



olympia<sup>TM</sup>  
electronics

SAFETY & SECURITY SYSTEMS

*for a safer world!*

Safety & Security  
Systems

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CATALOGUE  
2016 / 17





FROM MOUNT OLYMPUS  
TO 72 COUNTRIES

FOR A SAFER  
WORLD



**olympia<sup>TM</sup>  
electronics**  
SAFETY & SECURITY SYSTEMS

*for a safer world!*



Established in  
**1979**

## THE COMPANY

Innovative electronic safety and security systems

165 employees, with 10% in R & D dept

Strong presence in over 72 countries worldwide

Purely Greek company

Certified products according to the European standards .



*for a safer world!*



1. KM640081  
BS EN 60598-2-22  
2. KM640086  
BS EN 62034





1.KM640081  
BS EN 60598-2-22  
2.KM640086  
BS EN 62034

Dedication  
to  
**QUALITY**

**OLYMPIA ELECTRONICS S.A.** aiming in the quality, has adopted in the last years, production and inspection procedures that have supplied the market with products that are totally in accordance with European construction prototypes (EN).

For the production, the company applies advanced systems "world class manufacturing" such as lean systems , TPM, 5S which give it competitive advantages.

Its products allocate certificates from various laboratories such as: LPCB, VdS, LLOYD'S, H.E.E.Q.A.C, EVPÜ, BSI, BUREAU VERITAS e.t.c.

The company applies a complete management system IQMS "oly q" which include quality management systems, as well as environmental, hygiene and personnel safety management systems.

Olympia Electronics S.A. has been certified according to ISO9001, OHSAS 18001, ISO 140001 and for the second time (first time in 2005) has been accredited the European enterprise distinction in the scope of EFQM Levels of Excellence.

Also since 2011 the company holds the bee bronze award of the European Business Ethics Network.

## Our **PRODUCTS**

Emergency lighting  
Fire detection systems )

Gas detection systems

Burglar alarm and security systems

Access control systems (Card Switches)

Motion detectors

Electronic room thermostats

Electronic sirens

Electronic insect traps (HACCP standards)

Electronic elevator systems (customised)

Emergency lighting & fire detection systems  
for marine applications







Some of  
our

# PROJECTS

## AIRPORTS

Arlanda Airport / Sweden  
Landvetter Airport / Sweden  
Macedonia Airport / Greece  
Lisbon Airport / Portugal  
New Delhi Airport / India  
El. Venizelos  
Frankfurt Airport / Germany  
Oslo Airport / Norway  
Doha International airport / Qatar.

## HOTELS

Asplund Hotel / Sweden  
Movenpick / Petra, Jordan  
Hilton, Athens / Greece  
Le Royal Hotel / Dbayeh, Lebanon  
King George, Athens / Greece  
Desert Night Camp / Oman.

## VARIOUS INSTALLATIONS

Frescati university library / Sweden  
Happel Stadium / Vienna, Austria  
Schwerin metro / Germany  
Better Life Appliances for Cayan Tower/ Dubai,  
Hushagsgymnasiet school / Sweden  
Sportsarena Änglagården / Sweden  
Olympic village / Greece  
Twin Tower / Lebanon  
Kadrah Grid Station / Oman  
ARGO OFFICES / Prague, Czech Republic  
Prioritet Serneke Arena / Sweden  
Press center of the Olympic games / Rio, Brazil.

## SHOPPING MALLS

Armada shopping center / UK  
Solaris shopping center / Estonia  
Bergvik shopping center / Sweden  
Dubai Mall / Dubai  
Beirut City Centre / Lebanon  
El Corte Inglés / Spain  
Shopping center Mitt I city / Sweden.

# EXPORTS



We export  
to **72 countries**  
of Abroad

- ♦ European Union
- ♦ Eastern European countries & Russia
- ♦ Middle East and countries of Gulf
- ♦ Africa
- ♦ U.S.A.
- ♦ Iceland



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CERTIFIED  
EMERGENCY LIGHTING

bsi.



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SAFETY & SECURITY SYSTEMS

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## EMERGENCY LIGHTING

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EMERGENCY LIGHTING WITH LEDS

EMERGENCY LIGHTING WITH FLUORESCENT LAMPS

SPECIAL CATEGORIES



## ■ GENERAL EMERGENCY LUMINAIRE CATEGORIES

### NON- MAINTAINED EMERGENCY LUMINAIRES.

These luminaires operate only during an interruption of the mains power supply.

They consist of a charging circuit, rechargeable batteries (usually Ni-Cd), a control circuit and a lamp ignition circuit, if the luminaire contains a fluorescent tube.

### MAINTAINED EMERGENCY LUMINAIRES.

Luminaires of this type operate either from the mains power supply and during the interruption of the mains power supply. The same lamp is used for both instances.

They consist of a lamp operation circuit from the mains power supply (usually and electronic ballast), a charging circuit, rechargeable batteries (usually Ni-Cd), a control circuit and an inverter for the lamp, if the luminaire contains a fluorescent tube.

### SUSTAINED EMERGENCY LUMINAIRES.

This type of emergency luminaires is identical in operation with the maintained type with the only difference that two lamps are used, one for emergency operation and the other for operation with the mains power supply.

### SLAVE EMERGENCY LUMINAIRES.

These luminaires do not contain battery for their operation but depend on external power sources (central battery systems). The slave luminaires are categorized according to their operation voltage. There are models for 12, 24 V AC/DC and 230V AC/DC.

## ■ NEW TECHNOLOGY EMERGENCY LUMINAIRES

### SELF-TESTING «INTELLIGENT» EMERGENCY LUMINAIRES.

This special category incorporates high technology microprocessors monitor basic operation parameters. The intelligent luminaires of olympia electronics monitor and test for:

- Correct charging, internal circuitry operation and the correct battery installation on a continuous basis.
- Correct lamp operation every 15 days.
- Autonomous duration by fully discharging every 6 months

They have three LEDs by which they show their operational state. This permits maintenance personnel with a glance, to know exactly which luminaires require maintenance and what type of maintenance is required. The intelligent luminaires are also available in non-maintained, maintained and sustained types.

### ADDRESSABLE EMERGENCY LUMINAIRES.

These types of luminaires operate with the same philosophy as the intelligent type with the main difference that the tests are conducted by commands that are issued by a central control panel, which is programmed by the user as to the type of test and when it will be conducted. The results of every test is stored into the panel's memory and can be seen on the panel's screen or can be printed. The installation and commissioning of such a system is surely more

difficult but offers many advantages and capabilities compared to a system with common emergency luminaires.

### CENTRALLY SUPPLIED ADDRESSABLE EMERGENCY LUMINAIRES.

They operate with the same philosophy as the addressable emergency luminaires with the difference that they do not have batteries but are powered and simultaneously monitored by a central control panel. The installations of this type, apart from other things, have very few maintenance requirements because the batteries and all control circuitry are located in the central control panel.

## ■ INSTALLATION OF EMERGENCY LUMINAIRES

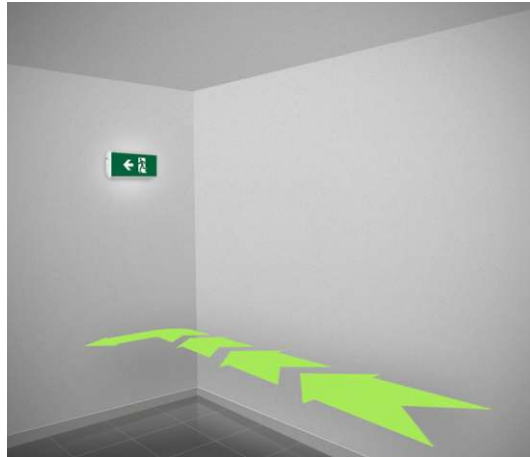
The guidelines below will attempt to give simple and understandable instruction and guides to installers that design, install and commission emergency luminaire systems. These guidelines were based on European requirements.



**Emergency luminaires must be mounted in crucial points such as:**



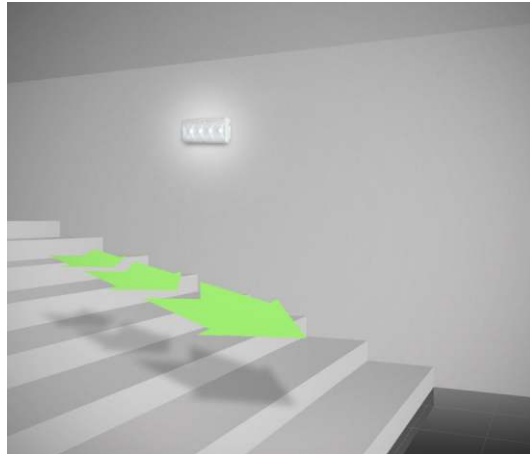
Near corridor crossings.



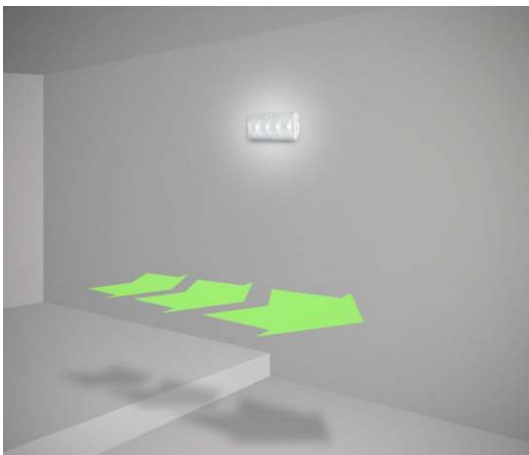
Close to corridor ending where a change of direction is required.



Near Hazard exits.



In stairwells to supply sufficient illumination to each step.



Near each floor level variation.



Near every call point.



Externally or near every final exit.



Near fire-extinguishing gear (e. i. Fire hoses).



Near first aid stations.

### On pre-determined escape routes.

Escape routes must be illuminated with a minimum of 1 lux along the central line of the corridor and 0,5 lux after the central line with a width of 1 meter. The spots between the common luminaires must be filled with emergency luminaires in order for the maximum installation distances that are proposed by the manufacturer are not exceeded.

### In open or anti-panic areas.

In these areas, the illumination must be 0,5 lux in any point as suggested by European regulations.

Other areas that are not considered escape routes but are required to have emergency luminaires are the following:

- Elevators.
- Rest rooms for the public and people with special needs.
- Control rooms

### DURATION OF AUTONOMOUS OPERATION.

The autonomous duration of the emergency luminaires should be such as to permit the safe evacuation of the building in the event of an emergency. The minimum requirement set by Greek regulations is 90 minutes. Health and social welfare buildings (hospitals, clinics, health centers e.t.c) require a minimum of 3 hours.

**(The duration of autonomous operation, according to Greek regulations is 90 minutes. In other European countries such as Germany, England and Arabic countries the minimum autonomous duration is 3 hours.)**



## DESIGNING

When designing an emergency luminaire system, the following must be accounted for:

### Goal

It is for escape routing or for standby illumination (emergency lighting)

In the case of escape routing illumination we can simply follow the regulations rules, whereas in the case of emergency lighting we must take into account the real illumination requirement needed by a specific area (e.i The security office of a building)

### Regulations

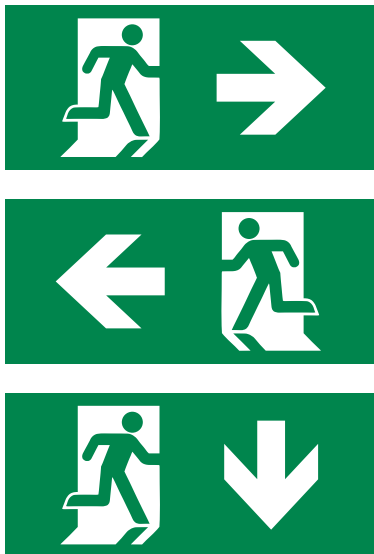
The regulations that must be adhered to are specific for each country. In many instances it is seen that regulations regarding even basic emergency luminaires systems are not adhered to. In these cases an installer must think of the probability the he may have to redesign and reinstall the whole system upon demand from local or European fire safety committees.

### Design requirements

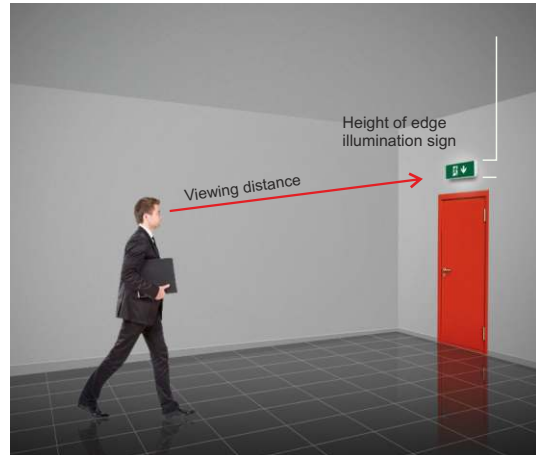
In order for escape routes to become obvious, indication signs are used where required. Up-to know, signs had words written on them, for example "EXIT". In modern days the signs must contain pictograms according to Euro norm 92/58/. Pictograms are used so that they are understandable by people that do not know the local language.

The signs must comply to Euro Norms EN 1838 where color, size and maximum legible distance are specified signs that are illuminated from an external light source, the legible distance must be 100 times the height of the sign.

Signs that are self-illuminated or are part of an emergency luminaire must have a legible distance that is 200 time the height of the sign.



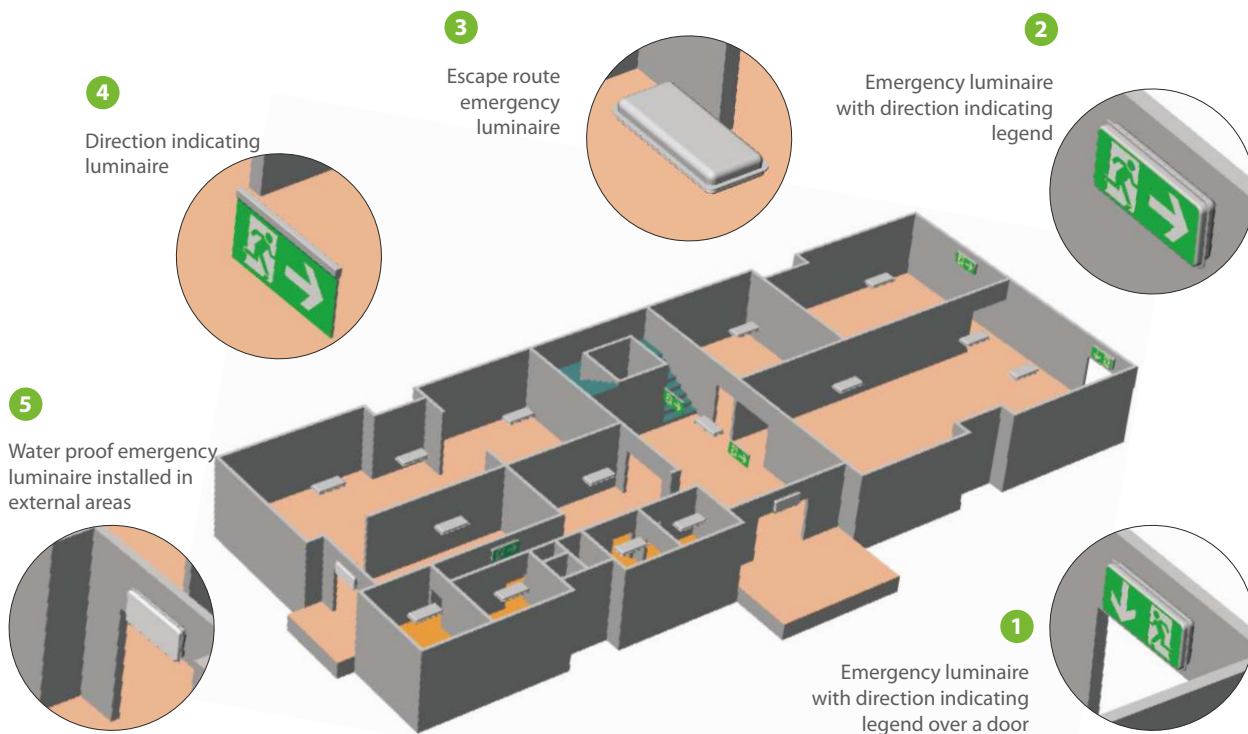
Types of signs according to 105/1995 standards



**For example:** In a corridor with a length of 20 meters we must install an indication sign with a height of at least 10cm at one end in order for it to be clearly visible in the other end.



### EXAMPLE OF INSTALLATION OF EMERGENCY AND INDICATION LUMINAIRES



### LIGHT OUTPUT OF EMERGENCY LUMINAIRES

On the following pages, there are many emergency luminaires that use LEDs as light source. In order to become comprehensible the equivalence between them and the ordinary luminaires that use lamps,

below is a list with the light output of emergency luminaires with fluorescent lamps. The stated light output is the light output produced during emergency operation.

TYPE	LIGHT OUTPUT	POWER FROM BATTERY
Emergency luminaire with lamp 1x6W (T5)	50 lumen	1,9W
Emergency luminaire with 9 LEDs	75 lumen	0,65W
Emergency luminaire with lamp 1x8W (T5)	85 lumen	1,7W
Emergency luminaire with 12 LEDs	100 lumen	0,9W
Emergency luminaire with lamp 2x8W (T5)	170 lumen	3,5W
Emergency luminaire with 24 LEDs	200 lumen	2W
Emergency luminaire with lamp 1x11W (CFL)	150 lumen	3,9W
Emergency luminaire with 21 LEDs	175 lumen	1,75W
Emergency luminaire with lamp 2x20W (Iodine)	580 lumen	28W
Emergency luminaire with 2x42 LEDs	790 lumen	7,5W
Emergency luminaire with lamp 2x55W (Iodine)	2050 lumen	74W
Emergency luminaire with 2x6 Power Leds	3200 lumen	28W

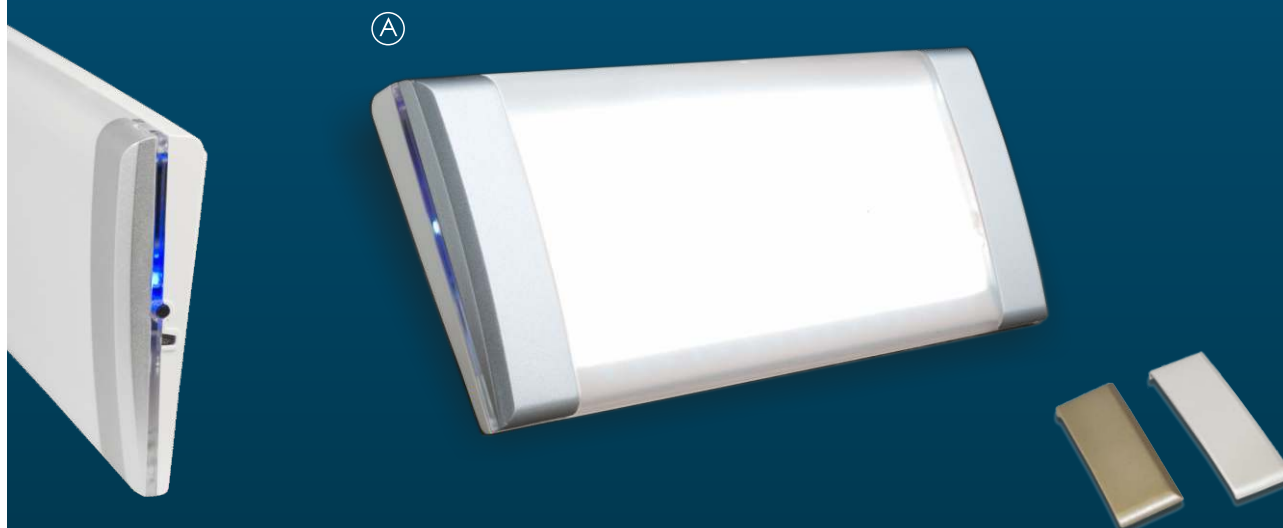


Technical specification are subject to change after the catalog has been published. For any clarifications please come in contact with our technical department





# Slim LEDs light



The packaging contains: 12 pcs.  
Packaging dimensions (LxWxH): 315x265x205

After order the set of right/left screw hiding cups for GR-2000 at white: 927200000 at bronze: 927200001



## SELF-TESTING MAINTAINED / NON-MAINTAINED LED EMERGENCY LUMINAIRE 220-240V AC

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-2000	A	923200000	3,6V/1Ah Ni-Cd	2-7 h	3,8W/8,2VA	125/125 lm	420 gr.

## ACCESSORIES

TYPE	CODE	COLOUR	DESCRIPTION
A-2000/W	927200000	White	Set of right / left screw hiding cup for GR-2000, white colour
A-2000/B	927200001	Gold	Set of right / left screw hiding cup for GR-2000, bronze colour

## Legends

Self-adhesive legends below can be provided after order



S-2000/  
S65L

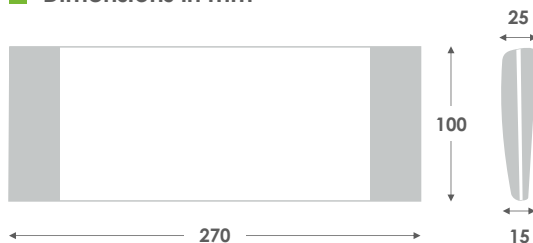


S-2000/  
S65R



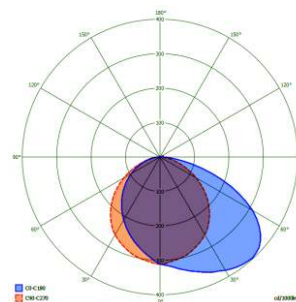
S-2000/  
S65D

## Dimensions in mm



## Photometric data

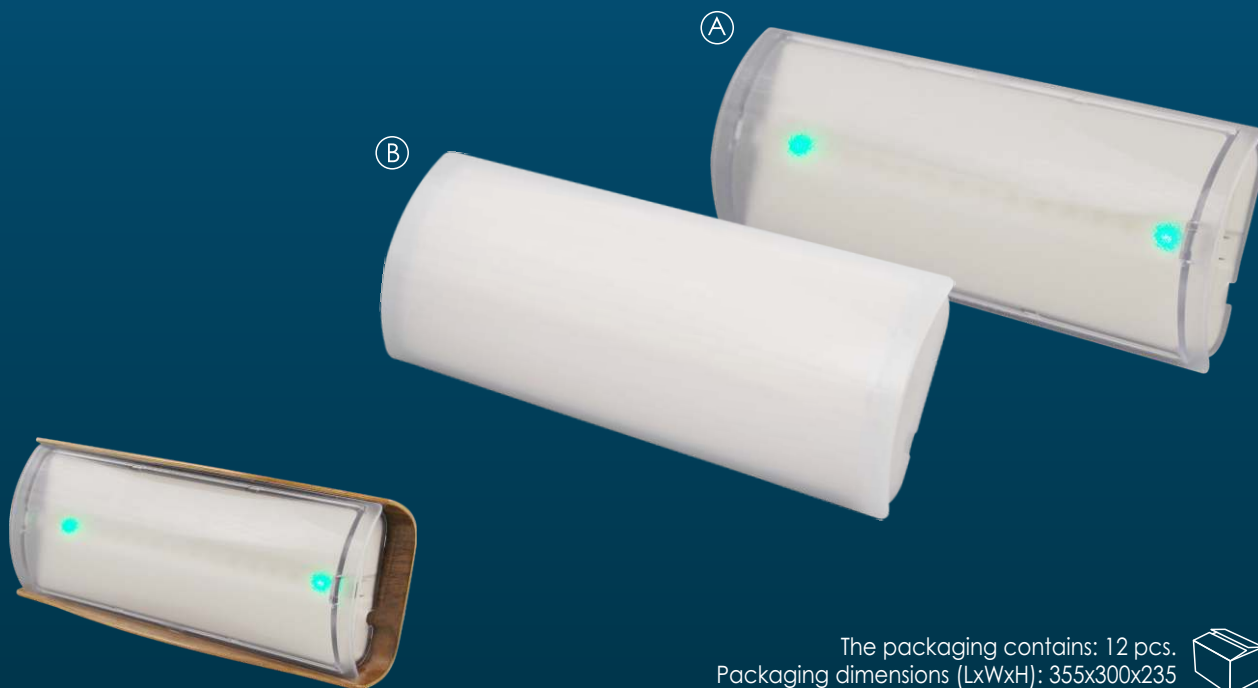
GR-2000, GR-2000/CBS







# Slim LEDs light



The packaging contains: 12 pcs.  
Packaging dimensions (LxWxH): 355x300x235



## MAINTAINED (OR NON-MAINTAINED) LED EMERGENCY LUMINAIRE 220-240V AC

TYPE	PICTURE	DIFFUSER	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-2100	A	clear	923210000	3,6V/600mAh Ni-Cd	1,5 h	3W / 2,7VA	40/100 lm	
GR-2100/OPAL	B	opal	923210001	3,6V/600mAh Ni-Cd	1,5 h	3W / 2,7VA	38/100 lm	
GR-2110	A	clear	923211002	3,6V/1Ah Ni-Cd	3 h	3,5W / 3VA	40/100 lm	
GR-2110/OPAL	B	opal	923211003	3,6V/1Ah Ni-Cd	3 h	3,5W / 3VA	38/100 lm	

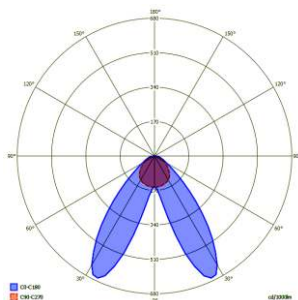
## WOODEN BASE

TYPE	CODE	COLOUR
WB-2100/CH	927210000	Cherry
WB-2100/NC	927210001	Natural cherry
WB-2100/WN	927210002	Walnut

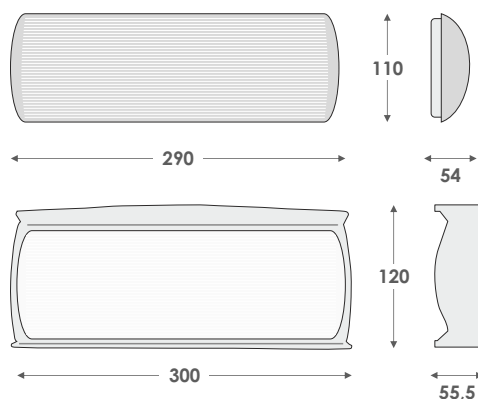


## Photometric data

GR-2100



## Dimensions in mm



## Legends

Self-adhesive legends below can be provided after order



S-21000/S65L

S-21000/S65R



S-21000/S65D



# Slim & Classic Light



The packaging contains: 20pcs.(A) 16 pcs.(B) 16 pcs.(C)  
 Packaging dimensions (LxWxH): 375x270x255mm (A & C) 315x265x205mm (B)












## Accessories

 <p><b>A-1012 "Easy Base"</b> Base included in packaging for easy luminaire mounting</p>	 <p><b>A-1015</b> Base for recessed mounting on suspended wall or ceiling (Classic Light)</p>	 <p><b>A-3008</b> Base for recessed mounting on suspended ceiling (Slim Light)</p>	 <p>235 95 Opening required for suspended ceiling mounting</p>
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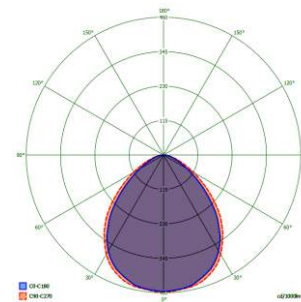
## Legends

Self-adhesive legends below can be provided after order

Slim LEDs	 <p>S-00801/S65L</p>	 <p>S-00801/S65R</p>	 <p>S-00801/S65D</p>
Slim	 <p>S-00800/S65L</p>	 <p>S-00800/S65R</p>	 <p>S-00800/S65D</p>
Classic	 <p>S-10800/S65L</p>	 <p>S-10800/S65R</p>	 <p>S-10800/S65D</p>

## Photometric data

GR-8/leds, GR-9/leds





**MAINTAINED / NON-MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-8/leds</b>	A	923378005	3,6V/600mAh Ni-Cd	1,5 h	3VA/2,7W	40/100 lm	390 gr.
<b>GR-9/leds</b>	A	923009007	3,6V/1Ah Ni-Cd	3 h	3,5VA/3W	38/100 lm	410 gr.

**MAINTAINED / NON-MAINTAINED LED EMERGENCY LUMINAIRE 220-240V AC WITH REMOTE CONTROL**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-8/leds/R</b>	A	923378006	3,6V/600mAh Ni-Cd	1,5 h	3VA/2,7W	40/100 lm	390 gr.

**MAINTAINED LED EMERGENCY LUMINAIRE 42V AC FOR ELEVATORS**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-119/6L/42V</b>	B	923119004	3,6V/1,5Ah Ni-Cd	1,5 h	4,5VA	150/300 lm	680 gr.

**MAINTAINED & NON MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-151-3/L*</b>	B	923151004	3,6V/1Ah Ni-Cd	3 h	3W/4 VA	30/75 lm	670 gr.
<b>GR-108/12L/90</b>	B	923108013	3,6V/600mAh Ni-Cd	1,5 h	2,5W/3VA	40/100 lm	630 gr.
<b>GR-109/12L/180</b>	B	923109004	3,6V/1Ah Ni-Cd	3 h	3W/3,5VA	38/100 lm	635 gr.

\*Suitable for installation on ships

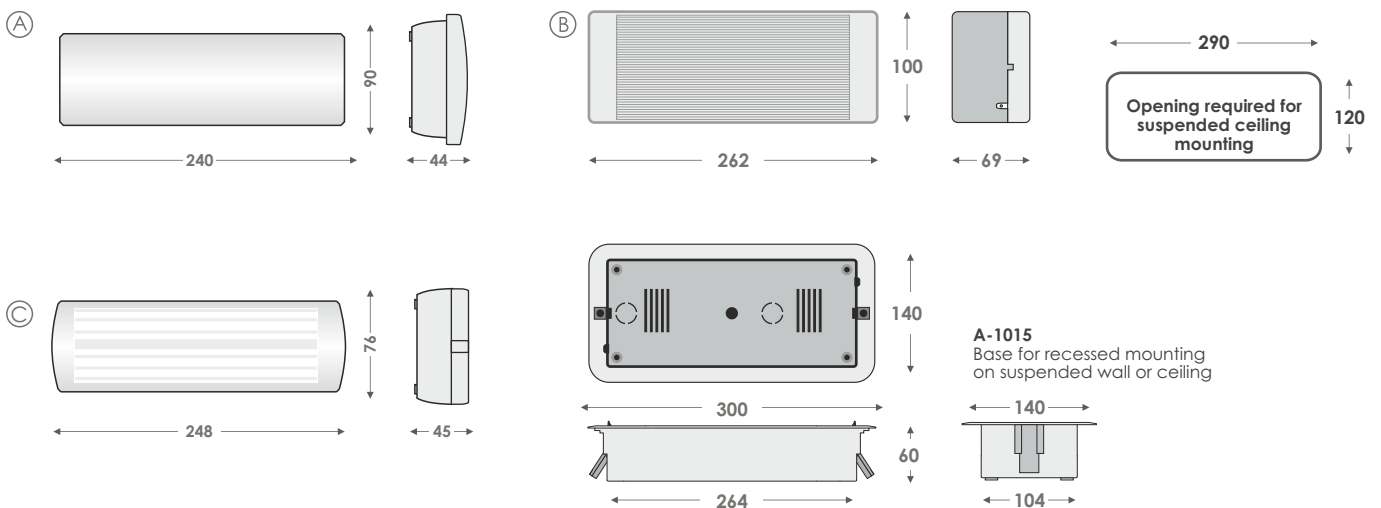
**NON-MAINTAINED EMERGENCY LUMINAIRE 220-240V AC WITH FLUORESCENT LAMP**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	WATT	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-8</b>	C	923008000	2,4V/1,5Ah Ni-Cd	1,5 h	3VA	6W	50 lm	465 gr.

**ACCESSORIES**

TYPE	PICTURE	CODE	DESCRIPTION
<b>A-3008</b>	B	927300800	Base for recessed mounting on suspended ceiling (Slim Light)
<b>A-1015</b>	B	927101500	Base for recessed mounting on suspended wall or ceiling (Classic Light)

**Dimensions in mm**

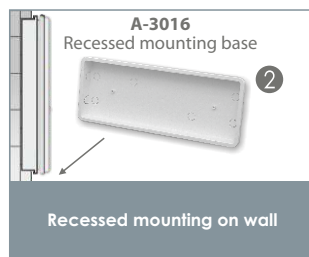
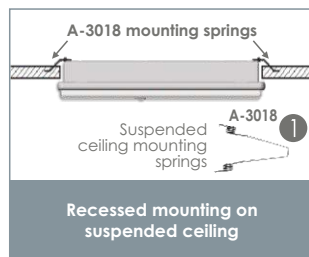
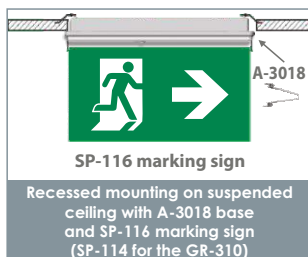
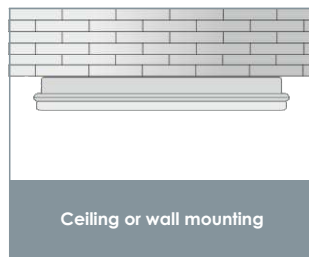




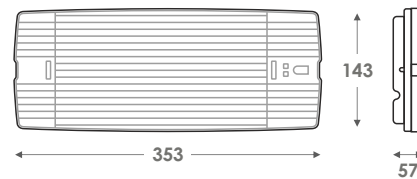
The packaging contains: 16 pcs. (A), 15 pcs. (B),  
Packaging dimensions (LxWxH): 430x375x275mm



## Mounting methods



## Dimensions in mm

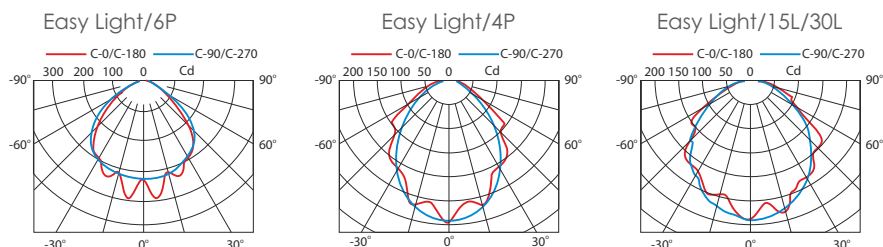


## Legends

Self-adhesive legends below can be provided after order



## Photometric data





**MAINTAINED / NON MAINTAINED (internal selection - without L1)  
LED EMERGENCY LUMINAIRES 220-240V AC- 50/60 Hz**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-310/12L/180/A	A	923310048	3,6V/1Ah Ni-Cd	3 h	2,9W/3,2VA	38/100lm	780 gr.
GR-310/12L/90/A	A	923310049	3,6V/600mAh Ni-Cd	1,5 h	2,9W/3,2VA	40/100lm	765 gr.
GR-310/15L/A*	A	923310047	3,6V/600mAh Ni-Cd	1,5 h	2,9W/3,2VA	40/100lm	765 gr.
GR-312/15L/A*	A	923312026	3,6V/1,5Ah Ni-Cd	3 h	3,3VA	30/105 lm	700 gr.
GR-310/30L/A*	A	923310046	3,6V/1,5Ah Ni-Cd	1,5 h	3,6VA	30/105 lm	780 gr.
GR-312/30L/A*	A	923312025	3,6V/3Ah Ni-Cd	3 h	3,5VA	30/210 lm	780 gr.
GR-309/15L/A	A	923309002	3,6V/3Ah Ni-Cd	8 h	4,8VA	30/210 lm	880 gr.

**SELF-TESTING MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC- 50/60 Hz**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-315/15L/A*	A	923315024	3,6V/600mAh Ni-Cd	1,5 h	7VA	105/105 lm	740 gr.
GR-316/15L/A*	A	923316020	3,6V/1,5Ah Ni-Cd	3 h	7VA	105/105 lm	810 gr.
GR-315/30L/A*	A	923315025	3,6V/1,5Ah Ni-Cd	1,5 h	7,5VA	210/210 lm	810 gr.
GR-316/30L/A*	A	923316021	3,6V/3Ah Ni-Cd	3 h	8VA	210/210 lm	890 gr.
GR-308/15L/A	A	923308003	3,6V/3Ah Ni-Cd	8 h	7VA	125/125lm	870 gr.
GR-315/4P/A	A	923315026	4,8V/1,5Ah Ni-Cd	1,5 h	11,5VA	150/300 lm	825 gr.
GR-315/6P/A	A	923315027	4,8V/3Ah Ni-Cd	1,5 h	14,5VA	225/450 lm	955 gr.
GR-316/4P/A	A	923316022	4,8V/3Ah Ni-Cd	3 h	13,5VA	150/300 lm	950 gr.
GR-316/6P/A	A	923316023	4,8V/4Ah Ni-MH	3 h	15VA	225/415 lm	995 gr.

**NON-MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC- 50/60 Hz**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-310/4P/A	A	923310050	4,8V/1,5Ah Ni-Cd	1,5 h	4VA	300 lm	840 gr.
GR-310/6P/A	A	923310051	4,8V/3Ah Ni-Cd	1,5 h	5VA	450 lm	925 gr.
GR-312/4P/A	A	923312027	4,8V/3Ah Ni-Cd	3 h	5VA	300 lm	925 gr.
GR-312/6P/A	A	923312028	4,8V/4Ah Ni-MH	3 h	6VA	415 lm	975 gr.

**NON-MAINTAINED EMERGENCY LUMINAIRE 220-240V AC - 50/60Hz WITH FLUORESCENT LAMP**

TYPE	PICTURE	CODE	BATTERY	DURATION	WATT	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-310	B	923310000	2,4V/1,5Ah Ni-Cd	1,5 h	8W	2,5W/3VA	85 lm	845 gr.

**ACCESSORIES**

TYPE	PICTURE	CODE	DESCRIPTION	GROSS WEIGHT
A-3016	2	927301600	Recess mounting base	200 gr.
A-3018	1	980330180	Suspended ceiling mounting springs	10 gr.



