hours	3 Hour	50W - 10% / 20W - 6%



## LED Combi Module LCP31051/3



**We have introduced a range of products designed to exploit the significant advantages that the new generation of high power white light emitting diodes (LEDs) offer.**

- Combined electronic parallel LED driver and emergency module, suitable for non-maintained and maintained 3-hour operation.
- Supplies into 6W of output power at 4 Volts D.C.
- Can be used for Nickel Cadmium or Nickel Metal Hydride cells in a variety of capacities dependant on the duration and load requirements.
- Easy selection of charge outputs.
- Load 3-hour battery
  - 1W 3 x 0.7Ah cells
  - 3W 3 x 1.5Ah cells
  - 5W 3 x 4Ah cells
- Maintained output can be switched via a separate input terminal
- Electronics are suitable for a wide operating temperature range of  $-40^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ . (not including batteries).
- Lightweight and compact size polycarbonate case provides designers with a large degree of flexibility. Dimensions: L130mm x W50mm x H30mm. Fixing centres 120mm.
- Short circuit and battery polarity protected.
- All designed to comply with EN55015 and relevant clauses of EN60924.

## LED Power Driver LPD8



- High output parallel LED driver supplying loads up to 8 Watts at 4 Volts a (limiting resistor should be included with the LED array).
- Suitable for 230V  $\pm 50\%$  50Hz (other supply voltages available to order).
- Housed in a polycarbonate case with dimensions of L130mm x W50mm x H30mm. Fixing centres at 120mm.
- Designed to comply with EN55015.

## Change-over and Sub-circuit Monitor Relay - DRM415AC



**The DRM415AC relay module is an enclosed change-over relay for use with static inverter operated emergency lighting systems and is rated at 1250VA.**

The DRM415AC can be used with either maintained or non-maintained luminaires, powered from a static inverter and provides local sub-circuit monitoring to comply with the European Standard for centrally supplied emergency systems, EN50171.

For non-maintained operation, the static inverter supply is connected to the DRM415AC together with the local lighting circuits un-switched supply. Upon loss of the local supply, the relay changes over and the luminaire is operated by the output from the static inverter.

For maintained operation, the switched supply is also connected to the DRM415AC. This allows the luminaire to be switched on and off as though it were a normal mains luminaire.

In the event of the local un-switched supply failing the luminaire is operated from the static inverter supply, regardless of whether the luminaire was being operated from the normal mains supply at the time.

A number of different options based upon the DRM415AC are available:

- |                 |   |
|-----------------|---|
| DRM415AC:       | Static inverter changeover relay rated at 1250VA  |
| DRM415AC/NR:    | As above, with neon indicator showing that the static inverter supply is present and healthy.       |
| DRM415AC/RB:    | Static inverter change over relay housed within a sheet metal box for remote mounting.              |
| DRM415AC/RB/NR: | As above except with neon indicator showing that the static inverter supply is present and healthy. |
| DRM415AC/ADD    | Addressable remote box incorporating OEL305.  |

**All of the above products can be factory fitted within "free-issued" luminaires, please contact our sales office for information.**

# Inverters for use with Central Systems

## Incorporating PERFERM™ Technology

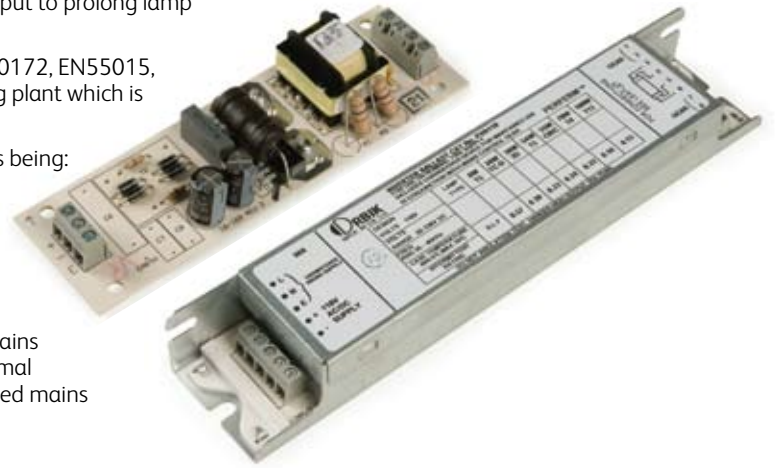
We produce a range of inverter units suitable for operating fluorescent lamps from low voltage AC or DC supplies, including central battery systems of 24 Volts, 50 Volts and 110 Volts and fluorescent lamps from 4 Watts to 100 Watts.

All PV range inverters incorporate our PERFERM™ technology to ensure good lamp life and correct operation with low mercury fluorescent lamps and sine-wave output to prolong lamp cathode life and prevent unpleasant visual lamp effects.

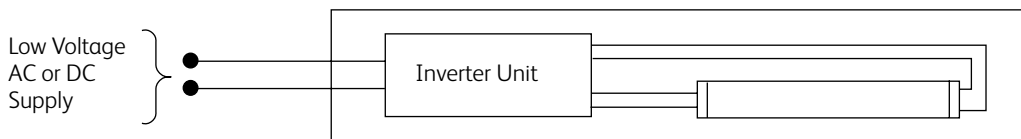
They are designed to comply with the European product standards EN50172, EN55015, EN 61547 and EN 61000.3.2 and are produced in our UK manufacturing plant which is registered to BS EN ISO9001:2000 by BSI.

Two types of operation are normally encountered in low voltage systems being:

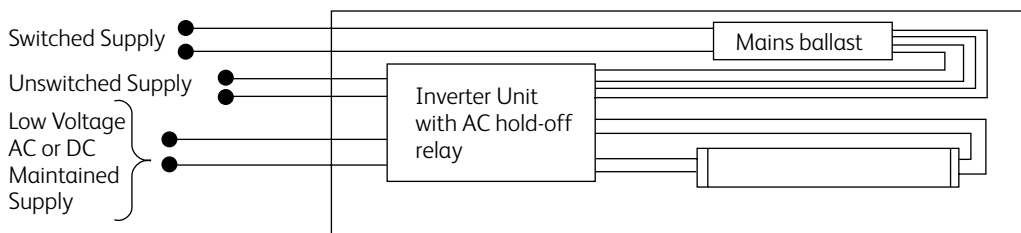
1. Slave inverters - where the lamp is operated only from the inverter unit. Typical of this type of use is vehicles where there is no mains supply or an emergency lighting system that is separate to the normal lighting luminaires. An example of a slave inverter of this type is our PV289.
2. Inverter units with an AC hold-off relay are used to convert normal mains luminaires to emergency luminaires by switching the lamp from the normal mains control gear to the inverter output when the un-switched monitored mains supply fails. An example of this type of inverter unit is our PVR110.



### Luminaire with Slave inverter



### Converted luminaire



## Technical details for inverters

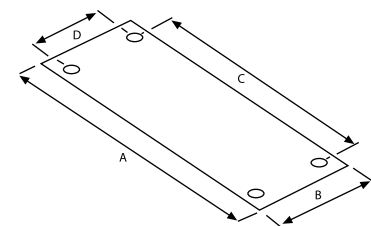
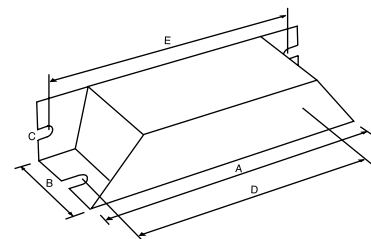
- Inverters are designed to conform to EN60924/60925. They are EMC compliant and carry the CE mark.
- Output circuitry uses a high efficiency sinusoidal inverter.
- Operating temperature range Inverter 0 to 70°C (centre side of case).
- DC Inverter Supply Range           Nominal Supply - 16% + 25%
- AC/DC Inverter Supply Range       Nominal Supply - 16% + 25% DC supply +/- 10% AC supply

## Dimensions

Sizes	A	B	C	D	E	Kg
Lamps up to 20W	154	42	35	144	138	0.25
Inverters with relay	216	42	28	206	200	0.35
Open PCB versions	131	40	114	31	-	-

Inverter Dimensions (millimetres)

## Technical Details



# Technical Specification Inverters For Fluorescent Lamps

No Relay Canned Unit PCB Version	24 Volt AC/DC				50 Volt AC/DC				110 Volt AC/DC			
	PV288				PV289				PV290			
	19288				19289				19290			
	Power Input		BLF		Power Input		BLF		Power Input		BLF	
	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC
4W (150mm)	11VA	4.3W	0.44	0.36	14VA	3.96W	0.56	0.34	15VA	4.6W	0.50	0.43
5W TC-S	12VA	4.7W	0.68	0.40	14VA	4.73W	0.46	0.34	1VA	5.2W	0.65	0.51
6W (225mm)	13VA	5.0W	0.56	0.41	16VA	5.2W	0.58	0.53	17VA	5.6W	0.85	0.71
7W TC-S	13VA	5.5W	0.39	0.38	16VA	5.2W	0.44	0.40	18VA	5.9W	0.62	0.49
8W (300mm)	15VA	6.3W	0.60	0.47	18VA	6.3W	0.80	0.60	20VA	6.9W	0.70	0.57