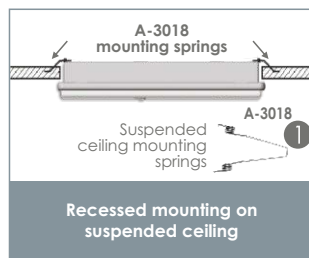
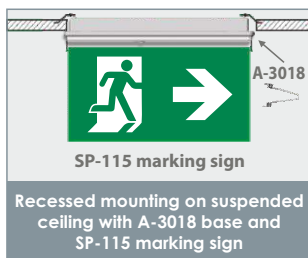
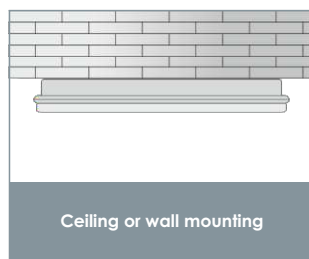
# Comfort Light



The packaging contains: 15 pcs.  
Packaging dimensions (LxWxH): 385x285x295mm



## ■ Mounting methods

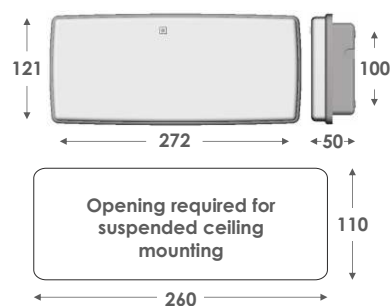


## ■ Legends

Self-adhesive legends below can be provided after order



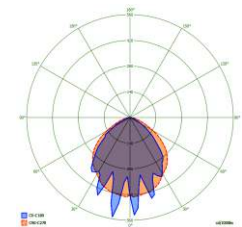
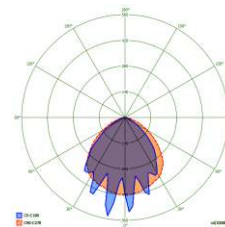
## ■ Dimensions in mm



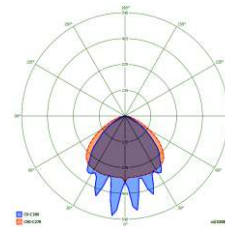
## ■ Photometric data

GR-421/3L, GR-423/3L, GR-408/3L, GR-409/3L, GR-414/3L, GR-414/3L/24V

GR-421/6L, GR-423/6L, GR-408/6L, GR-409/6L, GR-414/6L, GR-414/6L/24V



GR-421/12L, GR-423/12L, GR-427/12L, GR-408/12L, GR-409/12L, GR-440/12L, GR-414/12L, GR-414/12L/24V







**SELF-TESTING MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-421/3L	A	923421003	3,6V/1Ah Ni-Cd	1,5 h	7VA	150/150 lm	565 gr.
GR-421/6L	A	923421002	3,6V/1,5Ah Ni-Cd	1,5 h	7VA	150/300 lm	640 gr.
GR-423/3L	A	923423003	3,6V/1,5Ah Ni-Cd	3 h	7,5VA	150/150 lm	635 gr.
GR-423/6L	A	923423005	3,6V/3Ah Ni-Cd	3 h	7,5VA	150/300 lm	705 gr.
GR-421/12L	A	923421007	3,6V/600mAh Ni-Cd	1,5 h	6,5VA	100/100 lm	560 gr.
GR-421/24L	A	923421008	3,6V/1Ah Ni-Cd	1,5 h	7VA	200/200 lm	570 gr.
GR-423/12L	A	923423007	3,6V/1Ah Ni-Cd	3 h	6,5VA	100/100 lm	570 gr.
GR-423/24L	A	923423008	3,6V/2Ah Ni-MH	3 h	7VA	200/200 lm	650 gr.
GR-427/12L	A	923427000	3,6V/3Ah Ni-Cd	8 h	7VA	100/100 lm	690 gr.

**NON-MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-408/3L	A	923408004	3,6V/1Ah Ni-Cd	1,5 h	3VA	150 lm	615 gr.
GR-408/6L	A	923408005	3,6V/1,5Ah Ni-Cd	1,5 h	4VA	300 lm	690 gr.
GR-409/3L	A	923409003	3,6V/1,5Ah Ni-Cd	3 h	4VA	150 lm	690 gr.
GR-409/6L	A	923409006	3,6V/3Ah Ni-Cd	3 h	4,5VA	300 lm	755 gr.
GR-408/12L**	A	923408010	3,6V/600mAh Ni-Cd	1,5 h	3VA	100 lm	590 gr.
GR-409/12L**	A	923409007	3,6V/1Ah Ni-Cd	3 h	3,5VA	100 lm	600 gr.
GR-440/12L	A	923440000	3,6V/3Ah Ni-Cd	8 h	4,3VA	100 lm	770 gr.

\*\* Maintained / Non maintained operation (internal selection without L1)

**ACCESSORIES**

TYPE	PICTURE	CODE	DESCRIPTION	GROSS WEIGHT
A-3018	1	980330180	Suspended ceiling mounting springs	10 gr.

# Weather Light

Waterproof emergency luminaires



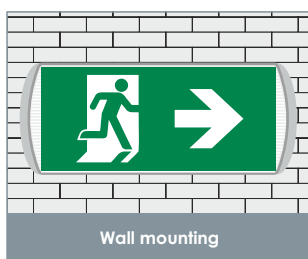
(A)



The packaging contains: 12 pcs.  
Packaging dimensions (LxWxH): 500x375x315mm



## ■ Mounting methods



## ■ Legends

Self-adhesive legends below can be provided on request



S-93593/  
S65L (705690016)



S-93593/  
S65R (705690017)



S-93593/  
S65D (705690018)

## ■ Dimensions in mm



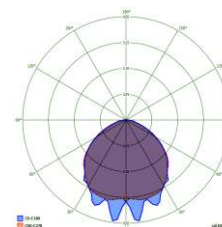
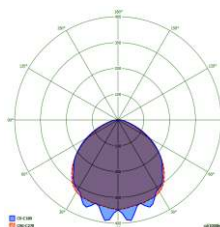
A-1017

All GR-9xx series codes are also produced with aluminum profile with order code: GR-9xx/AL  
All GR-9xx series codes can also be provided with plastic double sided diffuser with order code: GR-9xx/A-1017.

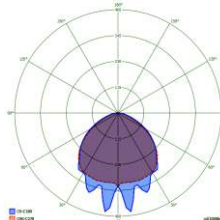
## ■ Photometric data

GR-938/30L, GR-939/30L, GR-935/30L, GR-936/30L, GR-926/30L, GR-926/30L/24V, GR-938/30L, GR-935/30L, GR-939/30L, GR-926/30L, GR-936/30L, GR-926/30L/24V

GR-938/4P, GR-939/4P, GR-935/4P, GR-936/4P, GR-938/4P/60, GR-938/4P, GR-939/4P, GR-945/4P, GR-936/4P



GR-938/6P, GR-939/6P, GR-935/6P, GR-936/6P, GR-938/6P, GR-312/6P, GR-945/6P, GR-939/6P, GR-936/6P,





**WATERPROOF IP65, SELF-TESTING MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-938/15L	A	923938006	3,6V/600mAh Ni-Cd	1,5 h	7,5VA	125/125 lm	980 gr.
GR-938/30L	A	923938007	3,6V/1,5Ah Ni-Cd	1,5 h	8,5VA	250/250 lm	1050 gr.
GR-939/15L	A	923939009	3,6V/1,5Ah Ni-Cd	3 h	6,8VA	125/125 lm	1050 gr.
GR-939/30L	A	923939100	3,6V/3Ah Ni-Cd	3 h	8,2VA	250/250 lm	1130 gr.
GR-938/4P	A	923938003	4,8V/1,5Ah Ni-Cd	1,5 h	8,10VA	150/300 lm	1075 gr.
GR-938/6P	A	923938004	4,8V/3Ah Ni-Cd	1,5 h	8,4VA	225/450 lm	1170 gr.
GR-939/4P	A	923939007	4,8V/3Ah Ni-Cd	3 h	7,7VA	150/300 lm	1170 gr.
GR-939/6P	A	923939008	4,8V/4Ah Ni-Mh	3 h	8,5VA	225/415 lm	1210 gr.
GR-940/15L	A	923940000	3,6V/3Ah Ni-Cd	8 h	7VA	125/125 lm	1135 gr.

**WATERPROOF IP65, NON-MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-935/15L	A	923935013	3,6V/600mAh Ni-Cd	1,5 h	3VA	125 lm	1010 gr.
GR-935/30L	A	923935014	3,6V/1,5Ah Ni-Cd	1,5 h	3VA	250 lm	1080 gr.
GR-936/15L	A	923936009	3,6V/1,5Ah Ni-Cd	3 h	3VA	125 lm	1080 gr.
GR-936/30L	A	923936010	3,6V/3Ah Ni-Cd	3 h	4,3VA	250 lm	1175 gr.
GR-935/4P	A	923935010	4,8V/1,5Ah Ni-Cd	1,5 h	4VA	300 lm	1140 gr.
GR-935/6P	A	923935011	4,8V/3Ah Ni-Cd	1,5 h	4,8VA	450 lm	1230 gr.
GR-936/4P	A	923936005	4,8V/3Ah Ni-Cd	3 h	4,8VA	300 lm	1230 gr.
GR-936/6P	A	923936006	4,8V/4Ah Ni-Mh	3 h	5,5VA	415 lm	1270 gr.
GR-941/15L	A	923941000	3,6V/3Ah Ni-Cd	8 h	4VA	125 lm	1175 gr.

**WATERPROOF IP65, NON-MAINTAINED EMERGENCY LUMINAIRE 220-240V AC - 50/60Hz WITH FLUORESCENT LAMP**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	ΙΣΧΥΣ ΛΑΜΠΑΣ	LIGHT OUTPUT	GROSS WEIGHT
GR-935	A	923935000	2,4V/1,5Ah Ni-Cd	1,5 h	3VA	8W	85 lm	1060 gr.

**WATERPROOF IP65, SELF-TESTING, LOW TEMPERATURE OPERATING (-20 °C)  
MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC (IDEAL FOR REFRIGERATORS & COLD ROOMS)**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-938/30L/LT	A	923938016	3,6V/2Ah Ni-MH	1,5 h	33VA/31W	250/250 lm	1110 gr.
GR-939/30L/LT	A	923939016	3,6V/4Ah Ni-MH	3 h	35VA/32W	250/240 lm	1220 gr.

**PLASTIC DOUBLE SIDED DIFFUSER**

TYPE	PICTURE	CODE	DESCRIPTION	GROSS WEIGHT
A-1017	B	927101700	Plastic double sided diffuser	

**CEILING BRACKET**

TYPE	PICTURE	CODE	DESCRIPTION	GROSS WEIGHT
A-9000	C	927900001	Ceiling Bracket for GR-9xx/xxL	

# Weather Light

Supercapacitor waterproof emergency luminaire



(A)



innovation

no use  
of batteries

10  
years

guarantee



The packaging contains: 12 pcs.  
Packaging dimensions (LxWxH): 500x375x315mm



## ■ Specifications for the new supercapacitor self-testing luminaire

The GR-900/30L/SC has a power pack consisting of super capacitors and not conventional batteries.

It has a total guarantee of 10 years.

It is self-testing with advanced circuits for charging and discharging the capacitors.

It has low consumption and a high Power Factor 0.93.

## ■ Mounting methods



## ■ Legends

Self-adhesive legends below can be provided on request



S-93593/  
S65L (705690016)



S-93593/  
S65R (705690017)



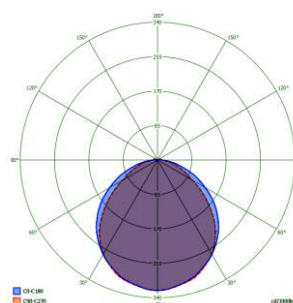
S-93593/  
S65D (705690018)

## ■ Dimensions in mm



## ■ Photometric data

GR-900/30L/SC







**SUPERCAPACITOR, WATERPROOF IP65, SELF-TESTING, MAINTAINED LED EMERGENCY LUMINAIRE 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-900/30L/SC	A	923900000	Supercapacitor	1 h	7W/7,5VA	250 / 95 lm	1250 gr.

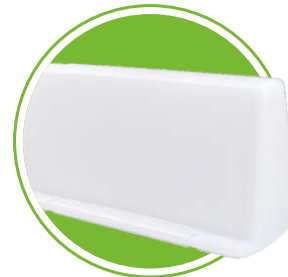
Using supercapacitors as energy storage media in place of conventional batteries is the most modern and sophisticated solution in emergency luminaires. Designed for, at least, 10 years of reliable function with much higher number of charging / discharging cycles. It can withstand much extreme temperature like -40 °C and 65 °C without serious degradation of its specifications.



**Comparing table**

	Supercapacitor	Ni-Cd battery	Ni-MH battery
Designed for	>10 years	4 years	4 years
Number of charging / discharging cycles	>500.000	500 - 2000	300 - 1500
Working temperature range	-40 °C to 65°C	0 - 55°C	5 - 55°C

*GR-900/30L/SC has advanced microprocessor based circuits for all functioning blocks and sophisticated charging/discharging method that's targeting supercapacitor's longer life.*



**A-1017**

*All GR-9xx series codes are also produced with aluminum profile with order code: GR-9xx/AL  
All GR-9xx series codes can also be provided with plastic double sided diffuser with order code: GR-9xx/A-1017.*

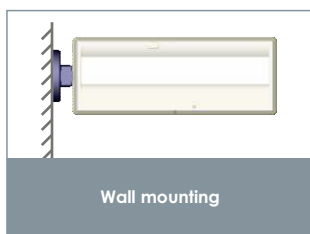
# Double Easy & Rect light



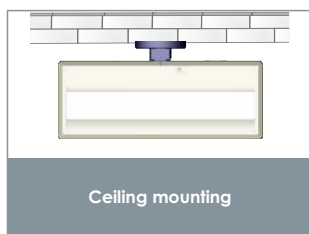
The packaging contains: 9 pcs. (A) 13 pcs. (B)  
Packaging dimensions (LxWxH): 500x375x315mm (A) 545x395x345mm (B)



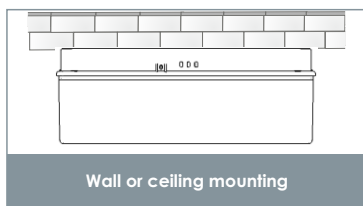
## ■ Mounting methods



Wall mounting



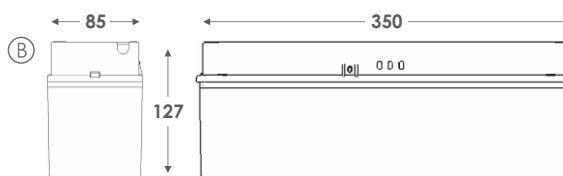
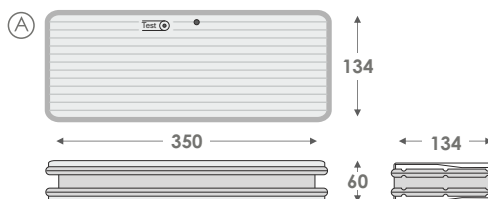
Ceiling mounting



Wall or ceiling mounting

Rect Light luminaires can be mounted on wall or ceiling surface. Special mounting accessories are included in packaging.

## ■ Dimensions in mm



## ■ Legends

Self-adhesive legends below can be provided after order



S-31100/  
S65L

S-31100/  
S65R

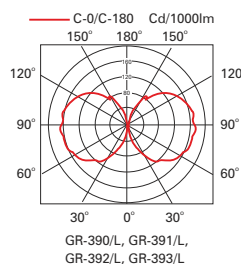
S-31100/  
S65D (x2)

Included in packaging (x2)



Rect

## ■ Photometric data





■ NON-MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-391/L	A	923391000	3,6V/1,5Ah Ni-Cd	1,5 h	3VA	270 lm	1160 gr.
GR-393/L	A	923393000	3,6V/3Ah Ni-Cd	3 h	4,3VA	270 lm	1300 gr.

■ SELF-TESTING, MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-390/L	A	923390000	3,6V/1,5Ah Ni-Cd	1,5 h	7,5VA	270/270 lm	1165 gr.
GR-392/L	A	923392000	3,6V/3Ah Ni-Cd	3 h	8VA	270/270 lm	1235 gr.
GR-736/21L	B	923736021	3,6V/1,5Ah Ni-Cd	3 h	7VA	175/175 lm	870 gr.
GR-736/6L	B	923736001	3,6V/3Ah Ni-Cd	3 h	7,5VA	150/300 lm	920 gr.

# Eco Light



MLD/ZLD-28 MLD/ZLD-34 MLD/ZLD-44

(A)



Accessory for wall mounting (included in packaging)

IP40

(B)



IP40 - IP42

(C)



IP40



The packaging contains:  
20 pcs. (MLD-28, DLD-28) 15 pcs. (MLD-34, DLD-34)  
Single package (ZLD-xx)



## Mounting methods



Easy mounting with special base for ZLD types



## Legends



SW28/R (SLD, MLD & ZLD-28) SW28/D  
SW34/R (SLD, MLD & ZLD-34) SW34/D  
SW44/R (SLD, MLD & ZLD-44) W44/D

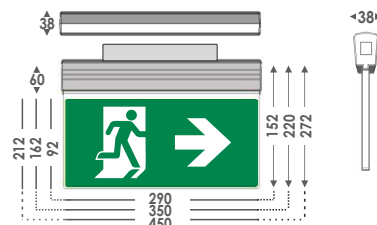
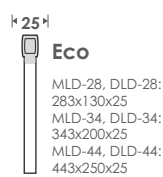
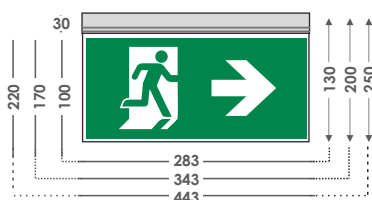
## Accessories for MLD luminaires

A-1018/PL Recess mounting base for MLD/ZLD-28  
A-1020/PL Recess mounting base for MLD/ZLD-34  
A-1018/PL/ST Recess mounting base for self-testing MLD/ZLD-28  
A-1020/PL/ST Recess mounting base for self-testing MLD/ZLD-34



Accessories contained in the package. Suitable for wall or ceiling mounting.

## Dimensions in mm







**MAINTAINED LED EDGE ILLUMINATION SIGNS 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
MLD-28D/w*	B	922502811	3,6V/1Ah Ni-Cd	3 h	3W/7,5VA	85/85 lm	710 gr.
MLD-34D/w*	B	922503426	3,6V/1Ah Ni-Cd	3 h	3W/8VA	105/85 lm	1070 gr.
MLD-44D/w*	B	922504417	3,6V/1Ah Ni-Cd	3 h	3W/8VA	105/85lm	1680 gr.

**LED SIGNS FOR GENERAL USE 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
MLD-28S/g	C	922502800	3,6V/1Ah Ni-Cd	3 h	3W/7,5VA	18/18 lm	670 gr.
MLD-34S/g	C	922503400	3,6V/1Ah Ni-Cd	3 h	3W/8VA	22/18 lm	1000 gr.
MLD-44S/g	C	922504400	3,6V/1Ah Ni-Cd	3 h	3W/8VA	22/18 lm	1500 gr.

**SELF-TESTING, MAINTAINED, LED EDGE ILLUMINATION SIGNS 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
ZLD-28/EM*	A	922502858	3,6V/1,5Ah Ni-Mh	3 h	3,8W/6,5VA	125/125 lm	1075 gr.
ZLD-34/EM*	A	922503462	3,6V/1,5Ah Ni-Mh	3 h	4W/6,7VA	145/125 lm	1475 gr.
ZLD-44/EM	A	922504456	3,6V/1,5Ah Ni-Mh	3 h	4,3W/6,9VA	200/150 lm	2045 gr.

**ACCESSORIES**

TYPE	CODE	DESCRIPTION	GROSS WEIGHT
A-1018/PL	927101801	Recess mounting base for MLD/ZLD-28	159 gr.
A-1020/PL	927102001	Recess mounting base for MLD/ZLD-34	180 gr.
A-1018/PL/ST	927101802	Recess mounting base for self-testing MLD/ZLD-28	159 gr.
A-1020/PL/ST	927102002	Recess mounting base for self-testing MLD/ZLD-34	180 gr.

**!** In June of 2012, CEN adopted the international standard ISO 7010 regarding graphical symbols and safety signs. Since all safety signs are to be designed based on this standard, we will be able to recognize a safety exit in any European country. In our catalog you can find a wide variety of luminaires with safety signage based on the EN ISO 7010 standard. The signage used on products MLD-28S/g, MLD-34S/g and MLD-44S/g does not comply with the latest European legislation and so can only be used as General Purpose Luminaires and not Emergency Escape Luminaires.

**!** All MLD, SLD and MLD types (except CBS) can be converted in non-maintained luminaires after pressing the TEST button.



# Lounge Light



SLD-28



SLD-34



SLD-44



IP30



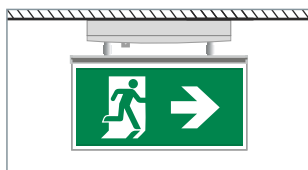
IP30



Single package



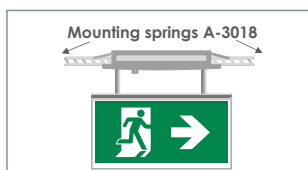
## ■ Mounting methods



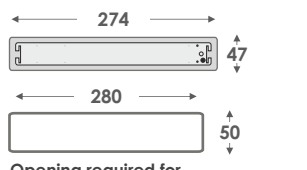
Ceiling mounting



Wall mounting



Recessed mounting  
on suspended ceiling



Opening required for  
suspended  
ceiling mounting A-3018

## ■ Legends

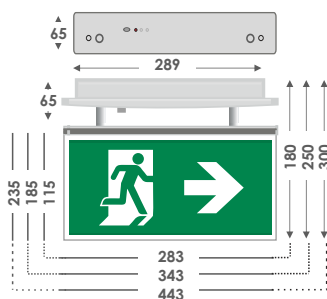
left or right

down



SW28/R (SLD-28) SW28/D  
SW34/R (SLD-34) SW34/D  
SW44/R (SLD-44) W44/D

## ■ Dimensions in mm



Lounge

SLD-28/SP, SLD-28/CBS/SP:  
289 x 180 x 34  
SLD-34/SP, SLD-34/CBS/SP:  
343 x 250 x 34  
SLD-44/SP, SLD-44/CBS/SP:  
443 x 300 x 34



SELF-TESTING, MAINTAINED, LED EDGE ILLUMINATION SIGNS 220-240V AC

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
SLD-28/SP	A	922028008	3,6V/1,5Ah Ni-Mh	3 h	9VA	100/100 lm	1050 gr.
SLD-34/SP	A	922034009	3,6V/1,5Ah Ni-Mh	3 h	9,5VA	125/125 lm	1370 gr.
SLD-44/SP	A	922044006	3,6V/1,5Ah Ni-Mh	3 h	9,5VA	125/125 lm	2060 gr.
SLD-28/DZ	B	922028000	3,6V/1,5Ah Ni-Mh	3 h	9VA	100/100 lm	980 gr.
SLD-34/DZ	B	922034000	3,6V/1,5Ah Ni-Mh	3 h	9,5VA	125/125 lm	1340 gr.
SLD-44/DZ	B	922044000	3,6V/1,5Ah Ni-Mh	3 h	9,5VA	125/125 lm	2030 gr.



*In June of 2012, CEN adopted the international standard ISO 7010 regarding graphical symbols and safety signs. Since all safety signs are to be designed based on this standard, we will be able to recognize a safety exit in any European country.*

*In our catalog you can find a wide variety of luminaires with safety signage based on the EN ISO 7010 standard.*

*The signage used on products MLD-28S/g, MLD-34S/g and MLD-44S/g does not comply with the latest European legislation and so can only be used as General Purpose Luminaires and not Emergency Escape Luminaires.*

# Professional & Double Light

16 - 28m

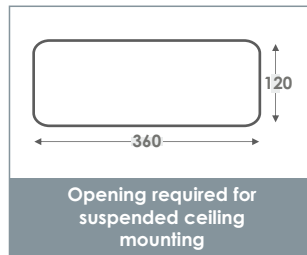
IP20



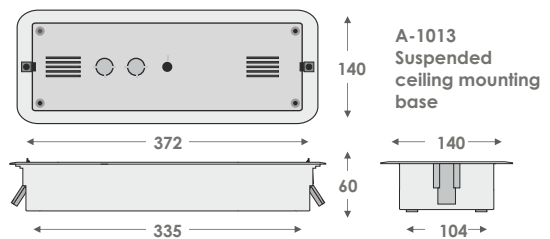
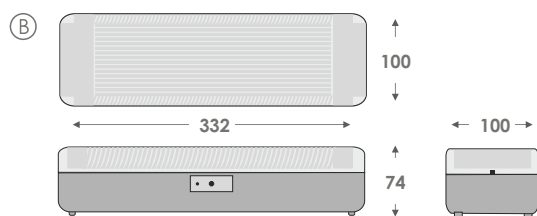
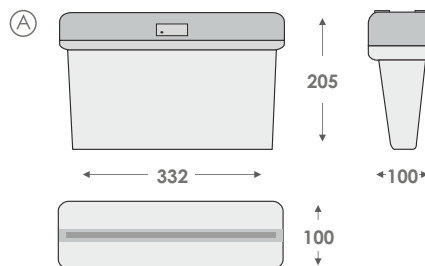
The packaging contains: 7 pcs. (A) 12 pcs. (B)  
Packaging dimensions (LxWxH): 545x395x345mm (A) 445x350x295mm (B)

CE

## Accessories



## Dimensions in mm



## Legends

Self-adhesive legends below can be provided after order



S-11100/  
S65L



S-11100/  
S65R



S-11100/  
S65D





■ SELF-TESTING, MAINTAINED, LED EMERGENCY LUMINAIRES 220-240V AC

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-515/15L	A	923515006	3,6V/600mAh Ni-Cd	1,5 h	7VA	125 lm/125 lm	1030 gr.
GR-516/15L	A	923516003	3,6V/1,5Ah Ni-Cd	3 h	7VA	125 lm/125 lm	1100 gr.
GR-115/15L	B	923115009	3,6V/600mAh Ni-Cd	1,5 h	7VA	125 lm/125 lm	770 gr.
GR-116/15L	B	923116006	3,6V/1,5Ah Ni-Cd	3 h	7VA	125 lm/125 lm	850 gr.

■ NON-MAINTAINED / MAINTAINED LED EMERGENCY LUMINAIRES (Internal selection - Without L1) 220-240V AC

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-110/15L	B	923110014	3,6V/600mAh Ni-Cd	1,5 h	3VA	40/125 lm	690 gr.
GR-112/15L	B	923112007	3,6V/1,5Ah Ni-Cd	3 h	3VA	38/125 lm	770 gr.
GR-511/15L	A	923511005	3,6V/1Ah Ni-Cd	1,5 h	3,5VA	40/125 lm	105 gr.
GR-512/15L	A	923512003	3,6V/1,5Ah Ni-Cd	3 h	3,5VA	38/125 lm	1125 gr.



**NEW**

Special base for easy mounting



Single package

## ■ Mounting methods



## ■ Special base for easy mounting



## ■ Accessories



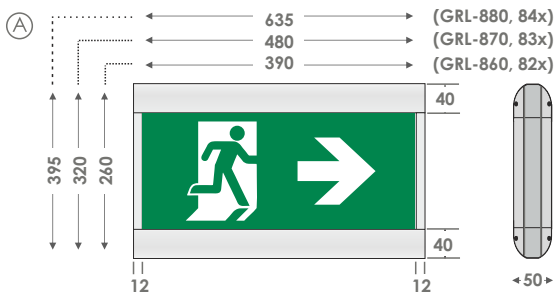


■ SELF-TESTING, MAINTAINED, LED EMERGENCY INDICATION LUMINAIRES 220-240V AC/50-60Hz

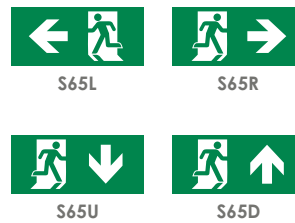
TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GRL-822/EM	A	923822102	3,6V/1,5Ah Ni-Cd	1,5 h	9,5VA	510/255 lm	1680 gr.
GRL-824/EM	A	923824102	4,8V/1,5Ah Ni-Cd	3 h	10VA	510/255 lm	1800 gr.
GRL-832/EM	A	923832102	4,8V/1,5Ah Ni-Cd	1,5 h	11VA	680/340 lm	2180 gr.
GRL-834/EM	A	923834102	4,8V/3Ah Ni-Cd	3 h	12,5VA	680/340 lm	2270 gr.
GRL-842/EM	A	923842102	4,8V/1,5Ah Ni-Cd	1,5 h	13,5VA	850/425 lm	3000 gr.
GRL-844/EM	A	923844102	4,8V/3Ah Ni-Cd	3 h	14VA	850/425 lm	3100 gr.

! **GR-XXX/O** All the above models can be manufactured as one sided luminaires with sheet metal at the back of the luminaire

■ Dimensions in mm



■ Legends



# Light Box

18-64m

IP42

**NEW**

Special base for easy mounting

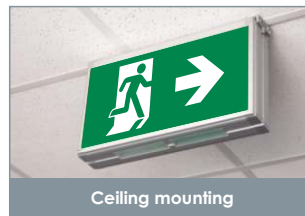
Ⓐ



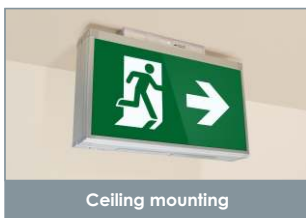
Single package



## ■ Mounting methods



## ■ Special base for easy mounting



## ■ Accessories





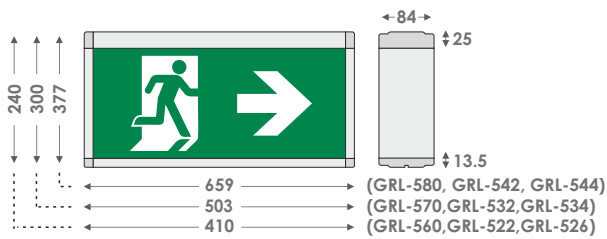


■ SELF-TESTING, MAINTAINED, LED EMERGENCY INDICATION LUMINAIRES 220-240V AC/50-60Hz

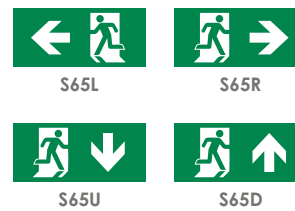
TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GRL-514/EM	A	923514103	3,6V/1,5Ah Ni-Cd	3 h	8,5VA	250/125 lm	1420 gr.
GRL-522/EM	A	923522102	3,6V/1,5Ah Ni-Cd	1,5 h	9,5VA	510/255 lm	2200 gr.
GRL-526/EM	A	923526103	4,8V/1,5Ah Ni-Cd	3 h	10VA	510/255 lm	2320 gr.
GRL-532/EM	A	923532102	4,8V/1,5Ah Ni-Cd	1,5 h	11VA	680/340 lm	2960 gr.
GRL-534/EM	A	923534102	4,8V/3Ah Ni-Cd	3 h	12,5VA	680/340 lm	3040 gr.
GRL-542/EM	A	923542102	4,8V/1,5Ah Ni-Cd	1,5 h	13,5VA	850/425 lm	3820 gr.
GRL-544/EM	A	923544102	4,8V/3Ah Ni-Cd	3 h	14VA	850/425 lm	3920 gr.

! **GR-XXX/O** All the above models can be manufactured as one sided luminaires with sheet metal at the back of the luminaire

■ Dimensions in mm



■ Legends



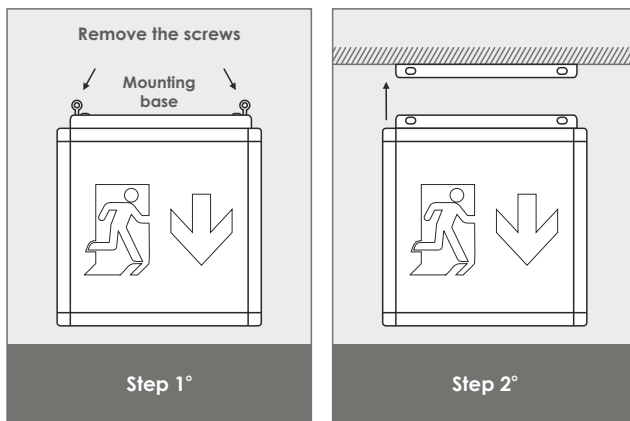
# 3D & Tunnel Light



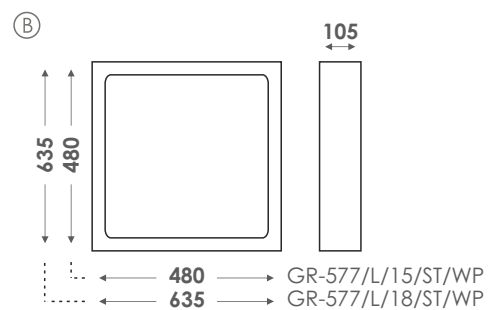
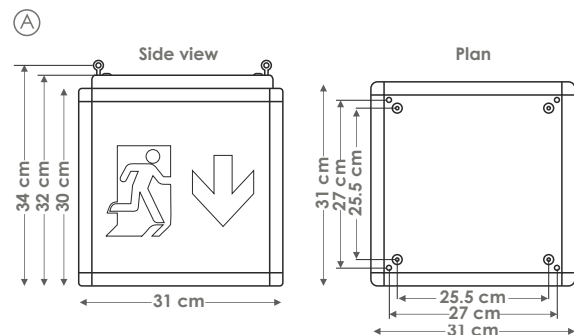
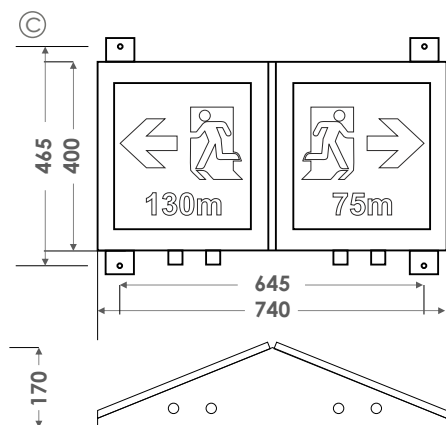
Single package  
GR-415/4P, GR-416/4P



## ■ Mounting methods on ceiling for 3D Light



## ■ Dimensions in mm





**WATERPROOF IP65, SELFTESTING, MAINTAINED LED EMERGENCY INDICATION LUMINAIRES 220-240V AC (FOR TUNNELS)**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-577/L/15/ST/WP	B	923577005	4,8V/1,5Ah Ni-Cd	1,5 h	11VA	680lm/340lm	7590 gr.
GR-577/L/15/ST/WP/O	B	923577007	4,8V/1,5Ah Ni-Cd	1,5 h	11VA	680lm/340lm	
GR-577/L/18/ST/WP	B	923577006	4,8V/1,5Ah Ni-Cd	1,5 h	13,5VA	850lm/425lm	
GR-577/L/18/ST/WP/O	B	923577008	4,8V/1,5Ah Ni-Cd	1,5 h	13,5VA	850lm/425lm	
GR-578/L/15/ST/WP	B	923578006	4,8V/3Ah Ni-Cd	3 h	12,5VA	680lm/390lm	
GR-578/L/15/ST/WP/O	B	923578008	4,8V/3Ah Ni-Cd	3 h	12,5VA	680lm/390lm	
GR-578/L/18/ST/WP	B	923578007	4,8V/3Ah Ni-Cd	3 h	14,5VA	700lm/350lm	
GR-578/L/18/ST/WP/O	B	923578009	4,8V/3Ah Ni-Cd	3 h	14,5VA	700lm/350lm	


**MAINTAINED, SELF-TESTING, LED EMERGENCY INDICATION LUMINAIRES 220-240V AC/50-60Hz**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-415/4P	A	923415001	4,8V/1,5Ah Ni-Cd	1,5 h	11VA	460/460lm	3370 gr.
GR-416/4P	A	923416001	4,8V/3Ah Ni-Cd	3 h	14VA	460/460lm	3465 gr.

**WATERPROOF IP65, SELFTESTING, MAINTAINED LED EMERGENCY INDICATION LUMINAIRES (FOR TUNNELS) 220-240V AC & 60° INDICATION ANGLE**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-579/L/90/WP	C	923579000	2x4,8V/1,5Ah Ni-Cd	1,5 h	22 VA	1360/680 lm	-
GR-579/L/180/WP	C	923579001	2x4,8V/3Ah Ni-Cd	3 h	25VA	1360/680 lm	-

TYPE	DESCRIPTION
GR-57X/XW/WP/B	All the above models can be manufactured with xenon beacon on top

 All the above luminaires are also manufactured as Maintained with fluorescent lamp and in a variety of dimensions according to the customer needs.

 Single sided luminaires are marked with /O at the end of product type.

# Power Light

IP65

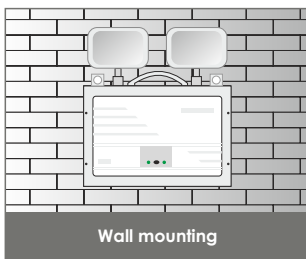
IP42



Single package

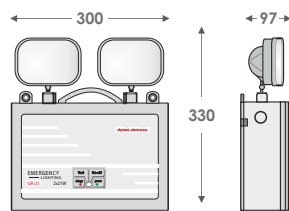


## ■ Mounting methods

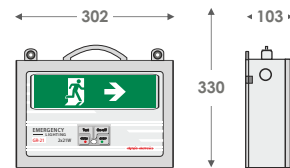


## ■ Dimensions

A, B, D & E.



C.



## ■ Legends

Self-adhesive legends below can be provided after order (only for GRL-22)



S-10800/  
S65L



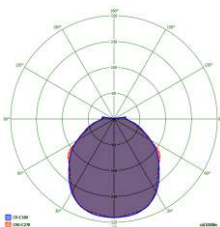
S-10800/  
S65R



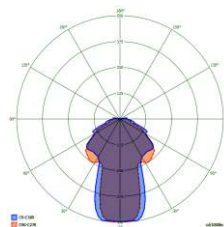
S-10800/  
S65D

## ■ Photometric data

GRL-29, GRL-29/WP, GRL-39,  
GRL-39/WP



GRL-21/H/90, GRL-21/H/180, GRL-21/H/90/WP,  
GRL-21/H/180/WP, GRL-37/90, GRL-37/180,  
GRL-37/90/WP, GRL-37/180/WP







**NON-MAINTAINED LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT SOURCE	LIGHT OUTPUT	GROSS WEIGHT
<b>GRL-21</b>	A	923021031	6V/4Ah Pb	1,5 h	10VA	2x42 Leds	790 lm	2205 gr.
<b>GRL-29</b>	A	923029009	12V/7Ah Pb	3 h	16VA	2x84 Leds	1620 lm	3880 gr.
<b>GRL-22</b>	C	923022100	12V/7Ah Pb	10 h	16VA	84 Leds	710 lm	3555 gr.
<b>GRL-21/H/90</b>	B	923021040	12V/7Ah Pb	1,5 h	16VA	2x6P Leds	3200 lm	4360 gr.
<b>GRL-21/H/180</b>	B	923021042	2x12V/7Ah Pb	3 h	16VA	2x6P Leds	3200 lm	6560 gr.