No Relay Canned Unit PCB Version	24 Volt AC/DC				50 Volt AC/DC				110 Volt AC/DC			
	PV190				PV191				PV192			
	19720				19721				19722			
	Power Input		BLF		Power Input		BLF		Power Input		BLF	
	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC
9W TC-S	20VA	11W	0.60	0.40	23VA	11W	0.54	0.45	26VA	9W	0.51	0.42
11W TC-S	22VA	13W	0.40	0.31	29VA	14W	0.49	0.41	32VA	11W	0.49	0.41
13W TC-D, TC-T	21VA	13W	0.51	0.41	30VA	15W	0.54	0.44	31VA	11W	0.61	0.48
16W 2D	22VA	16W	0.42	0.32	32VA	16W	0.49	0.38	33VA	12W	0.49	0.35
14W T5	22VA	15W	0.50	0.45	31VA	16W	0.50	0.41	35VA	13W	0.49	0.39
18W TC-D, TC-L	20VA	13W	0.49	0.40	28VA	14W	0.37	0.31	32VA	12W	0.41	0.37
18/20W T8	21VA	14W	0.29	0.19	33VA	17W	0.35	0.29	35VA	13W	0.27	0.21



Incorporating mains holdoff Relay	24 Volt AC/DC PVR24				50 Volt AC/DC PVR50				110 Volt AC/DC PVR110			
	Power Input		BLF		Power Input		BLF		Power Input		BLF	
	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC
7W TC-S	15VA	7W	0.38	0.28	18VA	7W	0.47	0.35	20VA	8W	0.53	0.40
8W T5	15VA	7W	0.45	0.56	19VA	8W	0.60	0.45	21VA	9W	0.57	0.43
9W TC-S	15VA	8W	0.42	0.35	19VA	8W	0.58	0.48	21VA	9W	0.58	0.46
11W TC-S	16VA	8W	0.40	0.29	20VA	8W	0.55	0.43	22VA	9W	0.61	0.49
13W T5	16VA	8W	0.62	0.48	20VA	8W	0.64	0.50	22VA	9W	0.58	0.46
14W T5	16VA	9W	0.36	0.27	21VA	9W	0.50	0.36	23VA	9W	0.42	0.33
16W 2D	17VA	9W	0.45	0.38	21VA	9W	0.60	0.46	23VA	9W	0.56	0.44
18W/20W T8	18VA	8W	0.20	0.14	21VA	8W	0.24	0.20	23VA	9W	0.24	0.18
18W TC-D	19VA	9W	0.31	0.24	23VA	10W	0.45	0.35	24VA	10W	0.42	0.32
21W T5	19VA	10W	0.32	0.24	24VA	11W	0.44	0.34	25VA	11W	0.40	0.32
22W T5 Circular	19VA	10W	0.28	0.25	26VA	11W	0.40	0.33	26VA	11W	0.38	0.30
24W TC-L	19VA	9W	0.25	0.20	21VA	9W	0.43	0.28	24VA	10W	0.36	0.25
26W TC-D	20VA	11W	0.24	0.18	27VA	11W	0.35	0.22	26VA	11W	0.30	0.25
28W 2D T5	19VA	9W	0.24	0.19	27VA	11W	0.36	0.27	25VA	11W	0.33	0.24
28W T5	22VA	12W	0.31	0.23	31VA	13W	0.46	0.35	30VA	13W	0.42	0.35
32W TC-T	21VA	12W	0.37	0.28	28VA	12W	0.51	0.40	29VA	12W	0.49	0.38
35W T5	25VA	14W	0.31	0.23	36VA	16W	0.45	0.33	34VA	15W	0.41	0.34
36W TC-L	22VA	11W	0.22	0.16	26VA	11W	0.30	0.25	29VA	12W	0.29	0.21
36W T8	21VA	11W	0.17	0.14	27VA	11W	0.27	0.20	28VA	11W	0.22	0.18
38W 2D T5	19VA	11W	0.16	0.13	27VA	11W	0.24	0.19	30VA	13W	0.23	0.17
39W T5	22VA	12W	0.15	0.12	30VA	13W	0.24	0.18	30VA	13W	0.22	0.17
40W T5 Circular	24VA	13W	0.30	0.23	33VA	14W	0.45	0.35	30VA	13W	0.43	0.34
40W TC-L	24VA	13W	0.29	0.21	30VA	13W	0.39	0.28	31VA	14W	0.36	0.28
42W TC-T	23VA	13W	0.23	0.13	32VA	14W	0.39	0.24	32VA	13W	0.36	0.24
49W T5	26VA	15W	0.29	0.22	37VA	17W	0.44	0.28	35VA	16W	0.33	0.26
54W T5	27VA	15W	0.18	0.14	36VA	16W	0.26	0.20	35VA	16W	0.24	0.20
55W T5 Circular	26VA	14W	0.25	0.20	35VA	15W	0.39	0.29	33VA	15W	0.33	0.27
55W 2D	23VA	12W	0.17	0.13	30VA	12W	0.26	0.19	30VA	13W	0.21	0.17
55W TC-L	26VA	14W	0.22	0.18	32VA	13W	0.31	0.24	33VA	15W	0.30	0.25
58W T8	24VA	13W	0.13	0.11	34VA	14W	0.29	0.22	33VA	14W	0.22	0.18
70W T8	27VA	15W	0.12	0.09	38VA	16W	0.10	0.08	36VA	17W	0.10	0.08
80W T5	30VA	17W	0.17	0.14	41VA	19W	0.28	0.22	39VA	19W	0.25	0.21
100W T12	27VA	14W	0.09	0.06	37VA	16W	0.15	0.10	35VA	16W	0.13	0.11

## Central Battery and Inverter Systems



## Low Power DC Systems



## High Power DC Systems

### Features:

- NM, M single or dual output versions for optimum system flexibility
- Lift off cubicle covers provide easy access for maintenance
- Separate battery and gear compartments for safer operation
- Cubicles are manufactured from sheet steel and are epoxy powder coated for a long life in RAL-7032
- Choice of Contactors to BS5424 as standard, BS764 types available.
- A wide battery choice to give optimum flexibility
- A range of pre-engineered options to allow complete control and monitoring.



\*Specify NM, M operation and duration required (ie. NM3) e.g.. HPDC/24/30/NM1/VR = 24V 480 watts Non maintained operation for 1 hour

To select a model in the HPDC range, insert either NM or M describing the system operation and the system duration 1,2 or 3 hours. Options required should be specified using the relevant suffix e.g. "/LE" = Low Electrolyte alarm, e.g. HPDC/110/ 46/M3VR/LE is a 110V Maintained system supplying 1350 watts for 3 hours via its Value Regulated, lead acid battery and has a Low Electrolyte alarm facility

### We supply a wide range of AC/DC and AC/AC central systems

Designed to meet the requirements of specific applications. Central systems have advantages over self-contained emergency luminaires as follows;

- Mains luminaires can be used in place of conventional emergency luminaires allowing higher light levels to be obtained.
- The central system and battery cubicles, being centrally located, make maintenance, control and monitoring easier.
- With a wide range of battery types and sizes the design life of the battery and duration of discharge can be specifically designed around the parameters of the individual application.
- The luminaires being mounted remotely from their power source can be placed in environments where a battery may not be capable of correct operation due to extreme heat or cold.

### We offer two ranges of lower power systems

Using sealed recombination lead acid batteries. The LPDC5 uses the 5-year design life battery and the LPDC10 the 10 year design life battery. All Central Systems available with 10 year design life battery's to order.

Tables below show the standard ranges but these can be augmented with alternative batteries and durations if required.

Cabinet sizes (millimetres)

W1 - Height 455 x Width 405 x Depth 210; W2 - Height 555 x Width 750 x Depth 250

### LPDC5 Range

Model*	Power Rating (W) for 1 hour	Power Rating (W) for 3 hours	Nominal Output Voltage	Cabinet Type
LPDC5/12/15	140	55	12	W1
LPDC5/24/6	84	38	24	W1
LPDC5/24/15	216	90	24	W1
LPDC5/24/24	300	150	24	W2
LPDC5/24/38	480	234	24	W2
LPDC5/24/48	550	300	24	W2
LPDC5/24/65	960	432	24	W2

### Trouble free operation with a wide choice of batteries

Our high power systems are manufactured to the highest standards from the UK's leading systems supplier. They offer long trouble free operation with a wide choice of batteries and options for specific applications.

### HPDC - Valve regulated Lead Acid (VR) range

System Normal Range	Model Description	Power Rating (W) 1 Hour	Power Rating (W) 2 Hours	Power Rating (W) 3 Hours	Battery Capacity Ah	Cabinet Type
24 Volts 12 Cells	HPDC/24/22/*VR	340	195	35	22	F1
	HPDC/24/30/*VR	480	280	190	30	F1
	HPDC/24/46/*VR	750	430	300	46	F1
	HPDC/24/68/*VR	1050	610	420	68	F1
	HPDC/24/84/*VR	1350	790	545	84	F1
50 Volts 24 Cells	HPDC/24/98/*VR	1550	925	635	98	F1
	HPDC/24/120/*VR	1925	1120	780	120	F1
	HPDC/50/22/*VR	680	390	270	22	F1
	HPDC/50/30/*VR	960	560	380	30	F1
	HPDC/50/46/*VR	1500	860	600	46	F1
110 Volts 54 Cells	HPDC/50/68/*VR	2100	1220	840	68	F1
	HPDC/50/84/*VR	2700	1580	1090	84	F2
	HPDC/50/98/*VR	3150	1850	1270	98	F2
	HPDC/50/120/*VR	3850	2250	1560	120	F2
	HPDC/50/152/*VR	4700	2800	1960	152	F3
110 Volts 54 Cells	HPDC/110/22/*VR	1500	890	610	22	F2
	HPDC/110/30/*VR	2150	1250	870	30	F2
	HPDC/110/46/*VR	3350	1950	1350	46	F2
	HPDC/110/68/*VR	4800	2750	1900	68	F3
	HPDC/110/84/*VR	6100	3550	2450	84	F3
	HPDC/110/98/*VR	7150	4150	2850	98	(2)F4
	HPDC/110/120/*VR	8700	5050	3500	120	(2)F4

\* Specify mode and duration e.g. NM1, M3, etc.