**WATERPROOF IP65, NON-MAINTAINED LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT SOURCE	LIGHT OUTPUT	GROSS WEIGHT
<b>GRL-21/H/90/WP</b>	D	923021041	12V/7Ah Pb	1,5 h	16VA	2x6P Leds	3200 lm	4510 gr.
<b>GRL-21/H/180/WP</b>	D	923021043	2x12V/7Ah Pb	3 h	16VA	2x6P Leds	3200 lm	6700 gr.
<b>GRL-29/WP</b>	E	923029010	12V/7Ah Pb	3 h	16VA	2X84 Leds	1620 lm	4020 gr.

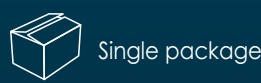
**SELF-TESTING, NON-MAINTAINED LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT SOURCE	LIGHT OUTPUT	GROSS WEIGHT
<b>GRL-37/90</b>	B	923037002	12V/7Ah Pb	1,5 h	16VA	2x6P Leds	3200 lm	4360 gr.
<b>GRL-37/180</b>	B	923037005	2x12V/7Ah Pb	3 h	16VA	2x6P Leds	3200 lm	6560 gr.
<b>GRL-39</b>	A	923039002	12V/7Ah Pb	3 h	16VA	2X84 Leds	1620 lm	3880 gr.

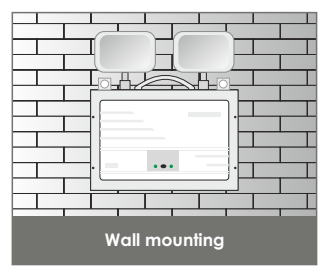
**WATERPROOF IP65, SELF-TESTING, NON-MAINTAINED LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT SOURCE	LIGHT OUTPUT	GROSS WEIGHT
<b>GRL-37/90/WP</b>	D	923037004	12V/7Ah Pb	1,5 h	16VA	2x6P Leds	3200 lm	4520 gr.
<b>GRL-37/180/WP</b>	D	923037006	2x12V/7Ah Pb	3 h	16VA	2x6P Leds	3200 lm	6700 gr.
<b>GRL-39/WP</b>	E	923039004	12V/7Ah Pb	3 h	16VA	2X84 Leds	1620 lm	4020 gr.

# Power Light

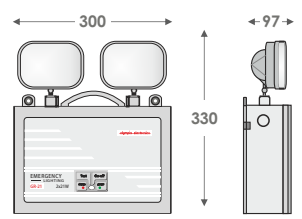


## ■ Mounting methods

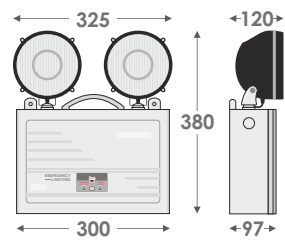


## ■ Dimensions in mm

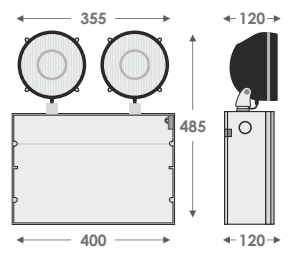
B & C.



A & D.

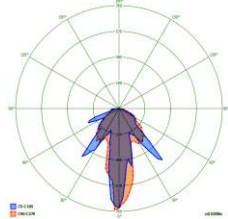


E.

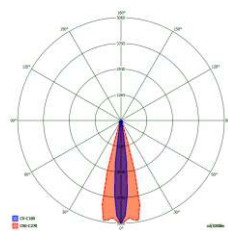


## ■ Photometric data

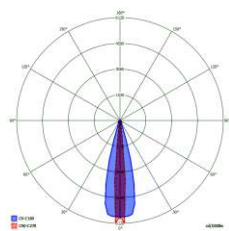
GR-21, GR-29, GR-30, GR-31, GR-36, GR-36/WP



GR-32, GR-37, GR-37/WP



GR-21/H





**NON-MAINTAINED EMERGENCY LUMINAIRES WITH INCANDESCENT LAMPS**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	LAMPS	GROSS WEIGHT
GR-21	C	923021000	12V/7Ah Pb	1,5 h	14VA	580 lm	2x20W	3870 gr.
GR-21/H	A	923021001	2x12V/7Ah Pb	1 h	24VA	1620 lm	2x55W	6835 gr.
GR-29	C	923029000	2x12V/7Ah Pb	3 h	24VA	580 lm	2x20W	5915 gr.

**WATERPROOF IP65, NON-MAINTAINED EMERGENCY LUMINAIRES WITH INCANDESCENT LAMPS**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	LAMPS	GROSS WEIGHT
GR-30	C	923030000	12V/7Ah Pb	1,5 h	14VA	580 lm	2x20W	3300 gr.
GR-31	C	923031000	2x12V/7Ah Pb	3 h	13VA	580 lm	2x20W	6260 gr.
GR-32	A	923032000	2x12V/9Ah Pb	1 h	24VA	2050 lm	2x55W	7655 gr.
GR-21/H3*	E	923021011	4x12V/7Ah Pb	3 h	47VA	1380 lm	2x55W	16430 gr.

\*The GR-21/H3 has a test button & a charge indication LED.

**SELF-TESTING, NON-MAINTAINED EMERGENCY LUMINAIRES WITH INCANDESCENT LAMPS**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	LAMPS	GROSS WEIGHT
GR-36	C	923036000	12V/7Ah Pb	1,5 h	14VA	580 lm	2x20W	3905 gr.
GR-37	A	923037000	2x12V/9Ah Pb	1 h	24VA	2050 lm	2x55W	7050 gr.
GR-39	C	923039000	2x12V/9Ah Pb	3 h	24VA	730 lm	2x20W	6140 gr.

**WATERPROOF IP65, SELF-TESTING, NON-MAINTAINED EMERGENCY LUMINAIRES WITH INCANDESCENT LAMPS**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	LAMPS	GROSS WEIGHT
GR-36/WP	B	923036002	12V/7Ah Pb	1,5 h	14VA	580 lm	2x20W	4050 gr.
GR-37/WP	D	923037003	2x12V/9Ah Pb	1 h	24VA	2050 lm	2x55W	7200 gr.
GR-39/WP	B	923039001	2x12V/9Ah Pb	3 h	24VA	730 lm	2x20W	6290 gr.



Single packaging



## Description

- ▶ Designed for installation in explosive atmospheres
- ▶ Certified according to the norms EN 60079-0, EN 60079-1, EN 60079-31
- ▶ The main body is constructed of aluminum (painted yellow, RAL-1003) and the diffuser from polycarbonate with UV protection or with special durable glass.
- ▶ The luminaires that contain batteries have a charge indicator and connector for installing a remote test button.

## General characteristics

- ▶ Ni-Cd batteries
- ▶ High power illumination
- ▶ Suitable for explosive gas atmospheres and explosive dust atmospheres
- ▶ IP67 / IK 05 degrees of cover protection
- ▶ Charge indication LED
- ▶ Produced in accordance with EN 60598-1, EN 60598-2-22, EN 55015, EN 61547, EN 61000-3-2
- ▶ Construction material: Aluminum and Polycarbonate or Aluminum and glass (IFA-3236).
- ▶ Operation temperature range: 0 °C up to 40°C the emergency luminaires, -20°C up to 40°C for the CBS luminaires
- ▶ Complying with the ATEX 94/9/EC
- ▶ Humidity: up-to 95% relative humidity



**NON-MAINTAINED EMERGENCY LUMINAIRES WITH FLUORESCENT LAMPS 220-240V AC \***

TYPE	PICTURE	CODE	BATTERY	DURATION	LAMP	DIFFUSER	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
*FSA-8202CB	A	980820203	3,6V/1,5Ah	1 h	8 W	5mm glass	4,5VA	150 lm	
*FSA-8352CB	A	980835201	3,6V/4Ah	1 h	8 W	5mm glass	8,05VA	280 lm	
*FSA-8203CB	A	980820303	4,8V/4Ah	3 h	8 W	5mm glass	8,05VA	150 lm	

**SUSTAINED EMERGENCY LUMINAIRES WITH FLUORESCENT LAMPS 220-240V AC \***

TYPE	PICTURE	CODE	BATTERY	DURATION	LAMP	DIFFUSER	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
*FSP-2218CC	B	980221803	4,8V/4Ah	1 h	18 W	9mm glass	8,05VA	500 lm	
*FSP-3236CCP	A	980323601	4,8V/4Ah	1 h	36 W	polycarbonate	53VA	1000 lm	

**EMERGENCY LUMINAIRES FOR CBS 230V WITH FLUORESCENT LAMPS \***

TYPE	PICTURE	CODE	BATTERY	DURATION	LAMP	DIFFUSER	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
*IFA-3236P	A	980323605	-	-	2x36W	polycarbonate	41,5VA	1215 lm	
*IFA-3236	A	980323602	-	-	2x36 W	9mm glass	74VA	3015 lm	12,900 gr.
*IFA-2218	B	980221800	-	-	2x18 W	9mm glass	41,5VA	1215 lm	
*IFA-2218P	B	980221801	-	-	2x18 W	polycarbonate	41,5VA	1215 lm	

**LED EMERGENCY LUMINAIRES FOR CBS 230V \***

TYPE	PICTURE	CODE	BATTERY	DURATION	LAMP	DIFFUSER	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
*IFA-2218LB	B	980221802	-	-	2x11W	5mm glass	20,25VA	1476 lm	
*IFA-2118L	B	980211801	-	-	1x11W	9mm glass	10,12VA	882 lm	

**SEALING GROMMET**

TYPE	CODE	DESCRIPTION	GROSS WEIGHT
*NPT34	751500102	Sealing grommet	

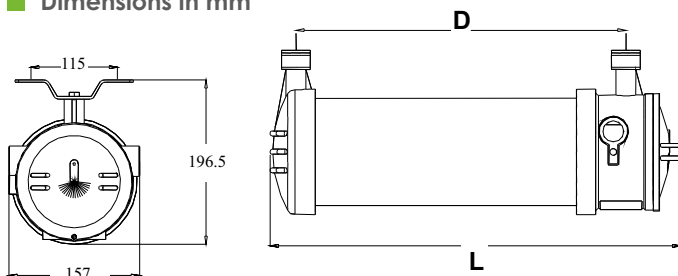


**MOUNTING BASE**

TYPE	CODE	DESCRIPTION	GROSS WEIGHT
*A-FSA	808700069	Mounting base	



**Dimensions in mm**



IFA-2218, IFA-2218P, IFA-2218LB, IFA-2118L,  
FSP-2118CB: D=640, L=750.  
IFA-3236, IFA-3236P, FSP-3236CCP: D=1250, L=1360.  
FSA-8202CB, FSA-8352CB, FSA-8203CB: D=375, L=485

**Legends**

Self-adhesive legends below can be provided on request



S-93593/  
S65L (705690016)



S-93593/  
S65R (705690017)



S-93593/  
S65D (705690018)





# Spot Light

(A)



Suitable for installation in open areas

IP42

(B)



Suitable for installation in escape routes

IP42

(C)



(D)



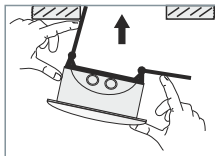
IP20



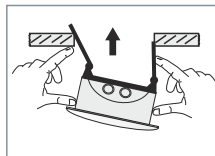
The packaging contains: 26 pcs. (A, B, C), 16 pcs. (D)  
Packaging dimensions (LxWxH): 430x375x275mm



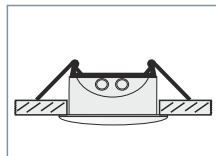
## Mounting methods GR-298



Bend the two springs so that they can pass through the suspended ceiling hole



We push the spot luminaire upwards



We keep on pushing until the luminaire fits into the hole



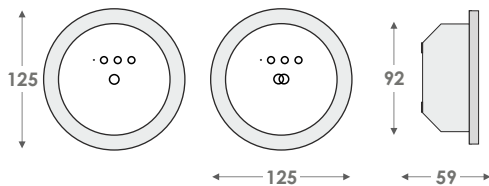
The specific luminaire has 2 rim options with perimeter dimensions.

The packaging contains:  
16 pcs. for the: KIT-77/84

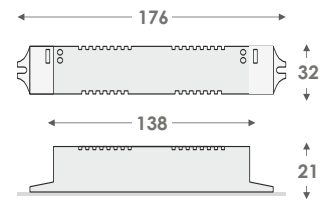
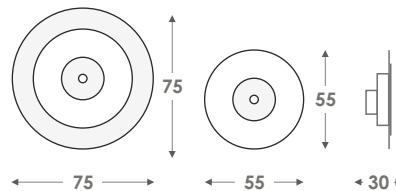
Packaging dimensions (LxWxH):  
315x265x205 for the: KIT-77/84

## Dimensions in mm

A, B & C.

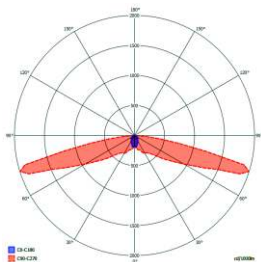


D.

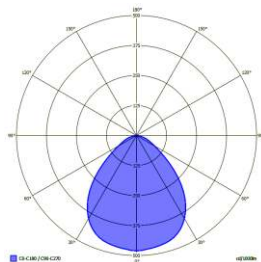


## Photometric data

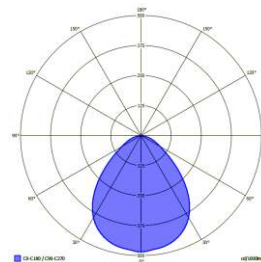
GR-280, GR-280/24V, GR-290



GR-298/30L/180



GR-298/60L/90





**SELF-TESTING, NON MAINTAINED, CEILING MOUNTED LED EMERGENCY LUMINAIRE**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	INSTALLATION	GROSS WEIGHT
GR-290	B	923290000	4,8V/1,2Ah Ni-Mh	1,5 h	3,5VA	270 lm	Escape routes	450 gr.
GR-291	A	923291000	4,8V/1,2Ah Ni-Mh	1,5 h	3,5VA	270 lm	Open areas	450 gr.
GR-292	B	923292000	4,8V/1,2Ah Ni-Mh	3 h	3,5VA	160 lm	Escape routes	450 gr.
GR-293	A	923293000	4,8V/1,2Ah Ni-Mh	3 h	3,5VA	160 lm	Open areas	450 gr.

**SET ELECTRONIC BALLAST GR-77 WITH GR-84 NON-MAINTAINED WITH LED 1WATT**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
KIT-77/84	D	923084001	4,8V/1,2Ah Ni-Mh	up to 3 h	6VA	150 lm	310 gr.

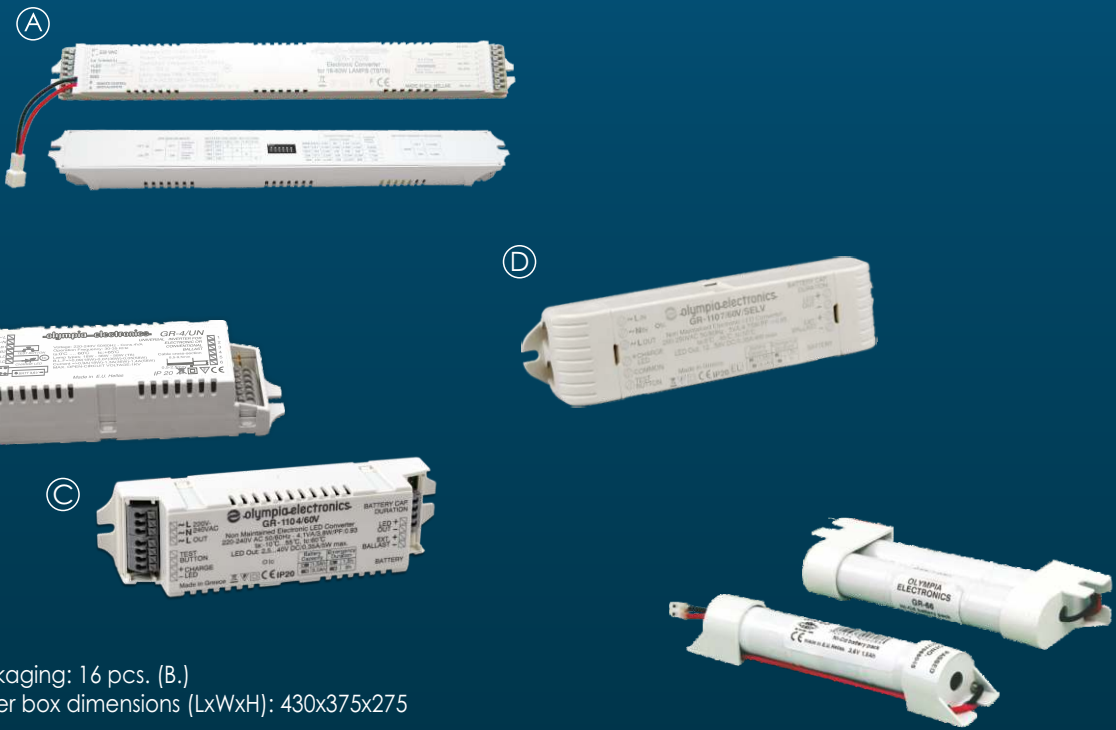
**MAINTAINED , CEILING MOUNTED LED EMERGENCY LUMINAIRE**

*When powered with 230VAC the 60 LEDs/250 lm are illuminated whereas during emergency mode the 11LEDs/80lm are illuminated.*

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT MAINS/EMERG	GROSS WEIGHT
GR-297/60L/180	C	923297000	4,8V/1,2Ah Ni-Mh	3 h	3,5VA	350/110 lm	533 gr.

**SELF-TESTING, NON MAINTAINED, CEILING MOUNTED LED EMERGENCY LUMINAIRE**

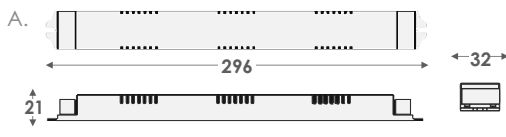
TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-298/30L/180	C	923298000	4,8V/1,2Ah Ni-Mh	3 h	3,5VA	170 lm	530 gr.
GR-298/60L/90	C	923298001	4,8V/1,2Ah Ni-Mh	1,5 h	3,5VA	340 lm	530 gr.



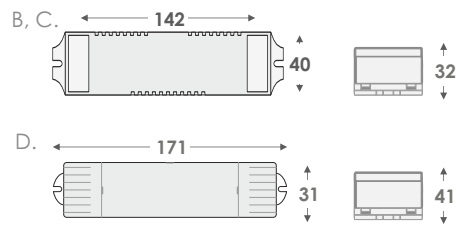
Packaging: 16 pcs. (B.)  
 Paper box dimensions (LxWxH): 430x375x275



## ■ Dimensions in mm



**GR-61:** 200 x 27 x 26mm | **GR-64:** 275 x 37 x 36mm  
**GR-65:** 163 x 27 x 26mm | **GR-67:** 215 x 37 x 36mm  
**GR-62:** 205 x 27 x 49mm | **GR-66:** 160 x 27 x 49mm



TYPE	GR-4/UN/A-966	GR-4/UN/65	GR-4/UN/66	GR-4/UN/67	GR-6/UN/61	GR-6/UN/62	GR-6/UN/64
18W (T8)	-----	90 min.	180 min.	240 min.	80 min.	160 min.	220 min.
36W (T8)	-----	70 min.	140 min.	180 min.	60 min.	120 min.	160 min.
58W (T8)	-----	60 min.	120 min.	160 min.	50 min.	100 min.	140 min.
18W (COMPACT)	-----	90 min.	180 min.	240 min.	80 min.	160 min.	220 min.
38W (2D/4PIN)	-----	70 min.	140 min.	180 min.	60 min.	130 min.	170 min.
36W (COMPACT)	-----	70 min.	140 min.	180 min.	70 min.	130 min.	180 min.
7-9W CFL	60 min.	-----	-----	-----	-----	-----	-----

TYPE	BATTERY	LAMPS														DURATION							
		6W (T5)	8W (T5)	11W (CFL)	13W (CFL)	14W (T5)	18W (CFL)	21W (T5)	24W (T5)	24W (CFL)	28W (T5)	32W (CIRC)	32W (CFL)	35W (T5)	36W (T8)		36W (CFL)	49W (T5)	54W (T5)	55W (CFL)	58W (T8)	80W (T5)	
GR-1004-A/61	4,8V - 1,5Ah	●	●	●	●	●	●	●	●	●													90'
GR-1004-B/62	4,8V - 3Ah	●	●	●	●	●	●	●	●	●													3 h
GR-1004-C/71	8,4V - 1,5Ah	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	90'
GR-1004-D/72	8,4V - 3Ah	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	3 h
GR-1004-E/81	6V - 1,5Ah	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	90'
GR-1004-F/82	6V - 3Ah	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	3 h



**CONVERTERS - COMMON TO EMERGENCY LUMINAIRES 220-240V AC / 50-60Hz (T5, T8, PL)**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	GROSS WEIGHT
GR-4/UN/65	B	960004028	3,6V/1,5Ah Ni-Cd	see table	4VA	395 gr.
GR-4/UN/66	B	960004029	3,6V/3Ah Ni-Cd	see table	4VA	525 gr.
GR-4/UN/67	B	960004030	3,6V/4Ah Ni-Cd	see table	4VA	605 gr.
GR-6/UN/61	B	960006018	4,8V/1,5Ah Ni-Cd	see table	4VA	445 gr.
GR-6/UN/62	B	960006019	4,8V/3Ah Ni-Cd	see table	4VA	540 gr.
GR-6/UN/64	B	960006020	4,8V/4Ah Ni-Cd	see table	4VA	580 gr.
GR-4/UN/127/230/67	B	960004046	3,6V/4Ah Ni-Cd	see table	4VA	605 gr.

Packaging contains: **16 pcs.** Paper box dimensions (LxWxH): **315x265x205mm**

**PROGRAMMABLE COMMON TO EMERGENCY LED LUMINAIRE CONVERTER 220-240V AC / 50-60Hz**

(LED volt output 2,5-35V with capability to connect 4,8V/1,5Ah or 3Ah battery)

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	GROSS WEIGHT
GR-1104/40V/B-941/HT	C	960110410	4,8V / 3Ah	1,5 or 3 h	3,5W/7VA	365 gr.
GR-1104/40V/B-973/HT	C	960110408	4,8V / 1,5Ah	1,5 or 3 h	3,5W/7VA	365 gr.

**PROGRAMMABLE COMMON LED LUMINAIRE TO EMERGENCY LED LUMINAIRE CONVERTER 4,8V 1,5Ah/3Ah**

(LED volt output 12-58V DC)

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	GROSS WEIGHT
GR-1107/60V	D	960110700	4,8V / 1,5 / 3Ah	1,5 or 3 h	4,75W/5VA	

**PROGRAMMABLE COMMON TO EMERGENCY LED LUMINAIRE CONVERTER 220-240V AC / 50-60Hz**

(LED volt output with capability to connect 4,8V/1,5Ah or 3Ah battery)

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	GROSS WEIGHT
GR-1107/60V/B-973/HT	D	960110701	4,8V / 1,5Ah	1,5 or 3 h	4,75W/5VA	400 gr.
GR-1107/60V/B-941/HT	D	960110702	4,8V / 3Ah	1,5 or 3 h	4,75W/5VA	480 gr.

**PROGRAMMABLE COMMON TO EMERGENCY LUMINAIRE CONVERTER FOR FLUORESCENT LAMPS T5/T8 6-80W 220-240V AC / 50-60Hz (without battery)**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	GROSS WEIGHT
GR-1004	A	960100400	4,8 - 8,4 V / 1,5 - 4 Ah	1 - 3 h	13VA	180 gr.

Packaging contains: **56 pcs.** Paper box dimensions (LxWxH): **430x280x335mm**

**NON PROGRAMMABLE CONVERTERS FOR FLUORESCENT LAMPS T5/T8 6-80W 220-240V AC / 50-60Hz**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	GROSS WEIGHT
GR-1004-A/61	A	960100461	4,8V/1,5Ah	1,5 h	13VA	425 gr.
GR-1004-B/62	A	960100462	4,8V/3Ah	3 h	13VA	510 gr.
GR-1004-C/71	A	960100471	8,4V/1,5Ah	1,5 h	13VA	520 gr.
GR-1004-D/72	A	960100472	8,4V/3Ah	3 h	13VA	695 gr.
GR-1004-E/81	A	960100481	6V/1,5Ah	1,5 h	13VA	240 gr.
GR-1004-F/82	A	960100482	6V/3Ah	3 h	13VA	360 gr.

# Weather Spot Light



IP40



IP40  
IP65



IP40



IP65



The packaging contains:  
100 pcs. for the: GR-83, 80/W, 80/W/S  
Packaging dimensions (LxWxH):  
430x280x335 for the: GR-83, 80/W, 80/W/S



## RECHARGEABLE, NON MAINTAINED LED LUMINAIRES

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-83	A	923083001	3,6V/120mAh Ni-Mh	3 h	2VA	21 lm	100 gr.

## RECHARGEABLE, MAINTAINED LED LUMINAIRES

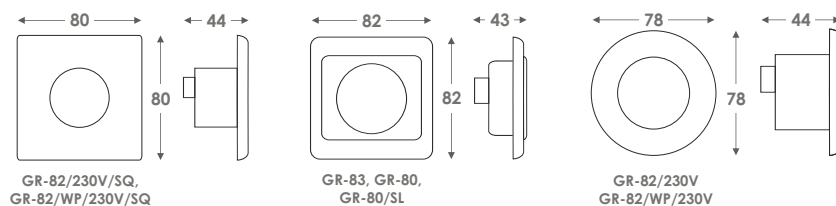
TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-82/230V	C	923082001	3,6V/120mAh Ni-Mh	3 h	4VA	1 lm / 22 lm	100 gr.
GR-82/230V/SQ	B	923082006	3,6V/120mAh Ni-Mh	3 h	4VA	1 lm / 22 lm	100 gr.
GR-82/WP/230V	D	923082002	3,6V/120mAh Ni-Mh	3 h	4VA	1 lm / 22 lm	100 gr.
GR-82/WP/230V/SQ	B	923082009	3,6V/120mAh Ni-Mh	3 h	4VA	1 lm / 22 lm	100 gr.

## RECHARGEABLE, WATERPROOF, WALL MOUNTED LED LUMINAIRES

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-80/W	A	923080001	-	-	6VA	30 lm	100 gr.
GR-80/W/SL**	A	923080002	-	-	6VA	30 lm	100 gr.

\*\* GR-80/W/SL - Silver case

## Dimensions in mm







The packaging contains: 20 pcs. (A), 10 pcs. (B)  
Packaging dimensions (LxWxH): 430x280x335 (A), 495x190x90 (B)



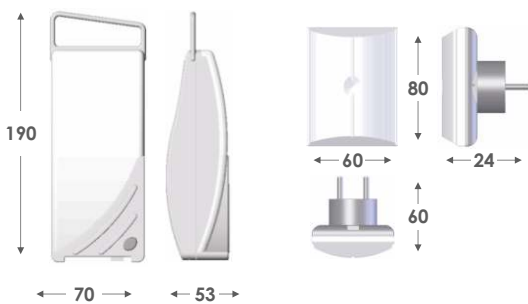
### RECHARGEABLE, MAINTAINED LED LUMINAIRE 220-240V AC

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-11	B	923011000	3,6V/120mAh Ni-MH	3 h	3VA	28 lm	85 gr.

### PORTABLE, RECHARGEABLE, MAINTAINED LED LUMINAIRE (BACKUP LIGHTING)

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-60	A	923060000	3,6V/1Ah Ni-Cd	4 - 14 h	2,5W/3VA	up to 95 lm	565 gr.

### Dimensions in mm



# Addressable Light

Addressable panel,  
addressable emergency  
luminaires & peripherals

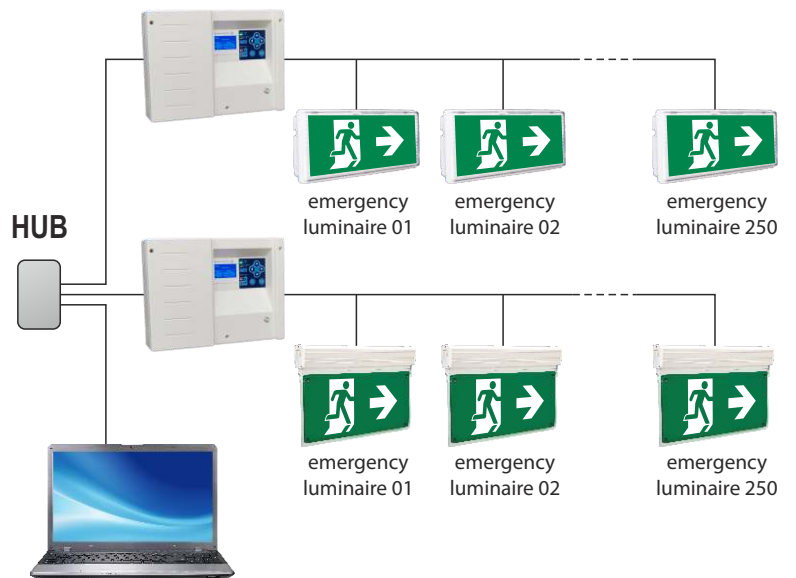


Single packaging

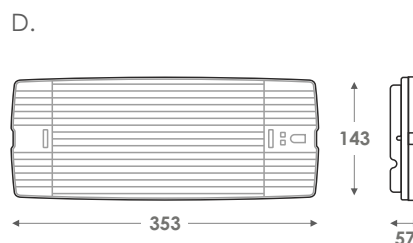
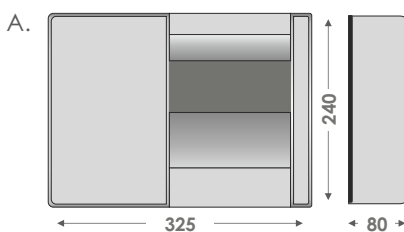


## Description of GR-6500 addressable panel

- ▶ Up to 250 addressable emergency luminaires
- ▶ Inhibit function for all luminaires
- ▶ 16 zones
- ▶ Capability for connecting several panels on an ethernet network
- ▶ The programming, control and testing of the system can be done using a web browser (Internet Explorer, Mozilla Firefox, Chrome)



## Dimensions in mm





**ADDRESSABLE LUMINAIRES CONTROL PANEL 220-240V / 50-60Hz**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	GROSS WEIGHT
<b>GR-6500**</b>	A	923650001	12V/7Ah	>3h	25W/35VA	2000 gr.

**ACCESSORY FOR THE GR-6500 PANEL**

TYPE	PICTURE	CODE	DESCRIPTION
<b>GR-8530</b>	B	923853000	Network card through ETHERNET

**ACCESSORY FOR THE GR-6500 PANEL**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION
<b>GR-6059</b>	C	923605900	Addressable device for GR-1004	<1mA

**ADDRESSABLE, SELF TESTING, MAINTAINED LED EMERGENCY LUMINAIRES 220-240V / 50-60Hz, EASY LIGHT**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-315/15L/ADR/A*</b>	D	923315022	3,6V/600mAh Ni-Cd	1,5 h	7VA	105/105 lm	740 gr.
<b>GR-316/15L/ADR/A*</b>	D	923316018	3,6V/1,5Ah Ni-Cd	3 h	7VA	105/105 lm	810 gr.
<b>GR-315/30L/ADR/A*</b>	D	923315023	3,6V/1,5Ah Ni-Cd	1,5 h	7,5VA	210/210 lm	810 gr.
<b>GR-316/30L/ADR/A*</b>	D	923316019	3,6V/3Ah Ni-Cd	3 h	8VA	210/210 lm	890 gr.
<b>GR-308/15L/ADR/A</b>	D	923308004	3,6V/3Ah Ni-Cd	8 h	7VA	125/125lm	870 gr.
<b>GR-315/4P/ADR/A</b>	D	923315028	4,8V/1,5Ah Ni-Cd	1,5 h	11,5VA	150/300 lm	825 gr.
<b>GR-315/6P/ADR/A</b>	D	923315029	4,8V/3Ah Ni-Cd	1,5 h	14,5VA	225/450 lm	955 gr.
<b>GR-316/4P/ADR/A</b>	D	923316024	4,8V/3Ah Ni-Cd	3 h	13,5VA	150/300 lm	950 gr.
<b>GR-316/6P/ADR/A</b>	D	923316025	4,8V/4Ah Ni-Cd	3 h	15VA	225/415 lm	995 gr.

**ADDRESSABLE, NON MAINTAINED LED EMERGENCY LUMINAIRES 220-240V / 50-60Hz, EASY LIGHT**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-310/30L/ADR/A</b>	D	923310054	3,6V/1,5Ah Ni-Cd	1,5 h	3VA	250 lm	855 gr.
<b>GR-312/30L/ADR/A</b>	D	923312031	3,6V/3Ah Ni-Cd	3 h	4VA	250 lm	945 gr.
<b>GR-310/4P/ADR/A</b>	D	923310052	4,8V/1,5Ah Ni-Cd	1,5 h	4VA	300 lm	840 gr.
<b>GR-310/6P/ADR/A</b>	D	923310053	4,8V/3Ah Ni-Cd	1,5 h	5VA	450 lm	925 gr.
<b>GR-312/4P/ADR/A</b>	D	923312029	4,8V/3Ah Ni-Cd	3 h	5VA	300 lm	925 gr.
<b>GR-312/6P/ADR/A</b>	D	923312030	4,8V/4Ah Ni-Cd	3 h	6VA	415 lm	975 gr.
<b>GR-309/15L/ADR/A</b>	D	923309003	3,6V/3Ah Ni-Cd	8 h	4,5VA	125 lm	950 gr.



# Addressable Light

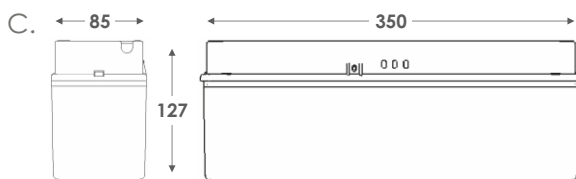
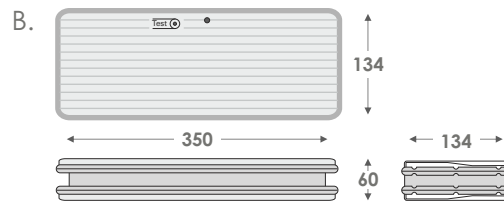
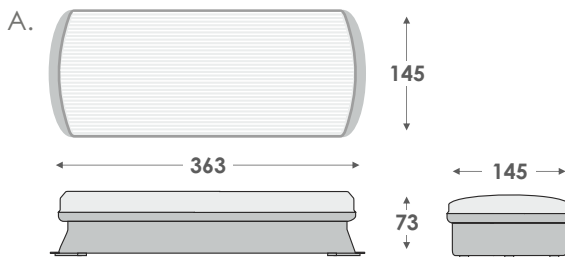
Addressable  
emergency luminaires

IP65



CE

## ■ Dimensions in mm





**ADDRESSABLE, WATERPROOF IP65, SELF TESTING, MAINTAINED LED EMERGENCY LUMINAIRES, WEATHER LIGHT**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-938/15L/ADR	A	923938014	3,6V/600mAh Ni-Cd	1,5 h	7,5VA	105/105 lm	980 gr.
GR-938/30L/ADR	A	923938015	3,6V/1,5Ah? Ni-Cd	1,5 h	8,5VA	210/210 lm	1050 gr.
GR-939/15L/ADR	A	923939014	3,6V/1,5Ah Ni-Cd	3 h	6,8VA	105/105 lm	1050 gr.
GR-939/30L/ADR	A	923939015	3,6V/3Ah Ni-Cd	3 h	8,2VA	210/210 lm	1130 gr.
GR-938/4P/ADR	A	923938012	4,8V/1,5Ah Ni-Cd	1,5 h	8,10VA	150/300 lm	1075 gr.
GR-938/6P/ADR	A	923938013	4,8V/3Ah Ni-Cd	1,5 h	8,4VA	225/450 lm	1170 gr.
GR-939/4P/ADR	A	923939012	4,8V/3Ah Ni-Cd	3 h	7,7VA	150/300 lm	1170 gr.
GR-939/6P/ADR	A	923939013	4,8V/4Ah Ni-Mh	3 h	8,5VA	225/415 lm	1210 gr.
GR-940/15L/ADR	A	923940003	3,6V/3Ah Ni-Cd	8 h	7VA	125/125 lm	1135 gr.

**ADDRESSABLE, WATERPROOF IP65, NON MAINTAINED LED EMERGENCY LUMINAIRES, WEATHER LIGHT**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-935/15L/ADR	A	923935018	3,6V/600mAh Ni-Cd	1,5 h	3VA	125 lm	1010 gr.
GR-935/30L/ADR	A	923935019	3,6V/1,5Ah Ni-Cd	1,5 h	3VA	250 lm	1080 gr.
GR-936/15L/ADR	A	923936017	3,6V/1,5Ah Ni-Cd	3 h	3VA	125 lm	1080 gr.
GR-936/30L/ADR	A	923936018	3,6V/3Ah Ni-Cd	3 h	4,3VA	250 lm	1175 gr.
GR-935/4P/ADR	A	923935020	4,8V/1,5Ah Ni-Cd	1,5 h	4VA	300 lm	1140 gr.
GR-935/6P/ADR	A	923935021	4,8V/3Ah Ni-Cd	1,5 h	4,8VA	450 lm	1230 gr.
GR-936/4P/ADR	A	923936019	4,8V/3Ah Ni-Cd	3 h	4,8VA	300 lm	1230 gr.
GR-936/6P/ADR	A	923936020	4,8V/4Ah Ni-Mh	3 h	5,5VA	415 lm	1270 gr.
GR-941/15L/ADR	A	923941002	3,6V/3Ah Ni-Cd	8 h	4VA	125 lm	1175 gr.

**ADDRESSABLE, SELF TESTING, MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-390/L/ADR	B	923390004	3,6V/1,5Ah Ni-Cd	1,5 h	7,5VA	270/270 lm	1165 gr.
GR-392/L/ADR	B	923392004	3,6V/3Ah Ni-Cd	3 h	8VA	270/270 lm	1235 gr.
GR-736/21L/ADR	C	923736022	3,6V/1,5Ah Ni-Cd	3 h	7VA	175/175 lm	870 gr.
GR-736/6L/ADR	C	923736006	3,6V/3Ah Ni-Cd	3 h	7,5VA	150/300 lm	920 gr.