### With intelligent Datlog™ technology

Our range of static inverter systems are designed to provide emergency lighting (1 to 3 hours as required) at 230VAC (or selected Voltage) at 50Hz and includes the latest version of the acclaimed Datlog™ system monitoring and data logging software. The range is designed as the safe option (AC output under emergency conditions).

Datlog™ will automatically monitor the load and the battery at a specified time and date if required. Yearly, monthly or weekly testing if required ensures that all luminaires and the battery are correctly functioning. The test results and alarms are stored in an internal non-volatile memory. With the optional external printer, the events log can be printed out for permanent record keeping.

Datlog™ also monitors the battery for continuity and provides temperature compensation and deep discharge protection to ensure maximum life from the batteries. The user-interface is easy to use with scroll buttons to read all operational parameters (available in different languages). Additionally standard alarm outputs allow integration into most building management systems.

Where price is an issue systems can be supplied without the Datlog™ facility.

Our range of high power static inverter central AC systems are active, off-line sine-wave inverters and provide the ultimate solution in emergency lighting for medium to large premises. Producing a sinusoidal waveform with <5% harmonic distortion into a linear load, the HPAC range is ideal for use with the latest high frequency ballasts and offers a no-break option, for high-pressure discharge lighting schemes.

HPAC systems are active and offline and use a static switch to supply a by-passed supply during normal conditions with a contactor for the non-maintained output. When there is a power failure the contactor connects the non-maintained load to the inverter that continues to supply the load

As standard the HPAC range covers single and three-phase outputs, from 1.6kVA to 200kVA. Single or three phase inputs with a single phase output are available up to 25kVA and three phase inputs with three phase outputs are available from 10kVA to 200kVA.

It should be noted that in order to comply with EN60598.2-22, it is essential that luminaires must not use glow starters or 2 pin lamps with integral starters, therefore electronic ballasts or electronic starters are required.

## AC Systems



### Ordering Codes: High Power Systems

Cat No	Input Phases	Watts VA	Battery Volts
HPAC3/1/#	Single	2400	192
HPAC4/1/#	Single	3200	192
HPAC6/1/#	Single	4800	264
HPAC8/1/#	Single	6400	264
HPAC10/1/#	Single	8000	264
HPAC12/1/#	Single	9600	264
HPAC15/3/#	Three	12000	480
HPAC20/3/#	Three	16000	480
HPAC25/3/#	Three	20000	480
HPAC30/3/#	Three	24000	480
HPAC40/3/#	Three	32000	480
HPAC60/3/#	Three	48000	480

### Low Power Systems

Cat No	Max VA	Max Watts
LPAC/10/#	150	120
LPAC/20/#	300	240
LPAC/30/#	450	360
LPAC/40/#	600	480
LPAC/50/#	750	600
LPAC/60/#	950	750
LPAC/80/#	1250	1000
LPAC/100/#	1500	1200





## Mini-Sine

### A mini static inverter emergency lighting unit for loads up to 150 watts

Orbik low power compact **Mini Sine** is a Mini Static inverter system designed to operated loads upto 150W at 230V. This popular unit is available in 2 versions, either for 1 or 3 hour duration on mains failure.

A purpose designed lead acid charger provides a float voltage of 27V within a tolerance of 1% with a sustainable charge current of 5A and over current protection. The charger is short circuit and battery reversal protected with the addition of thermal shutdown protection.

Addition cooling for the charger during early charging stages is provided by a quiet chassis mounted fan.

A high efficiency soft start modified sine wave inverter provides the emergency back up making it suitable for inductive loads. Output is  $230V \pm 10\%$   $50Hz \pm 1\%$ . It is able to provide continues loading up to 150W and includes overload protection. The sine wave inverter includes over temperature and short circuit protection and is suitable for operation in an ambient of up to  $30^{\circ}C$ .

The front panel provides a number of indicators displaying healthy supply, power failure battery disconnect/charger failure and over a charge indicator that extinguishes when the charge current falls below 1 Amp.

Additional fault monitoring is provided via a set of volt free contacts allowing for remote monitoring of the **Mini Sine**.

**Mini Sine** is supplied with Lead Acid Batteries which are housed within its robust high quality steel enclosure that is supplied in a white finish.

**Mini Sine** has advantages compared to self-contained systems for emergency lighting which include lower maintenance being a central unit, mains luminaires can be used with higher light outputs compared to conventional emergency luminaires which typically produce lower ballast lumen factors. Also with integral batteries the

**Mini Sine** can operate luminaires which maybe placed in environments unsuitable for batteries due to extreme heat or cold.

**Mini Sine** has also been successfully utilised to operate with certain discharge luminaires. (Please contact our technical department for assistance)



### Ordering Codes

Cat No	Description	Batteries
MS150/1	150W 1 Hour Static Inverter Emergency Lighting Unit	2x12V 12Ah
MS150/3	150W 3 Hour Static Inverter Emergency Lighting Unit	2x12V 25Ah

**Dimensions:** 375mm x 440mm x 160mm

**Weight:** 21Kg (MS150/1 including batteries)

30Kg (MS150/3 including batteries)

Complete  
reassurance



## PALS™



### Addressable Emergency Lighting

Regular testing and maintenance of emergency lighting systems is essential and is now a legal requirement in many countries. It is possible to carry out testing manually but this can be expensive and time consuming and accurate record keeping difficult to arrange. PALS is a Programmable Addressable Lighting System that will automatically test and monitor the emergency lighting system and produce accurate reports of test results and system events. It ensures building owners and occupiers are informed promptly of any problems effecting the emergency lighting system and as the system can be networked and remotely accessed, off-site monitoring also becomes an option.

Key features include:

- Each PALS panel is fully expandable from 1 to 5 loops using plug-in line drivers
- To allow for future expansion, specify 100 devices per driver (Maximum 126) can be supported by each line driver card allowing one panel to monitor and test 360 devices
- A total of 95 PALS panels can then be networked to allow a total system size of 58,850 devices
- A range of interface units allow the system to operate with most types of emergency luminaires including self-contained, central battery and static inverter systems
- User friendly software with auto device learn and data loop status for trouble free setting-up, commissioning and fault finding
- Constant communication with luminaires to prove system integrity
- Reports charger or mains supply failure within 60 seconds of the event
- Loops, zones and luminaires can be disabled to carry out maintenance work
- Carries out daily, weekly, quarterly and annual tests – fully automatically - or to customers requirements
- Full system and luminaires test can be manually activated at any time
- Reports luminaire number, location and nature of the fault detected
- On-board power supplies on the panel to maintain memory if power fails
- Designed to fail safe whatever event occurs
- Easy to use, tab style questions for programming and operating, On-board alpha numeric keyboard for easy updates and modifications
- External printer available
- Multi panel networking, modem communications and PC report and control
- Complies with the requirements of PR/EN62034

### Specifications PALS™ Control Panel OEL-CA1

Dimensions:	Height 350 x width 340 x depth 115mm
Weight:	10 kg (ex. Batteries)
Mains Supply:	230V 50Hz AC – other voltages are available
Standby:	Integral charger for 12V, 6Ah Sealed lead acid battery (battery not included)
Warning output:	4 programmable short circuit protected monitored outputs 1 amp per output maximum, total current 2 amps
Auxiliary relay:	2 programmable volt free change over outputs Contacts rated at 5 amps 250V max. per relay
Sensor circuit:	2 wire addressable loop
Loop protection:	Short circuit protection on-board (i.e. without isolators in loop).
Signalling Lines:	1 expandable to 5 via plug-in line driver circuits
Devices per Line:	up to 126 luminaires per line driver
Controls:	Alpha-numeric key pad
Indicators:	20 Test zone LED's and audible buzzer
Display:	2 line by 40 characters backlit LCD 20 LED zone test indicators 20 LED zone fault indicators 10 LED system indicators 2 LED common fault indicators
Communications:	1 x RS485 serial port (OEL-485 plug in module required) 1 x on-board RS232 port (OEL-004 lead assembly required)
Recommended Cable:	For signalling line circuits: Beldon 8762, 8760 or 8719 is recommended.



# PALS™

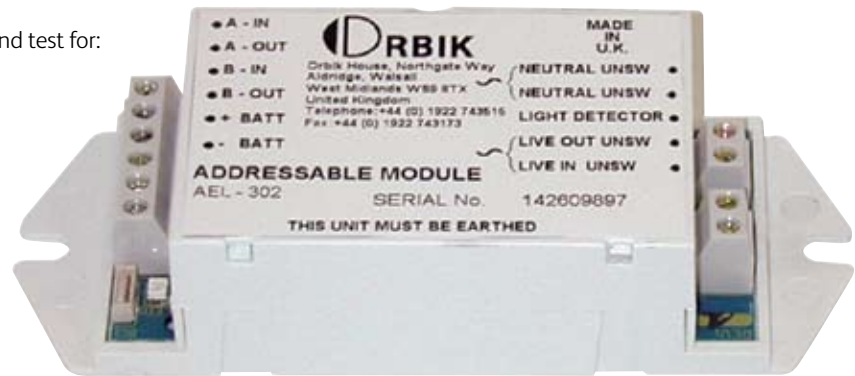
## Self-contained interface units

(OEL-302) monitor and test for:

- Unswitched mains supply present at all times
- Battery connected and charging
- Light output from the lamp in emergency operation (PALS monitors the actual lamp light output as current monitoring can be unreliable)
- Data loop integrity at all times

Central battery system interface units (OEL-307) monitor and test for:

- Data loop integrity at all times
- Light output from the lamp in emergency operation