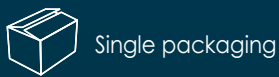
# Addressable Light

Addressable emergency luminaires

IP65

IP42

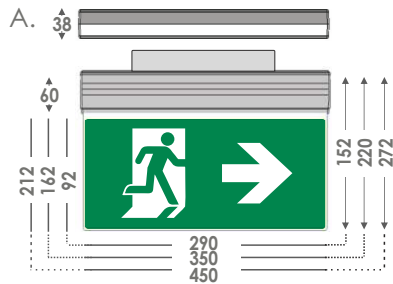
IP30



Single packaging

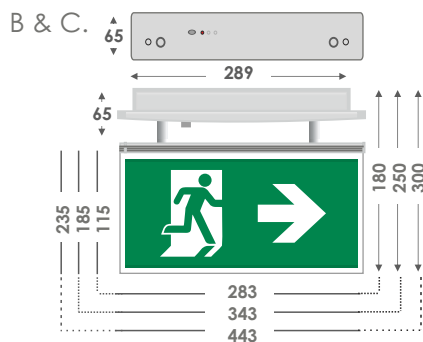
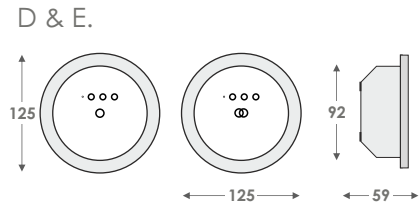


## ■ Dimensions in mm



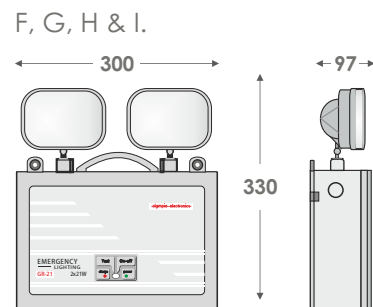
### Eco

- ZLD-28, ZLD-28/CBS: 290 x 152 x 38
- ZLD-34, ZLD-34/CBS: 350 x 220 x 38
- ZLD-44, ZLD-44/CBS: 450 x 272 x 38



### Lounge

- SLD-28/SP, SLD-28/CBS/SP: 289 x 180 x 34
- SLD-34/SP, SLD-34/CBS/SP: 343 x 250 x 34
- SLD-44/SP, SLD-44/CBS/SP: 443 x 300 x 34





**ADDRESSABLE, SELF TESTING, MAINTAINED LED EDGE ILLUMINATION SIGNS 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
ZLD-28/EM/ADR*	A	922502862	3,6V/1,5Ah Ni-Mh	3 h	6,5VA	125/125 lm	1075 gr.
ZLD-34/EM/ADR*	A	922503467	3,6V/1,5Ah Ni-Mh	3 h	6,7VA	145/125 lm	1475 gr.
ZLD-44/EM/ADR	A	922504458	3,6V/1,5Ah Ni-Mh	3 h	6,9VA	200/150 lm	2045 gr.

**ADDRESSABLE, SELF TESTING, MAINTAINED LED EDGE ILLUMINATION SIGNS 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
SLD-28/SP/ADR	B	922028019	3,6V/1,5Ah Ni-Mh	3 h	9VA	100/100 lm	1050 gr.
SLD-34/SP/ADR	B	922034018	3,6V/1,5Ah Ni-Mh	3 h	9,5VA	125/125 lm	1370 gr.
SLD-44/SP/ADR	B	922044011	3,6V/1,5Ah Ni-Mh	3 h	9,5VA	125/125 lm	2060 gr.
SLD-28/DZ/ADR	C	922028020	3,6V/1,5Ah Ni-Mh	3 h	9VA	100/100 lm	980 gr.
SLD-34/DZ/ADR	C	922034019	3,6V/1,5Ah Ni-Mh	3 h	9,5VA	125/125 lm	1340 gr.
SLD-44/DZ/ADR	C	922044012	3,6V/1,5Ah Ni-Mh	3 h	9,5VA	125/125 lm	2030 gr.

**ADDRESSABLE, SELF TESTING, NON MAINTAINED HIGH POWER LIGHT OUTPUT LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT SOURCE	LIGHT OUTPUT	GROSS WEIGHT
GRL-37/90/ADR	I	923037007	12V/7Ah Pb	1,5 h	16VA	2x6P Leds	3200 lm	4360 gr.
GRL-37/180/ADR	I	923037008	2x12V/7Ah Pb	3 h	16VA	2x6P Leds	3200 lm	6560 gr.
GRL-39/ADR	H	923039005	12V/7Ah Pb	3 h	16VA	2X84 Leds	1620 lm	3880 gr.

**ADDRESSABLE, WATERPROOF IP65, SELF TESTING, NON MAINTAINED HIGH POWER LIGHT OUTPUT LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT SOURCE	LIGHT OUTPUT	GROSS WEIGHT
GRL-37/90/WP/ADR	G	923037009	12V/7Ah Pb	1,5 h	16VA	2x6P Leds	3200 lm	4520 gr.
GRL-37/180/WP/ADR	G	923037010	2x12V/7Ah Pb	3 h	16VA	2x6P Leds	3200 lm	6700 gr.
GRL-39/WP/ADR	F	923039006	12V/7Ah Pb	3 h	16VA	2X84 Leds	1620 lm	4020 gr.

**ADDRESSABLE, SELF TESTING, NON MAINTAINED, CEILING MOUNTED LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	INSTALLATION	GROSS WEIGHT
GR-290/ADR	E	923290003	4,8V/1,2Ah Ni-Mh	1,5 h	3,5VA	270 lm	Escape routes	450 gr.
GR-291/ADR	D	923291003	4,8V/1,2Ah Ni-Mh	1,5 h	3,5VA	270 lm	Open areas	450 gr.
GR-292/ADR	E	923292001	4,8V/1,2Ah Ni-Mh	3 h	3,5VA	150 lm	Escape routes	450 gr.
GR-293/ADR	D	923293001	4,8V/1,2Ah Ni-Mh	3 h	3,5VA	150 lm	Open areas	450 gr.

# DALI Light

Addressable DALI  
self testing emergency  
luminaires



Single package



## Description

Dali (Digital Addressable Lighting Interface) is a luminaire communication protocol that can be used to monitor and control a luminaire network. It can monitor or control single or multiple luminaires and can be used to adjust various parameters such as light intensity, maximum light intensity as well as monitor the good operation of the luminaires. Via other Dali products, tests can be conducted by using Android cell phones, via Ethernet or via buttons.

### Advantages:

Monitor and control luminaire networks via computer through USB or Ethernet.

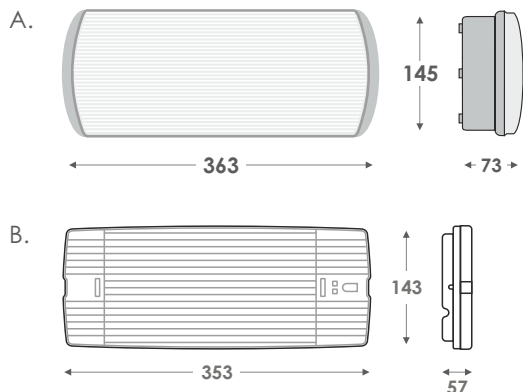
Monitor and control luminaires via Android cell phones.

Control luminaires via a button.

Capability to convert common luminaires to Dali luminaires via programmable relays.

Capability to expand the DALI network via an already installed 230V mains grid.

## Dimensions in mm





**DALI LED EMERGENCY LUMINAIRES CONTROL UNITS**

TYPE	PICTURE	CODE	DESCRIPTION
<b>Dali input unit</b>	C	980662100	Dali module with programmable inputs
<b>Dali / USB Bridge</b>	D	980662101	Dali to USB converter
<b>DeeBridge</b>	J	980662102	Ethernet to Dali converter
<b>BlueBridge</b>	E	980662103	Bluetooth to Dali converter
<b>Dali PLC –In</b>	F	980662104	Dali power line communication input module
<b>Dali 4 x Relay</b>	G	980662105	Dali module with 4 programmable relays
<b>Dali PLC</b>	H	980662106	Power line communication module
<b>Dali power supply</b>	I	980662107	Dali power supply

**DALI ADDRESSABLE, SELF TESTING, MAINTAINED LED EMERGENCY LUMINAIRES**

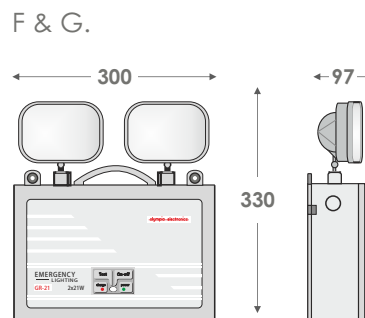
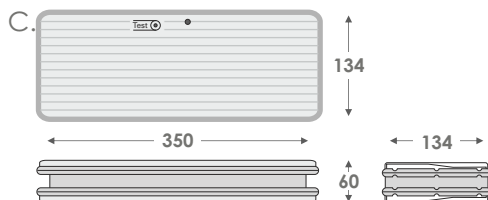
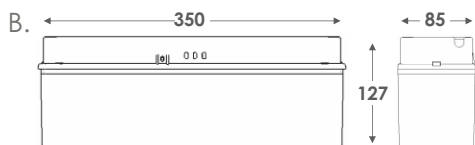
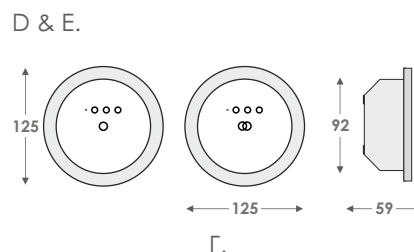
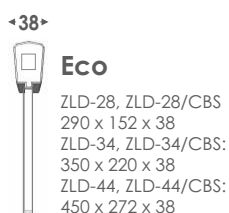
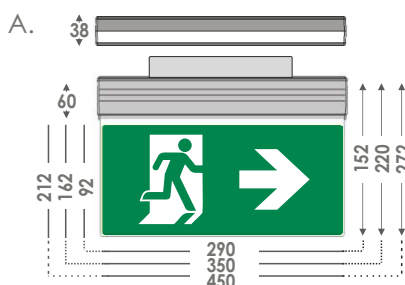
TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-315/15L/DALI/A</b>	B	923315032	3,6V/600mAh Ni-Cd	1,5 h	7VA	125/125 lm	740 gr.
<b>GR-316/15L/DALI/A</b>	B	923316028	3,6V/1,5Ah Ni-Cd	3 h	7,4VA	125/125 lm	810 gr.
<b>GR-315/30L/DALI/A</b>	B	923315033	3,6V/1,5Ah Ni-Cd	1,5 h	7,8VA	250/250 lm	810 gr.
<b>GR-316/30L/DALI/A</b>	B	923316029	3,6V/3Ah Ni-Cd	3 h	8,2VA	250/250 lm	890 gr.
<b>GR-315/4P/DALI/A</b>	B	923315030	4,8V/1,5Ah Ni-Cd	1,5 h	8,10VA	150/300 lm	825 gr.
<b>GR-315/6P/DALI/A</b>	B	923315031	4,8V/3Ah Ni-Cd	1,5 h	8,4VA	225/450 lm	955 gr.
<b>GR-316/4P/DALI/A</b>	B	923316026	4,8V/3Ah Ni-Cd	3 h	7,5VA	150/300 lm	950 gr.
<b>GR-316/6P/DALI/A</b>	B	923316027	4,8V/4Ah Ni-Cd	3 h	8,5VA	225/415 lm	995 gr.

**DALI ADDRESSABLE, WATERPROOF IP65, SELF TESTING, MAINTAINED LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
<b>GR-938/15L/DALI</b>	A	923938019	3,6V/600mAh Ni-Cd	1,5 h	7,5VA	125/125 lm	980 gr.
<b>GR-938/30L/DALI</b>	A	923938020	3,6V/1,5Ah Ni-Cd	1,5 h	8,5VA	250/250 lm	1050 gr.
<b>GR-939/15L/DALI</b>	A	923939022	3,6V/1,5Ah Ni-Cd	3 h	6,8VA	125/125 lm	1050 gr.
<b>GR-939/30L/DALI</b>	A	923939023	3,6V/3Ah Ni-Cd	3 h	8,2VA	250/250 lm	1130 gr.
<b>GR-938/4P/DALI</b>	A	923938017	4,8V/1,5Ah Ni-Cd	1,5 h	8,10VA	150/300 lm	1075 gr.
<b>GR-938/6P/DALI</b>	A	923938018	4,8V/3Ah Ni-Cd	1,5 h	8,4VA	225/450 lm	1170 gr.
<b>GR-939/4P/DALI</b>	A	923939020	4,8V/3Ah Ni-Cd	3 h	7,7VA	150/300 lm	1170 gr.
<b>GR-939/6P/DALI</b>	A	923939021	4,8V/4Ah Ni-Mh	3 h	8,5VA	225/415 lm	1210 gr.
<b>GR-940/15L/DALI</b>	A	923940004	3,6V/3Ah Ni-Cd	8 h	7VA	125/125 lm	1135 gr.



■ Dimensions in mm







**DALI ADDRESSABLE, SELF TESTING, MAINTAINED LED EDGE ILLUMINATION SIGNS 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
ZLD-28/EM/DALI	A	922502868	3,6V/1,5Ah Ni-Mh	3 h	6,5VA	150/150 lm	1075 gr.
ZLD-34/EM/DALI	A	922503472	3,6V/1,5Ah Ni-Mh	3 h	6,7VA	175/150 lm	1475 gr.
ZLD-44/EM/DALI	A	922504463	3,6V/1,5Ah Ni-Mh	3 h	6,9VA	200/150 lm	2045 gr.

**DALI ADDRESSABLE, SELF TESTING, MAINTAINED LED EMERGENCY LUMINAIRES 220-240V AC**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-390/L/DALI	C	923390005	3,6V/1,5Ah Ni-Cd	1,5 h	7,5VA	270/270 lm	1165 gr.
GR-392/L/DALI	C	923392005	3,6V/3Ah Ni-Cd	3 h	8VA	270/270 lm	1235 gr.
GR-736/21L/DALI	B	923736024	3,6V/1,5Ah Ni-Cd	3 h	7VA	175/175 lm	870 gr.
GR-736/6L/DALI	B	923736025	3,6V/3Ah Ni-Cd	3 h	7,5VA	150/300 lm	920 gr.

**DALI ADDRESSABLE, SELF TESTING, NON MAINTAINED CEILING MOUNTED LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT OUTPUT	INSTALLATION	GROSS WEIGHT
GR-290/DALI	E	923290004	4,8V/1,2Ah Ni-Mh	1,5 h	3,5VA	270 lm	Escape routes	450 gr.
GR-291/DALI	D	923291004	4,8V/1,2Ah Ni-Mh	1,5 h	3,5VA	270 lm	Open areas	450 gr.
GR-292/DALI	E	923292002	4,8V/1,2Ah Ni-Mh	3 h	3,5VA	150 lm	Escape routes	450 gr.
GR-293/DALI	D	923293002	4,8V/1,2Ah Ni-Mh	3 h	3,5VA	150 lm	Open areas	450 gr.

**DALI ADDRESSABLE, WATERPROOF IP65, SELF TESTING, NON MAINTAINED, HIGH POWER LIGHT OUTPUT LED EMERGENCY LUMINAIRES**

TYPE	PICTURE	CODE	BATTERY	DURATION	CONSUMPTION	LIGHT SOURCE	LIGHT OUTPUT	GROSS WEIGHT
GRL-37/90/WP/DALI	G	923037012	12V/7Ah Pb	1,5 h	16VA	2x6P Leds	3200 lm	4520 gr.
GRL-37/180/WP/DALI	G	923037013	2x12V/7Ah Pb	3 h	16VA	2x6P Leds	3200 lm	6700 gr.
GRL-39/WP/DALI	F	923039007	12V/7Ah Pb	3 h	16VA	2X84 Leds	1620 lm	4020 gr.

# 24V DC Addressable central battery system

(A)



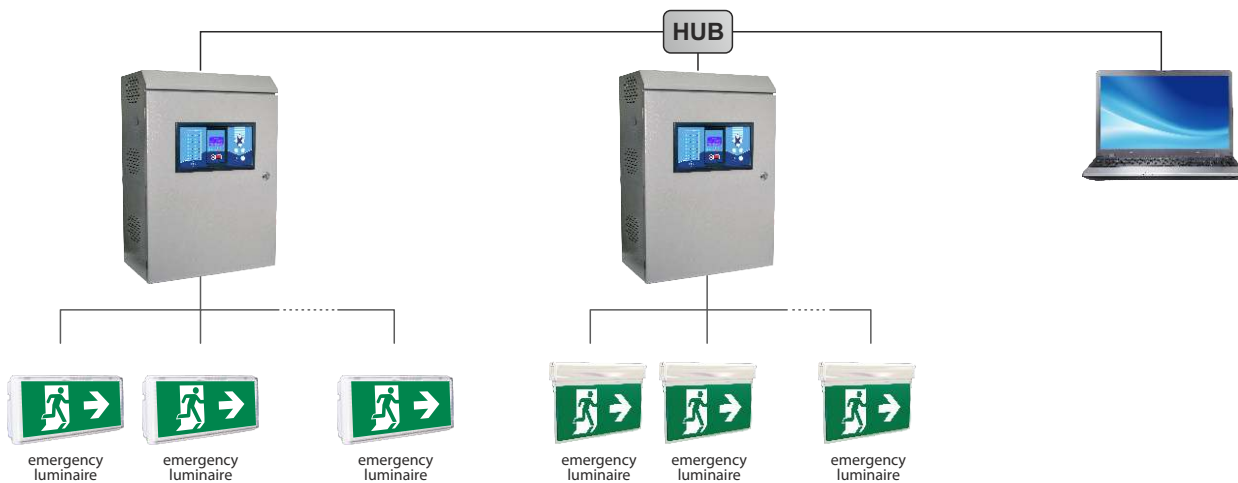
(B)



(C)



- ▶ Output: 24V DC
- ▶ 300W - 600W panels
- ▶ 4 - 8 zones
- ▶ Capability for connecting several panels on an ethernet network
- ▶ The programming, control and testing of the system can be done using a web browser (Internet Explorer, Mozilla Firefox, Chrome)
- ▶ Independent program for each zone for maintained or non-maintained operation.



## 300W / 24V DC PANELS

TYPE	PICTURE	CODE	DESCRIPTION
GR-8600/300/4	A	923860004	300 Watt panel with 4 lighting circuits. Requires 2 bateries 12V/33Ah
GR-8600/300/8	A	923860005	300 Watt panel with 8 lighting circuits. Requires 2 bateries 12V/33Ah

## 600W / 24V DC PANELS

TYPE	PICTURE	CODE	DESCRIPTION
GR-8600/600/8	A	923860006	600 Watt panel with 8 lighting circuits. Requires 2 bateries 12V/55Ah

## PERIPHERALS

TYPE	PICTURE	CODE	DESCRIPTION
GR-8610	C	923861000	4 zone lighting circuit extension card for addressable luminaires CBS 24V / 300 Watt
GR-8530	B	923853000	Network card through ETHERNET



**ADDRESSABLE LED EMERGENCY LUMINAIRES 24V DC EASY LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-325/6P/24V/ADR/A	A	923325009	Emergency	5,5W	580lm	
GR-324/15L/24V/ADR/A	A	923324021	Emergency	1,1W	125lm	
GR-324/30L/24V/ADR/A	A	923324022	Emergency	2,1W	250lm	

**ADDRESSABLE LED EMERGENCY LUMINAIRES 24V DC ECO LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
DLD-28/w/24V/ADR	C	922202810	Emergency, indication	0,85W	100lm	
DLD-34/w/24V/ADR	C	922203414	Emergency, indication	1,1W	125lm	
DLD-44/w/24V/ADR	C	922204407	Emergency, indication	1,1W	125lm	

**ADDRESSABLE LED EMERGENCY LUMINAIRES 24V DC ECO LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
ZLD-28/24V/ADR/EM	B	922502869	Emergency, indication	1,3W	150lm	
ZLD-34/24V/ADR/EM	B	922503473	Emergency, indication	1,5W	175lm	
ZLD-44/24V/ADR/EM	B	922504464	Emergency, indication	1,6W	200lm	

**ADDRESSABLE LED EMERGENCY LUMINAIRES 24V DC SPOT LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-280/24V/ADR	E	923280004	Emergency, ceiling mounted	2,2W	270lm	
GR-281/24V/ADR	D	923281004	Emergency, ceiling mounted	2,2W	270lm	
GR-296/30L/CBS/24V/ADR	F	923296006	Emergency, ceiling mounted	2,7W	250lm	
GR-296/60L/CBS/24V/ADR	F	923296007	Emergency, ceiling mounted	4,6W	500lm	



# CBS 24V DC Central battery system

(A)



(B)

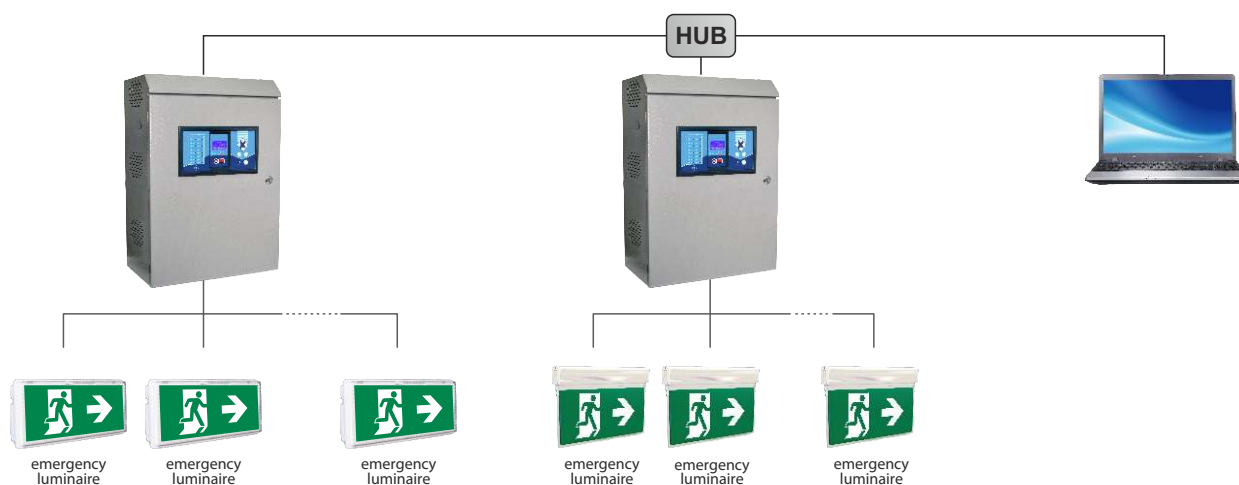


(C)



- ▶ Output: 24V DC In the mains and in emergency
- ▶ 300 - 600W zones
- ▶ 4-16 zones
- ▶ Capability for connecting several panels on an ethernet network
- ▶ The programming, control and testing of the system can be done using a web browser (Internet Explorer, Mozilla Firefox, Chrome)
- ▶ Independent program for each zone for maintained or non-maintained operation.

CE



## 300W / 24V DC PANELS

TYPE	PICTURE	CODE	DESCRIPTION
GR-8500/300/4	A	923850000	300W panel with 4 lighting circuits. Requires 2 bateries 12V/33Ah
GR-8500/300/8	A	923850001	300W panel with 8 lighting circuits. Requires 2 bateries 12V/33Ah
GR-8500/300/12	A	923850002	300W panel with 12 lighting circuits. Requires 2 bateries 12V/33Ah
GR-8500/300/16	A	923850003	300W panel with 16 lighting circuits. Requires 2 bateries 12V/33Ah

## 600W / 24V DC PANELS

TYPE	PICTURE	CODE	DESCRIPTION
GR-8500/600/8	A	923850004	600W panel with 8 lighting circuits. Requires 2 bateries 12V/55Ah
GR-8500/600/16	A	923850005	600W panel with 16 lighting circuits. Requires 2 bateries 12V/55Ah

## PERIPHERALS

TYPE	PICTURE	CODE	DESCRIPTION
GR-8510	C	923851000	4 zone lighting circuit extension card 24V / 300 Watt
GR-8530	B	923853000	Network card through ETHERNET



**LED EMERGENCY LUMINAIRES 24V DC EASY LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-325/6P/24V DC/A	A	923325008	Emergency	5,4W	580 lm	
GR-324/15L/24V DC/A	A	923324018	Emergency	1,05W	125 lm	700 gr.
GR-324/30L/24V DC/A	A	923324019	Emergency	2,05W	250 lm	700 gr.

**WATERPROOF IP65 LED EMERGENCY LUMINAIRES 24V DC WEATHER LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-926/15L/24V DC	B	923926014	Emergency, IP65	1,05W	125 lm	830 gr.
GR-926/30L/24V DC	B	923926015	Emergency, IP65	2,05W	250 lm	830 gr.

**LED EMERGENCY LUMINAIRES 24V DC RECT LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-736/21L/24V DC	C	923736007	Emergency	1,5W	175 lm	680 gr.

**LED EDGE ILLUMINATION SIGNS 24V DC ECO LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
DLD-28/CBS/w/24V DC	D	922202809	Emergency, indication	0,8W	100 lm	610 gr.
DLD-34/CBS/w/24V DC	D	922203413	Emergency, indication	1,05W	125 lm	960 gr.
DLD-44/CBS/w/24V DC	D	922204406	Emergency, indication	1,05W		
ZLD-28/CBS/24V DC/EM	E	922502867	Emergency, indication	1,25W	150 lm	945 gr.
ZLD-34/CBS/24V DC/EM	E	922503471	Emergency, indication	1,45W	175 lm	1340 gr.
ZLD-44/CBS/24V DC/EM	E	922504462	Emergency, indication	1,55W	200 lm	1870 gr.

**LED EDGE ILLUMINATION SIGNS 24V DC LOUNGE LIGHT**

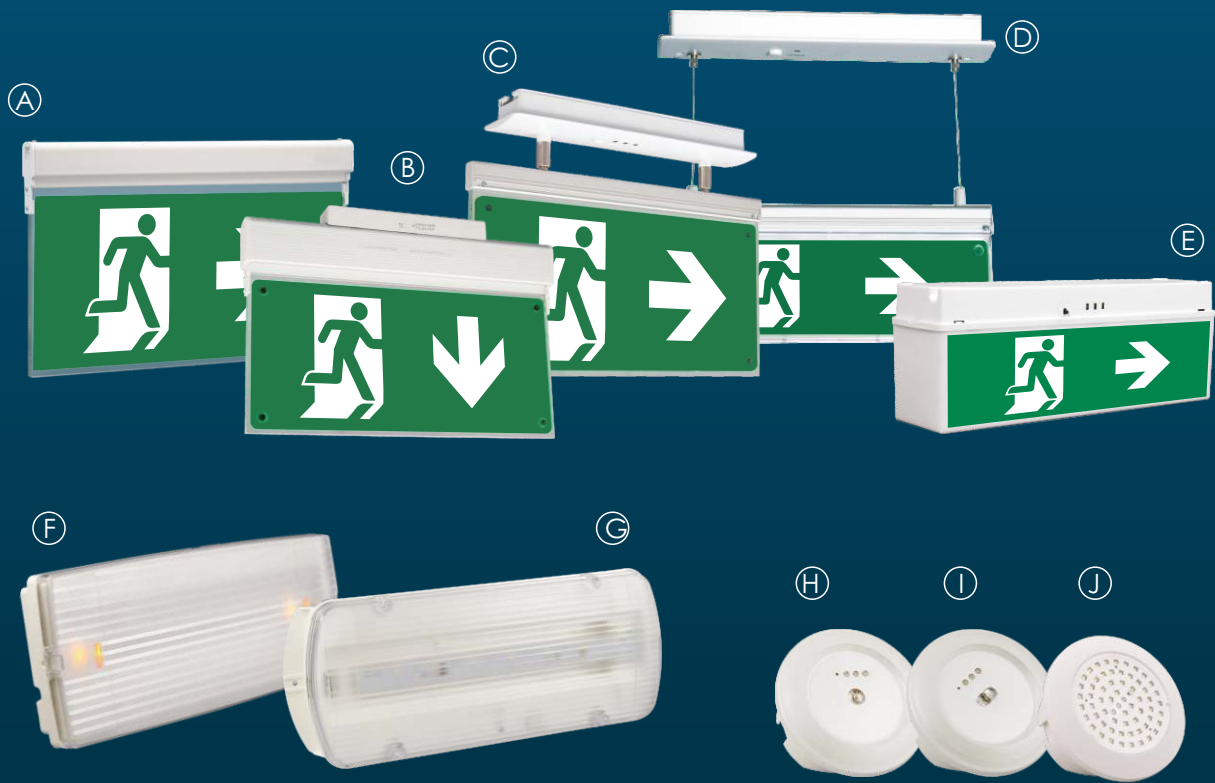
TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
SLD-28/CBS/SP/24V DC	F	922028021	Emergency, indication	0,8W	100 lm	910 gr.
SLD-34/CBS/SP/24V DC	F	922034020	Emergency, indication	1,05W	125 lm	1310 gr.
SLD-44/CBS/SP/24V DC	F	922044013	Emergency, indication	1,05W	125 lm	2015 gr.
SLD-28/CBS/DZ/24V DC	G	922028022	Emergency, indication	0,8W	100 lm	880 gr.
SLD-34/CBS/DZ/24V DC	G	922034021	Emergency, indication	1,05W	125 lm	1315 gr.
SLD-44/CBS/DZ/24V DC	G	922044014	Emergency, indication	1,05W	125 lm	1755 gr.

**CEILING MOUNTED LED EMERGENCY LUMINAIRES 24V DC SPOT LIGHT**

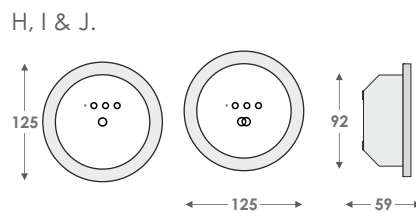
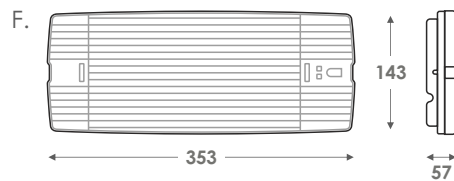
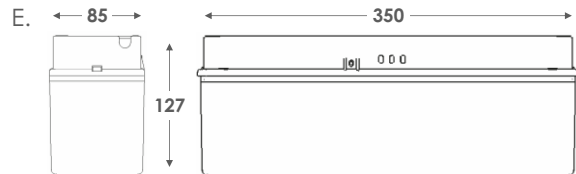
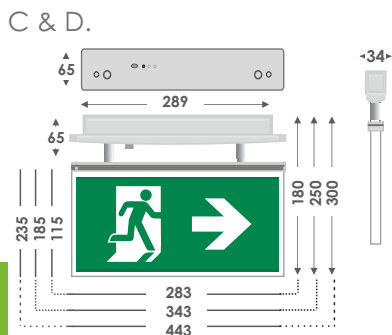
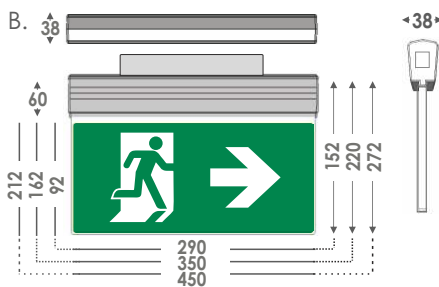
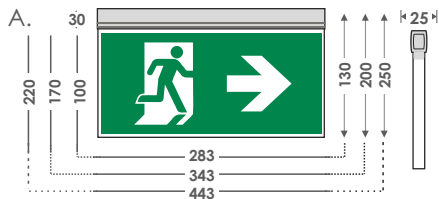
TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-296/30L/CBS/24V DC	J	923296004	Emergency, ceiling mounted	2,7W	250 lm	320 gr.
GR-296/60L/CBS/24V DC	J	923296005	Emergency, ceiling mounted	4,6W	500 lm	320 gr.
GR-280/24V DC	I	923280003	Emergency, ceiling mounted	2,1W	270 lm	320 gr.
GR-281/24V DC	H	923281003	Emergency, ceiling mounted	2,1W	270 lm	320 gr.



# CBS 24V ACDC LUMINAIRES



## ■ Dimensions in mm







**LED EMERGENCY LUMINAIRES 24V ACDC EASY LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-325/6P/24V ACDC/A	F	923325007	Emergency	5,9W/6,3VA	580 lm	
GR-324/15L/24V ACDC/A	F	923324016	Emergency	1,25W/1,4VA	125 lm	700 gr.
GR-324/30L/24V ACDC/A	F	923324017	Emergency	2,6W/2,8VA	250 lm	700 gr.

**WATERPROOF IP65 LED EMERGENCY LUMINAIRES 24V ACDC WEATHER LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-926/15L/24V ACDC	G	923926011	Emergency IP65	1,5W/1,8VA	125 lm	830 gr.
GR-926/30L/24V ACDC	G	923926012	Emergency IP65	2,5W/2,8VA	250 lm	830 gr.

**LED EMERGENCY LUMINAIRES 24V ACDC RECT LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-736/21L/24V ACDC	E	923736005	Emergency	2,2W/2,5VA	175 lm	680 gr.

**LED EDGE ILLUMINATION SIGNS 24V ACDC ECO LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
DLD-28/CBS/w/24V ACDC	A	922202808	Emergency, indication	1,2W/1,5VA	100 lm	610 gr.
DLD-34/CBS/w/24V ACDC	A	922203412	Emergency, indication	1,5W/1,8VA	125 lm	960 gr.
DLD-44/CBS/w/24V ACDC	A	922204405	Emergency, indication	1,5W/1,8VA	125 lm	
ZLD-28/CBS/24V ACDC/EM	B	922502864	Emergency, indication	1,4W/1,55VA	150 lm	945 gr.
ZLD-34/CBS/24V ACDC/EM	B	922503469	Emergency, indication	1,6W/1,75VA	175 lm	1340 gr.
ZLD-44/CBS/24V ACDC/EM	B	922504460	Emergency, indication	1,85W/2,05VA	200 lm	1870 gr.

**LED EDGE ILLUMINATION SIGNS 24V ACDC LOUNGE LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
SLD-28/CBS/SP/24V ACDC	C	922028017	Emergency, indication	1,2W/1,5VA	100 lm	910 gr.
SLD-34/CBS/SP/24V ACDC	C	922034016	Emergency, indication	1,5W/1,8VA	125 lm	1310 gr.
SLD-44/CBS/SP/24V ACDC	C	922044010	Emergency, indication	1,5W/1,8VA	125 lm	
SLD-28/CBS/DZ/24V ACDC	D	922028016	Emergency, indication	1,2W/1,5VA	100 lm	880 gr.
SLD-34/CBS/DZ/24V ACDC	D	922034015	Emergency, indication	1,5W/1,8VA	125 lm	
SLD-44/CBS/DZ/24V ACDC	D	922044009	Emergency, indication	1,5W/1,8VA	125 lm	

**CEILING MOUNTED LED EMERGENCY LUMINAIRES 24V ACDC SPOT LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-296/30L/CBS/24V ACDC	J	923296002	Emergency, ceiling mounted	2,7W/3VA	250 lm	320 gr.
GR-296/60L/CBS/24V ACDC	J	923296003	Emergency, ceiling mounted	4,6W/5,1VA	500 lm	320 gr.
GR-280/24V ACDC	I	923280001	Emergency, ceiling mounted	2,1W/2,3VA	270 lm	320 gr.
GR-281/24V ACDC	H	923281001	Emergency, ceiling mounted	2,1W/2,3VA	270 lm	320 gr.

# CBS 230V AC Central battery system

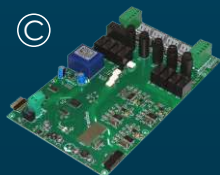
(A)



(B)

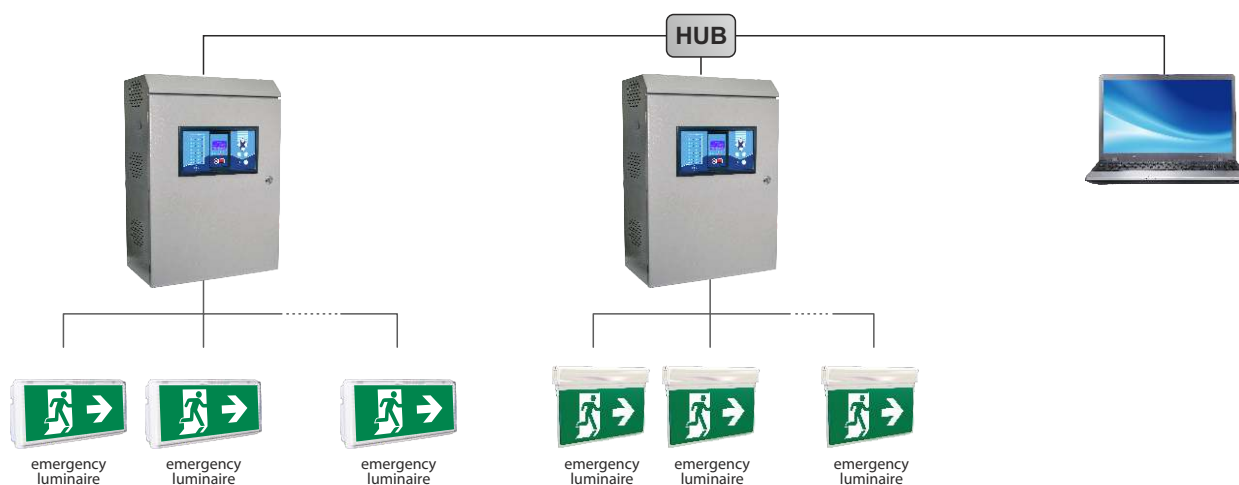


(C)



- ▶ Output: 230V AC In the mains and in emergency
- ▶ 300 - 600VA panels
- ▶ 4-8 zones
- ▶ Capability for connecting several panels on an ethernet network
- ▶ The programming, control and testing of the system can be done using a web browser (Internet Explorer, Mozilla Firefox, Chrome)
- ▶ Independent program for each zone for maintained or non-maintained operation.

CE



## 300VA/1h or 100VA/3h / 230V AC PANELS

TYPE	PICTURE	CODE	DESCRIPTION
GR-9500/300/4	A	923950002	4 lighting circuits panel. Requires 2 bateries 12V/33Ah
GR-9500/300/8	A	923950004	8 lighting circuits panel. Requires 2 bateries 12V/33Ah

## 600VA/1h or 200VA/3h / 230V AC PANELS

TYPE	PICTURE	CODE	DESCRIPTION
GR-9500/600/8	A	923950003	8 lighting circuits panel. Requires 2 bateries 12V/55Ah

## PERIPHERALS

TYPE	PICTURE	CODE	DESCRIPTION
GR-9510	C	923951000	4 zone lighting circuit extension card 230V / 300 Watt
GR-8530	B	923853000	Network card through ETHERNET



**LED EMERGENCY LUMINAIRES 230V ACDC SLIM LEDs LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-2000/CBS	C	923200004	Emergency	1,55W/1,78VA	125 lm	350 gr.