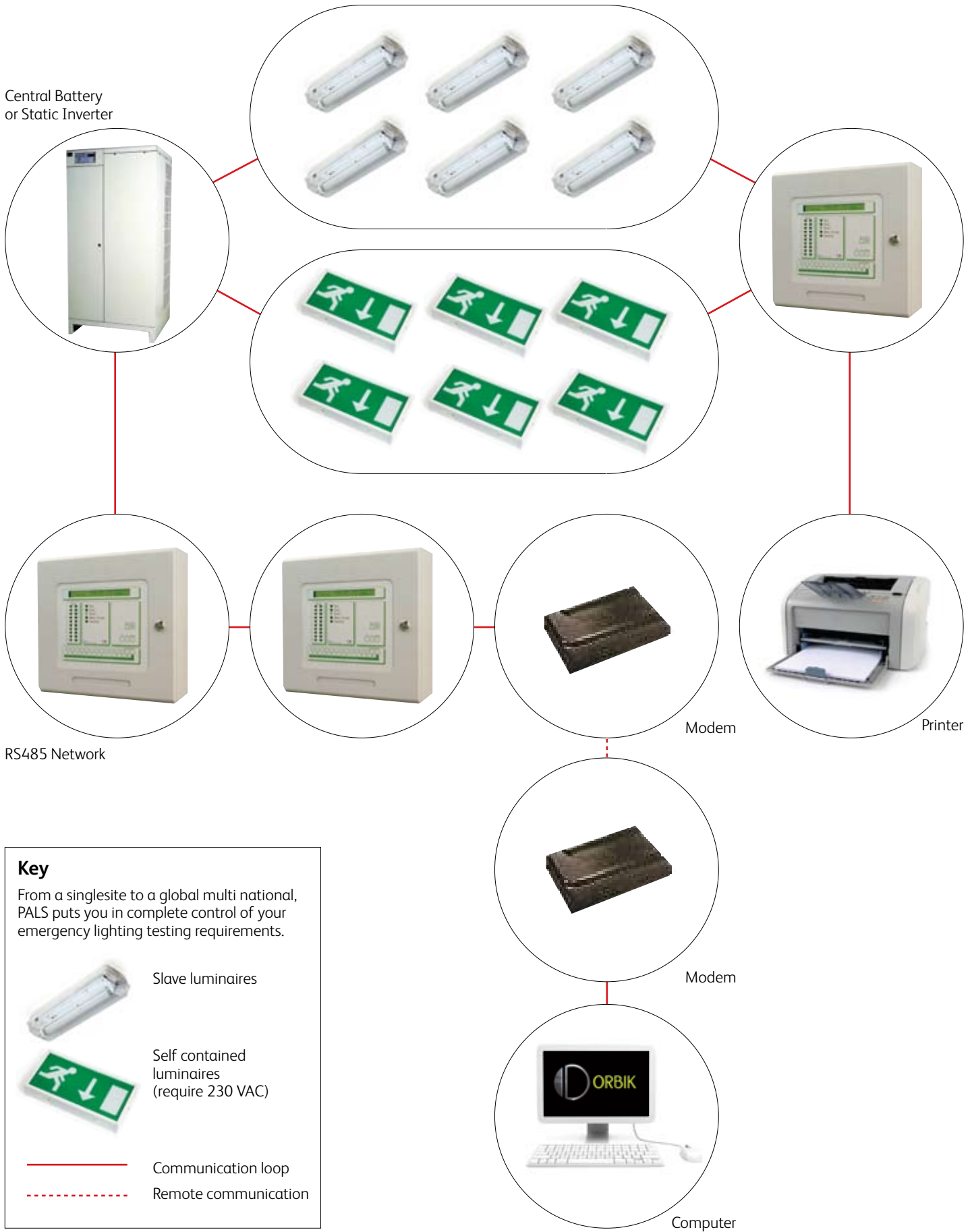


**Dimensions** Depth 30 x width 50 x length 130 mm  
**Weight** 80 grams  
**Fixing Centres** 120mm

Cat No	Description	Function
OEL-CA1	PALS™ Control Panel	Each PALS™ panel requires at least one OEL-001 driver, with a maximum of 5
OEL-001	PALS™ Line Driver	To allow for future expansion, specify 100 devices per driver (Maximum 126)
OEL-003	9 Pin - 25 Pin D Type Cable	For serial printer connection
OEL-004	RS232 Cable and Gland	Internal cable and gland for local printer and RS232 panel communications
OEL-006	Modem Cabling Kit	Requires OEL-485 and OEL-009 (PC Net 002 software)
OEL-008	PC-Net 001 Upload Software	To allow easy on-site description and test changes via external computer
OEL-009	PC-Net 002 Light Logger Software	Allows full off-site system monitoring and testing facilities
OEL-010	RS232 Cable to Centronics	For parallel printer connection
OEL-108	RS232-RS485 Converter	Converter for use with local RS232 printers
OEL-301	240V AC Current Sensor Interface	Used to detect the current into mains luminaires
OEL-302	Lighting Interface	One required for each maintained/non-maintained luminaire, monitors charge, mains and light
OEL-304/20	12 Volt 20W Tungsten Interface	Monitors the current in 10W and 20W non-maintained Tungsten luminaires
OEL-304/40	12 Volt 50W Tungsten Interface	Monitors the current in 20W and 50W non-maintained Tungsten luminaires
OEL-305	Central System Interface	One addressable relay required for each static inverter or central battery unit
OEL-307	Light Sensor Interface	Monitors only the lamp light output, one required for each luminaire on central systems
OEL-485	RS485 Network Card	One required for each panel for local and modem networking of PALS™ panels
16-508	12 Volt 6Ah Sealed Lead Acid Battery	Must be installed in each PALS™ control panel
LED-INT	Interface for 4 V LED circuits from 1 to 5 W and 6V 10W tungsten lamps.	