**LED EMERGENCY LUMINAIRES 230V ACDC EASY LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-324/4P/A	A	923324013	Emergency	5,8W/6,9VA	460 lm	660 gr.
GR-325/6P/A	A	923325006	Emergency	6,5W/6,9VA	580 lm	660 gr.
GR-324/15L/A	A	923324014	Emergency	1,75W/2VA	125 lm	660 gr.
GR-324/30L/A	A	923324015	Emergency	2,9W/3,2VA	250 lm	660 gr.

**WATERPROOF IP65 LED EMERGENCY LUMINAIRES 230V ACDC WEATHER LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-926/15L	B	923926007	Emergency IP65	1,75W/2VA	125 lm	880 gr.
GR-926/30L	B	923926008	Emergency IP65	2,9W/3,2VA	250 lm	880 gr.

**LED EDGE ILLUMINATION SIGNS 230V ACDC ECO LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
ZLD-28/CBS/EM	E	922502863	Emergency, indication	1,9W/2,1VA	150 lm	985 gr.
ZLD-34/CBS/EM	E	922503468	Emergency, indication	2,2W/2,42VA	175 lm	1380 gr.
ZLD-44/CBS/EM	E	922504459	Emergency, indication	2,6W/2,86VA	200 lm	1910 gr.
DLD-28/CBS/w	D	922202870	Emergency, indication	1,5W/4,5VA	100 lm	650 gr.
DLD-34/CBS/w	D	922603401	Emergency, indication	1,5W/4,5VA	125 lm	1000 gr.
DLD-44/CBS/w	D	922604410	Emergency, indication	1,5W/4,5VA	125 lm	1620gr.

**LED EDGE ILLUMINATION SIGNS 230V ACDC LOUNGE LIGHT**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
SLD-28/CBS/SP	F	922028009	Emergency, indication	1,35W/1,65VA	100 lm	930 gr.
SLD-34/CBS/SP	F	922034010	Emergency, indication	1,60W/1,9VA	125 lm	1260 gr.
SLD-44/CBS/SP	F	922044007	Emergency, indication	1,60W/1,9VA	125 lm	1970 gr.
SLD-28/CBS/DZ	G	922028003	Emergency, indication	1,35W/1,65VA	100 lm	930 gr.
SLD-34/CBS/DZ	G	922034004	Emergency, indication	1,60W/1,9VA	125 lm	1290 gr.
SLD-44/CBS/DZ	G	922044003	Emergency, indication	1,60W/1,9VA	125 lm	1960 gr.

**CBS SYSTEM, WITH EXTERNAL LUMINAIRE**

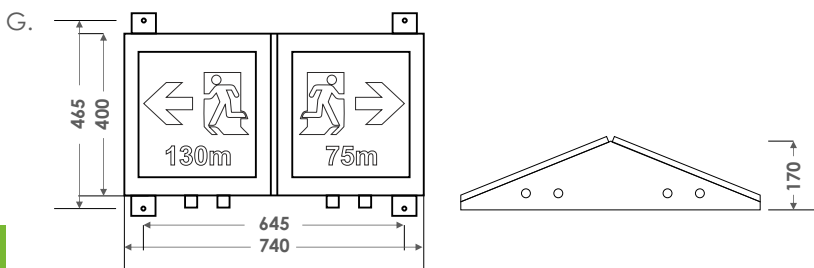
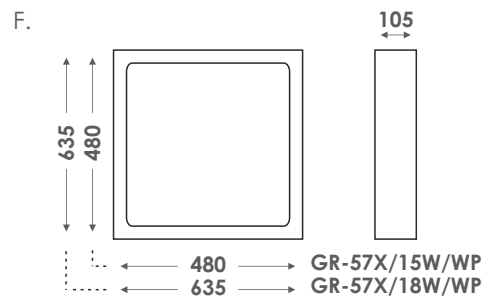
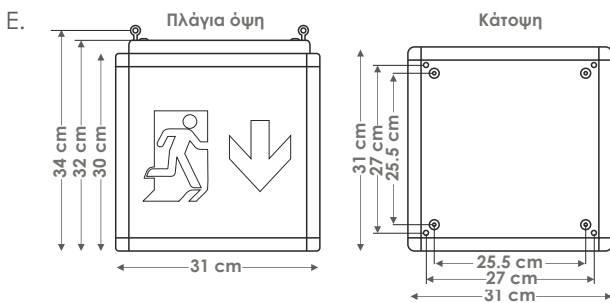
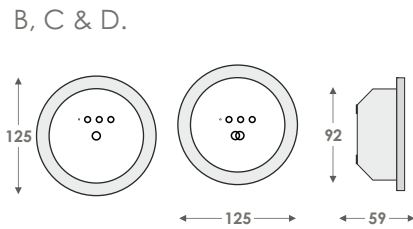
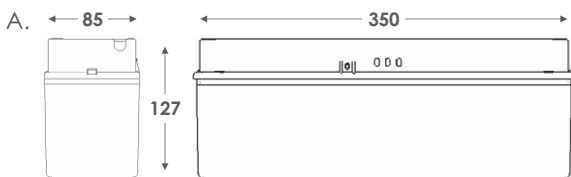
TYPE	CODE	DESCRIPTION
KIT-75/84	923084003	Mains electronic converter GR-75 with GR-84 1W spot LED



# CBS 230V AC LUMINAIRES



## ■ Dimensions in mm





#### LED EMERGENCY INDICATION LUMINAIRES 230V ACDC 3D & TUNNEL LIGHT

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-424/4P	E	923424001	Emergency, indication	5,8W/6,1VA	460lm	3170 gr.
GR-576/L/15/WP	F	923576100	Emergency, indication	7,2W/7,6VA	680lm	
GR-576/L/15/WP/O	F	923576102	Emergency, indication	7,2W/7,6VA	680lm	7445 gr.
GR-576/L/18/WP	F	923576101	Emergency, indication	8,8W/9,3VA	850lm	
GR-576/L/18/WP/O	F	923576103	Emergency, indication	8,8W/9,3VA	850lm	
GR-575/L/WP	G	923575100	Emergency, indication	14,4W/15,2VA	1360lm	

#### CEILING MOUNTED LED EMERGENCY LUMINAIRES 230V ACDC SPOT LIGHT

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-296/30L/CBS	D	923296000	Emergency, ceiling mounted	2,9W/3,15VA	255lm	250 gr.
GR-296/60L/CBS	D	923296001	Emergency, ceiling mounted	4,9W/5,3VA	510 lm	250 gr.
GR-280	C	923280000	Emergency, ceiling mounted	2,6W/3VA	270 lm	250 gr.
GR-281	B	923281000	Emergency, ceiling mounted	2,6W/3VA	270 lm	250 gr.

#### LED EMERGENCY LUMINAIRES 230V ACDC RECT LIGHT

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	LIGHT OUTPUT	GROSS WEIGHT
GR-736/6L/CBS	A	923736002	Emergency	4,75W/5,05VA	340 lm	715 gr.
GR-736/21L/CBS	A	923736004	Emergency	4,6W/4,9VA	175 lm	715 gr.





WOULD YOU  
GUMBLE WITH  
YOUR LIFE?

PLAY IT SAFE

CERTIFIED  
EMERGENCY LIGHTING



*for a safer world!*







*for a safer world!*



## FIRE DETECTION

CONVENTIONAL SYSTEMS  
ADDRESSABLE SYSTEMS  
PERIPHERALS

## DEFINITIONS

**Fire detection system.** Is a group of devices that are used to detect fire hot spots and to give an alarm signal by audible, visual or other means.

**Conventional fire detection systems.** Are fire detection systems where the detectors and call points are divided into detection zones. The indications on the control panels, refer to detection zones and not individual devices.

**Analog addressable fire detection systems.** Are fire detection systems where the sensors give analog signals for the phenomenon that they detect. The panel recognizes the exact point (address) of every device.

**Optical smoke sensor.** Is a device that senses smoke using an optical method. (With an IR transmitter and receiver). This optical method does not use radioactive elements.

**Ionization detector.** Is a device that detects smoke by current variations which run through the ionization smoke chamber. The detector's operation depends on the radioactive element (Am241).

**Beam detectors.** These smoke detectors emit an Infrared beam inside the protected area. They consist of at least two parts which are placed at different locations and are used to cover large areas.

**Heat of rise detectors.** Are devices that sense rapid temperature fluctuation

**Thermal detectors.** Are devices that are activated when the temperature exceeds a pre-determined level.

**Explosive gas detectors.** Are devices that have a special sensor that is capable of detecting a specific category of explosive or toxic gases. There are several types of explosive gas detectors according to the type of gas that they detect

**Manual fire detection call points.** Are devices that activate manually the central control panel.

**Siren/beacon.** Is a device that is activated by the control panel and is used to warn with a strong audible and visual signal for the presence of a fire.

**Public address system.** Is a device that is activated by the control panel and has the capability to transmit the siren's sound as well as verbal commands which can be heard in the covered areas.

**Electromagnetic door latches.** Are devices that retain the fire doors open but release them in the event of a fire condition

**Remote sensor LED.** Is a device that can be connected to one or more sensors and lights when one of them is activated in order to indicate the signal externally from the covered area.

## SYSTEM SELECTION

**The selection of a suitable fire detection system essentially begins from the selection of the panel.**

Without any general rules to adhere to, the total size of the area, its usage, the construction material and certain special requirements are factors that influence the size and the type of the panel.

**If we select a conventional system** we begin by dividing the area into zones and taking care that:

- Each zone does not have an area greater than 2000 sqm.
- Each zone contains a clearly defined area (e.g. A floor level).
- The total electrical capability of the zone is not exceeded.
- The point of the fire can be easily located by someone that is in the vicinity of the zone.

**If the required zones** do not exceed 6 and there is no need for future expansion of the system then we can select on the BS-1632, BS-1634 or BS-636 panels.

**In very large areas,** where it is required that the panel shows information of the exact location of the sensors that are activated, we must select an addressable system with one or more loops depending on the total covered area. Each loop has specific capacity (191 or 240 devices, depending on the system) and can theoretically cover approximately 5000 sqm. All the devices of the loop are connected on a 2-wire hook up arrangement by which they are powered and communicate with the panel. In order to prevent a fault from disrupting the operation of the whole loop, line isolators are placed periodically between the detectors and the call points.



## ■ INSTALLATION OF DEVICES

### Manual call points

The selection of suitable installation points in general can be done by following these guides:

- No point in the covered area must be at a greater distance of 30m from a manual call point.
- They must be installed on the escape routes, in points that lead to stairs and near every exit that leads to external areas.
- The call points can be connected on the same zone as the sensors but care must be taken to avoid mis-operation if a sensor is removed.

If this is not possible due to the configuration of the zones, then they must be installed in a separate zone.

They are installed at a height of about 1,2 to 1,5 meters and in clearly visible areas. Each call point must be adequately illuminated by the emergency illumination system.

### Selecting sensors

Start by selecting the suitable type of sensor for each area. Care must be taken to select the type of detector that will issue an alarm in the shortest time period from the time that the fire starts while simultaneously avoiding false alarms in normal operation. It is significant to find the golden mean between these two requirements in order to design a successful and reliable system.

In most cases we can use as a guide the table found on page 52.

### Installing smoke, heat of rise and thermal detectors.

The greatest quantity of smoke heat during a fire, will be concentrated in the highest points of the closed area. It is in these points that we must install the smoke and heat detectors.

When the ceiling of the area is level without interruptions from constructional beams then the mounting positions of the detectors can be calculated from the guides mentioned below:

- The area covered by a sensor must not be greater than 50 sqm.
- The distance from an adjacent wall must not be more than 3.5 meters.
- The distance between two consecutive detectors must not exceed 12.5 meters.

If the ceiling is interrupted by construction beams then each divided area must be designed separately from the others by adhering the pre-mentioned rules.

If the ceiling is inclined then we must surely install one line of detectors on the highest point.

### Installing gas detectors

The concentration area of a particular explosive or toxic gas depends on its molecular weight. The "heavy" gases, those that have a molecular weight greater than 29, are concentrated near the ground. The "lighter" gases, those that have a molecular weight less than 29, concentrate near the ceiling.

Gas detectors can be connected to the same zone with other types of detectors and manual call points. Due to the nature of the electrical installation (requires two more wires) and the different coping probably required by an alarm caused by gases, it is advisable from the beginning to install these detectors on zones that are independent from detectors and sensors of other types.

The table below shows the most common explosives gases, their chemical formula and their molecular weight.

## ■ Certain areas & suitable detectors

Area	Detector				
	Smoke	Beam	Heat of rise	Thermal	Explosive gas
Corridors - Stair wells	**				
Elevators	**				
Offices - general purpose areas	**				
Convention areas	**				
Reception areas	**				
Lobbies - Halls	**				
Malls	**				
Theaters - cinemas	**				
Storage areas	*	**			
Schools	**				
Clinics - Surgeries - Laboratories	**				
Machine shops	**				
Factories - Repair shops	**	**			
Churches	**				
Telephone booths	**				
Kitchens - electric ovens			**		
Boiler rooms			*	**	
Garages			**	*	
Gas kitchens			**		**
Beverage preparation areas					**

\*\* The most suitable \* Acceptable

## ■ Explosive & toxic gases

Name	Chemical formula	Molecular weight
Butane	C <sub>4</sub> H <sub>10</sub>	58
Propane	C <sub>3</sub> H <sub>8</sub>	44
Methane	CH <sub>4</sub>	16
Hydrogen	H <sub>2</sub>	2
Carbon monoxide	CO	28
Benzol	C <sub>6</sub> H <sub>6</sub>	78
Ethyl Alcohol	C <sub>2</sub> H <sub>5</sub> OH	46
Ammonia	NH <sub>3</sub>	17
Hydrochloride	HCL	36
Carbon dioxide	CO <sub>2</sub>	44
Chloride dioxide	CLO <sub>2</sub>	68
Sulphur dioxide	SO <sub>2</sub>	64
Hydro sulphor	H <sub>2</sub> S	34

If we are called upon to sense "heavy" gases then the detectors must be placed approximately 30 centimeters from the ground and at a distance of no more than 4 meter in a horizontal direction from the probable leakage point. No obstacles, that interfere with the movement of the air, must be placed between the detector and the probable leakage point.

To detect "light" gases, the detectors must be placed approximately 30 centimeters below the ceiling. No construction beams must exist between the detector and the probable leak point.

Also care must be taken so the detector is not mounted:

- In areas with excessive humidity.
- In areas where it can come in contact with water.

### Fire alarm indication and warning equipment.

With this general title we mean all those devices which have a purpose of warning and indicating a fire alarm condition to the public. Such devices are sirens, beacons, bells, automatic telephone dialers and other special devices. Special care must be taken for the selection and the installation of the sirens. This device, equal in value with the detectors of the system, is the peripheral that will warn the people responsible in order to intervene and the public to evacuate the premises.

The number of sirens and the mounting positions can be calculated if we take into account the following:

- In a multi-storey building at least one siren must be installed in each floor.
  - The sound pressure level of the alarm system must be higher than the normal sound pressure usually found in each area.
  - The sirens must be divided into two independent circuits. In this way, if one circuit fails there will always be a backup circuit to warn the public.
  - The sirens must have a similar sound that must be different from other audible devices that operate in the building.
  - If the alarm must wake sleeping people the sound pressure level must be 75dB at the height of the bed.
- In all siren installations it is advisable to install beacons as well.

## OTHER GUIDES

### Special attention should be given to the battery of the system.

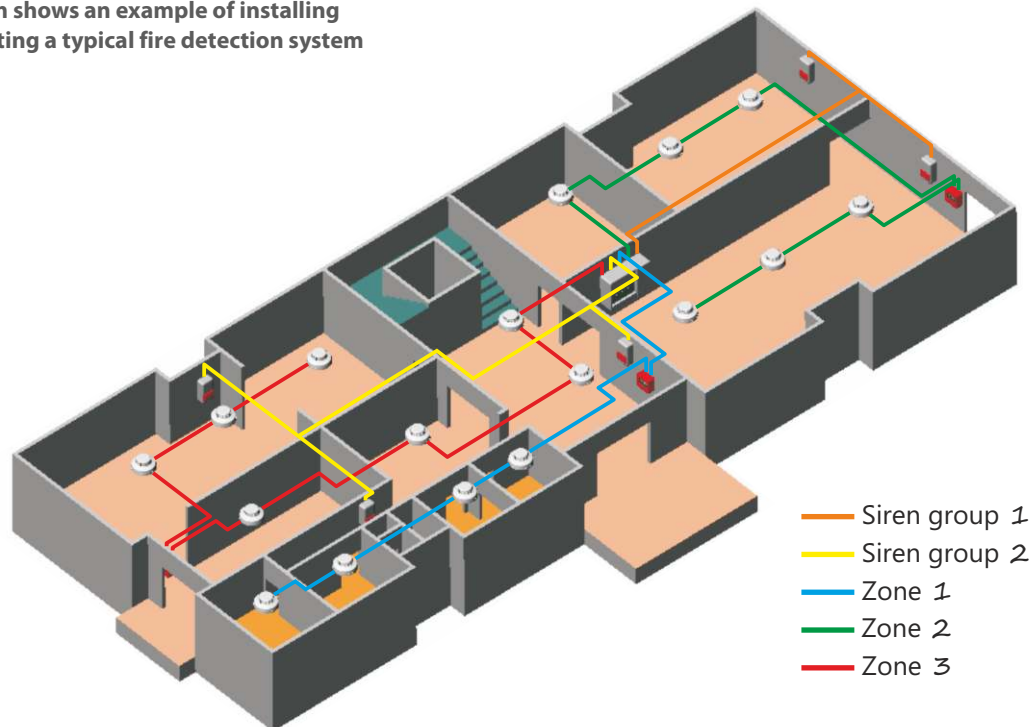
The battery type normally used is sealed lead acid (Pb). It's maximum life span is about 4 years, but depends on the discharge cycle. Normally after this time period it must be replaced. The panel has a special circuit that warns us about the battery condition. The battery should have a suitable capacity in order to permit the system to operate for 36 hours during a power failure and 30 minutes during an alarm condition.

### Cables.

Conventional fire detection system do not have any special requirements concerning the types of cables that they use for connecting their devices. In general, a flexible cable with a cross section of 0,75mm<sup>2</sup> is suitable for connecting the zones. For connecting the sirens where the power requirements are greater, it is required that the cable's cross section is 1,5mm<sup>2</sup>.

In analog addressable systems, where loops are used, the cable must contain an external shield (e.g. LiYCY) that is connected to the mains power supply ground terminal.

### The diagram shows an example of installing and connecting a typical fire detection system





## ■ INSPECTION AND SYSTEM MAINTENANCE

By the proper installation of all devices on a fire detection system we ensure it's proper first time operation. In order for the system to be reliable it must be inspected and maintained regularly.

The central panel has indications of all faults in the system that can degrade it's effectiveness. When a fault indication is observed, certain precautionary measures should be taken to restore the good operation of the system.

The most common faults and their consequences in a conventional fire detection system are:

- Zone fault indication. This means a short or open circuit of the cables that belong to the zone. It can also mean that a detector was removed from it's base. The area that is covered by this specific zone in reality is not monitored or in the best cases it is not fully monitored.
- Siren fault indication. This means an open or short circuit of the cables that power the sirens. All or some of the sirens may not be able to operate when there is an alarm condition. In this case the alarm may not be heard in some areas.

- Battery fault indication. This means that the battery is either disconnected or does not charge correctly. In this fault condition, the system will not operate or will have a very limited duration.

Every alarm signal that is not caused by a fire condition must be investigated and the causes that produced the alarm must be found in order to prevent false alarms.

The correct operation of the system must be verified once a week by activating the system using a different manual call point each time.

Each time the area is rearranged, the system's devices must be checked for good operation.

Finally, once a year the system must be inspected by activating it from each sensor or call point position.

## ■ FIRE DETECTION SYSTEM MAINTENANCE ROUTINE

### Generally

Initially there must be an agreement between the user and/or owner and the manufacturer, supplier or other competent body for supervision, maintenance and repair of the system. The agreement must provide access to the installations and specify the length of time allowed for the restoration of the equipment function after fault. The name and the telephone number of the maintenance organization must be fixed next to the central panel.

A sufficient maintenance procedure includes daily, monthly, quarterly and yearly checks performed by the user or the special maintenance person as described below.

### Daily checks

The user and/or owner must ensure that the following daily checks are performed:

- a.** That the panel indicates that it is in idle mode or that every change of the idle mode has been registered in the event table and a report was made where necessary to the competent body.
- b.** That the necessary attention was paid to every alarm registered until the previous working day.
- c.** That, where necessary, every flawed operation of the system was repaired.

Every fault must be registered in the event table and the necessary corrective actions must be taken the soonest possible.

### Monthly checks

At least once a month the user and/or owner must ensure that:

- a.** Every stand-by generator, required according to the regulation, works and the fuel levels have been checked, and where necessary, have been refilled.
- b.** Stationery and supplies in ink or band for each printer are sufficient.
- c.** The indications (LEDs, Display) of all the indicators work properly or that every deficient/defective function was registered.

Any deficiency/fault noticed must be registered in the event table and the necessary corrective action must be taken the soonest possible.

### Quarterly checks

At least once every three months the user and/or owner must ensure that someone trained:

- a.** Checks all the entries in the event table and takes the necessary actions so that the system works properly.
- b.** Activates at least one detector or one button in every zone and checks whether the control and indication system receives and produces the right signal, the alarm sounds and every other warning or assisting device works.

**NOTE.** A procedure must be adopted to secure that harmful functions (like the automatic extinguishment) are not performed when there is a quarterly check.

**c.** Looks for connection faults with all the control and indication devices (e.g. repetitive and mimic panels, answering machines).

**d.** Checks the correct function and indication of the fire security door retaining and releasing devices.

**e.** If permitted, operates every fire brigade or other signal receiving centre calling system.

**f.** Also performs all the extra checks, if they are foreseen by the system's installer, supplier or manufacturer.

**g.** Is informed if there have been building changes or installations that affect the requirements of the place in button, detectors or sirens. If there have been such changes, a visual inspection is performed.

Any lack, fault, requirement for position changes or equipment addition observed must be registered in the event table and the necessary corrective action must be taken the soonest possible.

### Yearly checks

At least once a year, the user and/or owner must ensure that someone trained:

- a.** Checks if the required daily, monthly and quarterly checks have taken place.
- b.** Checks one by one all the detectors to see if they work properly (using smoke spray, hot air or other means the manufacturer proposes).

**NOTE.** Alternatively, a 25% of the detectors (different every time) may be checked in every quarterly check, so that all detectors have been checked at least once a year.

**c.** Checks if the control and indication devices can perform any assisting function. **NOTE.** A procedure must be adopted to guarantee that harmful functions (like the automatic extinguishment) are not performed when there is a yearly check.

**d.** Performs a visual check of all the cables and the rest of the equipment to ensure they are in good condition and adequately protected.

**e.** Checks, by site inspection, for building changes or installations that affect the function of the button, the detectors and the sirens. The site inspection must certify that there is clear space of at least 0.5 metres towards every direction for each detector and that the buttons are in good condition, visible and easily accessible.

**f.** Checks all the batteries. Any lack, fault, requirement for position changes or equipment addition noticed must be registered in the event table and the necessary corrective actions must be taken the soonest possible.

**Special care must be taken so that all devices are re-installed properly after every check.**

(A)



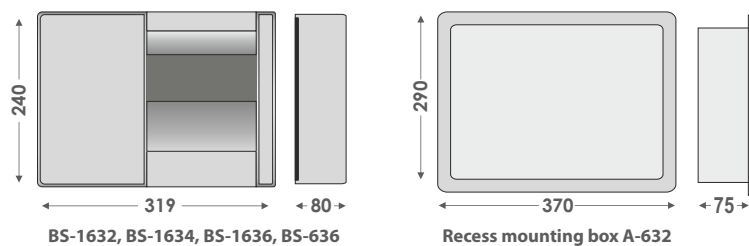
(B)



### Description

- BS-1632, BS-1634, BS-1636, BS-636.** Fire detection panels with 2, 4 and 6 zones respectively. They have uniform operations, controls and indications. They all have 2 siren outputs, alarm relay, programmable telephone dialer output. BS-636 panel is certified by

### Dimensions in mm







**FIRE DETECTION PANELS WITH 2, 4 & 6 ZONES**

TYPE	PICTURE	CODE	DESCRIPTION
BS-1632	B	921163200	2 zone fire detection panel
BS-1634	B	921163400	4 zone fire detection panel
BS-1636	B	921163600	6 zone fire detection panel

**TECHNICAL SPECIFICATIONS FOR 2, 4 & 6 ZONES FIRE DETECTION PANELS**

TYPE	BS-1632	BS-1634	BS-1636
CODE	921163200	921163400	921163600
DESCRIPTION	2 zone fire detection panel	4 zone fire detection panel	6 zone fire detection panel
OPERATION VOLTAGE	220-240VAC/50Hz		
CONSUMPTION	50 VA		
BATTERY	Two 12V Lead acid sealed 2.6Ah		
CHARGING CIRCUIT	Stabilized power supply 27.6V / max. 400mA		
DURATION	72 hours (Maximum connected detectors 72 and no load at output 24VM and 24VP)		
ZONE CIRCUITS	2 circuits monitored for short and open circuit conditions (max. current 35mA)	4 circuits monitored for short and open circuit conditions (max. current 35mA)	6 circuits monitored for short and open circuit conditions (max. current 35mA)
ALARM CIRCUITS	Two 24V circuits that are monitored for open and short circuit conditions (maximum current 300mA each). Each output is protected with a self-resetting electronic fuse.		
OUTPUTS RELAYS	Three relays contacts are rated at 30VDC and 5A maximum each. Under no circumstances should voltages or currents outside limits be connected. All relays output must be protected with a fuse of the same rating.		
OPERATION TEMPERATURE	0 up to 50 °C		
HUMIDITY	Up to 95% relative humidity		
WEIGHT (without battery)	2040gr (4030gr with battery)		
PROD. IN ACCORDANCE WITH	EN 54-2, EN 54-4		

**CONVENTIONAL FIRE DETECTION PANEL WITH 6 ZONES**

TYPE	PICTURE	CODE	DESCRIPTION
BS-636	A	921636000	6 zone fire detection panel

**TECHNICAL SPECIFICATIONS FOR FIRE DETECTION PANEL WITH 6 ZONES**

TYPE	BS-636 <span style="border: 1px solid black; padding: 2px;">VdS</span>
CODE	921636000
DESCRIPTION	6 zones fire detection panel
OPERATION VOLTAGE	220-240VAC/50Hz
CONSUMPTION	48 VA
BATTERY	12V/7Ah
CHARGING CIRCUIT	13.8V / 400mA
DURATION	36 hours (without using the outputs 24V_M and 24V_P)
ZONE CIRCUITS	6 zones
ALARM CIRCUITS	Two 24V circuits that are monitored for open and short circuit conditions
OUTPUTS RELAYS	1 Alarm relay, 1 relay per zone , 24V permanent 24V reset interrupted
OPERATION TEMPERATURE	0 up to 50 °C
HUMIDITY	Up to 95% relative humidity
WEIGHT (without battery)	2040gr (4030gr with battery)
PROD. IN ACCORDANCE WITH	EN 54-2, EN 54-4

**PERIPHERAL DEVICES**

TYPE	CODE	DESCRIPTION
A-632*	980163200	Recess wall mounting base for BS-1632/1634/1636/636

\* Trade products



CE

### Description

- ▶ Fire Detection Panels 8, 12, and 16 Zones
- ▶ 8, 12 and 16 zone fire detection panels with identical operation and indications.
- ▶ Programming and monitoring is done using a graphical display.
- ▶ Fully programmable depending on the requirements of each installation, providing detailed event information.
- ▶ They also have an events history memory.
- ▶ All panels incorporate 2 outputs for sirens, an alarm relay, a fault relay and an auxiliary relay.
- ▶ Ethernet control and programming capability (card GR-8530).

### BS-1619 FIRE DETECTION SET



- ▶ This set contains all the devices required for installing a small fire detection system in limited areas (small shops, houses). The BS-1619 set contains:
  - ▶ BS-1632 conventional fire detection control panel
  - ▶ x2 A-920 batteries 12V/2.6Ah for the panel
  - ▶ BS-655 smoke detector
  - ▶ BS-660 heat of rise detector
  - ▶ BS-536 manual call point
  - ▶ BS-531 siren with beacon.



**FIRE DETECTION PANELS WITH 8,12 & 16 ZONES**

**EVPÜ**

TYPE	PICTURE	CODE	DESCRIPTION
<b>BS-1638</b>	A	921163800	8 zone fire detection panel with display
<b>BS-1642</b>	A	921164200	12 zone fire detection panel with display
<b>BS-1646</b>	A	921164600	16 zone fire detection panel with display

**TECHNICAL SPECIFICATIONS FOR FIRE DETECTION PANELS WITH 8,12 & 16 ZONES**

**EVPÜ**

TYPE	<b>BS-1638</b>	<b>BS-1642</b>	<b>BS-1646</b>
CODE	921163800	921164200	921164600
DESCRIPTION	fire detection panel		
OPERATION VOLTAGE	220-240VAC/50Hz		
CONSUMPTION	100 VA		
BATTERY	2 sealed lead acid batteries 12V / 7Ah		
CHARGING CIRCUIT	Stabilized power supply 27,6V / 350mA		
DURATION	72 hours (Maximum number of connected detectors 220 and 16 zones, no loads connected to the 24V M and 24VP outputs) with two 12V/7Ah batteries.		
ZONE CIRCUITS	8 circuits that monitor open and short-circuit conditions (maximum current 35mA)	12 circuits that monitor open and short-circuit conditions (maximum current 35mA)	16 circuits that monitor open and short-circuit conditions (maximum current 35mA)
ALARM CIRCUITS	Two 24V circuits that are monitored for open and short-circuit conditions (The maximum current for each circuit is 300mA). Each output is protected by a resettable electronic fuse.		
TOTAL POWER	The total output power (zone circuits, siren circuits, outputs 24P and 24M) must not exceed 1A.		
OPERATION TEMPERATURE	0 up to 50 °C		
HUMIDITY	Up to 95% relative humidity		
WEIGHT (without battery)	3740 gr.	3780 gr.	3820 gr.
PROD. IN ACCORDANCE WITH	EN 54-2, EN 54-4		

**EXTENSION CARDS**

TYPE	PICTURE	CODE	DESCRIPTION
<b>BS-1640</b>		921164001	4 zones extension card for BS-1638
<b>BS-1641</b>		921164100	4 zones extension card for BS-1642

**PERIPHERAL DEVICES**

TYPE	PICTURE	CODE	DESCRIPTION
<b>GR-8530</b>	B	923853000	Network card through ETHERNET

**CARD WITH 4ZONE RELAYS**

TYPE	PICTURE	CODE	DESCRIPTION
<b>BS-613</b>	C	921613000	Card with 4zone relays for BS-1638, BS-1642, BS-1646

**BS-1619 FIRE DETECTION SET**

**FIRE DETECTION SET**

TYPE	PICTURE	CODE	DESCRIPTION
<b>BS-1619</b>	D	921161900	Fire detection accessories set

# Fire extinguishing panels & accessories



## ■ Description

- ▶ **BS-627.** Fire extinguishing panel, 1 command with 4 zones
  - ▶ The panel has:
  - ▶ One fire extinguish output monitored for open and short circuit. The output can operate with actuators or electro valves
  - ▶ Two cross zones for fire detectors
  - ▶ One zone for a manual call point to start the extinguish procedure
  - ▶ One zone for a manual call point to cancel the extinguish procedure
  - ▶ Three modes of operation
  - ▶ The panel has two independent siren outputs
  - ▶ One contact relay for fault status
  - ▶ Two fully programable relay contacts
  - ▶ Terminals to communicate with conventional fire detection panels
  - ▶ The battery A-986 (12V/7Ah) is required for the operation of the panel.
- ▶ Devices that can be used by a person to signify a fire alarm. They are required in every fire alarm system. In every fire alarm system a call point is located beside the main fire alarm panel and the rest near stair and exits in well distinct points that are easily accessible by people abandoning the area.
- ▶ **BS-533.** A call point used for activating fire extinguishing units and is suitable for interior use.
- ▶ **BS-534.** A call point used for activating fire extinguishing units and is suitable for interior use. It has an isolation lock. If the lock's key is placed in the OFF position, the call point event if it is activated, does not activate the fire extinguishing unit.



**FIRE EXTINGUISHING PANEL**


TYPE	PICTURE	CODE	DESCRIPTION
BS-627	A	921627000	Fire extinguish panel, 1 command with 4 zones

**TECHNICAL SPECIFICATIONS FOR BS-627 FIRE EXTINGUISHING PANEL**

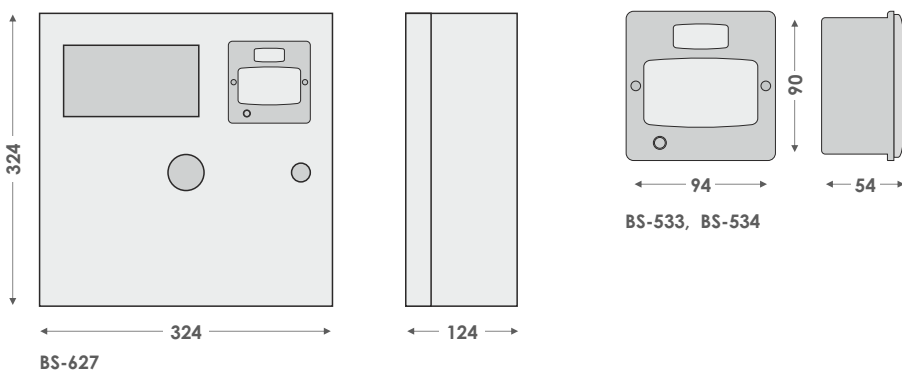
TYPE	<b>BS-627</b>
CODE	921627000
DESCRIPTION	Fire extinguish panel, 1 command with 4 zones
OPERATION VOLTAGE	220-240V AC 50/60Hz
CONSUMPTION	30VA
BATTERY	One or two 12V Lead acid sealed 7Ah maximum
CHARGING CIRCUIT	Stabilized power supply 13,8V/400mA
DURATION	48 hours with 1 battery / 72 hours with 1 batteries
ZONE CIRCUITS	4 zones
ALARM CIRCUITS	Two 24V circuits that are monitored for open and short circuit conditions
OPERATION TEMPERATURE	0 up to 50 °C
HUMIDITY	up to 95%
WEIGHT	4680 gr.
PROD. IN ACCORDANCE WITH	EN 12094-1

**FIRE EXTINGUISHING ACCESSORIES**

TYPE	PICTURE	CODE	DESCRIPTION
BS-533	D	921533000	Extinguishing call point
BS-533/WP	E	921533001	Waterproof IP65 extinguishing call point
BS-534	C	921534000	Extinguishing call point with isolation lock
BOX-534	B	927534000	Panic button waterproofing case

 Packaging contains: 54 pcs. (BS-533, BS-534) Paper box dimensions (LxWxH): 430x280x335mm (BS-533, BS-534)

**Dimensions in mm**

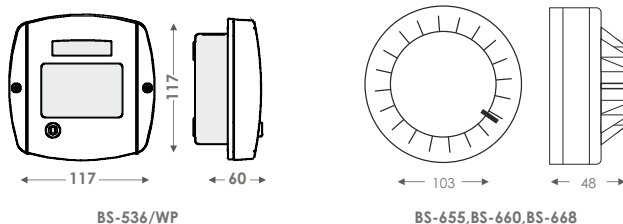




## ■ Description

- ▶ **BS-536.** This call point is used to activate the system manually. When it is pressed, the clear protective cover gives way and the fire detection system is triggered. A special key can be used to reset the cover to its original position. The device contains all symbols that are required by the European norm EN-54 and is suitable for interior use and is certificated by EVPU.
- ▶ **BS-536/WP.** Waterproof IP 65. It has the same operation as BS-536.
- ▶ **BS-655.** The optical smoke sensor (or smoke particle detector) is activated when the obscuration rate caused by the smoke exceeds 3% per meter.
- ▶ **BS-657.** Double technology sensor. It can be used to monitor an area of about 25-30 sqm.
- ▶ **BS-668.** The heat detector is activated when the temperature of the monitored area exceeds 60 °C. It can be used to monitor an area of about 50 sqm.
- ▶ **Base-6024.** This special base has an incorporated relay which is activated when the detector issues an alarm. It can be used to control devices (i.e. Sirens, Beacons) which must be activated in the event of an alarm condition.



## ■ Dimensions in mm








## CONVENTIONAL CALL POINTS

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION
BS-536	 	F	921536000 Manual call point with TEST-RESET key	-
BS-536/WP	E	921536007	Waterproof IP 65, fire extinguishing call point	-

 Packaging contains: **54 pcs.** Paper box dimensions (LxWxH): **430x280x335mm**

## CONVENTIONAL DETECTORS


TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION
BS-655		A	921655000 Optical smoke detector	50µA
BS-657	A	921657000	Smoke and heat detector	50µA
BS-660	A	921660000	Heat of rise detector with base	50µA
BS-661	D	921661000	Heat of rise detector, IP 65	28mA with LED 18mA without


## ACCESSORY

TYPE	PICTURE	CODE	DESCRIPTION
BASE-6024**	C	927600001	Base with relay 24V for BS-655 etc.

 Packaging contains: **54 pcs.** Paper box dimensions (LxWxH): **430x280x335mm**

## SIRENS AND SIRENS WITH BEACONS FOR FIRE ALARM PANELS

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION	GROSS WEIGHT
BS-530/1	H	921530004	Siren, 88dB, IP 42	21-28V DC	40mA	300 gr.
BS-531		G	921531000 Siren, 88dB, IP 42	21-28V DC	40mA	310 gr.
BS-530/1/WP	H	921530005	Waterproof IP65 siren, 88dB	21-28V DC	40mA	300 gr.
BS-531/1	H	921531007	Siren with beacon, IP42	21-28V DC	40mA	300 gr.
BS-531/1/WP	H	921531008	Waterproof IP65 siren	21-28V DC	40mA	310 gr.

 Packaging contains: **16 pcs.** Paper box dimensions (LxWxH): **430x280x335**

## AUTONOMOUS FIRE DETECTION DEVICE \*

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION
GS-506	B	980093000	Autonomous optical smoke detector with 9V battery	-	-

## WALL SOUNDER & VISUAL ALARM ACCORDING TO EN 54-23 \*

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION
*CWS 100-AV	I	980153100	Wall sounder & visual alarm device 24V, 100dB	-	-

## WATERPROOFING BOX FOR FIRE ALARM SENSOR BASE

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION
BASE-196*	J	980181960	Waterproofing box for fire alarm sensor base	-	-

## ACCESSORIES

TYPE	CODE	DESCRIPTION
A-536	927536000	Recess wall mounting base
A-533	927533000	Protective diffuser for BS-536



CE

## ■ Description

- ▶ **BS-230, BS-232, BS-240, BS-242.** New remote-adjusted beam detectors 8-50m and 8-100m
- ▶ Up to 4 detections devices per control unit
- ▶ Alignment and focus of the detection heads from the control unit (manual or automatic)
- ▶ The BS-230, BS-240 are state of the art in the field of beam detectors. They consist of the controller, the detector and the mirror (1 or 4). The controller can manage up to 4 detectors thus making the installation more economical
- ▶ The detectors (detection heads) have a motor for the movement on the horizontal and vertical axis and a laser transceiver. With these parts they can be adjusted manually or automatically from a distance during the installation phase.
- ▶ In case of a fire, the smoke absorbs part of the I.R emission. When the quantity of the IR beam drops below a pre-determined level for more than 8 to 10 seconds the detector issues an alarm signal
- ▶ **BS-250.** 5-50 meter beam smoke detector. Consists of 2 pieces. One piece contains an IR transmitter, receiver and a connection-control unit. The second piece is a special mirror which is mounted directly opposite from the main detector.



■ REMOTE-ADJUSTED BEAM DETECTORS \*

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	SENSIBILITY
BS-230	A	980123000	50m beam detector with controller, detection head and 1 mirror	10mA	25, 35, 50% Obscuration
BS-232	A	980123200	Detection head and 1 mirror	2mA	25, 35, 50% Obscuration
BS-240	A	980124000	100m beam detector with controller, detection head and 1 mirror	10mA	25, 35, 50% Obscuration
BS-242	A	980124200	Detection head and 4 mirrors	2mA	25, 35, 50% Obscuration

■ BEAM SMOKE DETECTORS \*

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	SENSIBILITY
BS-211	B	980121100	10 - 100m Beam smoke detector (with mirror)	8,5mA	25, 35, 50% Obscuration
BS-250	B	980125000	5 - 50m Beam smoke detector (with mirror)	8,5mA	25, 35, 50% Obscuration

■ IR BEAM SMOKE DETECTORS \*

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	SENSIBILITY
FIRERAY 3000	C	980130004	5 -120m Beam smoke detector	13mA	25, 35, 50% Obscuration



Modern addressable fire alarm panel with 32, 64 or 96 zones

Suitable for large installation such as malls, hotels, factories.

2 or 4 loops (150 points per loop).

- ▶ Produced in accordance with EN54-2, EN54-4.
- ▶ 32, 64 or 96 zone capability.
- ▶ 220-240V AC mains power supply.
- ▶ It offers 2 or 4 fully monitored siren outputs with a rating of 24V / 0,5A and 6 programmable relays as well as a built in network circuit.
- ▶ Incorporated power supply with a rating of 24V/100W and built-in battery charger for 24V batteries with a capacity of up-to 12Ah.
- ▶ The panels offer an extensive list of adjustments and characteristics for the control of the installed devices and sirens. These parameters can easily be adjusted using a PC based program.
- ▶ The programming of the panel can also be done using a PC.
- ▶ Messages can be viewed on the big LCD (320x240 pixels) whereas LEDs are used to show basic operations such as alarms, faults and isolated sections
- ▶ The operation is done using the built-in 16 key keypad.
- ▶ There is also an incorporated safety lock and a thermal printer mounting position
- ▶ The maximum delay for the sirens is 4 minutes.



### EXPANSION UNITS

- ▶ Capabilities of connecting unit per panel, thus configuring panels with up-to 8 loops.
- ▶ Each expansion unit contains 2 or 4 loops with 150 points per loop.
- ▶ 2 or 4 siren outputs.
- ▶ Incorporated battery charger for 24V batteries with a capacity of up-to 12Ah.
- ▶ 220-240V AC/50-60Hz mains power supply.



**ANALOG ADDRESSABLE FIRE DETECTION CONTROL PANELS 1 TO 8 LOOP**

TYPE	PICTURE	CODE	DESCRIPTION
<b>BSR-2104</b>	A	921210400	Addressable fire detection panel 2 loops/ 96 zones
<b>BSR-2114</b>	A	921211400	Addressable fire detection panel 4 loops/ 96 zones

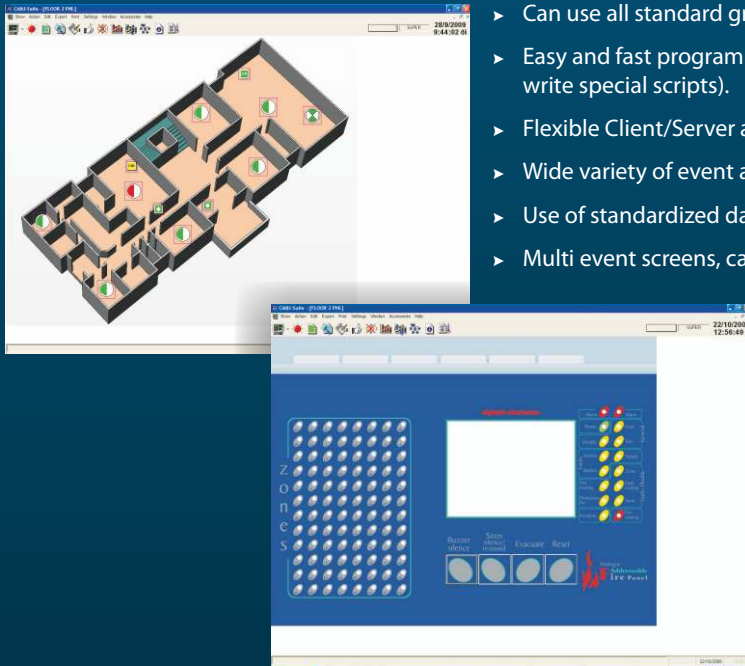
**TECHNICAL SPECIFICATIONS FOR ANALOG ADDRESSABLE FIRE DETECTION CONTROL PANELS 1 TO 8 LOOP**

TYPE	BSR-2104	BSR-2114
CODE	921210400	921211400
DESCRIPTION	Addressable fire detection panel 2 loops/ 96 zones	Addressable fire detection panel 4 loops/ 96 zones
OPERATION VOLTAGE	220-240V AC/50-60Hz	
CONSUMPTION	100 VA	
BATTERY	2x12V/7Ah to 2x12V/12Ah μολύβδου	
CHARGING CIRCUIT	Stabilized power supply 27.6V / 600mA	
LOOP CIRCUIT	24V/200mA(quiscent). Each loop can accept up-to 150 points. Each loop is protected by a self-resettable fuse. The total number of points that can be installed on one panel is 512 according to EN54-2 paragraph 13.7	
SIRENS CIRCUITS	4 circuits 24V/500mA, monitored for opens and short circuits. Each output is protected by a self-resettable fuse.	
V OUT OUTPUTS	24VDC (+- 3VDC) continous outputs with a max. current of 0,5A. Each output is protected by a self-resettable fuse.	
RELAY4, RELAY5, RELAY6	General purpose Relay (250VAC 5A).	
RELAY1, RELAY2, RELAY3	Relay outputs monitored for open and short circuits. Each output is protected by a self-resettable fuse.	
FAULT OUTPUT	Open collector output (maximum rating 30VDC/6mA)	
ALARM OUTPUT	Open collector output (maximum rating 30VDC/6mA)	
A1, A2 & A3 INPUTS	3 General purpose inputs (maximum input voltage 30VDC)	
MAX. CURRENT LOAD	The maximum current drawn by the loops, sirens, outputs VOUT and relays must not exceed 2A.	
CONNECTION CABLES	The connection cables must be approved for fire detection installation such as FIP200, MICC, PYROFIL. The cables use for data transfers must be of the twisted pair types and must be insulated	
DEGR. OF COVER PROT.	IP 30	
OPER. TEMPERATURE	0 up to 40 °C	
RELATIVE HUMIDITY	Up to 95%	
CONSTR. MATERIAL	Electrostatically painted steel	
DIMENSIONS	480 x 410 x 154 mm	
WEIGHT	7 Kgr (2 loops)	7.2 Kgr (4 loops)
PROD. ACCORD. WITH	EN 54-2, EN-54-4	

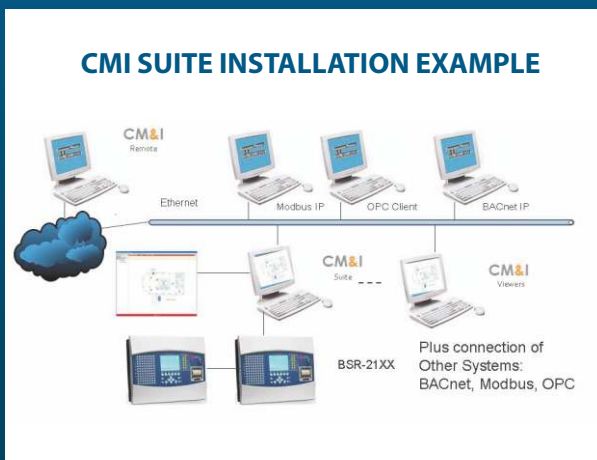
**ADDRESSABLE FIRE DETECTION PERIPHERAL DEVICES FOR PANELS BSR-21xx**

TYPE	PICTURE	CODE	DESCRIPTION
<b>BSR-2142</b>	B	921214200	Thermal printer for BSR-2xxx
<b>BSR-2000</b>	C	921200001	Repeat panel for BSR-2xxx
<b>A-2100 **</b>		980210000	Software for BSR-21xx & USB cable
<b>BOX-2100/WP * D</b>		980210001	Waterproof metal box for BSR-2xxx panels

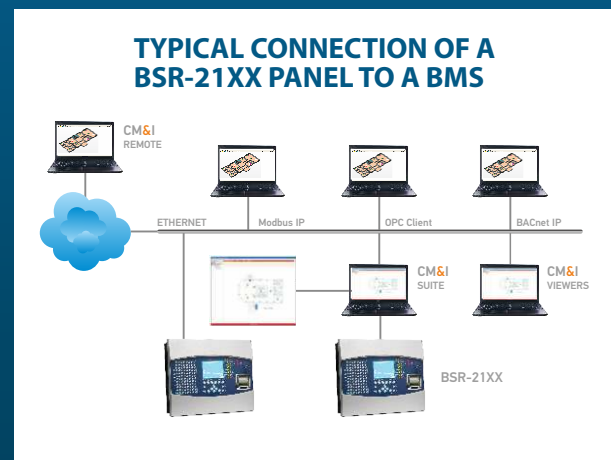
\*\* Download for free the A-2100 software for BSR-21xx panel at [www.olympia-electronics.gr](http://www.olympia-electronics.gr)



- ▶ Can use all standard graphic formats(bmp, jpg, e.t.c.)
- ▶ Easy and fast programming of the main application (without the need to write special scripts).
- ▶ Flexible Client/Server architecture (using the widespread TCP/IP socket),
- ▶ Wide variety of event and history logs,
- ▶ Use of standardized data bases.
- ▶ Multi event screens, calculations with spreadsheets, filters
- ▶ Open logic code that permits access to its libraries via other windows based programs (including VB and java script).
- ▶ Web operation capability with no workstation restrictions.
- ▶ Hot-Standby optional capability operation with the use of 2 computers,
- ▶ **NO RESTRICTION TO THE NUMBER OF PANELS!** Exhibitions, e.t.c.



- ▶ The CM&I Suite is a powerful graphical environment that can simultaneously communicate with open or private networks.
- ▶ The CM&I Suite permits the management and the control of the fire detection equipment from one computer and offers great capabilities.
- ▶ The CM&I Suite permits a bi-directional communication of the fire detection equipment with other equipment via certified protocols (BACnet, Modbus, OPC).



- ▶ The BMS-1001 is a powerful multi-protocol converter and communications processor which is used for the communication between of one or more fire detections installations and one or more terminals of other applications.
- ▶ The BMS-1001 can translate data from all supported protocols.
- ▶ Supports all certified industrial protocols. (BACnet, Modbus, OPC)
- ▶ Without restrictions as too the number of work stations!

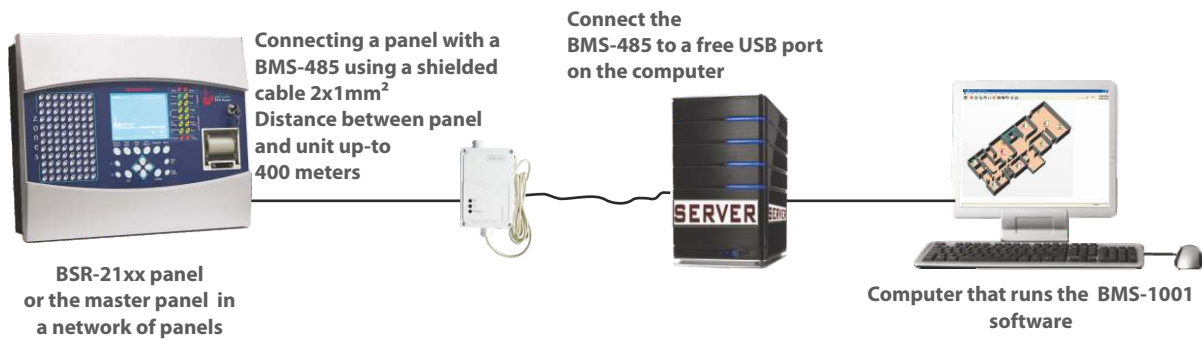




**SOFTWARE FOR CONNECTING FIRE DETECTION PANELS TO B.M.S.**

TYPE	CODE	DESCRIPTION
<b>BMS-1001</b>	921100101	Basic software for connection BSR-2xxx with Gateway
<b>BMS-1204</b>	921120401	Software for connection BSR-21xx with BACnet protocol
<b>BMS-1202</b>	921120201	Software for connection BSR-21xx with Modbus protocol
<b>BMS-1203</b>	921120301	Software for connection BSR-21xx with OPC protocol

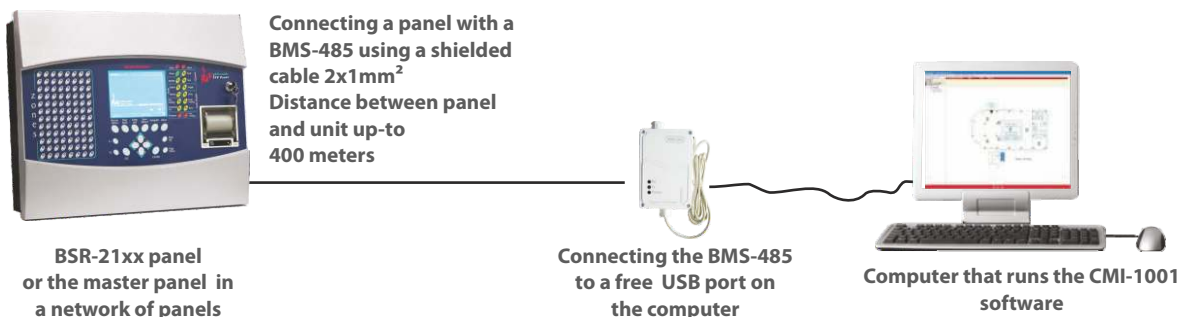
- ▶ The BMS series consists of the required programs for the system to function via a building management system (B.M.S).
- ▶ The BMS-1001 is a basic translation software that permits the communication between the panels and a computer.
- ▶ Depending on the requirements, one or more protocols must be added to communicate with the respective devices.



**GRAPHICAL ENVIRONMENT SOFTWARE FOR FIRE DETECTION SYSTEM MANAGEMENT**

TYPE	CODE	DESCRIPTION
<b>CMI-1001</b>	921100100	Visual software monitor BSR-21xx
<b>CMI-1202</b>	921120200	Modbus protocol for CMI-1001
<b>CMI-1203</b>	921120300	OPC protocol for CMI-1001
<b>CMI-1204</b>	921120400	BACnet protocol for CMI-1001
<b>BMS-485</b>	921485100	Device for connection BSR-21xx with a PC

- ▶ The CMI contains programs for the autonomous operation of the system and can support individual panels or panels in a network.
- ▶ The CMI-1001 is the basic software which can be used to manage the fire detection system. It runs in a Windows environment on any personal computer.
- ▶ To the basic software you can add any of the protocol packages thus giving the capability to the system to exchange data with other systems that use one of the protocols. The CMI contains programs for the autonomous operation of the system and can support individual panels or panels in a network.





### ■ Description

- ▶ **BSR-6055/A.** Addressable optical smoke sensor. It has an internal «smart» chamber with a special transmitter and receiver. The sensor continuously sends digital information to the panel regarding quantity of the smoke. The panel, using special algorithms, decides when to issue the alarm. The sensor has a special connection base and micro-switches that are used to set the address.
- ▶ **BSR-6057/A.** Addressable optical smoke / heat of rise detector. (The same base as BSR-6055/A)
- ▶ **BSR-6060/A.** Addressable heat of rise sensor. It has a special temperature sensor that gives an output depending on the temperature of the monitored area. The built-in microprocessor calculates the rise rate of the temperature and sends the digital information to the panel. The sensor has a special connection base and micro-switches that are used to set the address.
- ▶ **BSR-8019/A.** Addressable input unit with auxiliary relay. It is used for connected gas detectors (e.g. BS-685 and BS-686) on the loop. It has an input which is monitored for open and short circuit conditions and a relay (1A/30V) activated after a panel reset.
- ▶ **BSR-7070/A.** Line isolator. It is placed between other addressable units and isolates any short circuits that might happen on the loop cables. Up-to 32 such devices can be connected on the loop.



■ PERIPHERAL DEVICES for fire detection panels BSR-2104 & BSR-2114

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION	GROSS WEIGHT
BSR-8017	D	921801700	Addressable I/O unit	14-28V DC	1mA	165 gr.
BSR-8019/A	D	921801901	Addressable unit input with relay	14-28V DC	1mA	165 gr.
BSR-8020	D	921802001	Addressable unit input with relay	21-28V DC	0,7mA	165 gr.
BSR-8020/WP	A	921802002	Addressable unit input with relay (IP65)	21-28V DC	0,7mA	
A-485*	H	980148500	Signal amplifier for RS-485	-	-	230 gr.

■ SIREN WITH BEACON for fire detection panels BSR-2104 & BSR-2114

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION	GROSS WEIGHT
BSR-5032		J 921503200	Siren, 88dB, IP 42	14-30V DC	20mA	300 gr.

Packaging contains: 16 pcs. Paper box dimensions (LxWxH): 430x280x335mm

■ FIRE DETECTION CALL POINT

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION	GROSS WEIGHT
BSR-5036/A		B 921503602	Fire detection call point	14-28V DC	1mA	225 gr.
BSR-5036/A/WP		C 921503603	Waterproof IP64, fire detection call point	14-28V DC	1mA	225 gr.

Packaging contains: 54 pcs. Paper box dimensions (LxWxH): 430x280x335mm

■ PERIPHERAL DEVICES

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION	GROSS WEIGHT
BSR-6055/A		E 921605502	Optical smoke detector	14-28V DC	1mA	200 gr.
BSR-6057/A		E 921605700	Optical smoke/heat of rise detector	14-28V DC	1mA	190 gr.
BSR-6060/A		E 921606002	Heat of rise detector	14-28V DC	1mA	180 gr.
BSR-5072	G	921507200	Remote detector LED	14-28V DC	1mA	70 gr.
BSR-2143	K	921214300	Programming & testing unit	2x9V Battery	60mA	600 gr.
BSR-7070/A	I	921707001	Line isolator	14-30V DC	1,2mA	80 gr.
BSR-7071/A	F	921707100	Line isolator with base	14-30V DC	400μA	

Packaging contains: 54 pcs. (BSR-6055/A, BSR-6057/A, BSR-6060/A, BSR-6024/SB)  
Paper box (LxWxH): 430x280x335mm (BSR-6055/A, BSR-6057/A, BSR-6060/A, BSR-6024/SB)

■ WATERPROOFING BOX FOR FIRE ALARM SENSOR BASE

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUMPTION
BASE-196*	J	980181960	Waterproofing box for fire alarm sensor base	-	-

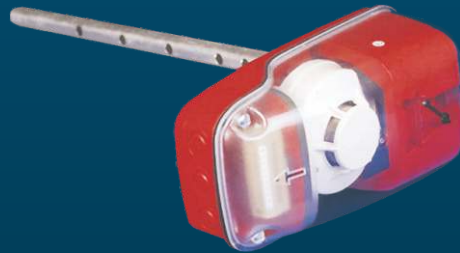
## Fire detection peripheral devices

Ⓐ



IP65

Ⓑ



Ⓒ



IP42

CE

### ■ Description

- ▶ **BS-510/24.** An electromagnetic door latch with a latching capability of 50 Kg. It is used in cooperation with fire safety doors, in order to prevent the expansion of the fire when required. The package contains the electromagnet that is placed on the wall and is powered, and the magnet placed on the door along with all the required mounting accessories. The magnet can either be permanently or swivel mounted.
- ▶ **BS-680.** 24 Vdc, 6bar, ½" manually reset electro-valve .
- ▶ **BS-682.** 230 Vac, 6bar, ½" manually reset electro-valve
- ▶ **BS-684.** 12 Vdc, 6bar, ½" manually reset electro-valve .
- ▶ The electro-valves are placed in the exterior of the protected area, and with the arrow engraved on the body, towards the direction of the gas.



**FIRE DETECTION DEVICES FOR SPECIAL USE\***

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
BS-510/24*	C	980151000	Electromagnetic door latch (24V)	24V DC	80mA	430 gr.

**FIRE DETECTION DEVICES FOR SPECIAL USE\***

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
BS-680*	A	980168000	Electro-valve 24VDC	24V DC	4VA	610 gr.
BS-682*	A	980168200	Electro-valve 230VAC	230V AC	4VA	610 gr.
BS-684*	A	980168400	Electro-valve 12VDC	12V DC	6VA	610 gr.

Packaging contains: **20 pcs.**

**ACCESSORIES FOR SMOKE, HEAT & GAS DETECTORS**

TYPE	PICTURE	CODE	DESCRIPTION
BOX-3016*	B	980130160	Base for installing detectors in air-ducts
A-752*		752000008	Spray for testing smoke detectors (150ml)
RSC-TESTKIT*		980600111	Smoke capsule for TESTKIT



**ACCESSORIES FOR TESTING SMOKE & HEAT DETECTORS\***

TYPE	CODE	DESCRIPTION
TESTKIT	980600110	Accessories set for testing smoke & heat detectors



\* Trade products









*for a safer world!*



## GAS DETECTION

GAS DETECTION SYSTEMS

The more and more extensive gas use (liquid gas or natural gas) for domestic purposes as well as the industrial use of flammable or toxic gases demand the detection of possible leaks. In this short guide, we will describe the behaviour and basic characteristics of the main gases so that someone can design a proper installation to detect them.

### Gas properties

In the science of physics, gases are substances with no particular volume and without a defined shape. Gases are one of the three states of matter.

The particles (atoms, molecules, ions) that compose gases are thinly distributed in space in relation to those of the liquids, let alone those of the solids. The tractive forces between them are too weak to hold them in fixed positions and as a result they move towards all directions. This is the reason gases have no defined shape and volume but tend to cover all the available space.

Molecular weight or relative molecular mass is the mass of a molecule compared to the mass of the atom of the isotope anthrax 12 (C12), and in particular the number that shows how many times bigger than 1/12 of the mass of C12 the molecule mass is. To find the molecular weight, we add the atomic weights of the atoms that take part in the chemical formula of a compound or element.

For example, the chemical formula of methane is CH<sub>4</sub>. The molecular weight of anthrax is 12 and hydrogen 1, therefore the molecular weight of methane is 12+(1x4)=16. The molecular weight of air (which is a mixture of different gases in specific contents) is considered to be 29. A chart follows with different gases and their molecular weight.

We need molecular weight to see if the gas is lighter or heavier than air. Generally, lighter gases (molecular weight less than 29) tend to concentrate high, while heavier gases (molecular weight more than 29) tend to concentrate low, meaning of course the initial concentration, because with the passing of a certain amount of time, all leaking gases end up with uniform density throughout the available space.

The quantity of gas in the air is measured in percentage per volume and the unit percent (%vol) is used for big concentrations or the parts per million (ppm) for small concentrations.

### Gas categories

We separate the gases we are usually called to detect in two general categories, explosive and toxic. Explosive gases are the gases that, beyond a certain concentration point, create an explosive mixture with air. Toxic gases are the gases that, when leaked, can cause damage to living organisms. Generally, toxic gases are more dangerous and must be detected in much smaller concentrations than explosive gases.

### Explosive gases

When the gas we want to detect is explosive, the main characteristic we are interested in is the Lower Explosion Limit (L.E.L.). It is the concentration of the gas in the gas-air mixture above which the mixture becomes flammable-explosive. If the gas reaches and overcomes this limit, any flame, spark, electrostatic discharge or even thermal body can cause ignition-explosion. Each gas has a different L.E.L. The following chart shows the most usual explosive gases and their Lower Explosion Limit.

For security reasons, as proposed in EN 50194, the gas must be detected in the part between 3% and 20% of the L.E.L. (the usual figure is 10%).20% tou L.E.L.

### Chemical type and molecular weight of gases

Name	Chemical type	Molecular weight
Butane	C <sub>4</sub> H <sub>10</sub>	58
Propane	C <sub>3</sub> H <sub>8</sub>	44
Methane	CH <sub>4</sub>	16
Hydrogen	H <sub>2</sub>	2
Carbon monoxide	CO	28
Benzol	C <sub>6</sub> H <sub>6</sub>	78
Ethyl alcohol	C <sub>2</sub> H <sub>5</sub> OH	46
Ammonia	NH <sub>3</sub>	17
Hydrochloride	HCL	36
Carbon dioxide	CO <sub>2</sub>	44
Chloride dioxide	CLO <sub>2</sub>	68
Sulphur dioxide	SO <sub>2</sub>	64
Hydro sulphur	H <sub>2</sub> S	34

### Low limit of explosiveness of gases

Name	Chemical type	L.E.L.
Butane	C <sub>4</sub> H <sub>10</sub>	1.5
Propane	C <sub>3</sub> H <sub>8</sub>	2.2
Methane	CH <sub>4</sub>	5
Hydrogen	H <sub>2</sub>	4
Ethylene	C <sub>2</sub> H <sub>4</sub>	2.7
Benzol	C <sub>6</sub> H <sub>6</sub>	1.2
Ethyl alcohol	C <sub>2</sub> H <sub>5</sub> OH	3.3



For safety reasons, as suggested by EN50194 the detection of gas must be done in the range from 3% to 20% of the L.E.L. (the most common value is 10% of the L.E.L)



### Toxic gases

When the gas we want to detect is toxic, we need to take into account various parameters that have to do with the toxicity and hazard of the gases to be detected. These have to do with the gas itself as well as with the period of time people can be exposed to it (depending on the use of space and the permanent or occasional presence of people there).

The main characteristics of toxic gases are:

**T.W.A.** It is the maximum average gas content during eight hours (48 hours per week).

**S.T.E.L.** It is the maximum gas content in the air a person can be exposed to for a small period of time (maximum 15 minutes) without serious and permanent health damage. The two notions above are expressed in ppm or mg/L (micrograms per air litre) or mg/m<sup>3</sup> (micrograms per cubic air metre).

The chart below shows the main toxic gases and the T.W.A and S.T.E.L numbers for each.

### Toxic Gases

Name	Chemical formula	T.W.A	S.T.E.L.
Carbon monoxide	CO	50	300
Carbon dioxide	CO <sub>2</sub>	5000	15000
Ammonia	NH <sub>3</sub>	25	35
Hydro sulphur	H <sub>2</sub> S	10	15
Sulphur dioxide	SO <sub>2</sub>	2	5
Chloride dioxide	ClO <sub>2</sub>	0.1	0.3
Hydrocyanic	HCN	-	10
Hydrochloride	HCL	-	5
Monoxide of nitrogen	NO	25	35
Dioxide of nitrogen	NO <sub>2</sub>	3	5

Apart from these general limits, each toxic gas causes different side-effects to the human organism, which always depend on its concentration and the time of exposure to it. Next, we are going to examine the side-effects of carbon monoxide, a toxic gas that can be emitted in places where most people can find themselves.

**Carbon Monoxide (CO)** is created when the combustion is imperfect. It is a very dangerous gas as it is invisible and odourless, therefore, undetectable through the physical senses of the human organism. It is nearly as light as air, with almost the same density (0.97), so it spreads in space homogeneously. CO belongs to the category of chemical gases that cause asphyxia. When CO is inhaled, it is absorbed by blood and progressively reduces the ability of blood to transfer oxygen to the tissues. A prolonged stay in a polluted environment with high concentrations can be fatal.

More specifically, some of its side-effects in conjunction with the time of exposure are:

- 50ppm concentration for 8 hours: Maximum allowable limit of exposure, no serious side-effect.
- 200ppm concentration for 3 hours: Feeling of mild sickness accompanied with a light headache.
- 600ppm concentration for 1 hour: Severe headache.
- 1500ppm concentration for 1 hour: Severe headache, feeling of nausea, discomfort.
- 2000ppm concentration for more than 30 minutes: Severe headache, feeling of nausea, discomfort, loss of balance.
- 2500ppm concentration for more than 30 minutes: Loss of the senses.
- 4000ppm concentration for more than an hour: Death.

Anthrax monoxide detection systems are enforced by order in many European countries, in medium and big size underground parking spaces (over 350 square metres) intended for public use.

### DETECTOR TYPES

We divide detectors into categories depending on the type of their output, the type of the sensor and the environment where they were intended to work. Autonomous detectors and those that work with conventional fire detection panels have a relay contact as output, which is activated in a preset gas concentration. Those used in industrial installations have analogue output (4-20mA) and only work with special panels that have equivalent inputs.

The types of sensors used by gas detectors are:

#### Catalytic

This type of sensor is mainly used to detect explosive gases (in concentrations measured in L.E.L.). Their life span is usually 5 years. They gradually lose in sensitivity (with a rate of about 5% per year) and this is why they need periodic recalibration 1 to 2 times per year.

#### Electrochemical

This type of sensors is usually used to detect toxic gases in small concentrations (concentrations measured in ppm). Their life span is 2 to 3 years. Their sensitivity is affected by humidity and low temperature and this is the reason they need periodic recalibration 1 to 2 times per year.

#### Infrared

This type of sensors is usually used to detect gases other detectors cannot detect (carbon dioxide). They are more expensive but have many advantages compared to the other two types. The main ones are:

- They are not affected by humidity and environmental temperature.
- They can be used to measure a very small or big concentration of the same gas.
- Their sensitivity is not affected if they are suddenly found in a very big concentration of the gas.
- They cannot be 'poisoned' by gases that cause permanent damage to the other two types.
- They can be used to measure more than one gas at the same time.



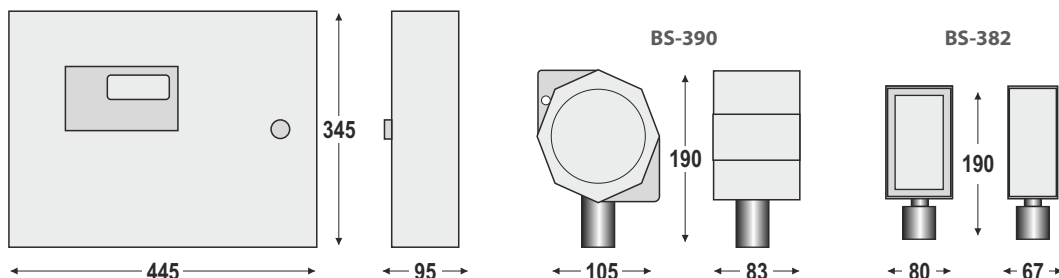
CE

## General characteristics

- ▶ **BS-380, BS-381, BS-382, BS-383.** Gas detectors which are suitable for laboratories, industries, car parking stations e.t.c. They have a 4-20mA analog output and are suitable for panels and peripherals (pg. 55). These gas detectors are mounted in a vertical position with the detection nozzle pointing downwards. If the detected gas is considered "light" (its molecular weight is smaller than 29) then the detectors are placed above the probable leakage points. If the detected gas is considered "heavy" (its molecular weight is above 29) then the detectors are placed below the probable leakage points.
- ▶ **BS-390, BS-391, BS-393.** The anti-explosive type gas detectors are detectors that are suitable for hazardous environments. They are certified for environments: II 2G Eex d IIC T6. They have a 4-20mA analog output and are suitable for panels and peripherals (pg. 55).
- ▶ These gas detectors are mounted in a vertical position with the detection nozzle pointing downwards. If the detected gas is considered "light" (its molecular weight is smaller than 29) then the detectors are placed above the probable leakage points. If the detected gas is considered "heavy" (its molecular weight is above 29) then the detectors are placed below the probable leakage points. The connection with the panel is done using 3 cables. A shielded cable with a rating of 3 x 1.5mm<sup>2</sup> is required for a distance up-to 300 meters and 3 x 2.5mm<sup>2</sup> for distances up-to 300 - 600 meters.
- ▶ **BS-316.** Expandable gas detection panel with a microprocessor, 16 inputs for connection with gas detectors 4-20 mA, programmable outputs (opened relay contacts). Cooperates with detectors 4-20 mA that are connected with 2 or 3 cables to the panel.

## Dimensions in mm

BS-304, BS-308, BS-312, BS-316





## ANALOG GAS DETECTION PANELS

TYPE	PICTURE	CODE	DESCRIPTION
BS-304	A	921304000	4 inputs 4-20mA
BS-308	A	921308000	8 inputs 4-20mA
BS-312	A	921312000	12 inputs 4-20mA
BS-316	A	921316000	16 inputs 4-20mA

## TECHNICAL SPECIFICATIONS FOR ANALOG GAS DETECTION PANELS

TYPE	BS-304	BS-308	BS-312	BS-316
CODE	921304000	921308000	921312000	921316000
DESCRIPTION	4 inputs 4-20mA	4 inputs 4-20mA	12 inputs 4-20mA	16 inputs 4-20mA
OPERATION VOLTAGE	220-240V AC / 50-60Hz			
WATTAGE	60VA			
BATTERY	12V-7Ah Pb			
OUTPUTS	4	8	12	16
OPERATION TEMPERATURE	0-40 °C			
WEIGHT	6160 gr.			
PROD. IN ACCORDANCE WITH	EN 50057, EN 60335, EN 6100-3-2, EN 61000-3-3			

## EXPANSION UNIT

TYPE	CODE	DESCRIPTION
A-304	927304000	Expansion card for BS-304,BS-308,BS-312 panels

## WATERPROOF IP65 ANALOG GAS DETECTORS 4-20mA\*

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	SENSOR TYPE
BS-380	B	980380000	LPG gas detector	12-24V DC	Catalytic
BS-381	B	980381000	Natural gas detector	12-24V DC	Catalytic
BS-382	B	980382000	Carbon monoxide detector	12-24V DC	Electrochemical
BS-383	B	980383000	Ammonia detector	12-24V DC	Electrochemical

## ANALOG, ANTI - EXPLOSIVE TYPE GAS SENSORS 4-20mA\*

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	SENSOR TYPE
BS-390	C	980390000	LPG gas sensor	12-24V DC	Catalytic
BS-391	C	980391000	Natural gas sensor	12-24V DC	Catalytic
BS-393	C	980393000	Ammonia sensor	12-24V DC	Electrochemical
TC100N/LPG	D	980110004	Exd Analogue Gas Detector		Catalytic
TC100N/CNG	D	980110006	Exd Analogue Natural Gas Detector		Catalytic
TS293PX	C	980129304	Anti explosive gas sensor for various gases		Catalytic
TS293PX-H	C	980293002	Anti explosive gas sensor for various gases		Catalytic
TS293EO	C	980129300	Anti explosive oxygen gas sensor		Electrochemical
TS293ES	C	980129305	Anti explosive sulfur dioxide gas sensor		Electrochemical
TS293KI	C	980129306	Anti explosive hydrogen gas sensor		Catalytic

\* (Hexane, ethyl acetone, ethyl alcohol, xylene, toluene, sulfur dioxide, acetylene, methanol).

\* Trade products

## PERIPHERAL DEVICES

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
BS-527	E	921527000	Indication slave luminaire with buzzer	12-24V DC	85mA
BS-527/WP	F	921527001	Waterproof IP 65 indic. slave luminaire with buzzer	12-24V DC	85mA

# Autonomous gas detection devices



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## ■ Description

- ▶ **BS-690.** Autonomous LPG detector with fire detection zone. It is activated when the gas contents in the monitored area exceed 5-15% of the L.E.L. (Lower Explosive Level) Conventional fire detection sensors, remote gas sensors and different kinds of electro-valves, can be installed on the special input. It has a built-in sounder, a 5A/230V relay and a good operation test button.
- ▶ **BS-691.** Autonomous natural gas detector with fire detection zone. This detector has the same characteristics as the BS-690 but is suitable for sensing natural gas leaks or alcohol vapors.
- ▶ **BS-687.** Waterproof autonomous LPG detector (IP 42). It is activated when the gas (propane, butane) concentration level reach 5-15% of the L.E.L. (Lower explosive level. It has a 220V/5A relay and can monitor an area of 25-30 sq.m.
- ▶ **BS-688.** Waterproof autonomous natural gas detector (IP 42). It has the same characteristics as the BS-687 but is suitable for detecting natural gas and alcohol vapors.
- ▶ **BS-673.** Autonomous natural gas detector with battery back-up. This detector has a suitable output capable of driving an electro-valve. The built-in battery enables the electro-valve activation even when the mains power supply fails. It can monitor an area of 25-30 sq.m.
- ▶ **BS-674.** Autonomous LPG detector with battery back-up. It has the same characteristics as the BS-673 but is suitable for detecting propane-butane gases.
- ▶ **BS-685.** Waterproof (IP 65) LPG detector with relay. It is activated when the gas content (propane or butane) in the monitored area exceeds 5-15% of the lower explosive level (L.E.L). The incorporated LED lights when the detector is activated. The command towards that panel is given with a voltage free relay contact.
- ▶ **BS-686.** Waterproof (IP 65) natural gas detector with relay. It is activated when the methane or alcohol content in the monitored area exceeds 5-15% of the lower explosive level (L.E.L) The incorporated LED lights when the detector is activated. The command towards that panel is given with a voltage free relay contact.
- ▶ **BS-658.** With a high-quality electrochemical gas sensor and excellent craft work, it has the advantages of good repeatability, Resistant against temperature and humidity, long life-span and easy operation. It can convert the gas concentration in the air to a digital signal output with a range of 4-20mA. It is suitable for gas detection in car parkings or industrial environment where toxic gas leaks.