# PALS™

## System schematic/PALS



Central Battery or Static Inverter

RS485 Network

Modem

Printer

Modem

Computer

### Key

From a singlesite to a global multi national, PALS puts you in complete control of your emergency lighting testing requirements.



Slave luminaires



Self contained luminaires (require 230 VAC)



Communication loop



Remote communication

### A unique fully automatic self testing module

The Digital Self-Test Adapter, DST™, is a unique, fully automatic, independent, self-testing module that complies with the requirements of BS5266 and the forthcoming International Standard for automatic testing devices, IEC62034 and unlike many is suitable for incorporation into virtually any Nickel Cadmium, Nickel Metal Hydride VRLA. Battery powered, self contained emergency lighting luminaire.

The DST™ is flexible and can be specified to be included in virtually all self contained luminaires and conversion kits and is ideally suited to retrofitting.

The DST™ is thorough and carries out the monthly, six monthly and yearly test regime contained within BS 5266 without need for manual intervention. When the unit detects a fault condition it provides both a visual and an audible alarm indication (if not required, the audible alarm can be simply disabled when the DST is commissioned).

DST™ is reliable and even when it has failed its associated luminaire for duration or light output discrepancies, it will still allow the luminaire to operate to the best of its ability in its emergency mode.

Additionally, the DST™ has a non-volatile memory so if the power fails the clock is suspended but the test sequence remains unaltered. When the mains power is restored they simply carry on from the point at which power failed.

On initial power up the DST's intelligence allows it to enter a battery pre-conditioning mode to ensure the batteries are in a suitable condition to supply sufficient power for emergency operation. Testing, initiation and clock resetting are carried out via a single discrete push button.

DST™



**Dimensions** Height: 30mm x Length 130mm x Width 50mm,  
**Fixing centres:** 120mm,  
**Weight:** 80 grams.

### Performance

DST™ Standard Testing programme conforms to the requirements of BS5266-1

- Monthly: 1 minute, functional test
- 6 Monthly: 1 hour, duration test
- Annually: 3 hour, full rated duration test

DST™ LED Status Reports are made via a single tri-colour LED.

- Continuous GREEN LED: Mains, battery, charger and previous test correct
- Continuous RED LED: Test in progress
- Flashing AMBER LED: Test fail alarm \*

(With optional sound alarm)

LED off: Mains failure or battery faulty

\*If a fault is detected the sounder will enter a cycle where it emits an optional audible alarm, it will then sound every 10 seconds until 4 hours have elapsed and if during this time it has not been reset or the test reinitiated the sound alarm will repeat the alarm cycle. A single bleep only will be emitted during manually initiated tests.

### Ordering Codes

DST – 2 cell	Suitable for all modules using 2 Cell Batteries
DST – 3 cell	Suitable for all modules using 3 Cell Batteries
DST – 4 cell	Suitable for all modules using 4 Cell Batteries
DST – 5 cell	Suitable for all modules using 5 Cell Batteries
DST – 6 cell	Suitable for all modules using 6 Cell Batteries
DST – 8 cell	Suitable for all modules using 8 Cell Batteries
DST – 10 cell	Suitable for all modules using 10 Cell Batteries
DSTT – 12 V	Suitable for Tungsten Lamps using 12V VRLA Batteries
LED-INT	Interface for 4 volt LED circuits from 1 to 5 watts and 6V 10W tungsten lamps.



# Test Switch

## This innovative test switch enables manual testing

Simple to install and use, this innovative test switch enables manual testing of emergency lighting to current UK and European standards.

There are requirements for all building occupiers and operators to test their emergency lighting on a regular basis. The ELTS switch enables the short monthly test (10 minutes), the six monthly 1 hour test and the annual 3 hour test to be carried out by one person who, having operated the switch, is then free to inspect the emergency lights for correct operation. At the end of the selected test period, the mains is automatically re-instated.

ELTS is a cost effective solution for meeting testing requirements and is installed in the unswitched supply to the emergency lights.



### Ordering Codes

Cat No	Description
ELTS	Emergency Lighting Test Switch
ELT/R5	5 Channel Relay Box
ELT/R10	10 Channel Relay Box
ELT/R15	15 Channel Relay Box
ELT/R20	20 Channel Relay Box



Pescara - G

P45

Large exit sign with a 90 metre viewing distance