**AUTONOMOUS GAS DETECTION DEVICES (230V)**

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
<b>BS-690</b>	D	921690000	LPG detector with beacon & fire detection zone with output relay	220-240V AC	32VA
<b>BS-691</b>	D	921691000	Natural gas detector with beacon & fire detection zone	220-240V AC	32VA
<b>BS-692</b>	E	921692000	External LPG sensor for connecting with BS-690, BS-691	5V DC	0,5W
<b>BS-693</b>	E	921693000	External natural gas sensor for connecting with BS-690, BS-691	5V DC	0,5W
<b>BS-694</b>	C	921694000	LPG detector with output relay	220-240V AC	4VA
<b>BS-695</b>	C	921695000	Natural gas detector with output relay	220-240V AC	4VA
<b>BS-696</b>	D	921696000	LPG detector with beacon & output for electro-valve 12V / 19W NO	230VAC / 24VDC	4VA
<b>BS-697</b>	D	921697000	Natural gas detector with beacon & output for electro-valve 12V / 19W NO	230VAC / 24VDC	4VA

Packaging contains: **54 pcs. (BS-692 & BS-693 132pcs.)** Paper box dimensions (LxWxH): **430x280x335mm**

**AUTONOMOUS GAS DETECTION DEVICES (230V)**

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
<b>BS-687</b>	B	921687000	Autonomous LPG detector with relay & buzzer, IP42	220-240V AC	3VA
<b>BS-688</b>	B	921688000	Autonomous natural gas detector with relay & buzzer, IP42	220-240V AC	3VA
<b>BS-673</b>	A	921673000	Autonomous natural gas detector with battery for 12V electro-valve	220-240V AC	3VA
<b>BS-674</b>	A	921674000	Autonomous LPG detector with battery	220-240V AC	3VA
<b>BS-672-1*</b>	F	980672001	Autonomous carbon monoxide detector with relay 230V	220-240V AC	5VA

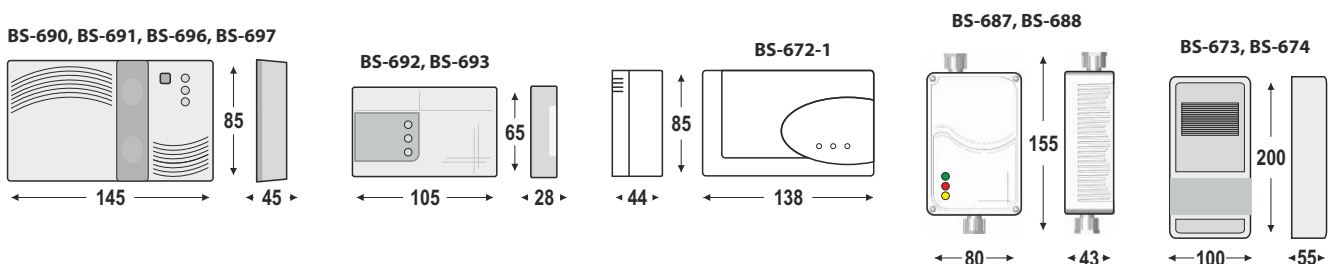
Packaging contains: **54 pcs. (BS-687, BS-688), 24 pcs. (BS-673, BS-674)** Paper box dimensions (LxWxH): **430x280x335mm**

**WATERPROOF GAS DETECTION DEVICES (IP65) 10-30V DC**

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION
<b>BS-685</b>	H	921685000	LPG detector with relay, 10V-30DC, IP 65	0,5W
<b>BS-686</b>	H	921686000	Natural gas detector with relay, 10V-30DC, IP 65	0,5W
<b>BS-658*</b>	G	980165800	Carbon monoxide detector (IP 66)	2W/channel

\* Trade product

**Dimensions in mm**



\* Trade product



# SAFE HOME FROM DISTANCE!



Burglar alarm system  
**BS-458**  
Panel | Siren | Keypad

**NEW colour**  
anthracite



- | Easy installation
- | Programming through PC
- | Smart home capability, lighting control, heating etc.
- | Connecting to GSM automatic dialer
- | Android & iOS application\*



i-Olympia application for



iOS



*for a safer world!*



**olympia™  
electronics**  
SAFETY & SECURITY SYSTEMS

*for a safer world!*



## BURGLAR ALARM SYSTEMS

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BURGLAR ALARM SYSTEMS

**IN GENERAL**

A burglar alarm system is a group of accessories and its purpose is to protect a specific area from intrusion. It consists of the central control panel, the operating controls, the external siren and the alarm sensors. In some cases, it can include an internal siren or devices to notify people via telephone (e.g. answering machine). The burglar alarm systems for personal use (houses, small shops) can include fire detection or flood detection using special detectors connected to independent zones.

**CENTRAL PANEL**

It is the 'heart' of the system. All the sensors send the signal to it and all alarm orders start from it. It supplies all the devices with 12 VDC voltage and has got rechargeable battery so that it works in case of power failure.

**OPERATING CONTROLS**

Small sized panels (e.g. BS-468) usually have an operating control through which the programming and operating of the system is done. Medium or big sized panels require external operating controls for their programming and function. Up to 4 operating controls can be connected to each panel and 4 cables are required for their connection. Panel BS-468 can also work with a wireless operating control (RF). In this case, a plate (RF receiver) is placed in a special socket in the panel and one or more RF transmitters operate it.

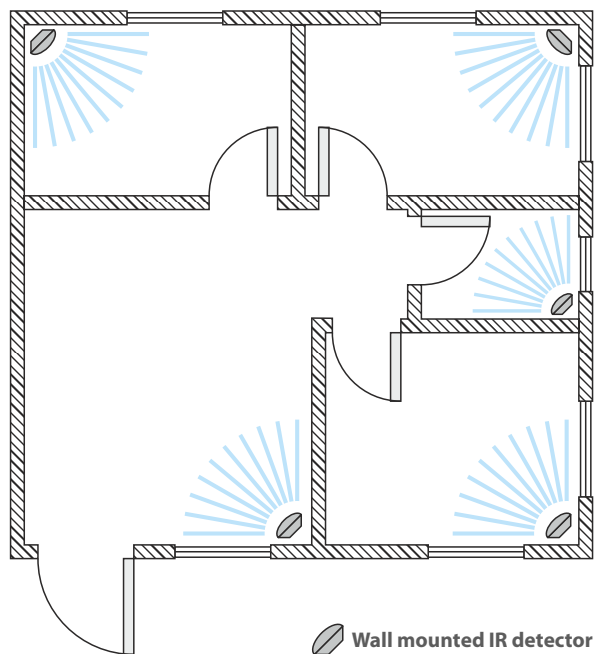
**ALARM SENSORS**

**Magnetic contact.** It consists of a contact that works with the help of a magnet. In particular, the contact is closed when it is close to the magnet and it is open when it is away from it. It can be placed on doors, windows or shutters and protect them from opening. Depending on the type of frames, external placement or built-in placement magnetic contacts can be used. There are also robust type magnetic contacts, suitable for use in industrial shutters. Their connection to the panel requires 2 cables for the alarm order.

**Infrared movement detector (PIR).** It detects a moving source of infrared radiation (heat). It is considered to be the more suitable sensor for internal spaces and it is what is mostly used. If placed correctly, they can fully cover all the internal spaces. They are either surface mounted placement or suitable for roof placement. 6 cables, 2 for supply with 12 VDC voltages, 2 for the alarm order and 2 for the auto protection switch (TAMPER) are required for connecting to the panel. There is a movement detector placement example in the following chart.

**Infrared movement detector and microwave detector (PIR+MW).**

It combines the infrared detector circuits with very low power microwave transmitter and receiver. It is

**Diagram of correct placement of IR detectors in a building**

programmed by the user to work in two states. With OR logic (any one of the two technologies detects movement, there is an alarm) it can cover spaces that require high security. With AND logic (there is an alarm when both technologies detect movement at the same time) it can cover spaces that regularly produce false alarms, if we are using a simple infrared detector. 6 cables are required for connecting to the panel, like with common infrared detectors.

**Breaking detector.** It is an audio frequency selective detector with adjustable sensitivity, suitable for detecting the sound of breaking windows. The frequency above which it detects is adjusted from 2 up to 10 KHz. It is placed near the areas it protects and with direction towards the window surfaces. In order to have good acoustics, there must be no objects between the detector and the surface it protects. 6 cables are required for connecting to the panel, 2 for its supply with 12VDC voltage, 2 for the alarm order and 2 for the auto protection switch (TAMPER).

**Infrared beam detector.** It consists of two accessories, a transmitter of two or more infrared beams and an equivalent receiver. It is usually used in external spaces for perimeter covering. The transmitter's beams focus on the receiver and if one or more beams (depending on the adjustment) are interrupted, an alarm signal is produced.



There are several models depending on the maximum distance between transmitter-receiver. The following are required for connecting to the panel:

6 cables for the transmitters, 2 to supply it with 12 VDC voltage, 2 for the alarm order and 2 for the auto-protection switch (TAMPER).

**Fire detectors.** One of the panel's zones can be used to detect fire. Special smoke and heat detectors (like the fire detectors but in 12 VDC version) can be connected to this zone. 2 cables are required for the detectors' connection to the panel, which has got a specially programmable zone.

4 cables are required for bigger panels and every detector must be accompanied with a special base BASE-6012.

**Infrared movement detector and microwave detector (PIR+MW) for open space use.** Special detector in which microwaves function with a doppler system and which produces alarm signal only when both technologies detect movement, thus, securing remarkable reliability. Its cover is sealed (IP65). 6 cables are required to connect it, like with common infrared detectors.

**Panic button.** It includes a simple contact. When pressed, it sends an alarm signal to the panel. It can be placed in different places (under the desk, over the bed, near the entrance) depending on the use of the system. It internally contains auto protection switch. 4 cables are required to connect it, 2 for the alarm order and 2 for the auto protection switch (TAMPER).

### EXTERNAL LIGHT SIREN

It is placed high in order to be visible from far away and on a spot difficult to access. It has got a powerful loudspeaker (at least 120DB) and a powerful light to be visible during the day, too. It works with incorporated, rechargeable battery voltage.

The panel charges and sustains its battery. It has got a double covering (to protect it from urethane foam) and an auto protection switch. 5 cables are required for connecting it, 2 for its supply with 13.8VDC voltage, 1 for the alarm order and 2 for the auto protection switch (TAMPER).

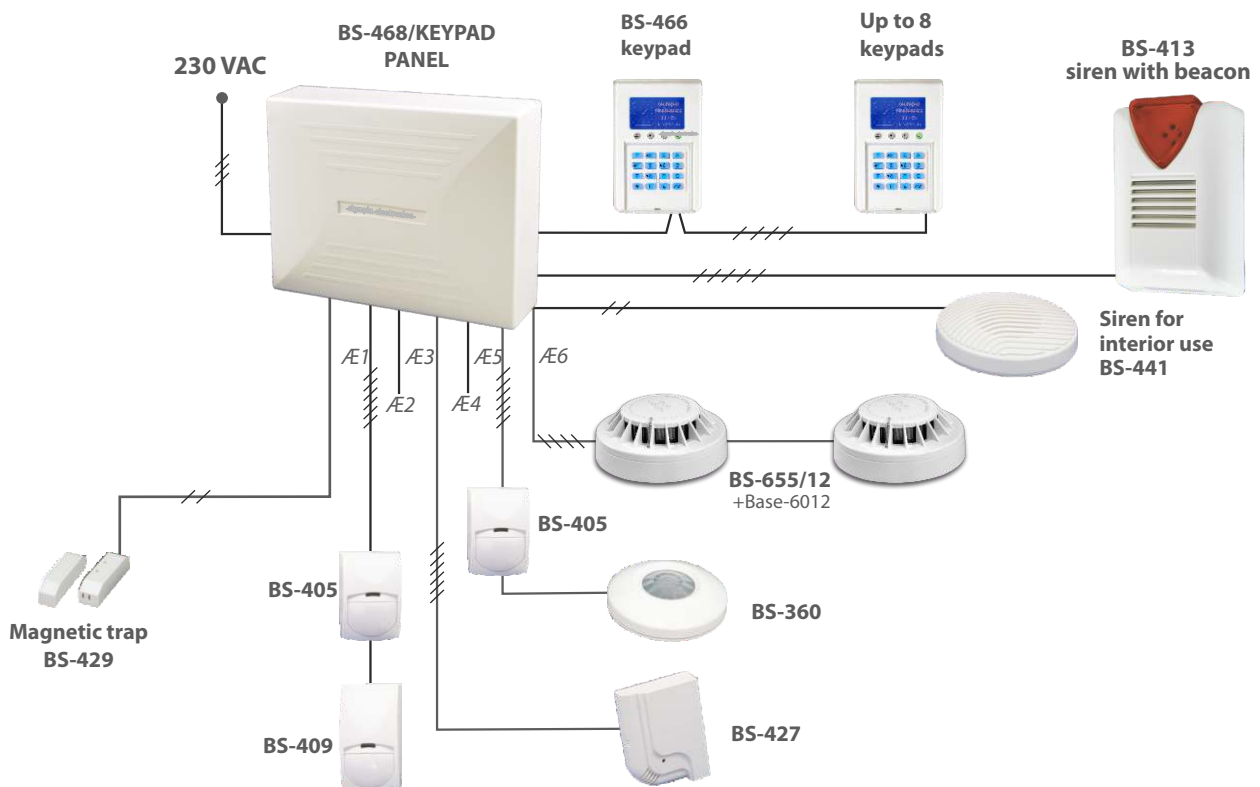
### INTERNAL SIREN

It is placed inside the covered space in order to notify the occupants of the intrusion. It cannot replace the external siren and it is always used as its supplement. 2 cables for its supply with voltage are required for connecting it.

### ANSWERING MACHINE

In case of alarm, it receives an activating order from the panel, calls the programmable telephone numbers and transmits a message recorded by the user. There are devices that work via wired telephone network and others that use the mobile telephone networks.

## TYPICAL CONNECTION OF BS-468/KEYPAD PANEL







## Description

- ▶ Easy installation
- ▶ Programming through PC
- ▶ Smart home capability, lighting control, heating etc.
- ▶ Connecting to GSM automatic dialer
- ▶ Android & iOS application

**i-Olympia**  
application



## General characteristics

- ▶ The BS-458 is a 4 zone burglar alarm panel.
- ▶ The programming can be done using the keyboard or via a USB connection to a PC using special software.
- ▶ There is also an expansion port used for automatic telephone dialers.
- ▶ 4 zones where we can connect 5 motion detectors per zone and infinite magnetic traps(BS-429/X).
- ▶ Also, 3 freely programmable outputs and 1 relay output.
- ▶ 1 output for connecting an autonomous external siren such as the BS-413.
- ▶ 1 output for connecting to a simple siren such as BS-413
- ▶ Capability to connect an automatic telephone dialer GSM for remote control and operation.
- ▶ «Smart Home» capability. Lighting control, heating e.t.c.
- ▶ 250 event logging capability.
- ▶ 20 different users.
- ▶ 3 separate areas A, B, C. Each area operates independently. Instant one key arming.
- ▶ Perimeter arming and full arming functions.





#### 4 ZONE BURGLAR ALARM PANEL WITH SIREN AND EMBEDDED KEYPAD

TYPE	PICTURE	CODE	DESCRIPTION
<b>BS-458</b>	A	921458000	Burglar alarm panel with embedded BS-466 keypad
<b>BS-458/GSM</b>	A	921458003	Burglar alarm panel with embedded BS-466 keypad & GSM card

#### TECHNICAL SPECIFICATIONS 4 ZONE BURGLAR ALARM PANEL WITH SIREN AND EMBEDDED KEYPAD

TYPE	BS-458
CODE	921458000
DESCRIPTION	Burglar alarm panel with embedded BS-466 keypad
OPERATION VOLTAGE	220-240V AC / 50-60Hz
CONSUMPTION	15VA
BATTERY	Sealed lead acid 12V/1,3Ah
CHARGING CIRCUIT	Stabilized power supply 13,8V/50mA
SIREN CIRCUIT AS	The AS output powers the external sirens and is used to charge the battery of the siren with a rating of 13,8V 200mA. This output continuously provides power.
OUTPUTS P1, P2	General outputs with a 13,8V 150mA rating. Activated depending on the panel settings.
OUTPUT 12V	General power output for devices (13,8V 250mA)
ZONES	4 independent zone inputs. Terminal resistor 5,6kOhm
MAXIMUM LOAD	The maximum load connected to the panel must not exceed 450mA
DURATION	12 with external load not over 80mA
HUMIDITY	up to 95%
CONSTRUCTION MATERIALS	ABS - polycarbonate
DIMENSIONS	222x146x54 mm
WEIGHT	460 gr.
PROD. IN ACCORDANCE WITH	EN 50131-1_Grade 2_Class II & EN 50131-6_Type A
GUARANTEE	2 years

#### PERIPHERALS FOR BS-458 BURGLAR ALARM PANEL

TYPE	CODE	DESCRIPTION	VOLTAGE
<b>BS-454</b>	921454000	GSM Dialer	from the panel
<b>PC-468</b>	921468003	Installation program	
<b>BS-413</b>	921413000	Autonomous siren with beacon & battery	
<b>BS-413/B</b>	921413002	Autonomous siren with beacon & battery (anthracite)	



#### OLYMPIA ALARM MOBILE APPLICATION (i-Olympia)

i-Olympia application gives access to user's burglar alarm system, using smartphone's SMS. It is published in Android OS (Google) and iOS (Apple) as well. It is able to handle many locations simultaneously (home, office etc). The android version can operate in tablets, that carry a SIM holder.

The access capabilities to a location are the same with the GSM's, but the application is taking actions with the press of a single button. The user can give commands from the application to arm or disarm the system, to receive SIM credit information, to send codes, panic alarm and silent alarm, as well as driving the outputs of the panel (connected to illuminators, extra sirens, or other devices). The android version offers sound and visual notification from the smartphone in case of alarm (the smartphone is notified via incoming SMS). Recording of SMS delivery reports is also offered. The application comes out with a detailed help menu, explaining all the above capabilities, together with the application menu.

# BURGLAR ALARM SYSTEM



## Description

- ▶ The BS-468 is an 8 zone burglar alarm panel. By using the BS-469 expansion module it can be expanded to 16 zones.
- ▶ To control the panel, at least 1 BS-466 keyboard is needed. The panel can accept up to 8 keyboards.
- ▶ The alarm panel has a slot that can accept a remote control receiver BS-424. There is also a connector on to which we can install an automatic telephone operator.

i-Olympia  
application



iOS



## General Characteristics

- ▶ 5 motion detectors per zone and infinite magnetic traps (BS-429/X).
- ▶ 3 freely programmable outputs and 1 relay output.
- ▶ 1 output for connecting an autonomous external siren such as the BS-413.
- ▶ 1 output for connecting to a simple siren such as Up to 8 BS-466 or BS-463 keyboard connection capability.
- ▶ Device for connecting shatter glass contacts.
- ▶ Capability to connect an automatic telephone dialer PSTN, GSM for remote control and operation
- ▶ «Smart Home» capability. Lighting control, heating e.t.c.
- ▶ 250 event logging capability.
- ▶ 50 different users.
- ▶ 3 separate areas A, B, C. Each area operates independently. Instant one key arming.
- ▶ Perimeter arming and full arming functions.



**BURGLAR ALARM PANEL WITH BS-466 KEYPAD**

TYPE	PICTURE	CODE	DESCRIPTION
BS-468/KEYPAD	C & D	921468000	Burglar alarm panel with BS-466 keypad

**TECHNICAL SPECIFICATIONS FOR BS-468 BURGLAR ALARM PANEL WITH BS-466 KEYPAD**

TYPE	BS-468/KEYPAD
CODE	921468000
DESCRIPTION	BS-468 Burglar alarm system with BS-466 keypad
OPERATION VOLTAGE	220-240V AC / 50-60Hz
CONSUMPTION	25VA
BATTERY	Sealed lead acid 12V/7Ah
CHARGING CIRCUIT	Stabilized power supply 13,8V / 400mA
AS SIREN CIRCUIT	The AS output powers the external sirens and is used to charge the battery of the siren with a rating of 13,8V 500mA. This output continuously provides power.
ES SIREN CIRCUIT	The ES output is used to power the internal siren and provides 13,8V up to 500mA. It is activated during an alarm and is deactivated when the alarm is finished.
OUTPUTS P1, P2, P3	General outputs with a 13,8V 200mA rating. Activated depending on the panel settings
OUTPUT RELAY	A relay output with volt-free contacts (NC,C,NO). The contact has 1A & up to 30VDC rating
OUTPUT 12V	General power output for devices (13,8V 500mA)
ZONES	8 to 24 independent zone inputs. Terminal resistor 5,6kOhm
MAXIMUM LOAD	The max. load connected to the panel (Outputs P1,P2,P3,BS-466,12V) must not exceed 1A
OPERATION TEMPERATURE	0-40°C
HUMIDITY	up to 95%
CONSTRUCTION MATERIALS	ABS - polycarbonate
DIMENSIONS	322x241x97 mm
WEIGHT	1300 gr.
PROD. IN ACCORDANCE WITH	EN 50131-1_Grade 2_Class II & EN 50131-6_Type A
GUARANTEE	2 years

**PERIPHERALS FOR BS-468/KEYPAD BURGLAR ALARM PANEL**

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
BS-466	C	921466000	Keypad with LCD display	from the panel	50mA
BS-463	E	921463000	Keypad without display	from the panel	40mA
BS-413	B	921413000	Autonomus siren with battery	from the panel	140mA
BS-413/B	A	921413002	Autonomus siren with battery (anthracite)	from the panel	//
BS-465		921465000	PSTN Dialer card	from the panel	20mA / 50mA
BS-464		921464000	GSM Dialer card	from the panel	30mA / 120mA
BS-469		921469000	8 zone expansion card	from the panel	40mA
PC-468		921468003	Installation programm	-	-
RF-467*		980146700	Remote control transmitter 433MHz		
RF-468		921468004	Wireless remote control receiver 433MHz		



Please turn to page 109 for information about Olympia Alarm Mobile Application (i-olympia)

\* Trade product

## BS-458/KIT



Single packaging



## BS-468/KIT



Single packaging



#### BS-458/KIT BURGLAR ALARM SET

TYPE	CODE	DESCRIPTION
BS-458/KIT	921458001	Burglarm alarm set

#### THE BS-458/KIT CONTAINS:

TYPE	PCS.	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
BS-458	1	921458000	4 zone burglar alarm panel with embedded keyboard	220-240V AC	15VA
BS-413	1	921413000	Aut. siren & beacon with A-989 battery 12V/1.3Ah		
BS-405/A	1	921405003	IR movement detector for burglar alarm system	8-16V DC	8mA
BS-429/W*	2	980142900	Magnetic trap (white)	-	-
A-989*	1	603001211	Battery 12V/1.3Ah	-	-

#### BS-468/KIT BURGLAR ALARM SET

TYPE	CODE	DESCRIPTION
BS-468/KIT	921468002	Burglarm alarm set

#### THE BS-468/KIT CONTAINS:

TYPE	PCS.	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
BS-468/KEYPAD	1	921468000	Burglar alarm panel BS 468 with keypad	220-240V AC	25VA
BS-466**	-	921466000	Keypad with LCD display		
BS-413	1	921413000	Siren beacon with battery. A-989 12V 1.3Ah		
BS-405/A	1	921405003	IR movement detector for burglar alarm system		
BS-429/W*	2	980142900	Magnetic contact (white) NC	-	-
A-986*	1	603001270	Lead battery 12V/7A	-	-
PC-468	1	921468003	Software for BS-468 & mini usb cable for PC	-	-

\*\* Contained in the BS-468/keypad

\* Trade products



CE







## DETECTORS

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
<b>BS-405/A</b>	J	921405003	IR movement detector for burglar alarm system	8,2-16V DC	8mA	
<b>BS-409</b>	J	921409000	Combined (microwave-IR) detector	8,2-16V DC	10mA	133 gr.
<b>BASE-401*</b>	L	980184011	Base for detectors BS-405, BS-409	8,2-16V DC	25,5mA	
<b>BS-360*</b>	F	980136000	360o ceiling mounted IR detector	8-16V DC	16,5mA	
<b>BS-4000*</b>	C	980140000	Detector for external use (2xPIR & DIRFE) IP54	9,6-16V DC	21mA/24mA	
<b>BS-272*</b>	D	980127200	"Curtain" detector up to 12m. TESEO-C	9,6-16V DC	21mA/24mA	
<b>BS-660/12</b>	G	921660001	Heat of rise detector 12VDC	11-15V DC	50mA/20-30mA	180 gr.
<b>BS-655/12</b>	G	921655001	Optical smoke detector 12VDC	11-13V DC	50mA/20-30mA	210 gr.
<b>BASE-6012</b>	H	927600000	Base with relay for BS-655/12, BS-660/12	10-16V DC	13mA	125 gr.
<b>BS-427*</b>	I	980142700	Shatter glass detector for alarm panel	12V DC	15mA	80 gr.
<b>LD-12*</b>	K	980108012	Flood detector			

 Packaging contains: **54 τεμ. (BS-665/12, BASE-6012)**  
Paper box dimensions (LxWxH): **430x280x335 (BS-665/12, BASE-6012)**

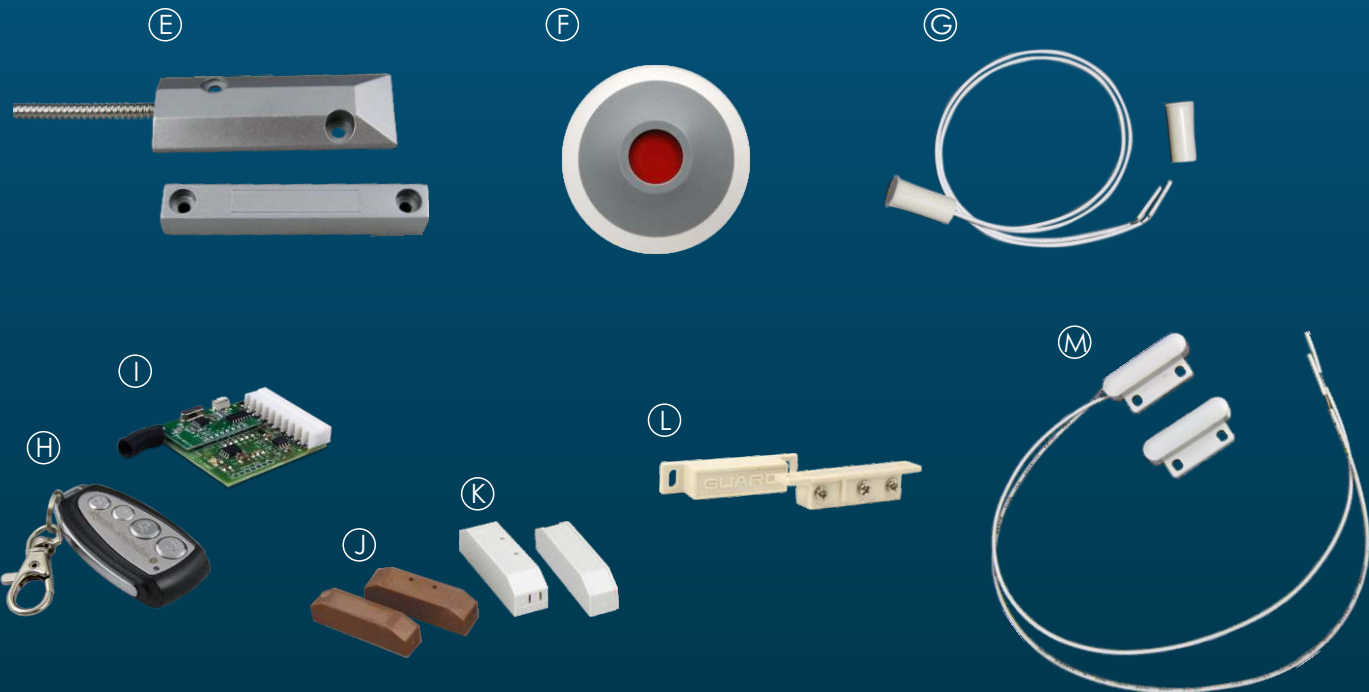
## OUTDOOR BEAM DETECTORS\*

TYPE	PICTURE	CODE	DESCRIPTION
<b>ALABI-30764</b>	E	980630764	4-beam, wired type, outdoor detecting distance, 30m
<b>ALBI-301408</b>	E	980301408	8-beam, wired type, outdoor detecting distance, 30m
<b>ABT-40A</b>	B	980600040	2-beam, wired type, outdoor detecting distance, 40m
<b>ABT-100</b>	B	980600100	2-beam, wired type, outdoor detecting distance, 100m
<b>ABE-150</b>	A	980600150	3-beam, wired type, outdoor detecting distance, 150m
<b>ABH-250</b>	A	980601250	4-beam, wired type, outdoor detecting distance, 250m



IP20

CE





## ■ SIRENS - SIRENS WITH BEACONS

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
<b>BS-413</b>	A	921413000	Siren with beacon & battery	13,6-14,8V DC	6mA	1875 gr.
<b>BS-413/DM</b>	A	918141300	External siren cover	-		980 gr.
<b>BS-413/B</b>	B	921413002	Siren with beacon & battery (anthracite)			1875 gr.
<b>BS-441*</b>	D	980144100	Interior siren for alarm panel	9-14V DC	200mA	150 gr.

 Packaging contains: **7 pcs.** Paper box dimensions (LxWxH): **545x395x345mm**

## ■ AUTOMATIC TELEPHONE DIALER

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
<b>BS-489</b>	C	921489000	Automatic telephone dialer	10-30V DC	25/70mA	145 gr.

## ■ MAGNETIC TRAPS\*

TYPE	PICTURE	CODE	DESCRIPTION
<b>BS-429/B</b>	J	980142902	Magnetic trap for burglar alarm panel (brown)
<b>BS-429/W</b>	K	980142900	Magnetic trap for burglar alarm panel (white)
<b>BS-439</b>	G	980143900	Magnetic trap for doors (plastic, white)
<b>BS-449/B</b>	M	980144901	Magnetic trap (brown) low profile
<b>BS-449/W</b>	M	980144900	Magnetic trap (white) low profile
<b>BS-459</b>	E	980145900	Heavy-duty metallic magnetic trap
<b>BS-490</b>	L	980149000	NC & NO Magnetic trap

## ■ CONTROLS FOR PANELS

TYPE	PICTURE	CODE	DESCRIPTION
<b>RF-467*</b>	H	980146700	Remote control transmitter 433MHz
<b>RF-468</b>	I	921468004	Wireless remote control receiver 433MHz
<b>ND 100GLT</b>	F	980143601	Manual panic button



**DESCRIPTION**

Oasis is a professional electronic security system that adjusts exactly to the requirements of your house or apartment. You have an overview of everything that is happening in your household or company via your mobile phone. You already have the essential part of the security system – your mobile phone. Events from the guarded area can be also reported to a security services agency that in the case of burglary or possible fire emergency ensures immediate professional intervention on the spot. Your possessions are consequently taken care of despite that fact that you are on holiday or have your phone switched off.

**General Characteristics**

- ▶ up to 50 proximity user cards
- ▶ up to 50 PIN codes (codes and cards can be combined for higher security)
- ▶ remote control by mobile phone



**The burglar alarm panel can:**

- ▶ be operated remotely by phone
- ▶ report selected events by SMS to your phone
- ▶ report all details to a Signal Receiving Centre

**WIRELESS BURGLAR ALARM SYSTEMS**

- ▶ JA-82K Offers 4 hard wired zones, up to 50 user codes (cards). Built-in ready BSW-451 radio module provides up to 50 addresses for wireless peripherals. Allows 2 level partial setting (or 2 partitions splitting). Records 255 events in the internal memory. Provides audible warning and 2 programmable outputs. Remote access and reporting can be done via GSM, PSTN optional communicators.
- ▶ JA-81F Allows system control and programming. Has a built-in RFID card reader.
- ▶ JA-81M Magnetic sensor senses door (or window) opening. Provides an input for external wired magnetic sensors.
- ▶ JA-80L Mains powered siren to sound alarms, exit and entrance warnings, door bell signals and smoke detector triggered chimes. Signals a tamper if disconnected (by AC operation voltage).
- ▶ JA-80A Wire-free siren in a robust housing. Its lithium battery lifetime is from 3 to 5 years (depends on alarm rate).



**WIRELESS BURGLAR ALARM PANEL WITH 50 ADDRESSES**

TYPE	PICTURE	CODE	DESCRIPTION
<b>BSW-450</b>	A	921450000	Wireless burglar alarm panel with 50 addresses

**WIRELESS BURGLAR ALARM PANEL BSW-450 (50 ADDRESSES)**

<b>TYPE</b>	<b>BSW-450</b>
<b>CODE</b>	921450000
<b>DESCRIPTION</b>	Wireless burglar alarm panel with 50 addresses
<b>OPERATION VOLTAGE</b>	220-240V AC / 50-60Hz
<b>BATTERY</b>	Lead battery Pb 12V/ 1.3Ah
<b>OUTPUTS</b>	PEX, PGX, max. 0,1A
<b>DIMENSIONS</b>	258x214x77
<b>PRODUCED IN ACCORDANCE WITH</b>	EN 50131-1_Grade 2_Class II & EN 50131-6_Type A

**WIRELESS BURGLAR ALARM SET\***

TYPE	PICTURE	CODE	DESCRIPTION
<b>JK-84</b>	N	980108400	Wireless burglar alarm KIT (BSW-464)**

\*\* It contains: 1xBSW-450, 1xA-992 Lead battery 12V/2Ah(included in the price), 1xJA-80L, 1xJA-83P, 1xJA-83M, 1xRC-86K  
(Batteries of the peripheral devices are included)

**WIRELESS BURGLAR ALARM SYSTEM\***

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	BATTERY
<b>JA-81F</b>	C	980108003	Keypad with LCD screen (BSW-453)	-	-	2 x Lith. (3,0V)
<b>JA-81M</b>	D	980108008	Door detector (BSW-460)	-	-	Lith. (3,6V AA)
<b>JA-83M</b>	M	980108301	Wireless door detector	-	-	Lith. (3V CR123A)
<b>JA-80L</b>	B	980108002	Internal siren (BSW-452)	230 V	1 W	-
<b>JA-80A</b>	E	980108009	Outdoor siren (BSW-461)	-	-	Lith. BAT - 80

**DETECTORS \* (Batteries are not included in the price)**

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	BATTERY
<b>JA-80P</b>	F	980108004	Motion detector (BSW-454)	-	-	Lith. (3,6V AA)
<b>JA-83P</b>	L	980108300	Wireless motion detector	-	-	Lith. (3V CR123A)
<b>JA-84P</b>	J	980108401	Motion detectorwith camera & flash (BSW-466)	-	-	Lith. (3,6V AA)
<b>JA-85B</b>	H	980108500	Glass break detector (BSW-459)	-	-	Lith. (3,6V ½AA)
<b>JA-80PB</b>	K	980108005	Combined detector (BSW-455)	-	-	Lith. (3,6V AA)
<b>JA-85ST</b>	G	980108015	Wireless optical smoke & heat detector (BSW-456)	-	-	Lith. (3,6V AA)
<b>JA-88P</b>	I	980108900	Outdoor motion detector (BSW-463)	-	-	Lith. (3,6V AA)

**ACCESSORIES \* (Batteries are not included in the price)**

TYPE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	BATTERY
<b>JA-82Y</b>	980108014	GSM module (BSW-457)	12V DC	35mA	-
<b>RC-86K</b>	980108600	Activation & deactivation key-fob (BSW-458)	-	-	Alcaline (6,0V)
<b>JA-80X</b>	980108010	Voice module (BSW-462)	-	-	-
<b>JA-80Q</b>	980108011	Photo transmission module (BSW-465)	5V DC	2mA	-
<b>RC-89</b>	980108402	Wireless doorbell button (BSW-467)	-	-	Alcaline (6,0V)
<b>AN-81</b>	980108403	External ANTENNA for signal support (BSW-468)	-	-	-



JA-80Y



JA-80X



JA-80Q



RC-86K



RC-89



AN-81









*for a safer world!*



## OTHER CATEGORIES

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GENERAL PURPOSE DEVICES

CONTROL - WARNING UNITS

# GENERAL PURPOSE DEVICES

Ⓐ



IP42

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IP20

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IP30

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CE

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IP40

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IP20

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IP42

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## GENERAL PURPOSE DEVICES

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
BS-542	I	921542000	Siren with beacon 100dB, (BS-690, BS-691)	12V DC	0,3W	1030 gr.
BS-576/L	K	921576003	Beacon with incandescent LED lamp	12-24V DC	25mA	170 gr.
BS-520	P	921520000	Siren, 100dB, (Ni-Cd)	220-240V AC	4VA	420 gr.
BS-521	P	921521000	Siren with beacon, 100dB, (Ni-Cd)	220-240V AC	4VA	425 gr.
BS-520/WP	P	921520003	Siren, 100dB, IP 65 (Ni-Cd)	220-240V AC	4VA	430 gr.
BS-521/WP	P	921521005	Siren with beacon, 100dB, IP 65 (Ni-Cd)	220-240V AC	4VA	435 gr.
BS-580	K	921580000	Beacon with XENON lamp		3VA	175 gr.
BS-590*	L	921590000	Fire alarm bell	220-240V AC	51VA	1330 gr.
BS-537*	C	921537000	Cancel call point - extinguishing	220-240V AC		145 gr.
BS-595*	J	921595000	Electronic alarm bell		15mA	500 gr.
BS-620	H	921620000	Public address unit	24V DC	3A/12V DC	350 gr.
BS-554	Q	921554000	Megaphone, siren and beacon for BS-620		30-45mA	410 gr.
BS-50*	D	921050000	Microphone for the BS-620	12-24V DC		200 gr.
BS-572	R	921572000	Remote detector LED (red)		10mA	70 gr.
BS-531/WP	P	921531003	Siren with beacon 100dB, IP 65	21-28V DC	40mA	300 gr.

Packaging contains: 24 pcs. (BS-554, BS-595) 36 pcs. (BS-576, BS-528, BS-579) Paper box dimensions (LxWxH): 430x280x335  
16 pcs. (BS-520, BS-521, BS-520/WP, BS-521/WP, BS-580), 36 pcs. (BS-577), 5 pcs. (BS-590)  
Paper box dimensions (LxWxH): 430x280x335 (BS-520, BS-521, BS-520/WP, BS-521/WP, BS-580), 430x375x275 (BS-590)

## FIRE ALARM INDICATION LUMINAIRES & SIGN

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
BS-528	G	921528000	Message indication sign	12-24V DC	140mA	1030 gr.
BS-527	F	921527000	Indication slave luminaire with buzzer	12-24V DC	85mA	410 gr.
BS-527/WP	E	921527001	Waterproof IP65 indic. slave lum. with buzzer	12-24V DC	85mA	830 gr.

Packaging contains: 24 pcs. (BS-527), 12 pcs. (BS-527/WP) Paper box dimensions (LxWxH): 430x280x335 (BS-527), 500x375x315 (BS-527/WP)

## AUTOMATIC TELEPHONE DIALER

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
BS-489	B	921489000	Automatic telephone dialer	10-30V DC	25/70mA	145 gr.

## AUTONOMOUS GENERAL PURPOSE DEVICES

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONS.	GROSS WEIGHT
BS-3001	M	921300100	Siren with beacon, fire ext. call point and backup light (230V)	220-240V AC	3VA	
BS-3002	N	921300200	Siren with beacon & fire extinguishing call point, battery (3xAA)	4,5V DC	-	

Packaging contains: 22 pcs. Paper box dimensions (LxWxH): 500x375x315

## GENERAL PURPOSE DEVICES 85-265V AC/50-60Hz

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	GROSS WEIGHT
GR-24/12-1	A	923024005	Stabilized power supply 12V DC, 4 A output	163VA	5400 gr.
GR-24/24-1	A	923024006	Stabilized power supply 24V DC, 2 A output	163VA	5400 gr.

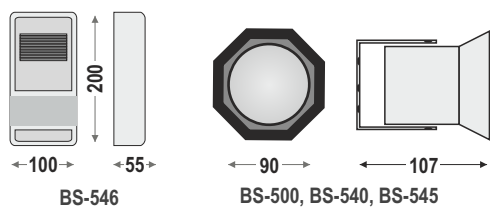
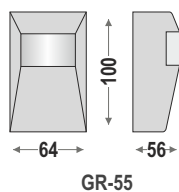
## SPECIAL PURPOSE DEVICES

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
BS-162	O	921162000	12V module for electro-valve unit	11-15V DC	15mA	180 gr.
BS-164	O	921164000	24V module for electro-valve unit	11-15V DC	30mA	190 gr.

Packaging contains: 48 pcs. Paper box dimensions (LxWxH): 430x280x335mm



■ Dimensions in mm






#### IR MOTION DETECTOR

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
GR-55	D	923055000	IR Motion detector, 1 KW/0,1 hp	220-240V AC	6VA

#### GENERAL PURPOSE SIRENS

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
BS-500	B	921500000	Telephone siren with dimmer, 40-105dB	220-240VAC	6VA
BS-540	B	921540000	General purpose siren, 0-100dB	12-24V DC	150mA/4W
BS-545	B	921545000	General purpose siren, 0-100dB	220-240VAC	6VA

 Packaging contains: **36 pcs.** Paper box dimensions (LxWxH): **430x280x335mm**

#### GENERAL PURPOSE SIRENS WITH BEACON

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
BS-505	A	921505000	Telephone siren, 105dB	220-240V AC	4,5VA
BS-546	C	921546000	General purpose siren, 100dB	220-240V AC	6VA
BS-505/WP	A	921505001	Telephone siren, waterproof IP65, 105dB	220-240V AC	4,5VA


 Packaging contains: **16 pcs.** (BS-505, BS-505/WP) Paper box dimensions (LxWxH): **430x280x335mm**

#### CONTROL DEVICES - WARNING UNITS

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
Wi-DAC2	E	926000100	Device control with SMS	230V or 9-15V DC	100mA
AN-100*		980110001	Antenna 2,5m. for Wi-DAC2	-	-

# NUMERATORS LED ALERT



 Paper box dimensions (LxWxH): 205x80x250 mm (BS-748), 160x115x35 mm (BS-746), 210x105x70 mm (BS-716)



## General characteristics

- ▶ Controlled via a remote BS-746 keyboard (mounted in the reception area).
- ▶ Room number programming and display indication  
Network capability with up-to 5 BS-748 panels (240 rooms in total)
- ▶ Presence indication mode displayed on the BS-746 keyboard
- ▶ Degrees of cover protection: IP 20.
- ▶ Produced in accordance with European norms: EN60335-1



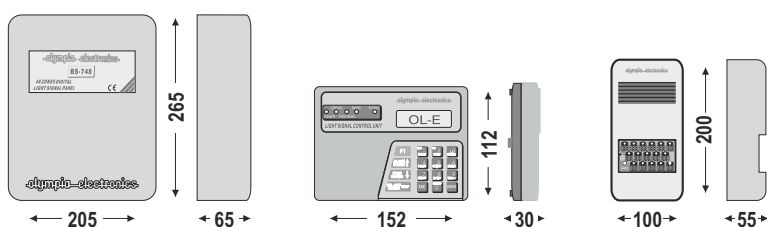
Numerator panels are suitable for hotel & rented room installations.

Their purpose is to inform us of any call coming from the monitored area.

## The numerator series consists of the following units:

- ▶ The BS-716 is a 6 zone panel. It can monitor up-to 16 different areas with a numeration capability.
- ▶ The BS-748 is a 48 zone connection panel. It can be used to monitor up-to 48 different areas and requires the BS-746 keyboard to operate.
- ▶ The panel informs us by using audible and visual means. The call towards the panel is implemented by pressing a common push or pull-cord button.
- ▶ The BS-746 keyboard cooperates with the BS-748 connection panel and is used for displaying information concerning incoming call and for controlling and programming the system.

## Dimensions in mm



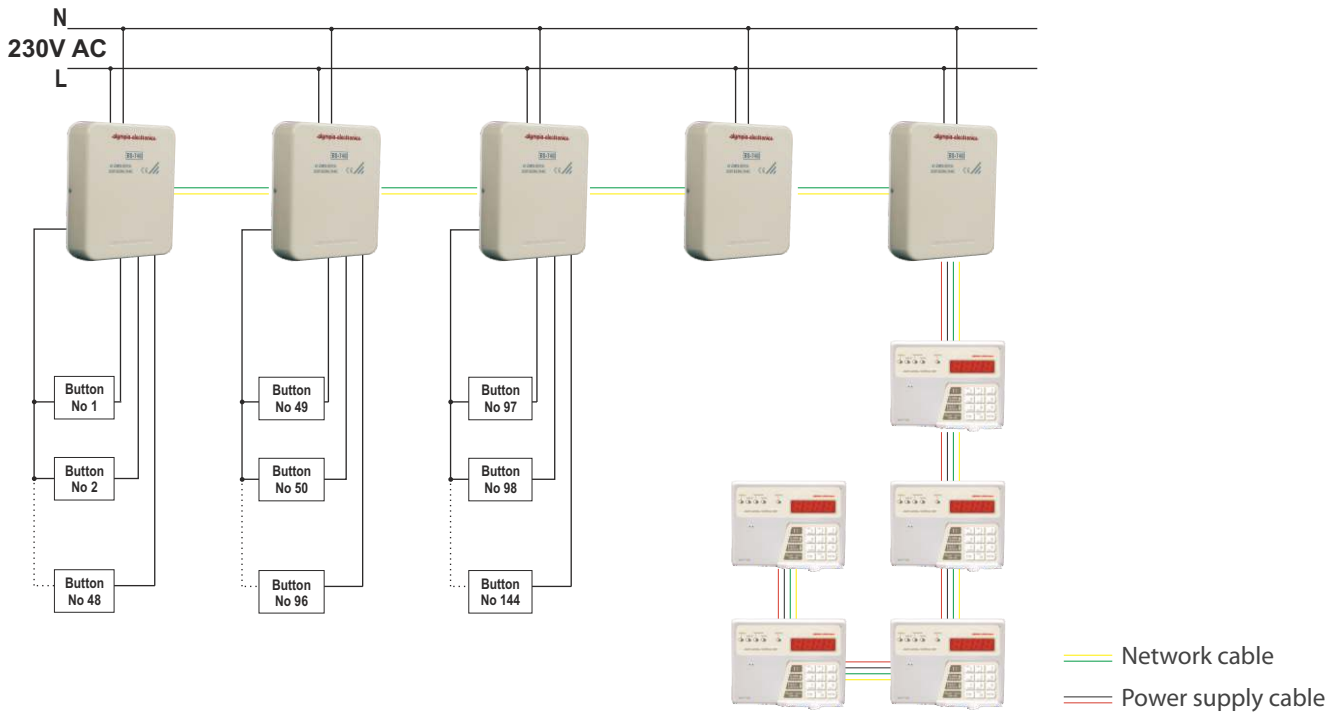




**NUMERATORS "LED ALERT"**

TYPE	PICTURE	CODE	DESCRIPTION	OPERATION VOLTAGE	CONSUPTION
BS-716	B	921716000	16 zone numerator panel (non expandable)	220-240VAC/50-60Hz	6VA
BS-746	C	921746000	Keyboard for BS-748 num. panel		30mA
BS-748	A	921748000	48 up to 240 zones expandable numerator panel	220-240VAC/50-60Hz	6VA

A connection diagram between 5 BS-748 panels and 5 BS-746 keyboards for implementing a 240 room numerator system.







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## HOTEL ACCESS RFID CARDSWITCHES

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CE

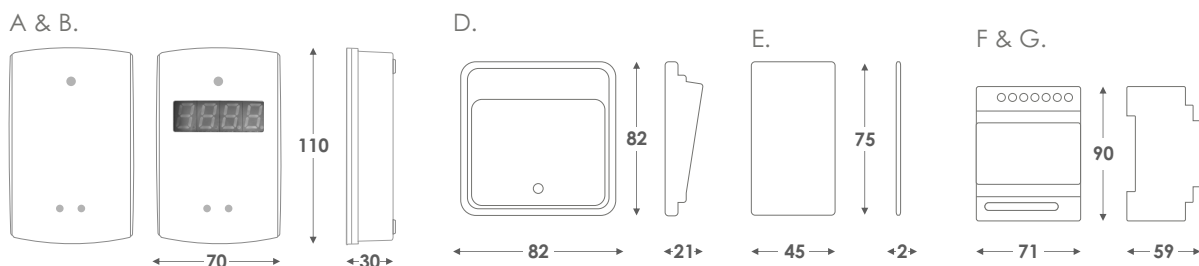
#### ■ DOOR LOCK ACCESS, LIGHTING & AIR-CONDITIONING CONTROL CIRCUITS WITH RFID TECHNOLOGY

- ▶ A self-contained system that does not require a network connection with all the hotel.
- ▶ Easy installation & High security protection.
- ▶ Easy and fast programming.
- ▶ Modern design - low profile.
- ▶ Capability to program up-to 20 customer cards with lighting only or lighting & air-conditioner access.
- ▶ Capability to program up-to 20 personnel card with access to all rooms.
- ▶ The RF-52/A card switch is waterproof with IP 65 cover protection.
- ▶ RF-50/T card with laser printing (hotels logos and room numbers).
- ▶ The RF-54/A control unit has 2 relays 230V AC/25A and 1 output for electric door locks 12V AC/DC-0,5A. Can be mounted on conventional electrical box rail mounts.
- ▶ The RF-52/A/D card switch incorporates a 4-digit room number display

#### ■ LIGHTING & AIR-CONDITIONING CONTROL UNITS WITH RFID TECHNOLOGY

- ▶ The cards used for accessing the lighting and air-conditioning of a room are not programmed by the user. During the order use the respective code depending on the type of card that is required. For lighting only access order code (RF-51/A), and for lighting and air-conditioning access order code (RF-51/B).
- ▶ Respectively you can order cards with laser printed logos and room numbers by using the order codes RF-51/A/T & RF-51/B/T.
- ▶ The RF-57/A control unit has 2 relay outputs 230V AC/25A.
- ▶ The A/C circuit is active only if the windows are closed. This is accomplished only if the magnetic window contacts are used.

#### ■ Dimensions in mm





#### DOOR LOCK, LIGHTING AND AIR-CONDITIONING CONTROL CIRCUITS WITH RFID TECHNOLOGY

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONS.	GROSS WEIGHT
RF-50	E	930050001	Access card for RF-52/A, RF-52/A/D, RF-53/A	-	-	10 gr.
RF-50/T	E	930050002	Lazer printed access card for RF-52/A, RF-52/A/D, RF-53/A	-	-	10 gr.
RF-52/A	B	930052002	IP 65 , RFID card switch for RF-54/A	from the RF-54/A	60mA	135 gr.
RF-52/A/D	A	930052003	IP 65 , RFID card switch for RF-54/A with display	from the RF-54/A	85mA	155 gr.
RF-53/A	D	930053002	RFID card switch for RF-54/A	from the RF-54/A	60mA	95 gr.
RF-54/A	F	930054002	Door lock, lighting & A/C control unit (2x25A)	220-240V AC	25VA	265 gr.
A-42	C	927042000	Recess mounting base	-	-	90 gr.

 Packaging contains: **26 pcs. (RF-52/A) 56pcs.** Paper box dimensions (LxWxH): **270x230x230mm (RF-52) 430x280x335 (RF-56)**

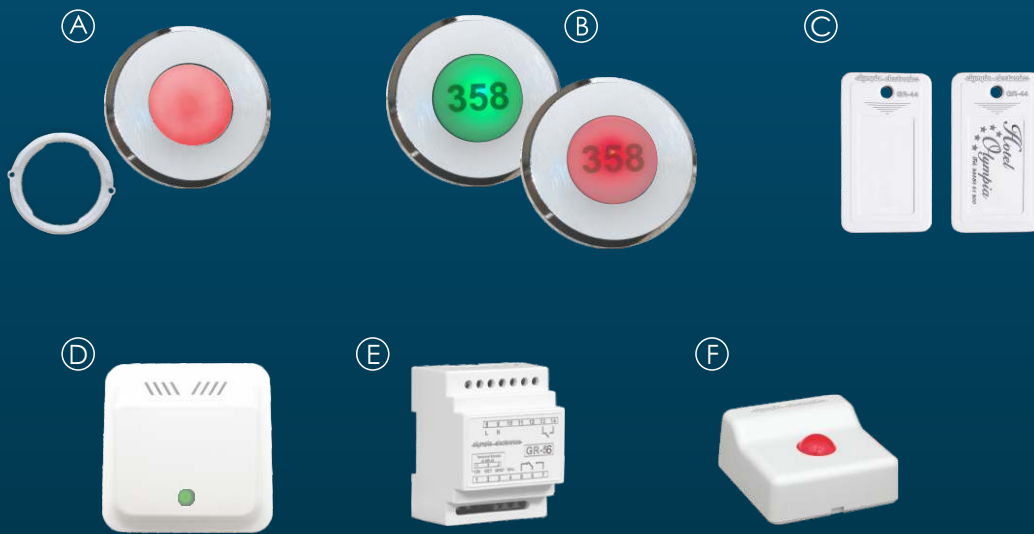
#### LIGHTING & AIR-CONDITIONING CONTROL UNITS WITH RFID TECHNOLOGY

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONS.	GROSS WEIGHT
RF-42	B	930042000	RFID card switch for RF-57/A	from the RF-57/A	50mA	-
RF-43	D	930043100	RFID card switch for RF-57/A	from the RF-57/A	50mA	95 gr.
RF-51/A	I	930051002	Access card for lighting for RF-42, RF-43	-	-	10 gr.
RF-51/A/T	I	930051004	Laser printed access card for lighting	-	-	10 gr.
RF-51/B	I	930051003	Access card for lighting & A/C	-	-	10 gr.
RF-51/B/T	I	930051005	Laser printed access card for lighting & A/C	-	-	10 gr.
RF-57/A	G	930057004	Control unit for lighting and air-conditioning	220-240V	5VA	215 gr.
A-42	C	927042000	Recess mounting base	-	-	-

 Packaging contains: **100 pcs. (RF-43) 56 pcs. (RF-57/A)** Paper box dimensions (LxWxH): **430x280x335**

#### MAGNETIC TRAPS

TYPE	PICTURE	CODE	DESCRIPTION
BS-429/B*	H	980142902	Magnetic trap for burglar alarm panel (brown)
BS-429/W*	H	980142900	Magnetic trap for burglar alarm panel (white)



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**SIMPLE OR MAGNETIC CARD SYSTEMS**

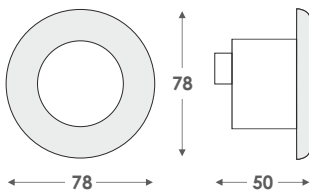
- ▶ Single color room number card printing capability
- ▶ Suitable for Hotels and rented rooms
- ▶ Relay output contact protection.

**BICOLOR PRESENCE INDICATORS RF-58 and RF-58/T**

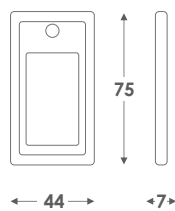
- ▶ Suitable for Hotels and rented rooms
- ▶ Room number on card, Laser printing capability
- ▶ Suitable for installation in common electrical boxes
- ▶ Modern design, slim profile

■ Dimensions in mm

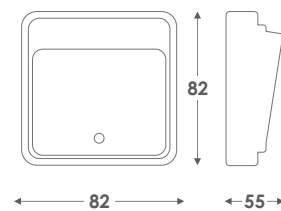
A &amp; B.



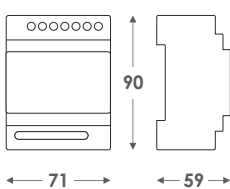
C.



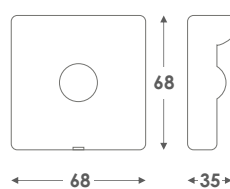
D.



E.



F.







## MAGNETIC CARD SWITCHES

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
GR-43	D	930043000	Magnetic card switch for GR-45/A, GR-46/A, GR-47/A, GR-57/A	12V DC	8mA	110 gr.
GR-50	D	930050000	Magnetic card switch for relay connection	220-240V AC	1VA	100 gr.
GR-44	C	930044000	Magnetic card for GR-43 & GR-50	-	-	20 gr.
GR-44/T	C	930044100	Laser printed magnetic card for GR-43 & GR-50 laser	-	-	20 gr.

Packaging contains: **54 pcs. (GR-43, GR-50)** Paper box dimensions (LxWxH): **430x280x335**

## CONTROL UNITS

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION	GROSS WEIGHT
GR-45/A	E	930045002	Air-conditioner controller (1x16A)	220-240V AC	4VA	185 gr.
GR-46/A	E	930046002	Room lighting controller (1x16A)	220-240V AC	4VA	230 gr.
GR-47/A	E	930047003	A/C and lighting controller (2x16A)	220-240V AC	4,5VA	250 gr.
GR-47/A/NODELAY	E	930047004	A/C and light. contr., no time delay(2x16A)	220-240V AC	4,5VA	250 gr.
GR-56/A	E	930056002	Room lighting controller (25A)	220-240V AC	4,5VA	
GR-57/A	E	930057003	Room lighting & A/C controller (2x30A)	220-240V AC	5VA	305 gr.

Packaging contains: **100 pcs. (GR-45/A, GR-46/A, GR-47/A)** **56 pcs. (GR-56/A, GR-57/A)** Paper box dimensions (LxWxH): **430x280x335**

## COMMON CARD SWITCHES

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
GR-48	D	930048000	Power supply card switch	220-240V AC	1VA
GR-49	C	930049000	Card for GR-48	-	-
GR-49/T	C	930049100	Laser printed Card for GR-48	-	-

Packaging contains: **54 pcs. (GR-48)** Paper box dimensions (LxWxH): **430x280x335**

## INDICATORS

TYPE	PICTURE	CODE	DESCRIPTION	VOLTAGE	CONSUMPTION
GR-52	F	923052000	Presence LED indicator	220-240V AC	6VA
RF-58	A	930058000	Presence LED indicator (red & green LED)	220-240V AC	7VA
RF-58/T	B	930058001	Laser printed presence LED indicator (red & green LED)	220-240V AC	7VA

## ACCESSORIES - Rosettes for RF-58 & RF-58/T

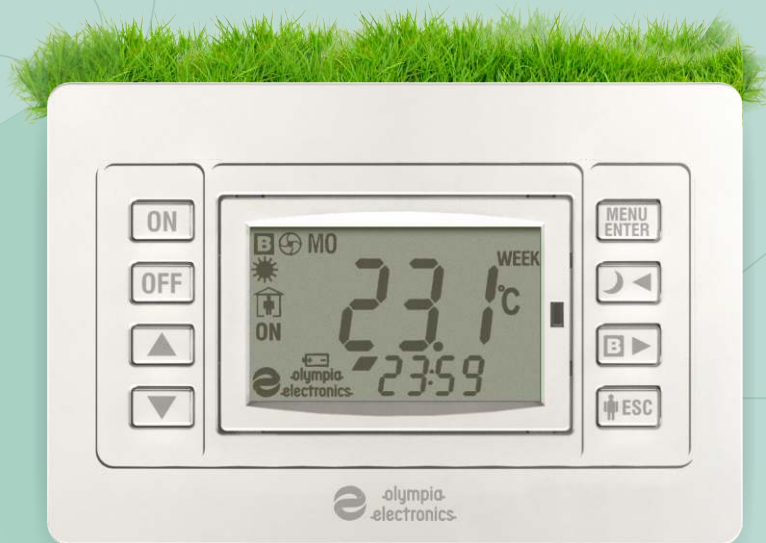
ROUNDED	TYPE	CODE	COLOUR	SQUARE	TYPE	CODE	COLOUR
	A-82/G	927082000	Gold		A-82/G/SQ	927082003	Gold
	A-82/SL	927082001	Silver-pink pearlescent		A-82/SL/SQ	927082004	Silver-pink pearlescent
	A-82/Ni	927082002	Nickel		A-82/W/SQ	927082005	White



\*In the price of RF-58 & RF-58/T included one of the rosettes above.  
Please define during the order the type you require using the codes.



25%  
economy\*



**\*Energy saving**  
compared with the bimetallic thermostats

New room thermostat BS-812 with batteries

High aesthetics / Low profile 27mm. / User friendly /  
3 operation modes: manual, daily, weekly / Easy operation via 8 keys /  
Easy programming / Multi function LCD with backlight / Clock, calendar /  
Keyboard lock / Upper and lower limit settings /  
Manual temperature selection / Heating and cooling function



olympia<sup>™</sup>  
electronics  
SAFETY & SECURITY SYSTEMS

*for a safer world!*



*for a safer world!*



**Olytherm**   
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**ELECTRONIC THERMOSTATS**

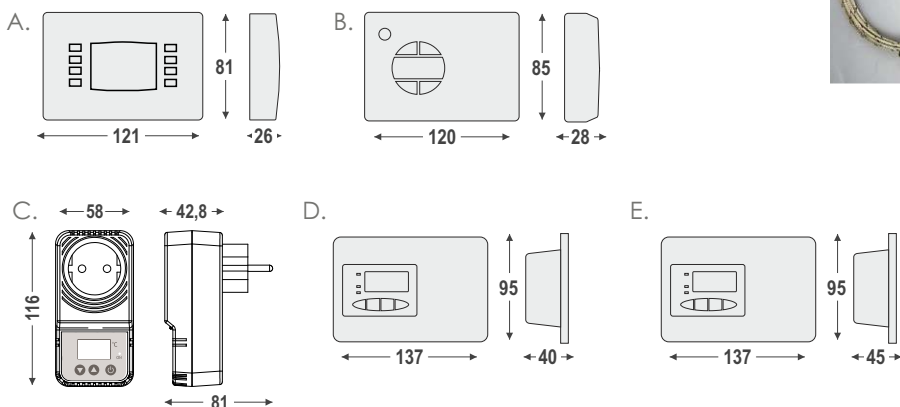
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**■ BS-812, BS-813, BS-814**

- ▶ 3 operation modes: manual, daily, weekly
- ▶ Easy operation via 8 keys
- ▶ Easy programming
- ▶ Multi function LCD with backlight
- ▶ Clock, calendar
- ▶ Keyboard lock
- ▶ Upper and lower limit settings
- ▶ Manual temperature selection
- ▶ Boiler option (BS-813)
- ▶ Heating and cooling function.

**■ Dimensions in mm**



### ENERGY FIREPLACE THERMOSTAT WITH SPEED ADJUSTMENT 220-240V AC/45-55Hz

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	OUTPUT	GROSS WEIGHT
BS-840	B	940840000	Programmable	max. 3VA/2,5W	Adj. up to 200W	300 gr.
BS-841	D	940841000	Recessed programmable	max. 3VA/2,5W	Adj. up to 200W	310 gr.

 Packaging contains: 12 pcs. Paper box dimensions (LxWxH): 315x265x205mm

### PROGRAMMABLE THERMOSTAT FOR WOODURNER 220-240V AC/45-55Hz

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	OUTPUT	GROSS WEIGHT
BS-844	E	940844000	Recessed thermostat for woodburner	max. 3VA/2,5W	Up to 200W/230V-0,65A	300 gr.
BS-844/2	E	940844002	Recessed (2 sensor ability)	max. 3VA/2,5W	Up to 200W/230V-12A	300 gr.

 Packaging contains: 12 pcs. Paper box dimensions (LxWxH): 315x265x205mm

### ELECTRIC SOCKET THERMOSTAT FOR HEATERS AND INFRARED PANELS

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	OUTPUT	GROSS WEIGHT
BS-824	C	940824000	Electric socket thermostat	0,5VA	Relay 250V-16A	200 gr.

 Packaging contains: 28 pcs. Paper box dimensions (LxWxH): 315x265x205mm

### PROGRAMMABLE ELECTRONIC ROOM THERMOSTATS 220-240V AC/50-60Hz WITH 2 BATTERIES AA

TYPE	PICTURE	CODE	DESCRIPTION	OUTPUT	GROSS WEIGHT
BS-812	A	940812000	Programmable electronic thermostat with battery	5A/250V	180 gr.
BS-813	A	940813000	Programmable electronic thermostat with battery & boiler	2x5A/250V	190 gr.
BS-814	A	940814000	Programmable electronic thermostat with relay for heating elements	12A/250V	190 gr.

 Packaging contains: 34 pcs. Paper box dimensions (LxWxH): 315x265x205mm

### WIRELESS PROGRAMMABLE ELECTRONIC ROOM THERMOSTATS 220-240V AC/50-60Hz WITH 2 BATTERIES AA

TYPE	PICTURE	CODE	DESCRIPTION	OUTPUT	GROSS WEIGHT
BS-818	A & G	940818000	Battery operated wireless programmable room thermostat	5A/250V	180 gr.
BS-819	A & G	940819000	Battery operated wireless program. room thermostat with boiler output	2x5A/250V	190 gr.

### ELECTRO-MECHANICAL ROOM THERMOSTATS 220-240V AC/50-60Hz

TYPE	PICTURE	CODE	DESCRIPTION	CONSUMPTION	OUTPUT	GROSS WEIGHT
BS-900*	F	980190000	Room thermostat	-	Contact 230V/8A	120 gr.
BS-901*	F	980901000	Room thermostat with boiler output	-	Contact 230V/2x10A	120 gr.

### ACCESSORIES FOR THE WIRELESS THERMOSTATS

TYPE	PICTURE	CODE	DESCRIPTION
BS-818/T	A	940818001	Battery operated wireless transmitter for programmable room thermostat BS-818
BS-819/T	A	940819001	Battery operated wireless transmitter for program. room thermostat with boiler command BS-819
BS-818/R	G	940818002	Wireless receiver for programmable room thermostat BS-818
BS-819/R	G	940819002	Wireless receiver for programmable room thermostat with boiler output BS-819

### ACCESSORIES

TYPE	PICTURE	CODE	DESCRIPTION
A-844/2	3	927844000	Type J temperature sensor 450°C for BS-844/2
A-840	2	927840000	Temperature sensor for BS-840-841-844
B-844/2	1	927844001	Temperature sensor for BS-844/2



The digital programmable thermostats are new advanced products in the room thermostat field.

The intelligent concept, elegant design and high quality construction renders them suitable for installation in any area and can meet any requirement.









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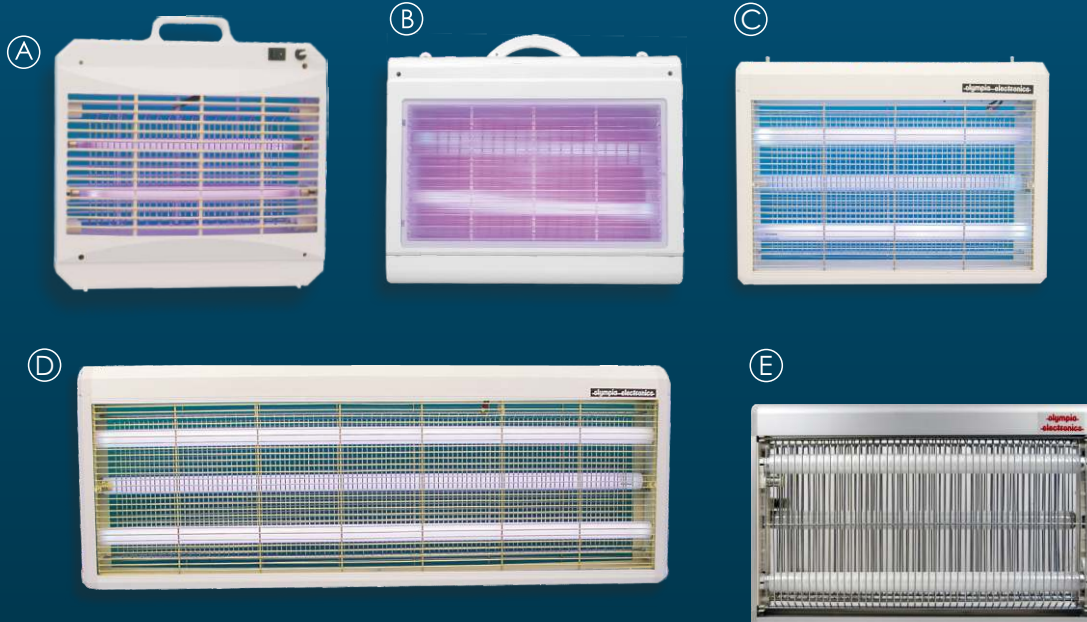
## ELECTRIC INSECT TRAPS

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# ELECTRIC INSECT TRAPS

High voltage  
grid

IP20



Single box  
Packaging dimensions (LxWxH): 330 x 110 x 340 mm (RT-11) & 500 x 165 x 425 (RT-12)

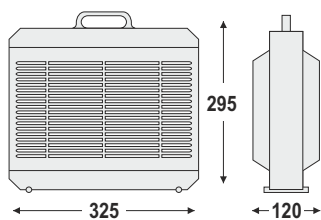


## General Characteristics

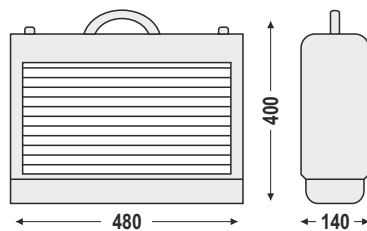
- ▶ Elegant appearance
- ▶ Easy installation
- ▶ Two portable models (RT-11, RT-12)
- ▶ A full range of professional models for large areas
- ▶ Special models with mirror for wall mounting installations (RT-14/6, RT-14/7, RT-15/6, RT-15/7).
- ▶ Easy to clean insect collecting drawer
- ▶ Research proven, UV insect attracting lighting
- ▶ All models operate using special Black Light (BL) tubes
- ▶ UV resistant plastic parts
- ▶ Construction material: Fire retardant ABS, electrostatic-painted aluminum
- ▶ Produced in accordance with: EN60335.02.59

## Dimensions in mm

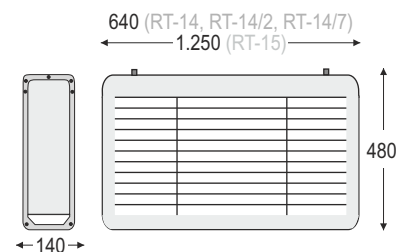
RT-11



RT-12



RT-14, RT-15





**ELECTRIC INSECT TRAP WITH HIGH VOLTAGE GRID 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-11	A	925011000	BL 2 x 8W	30VA	40 m <sup>2</sup>	1.900 gr.

**ELECTRIC INSECT TRAP WITH HIGH VOLTAGE GRID 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-12	B	925012000	BL 2 x 15W	100VA	80 m <sup>2</sup>	4.950 gr.
A-1024		801822012	Transparent protective grid for RT-12			

**ELECTRIC INSECT TRAPS WITH HIGH VOLTAGE GRID (SUITABLE FOR PROFESSIONAL USE) 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-14	C	925014000	BL 3 x 20W	170VA	160 m <sup>2</sup>	8.850 gr.

**ELECTRIC INSECT TRAPS WITH HIGH VOLTAGE GRID 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-114	E	925114000	BL 3 x 20W	170VA	160 m <sup>2</sup>	7.305 gr.

**ELECTRIC INSECT TRAP WITH HIGH VOLTAGE GRID 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-15	D	925015000	BL 3 x 40W	270VA	360 m <sup>2</sup>	18.555 gr.



### General characteristics

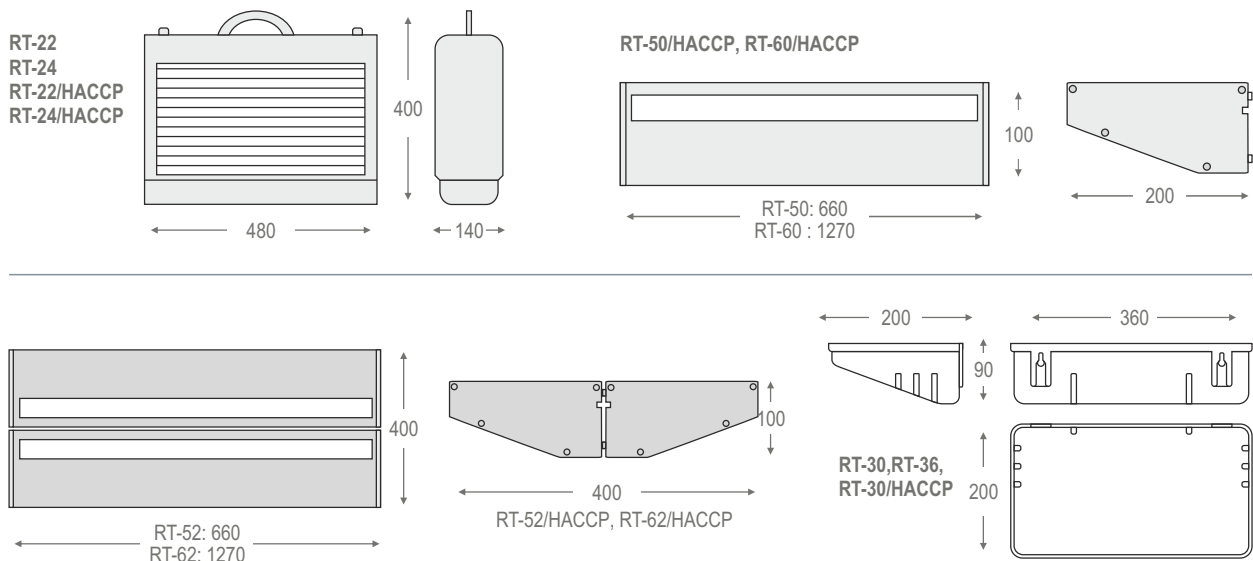
- ▶ Environmental friendly.
- ▶ Research proven insect attracting UV lighting.
- ▶ Constructed according to HACCP regulations.
- ▶ Table mounted installation capability (special accessory)
- ▶ Glue trap, resistant to UV rays and high temperature.
- ▶ Constructional material: Fire retardant ABS, electrostatically painted aluminum.
- ▶ Produced in accordance with: EN60335.02.59



In the food and beverage industry it is mandatory to adhere to HACCP regulation, according to which it is prohibited to use chemicals and high voltage grids in the construction of electric insect traps. In replacement to the high voltage grid, a special factory inspected glue trap is used. The respective legislative regulation are TL/195/97-CE93/43 and 96/3 of European council on the 14th of June 1993. This specific legislation is mandatory for the whole of the food industry as well as the food service industry (restaurants, candy shops, bakeries, meat and super markets e.t.c).

The new product RT-1 combines the use as a portable insect trap and as a night light . It's blue light has a special frequency which attracts insects and offers a special replaceable trap sheet. The coverage area is approximately one room.

### Dimensions in mm



**ELECTRIC INSECT TRAPS WITH GLUE from the "DELUXE FLYTRAP" series 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-30	B	925030000	BL 2x8W	35VA	40 m <sup>2</sup>	1000 gr.
RT-30/SL	B	925030100	BL 2x8W	35VA	40 m <sup>2</sup>	1000 gr.
RT-30/HACCP	B	925030200	2x8W BL/HACCP	35VA	40 m <sup>2</sup>	1050 gr.
RT-30/HACCP/SL	B	925030300	2x8W BL/HACCP	35VA	40 m <sup>2</sup>	1050 gr.
RT-36	B	925036000	PL 26W BL	70VA	60 m <sup>2</sup>	1100 gr.
RT-36/SL	B	925036100	PL 26W BL	70VA	60 m <sup>2</sup>	1100 gr.

**REPLACEMENTS from the "DELUXE FLYTRAP" series**

TYPE	CODE	DESCRIPTION	GROSS WEIGHT
A-1030	980103000	Protective bird grid (in case of external use)	
A-1048	927104800	Glue board for "Deluxe Fly" (12 pieces)	

**ELECTRIC INSECT TRAPS WITH GLUE from the "FOODY`S FLYTRAP" series 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-20	E	925020000	BL 2x8W		40 m <sup>2</sup>	
RT-22	A	925022000	BL 2x15W	92VA	80 m <sup>2</sup>	4200 gr.
RT-22/HACCP	A	925022100	2x15W BL/HACCP	92VA	80 m <sup>2</sup>	4250 gr.
RT-24	A	925024000	BL 4x15W	180VA	160 m <sup>2</sup>	5000 gr.
RT-24/HACCP	A	925024100	4x15W BL/HACCP	180VA	160 m <sup>2</sup>	5050 gr.

**REPLACEMENTS from the "FOODY`S FLYTRAP" series**

TYPE	CODE	DESCRIPTION
A-1050	927105000	Glue board for RT-22 (single sided)
A-1052	927105200	Glue board for RT-24 (double sided)
A-1024	801822012	Protective grid (transparent) for RT-22 & RT-24
A-1049	705010502	Replacement tab for RT-20

**ELECTRIC INSECT TRAPS WITH GLUE from the "PROFESSIONAL DELUXE FLYTRAP" series 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-50/HACCP	D	925050000	BL 1x20W	87VA	80 m <sup>2</sup>	2750 gr.
RT-52/HACCP	C	925052000	BL 2x20W	179VA	160 m <sup>2</sup>	5500 gr.
RT-60/HACCP	D	925060000	BL 1x40W	93VA	180 m <sup>2</sup>	4500 gr.
RT-62/HACCP	C	925062000	BL 2x40W	192VA	360 m <sup>2</sup>	9000 gr.

**REPLACEMENTS from the "PROFESSIONAL DELUXE FLYTRAP" series**

TYPE	CODE	DESCRIPTION	GROSS WEIGHT
A-1068	927106800	Glue board for "Deluxe Fly" (12 pieces)	

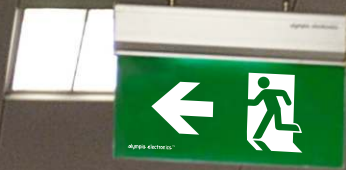
**ELECTRIC INSECT TRAPS WITH GLUE 220-240V AC**

TYPE	PICTURE	CODE	LAMPS	CONSUMPTION	COVERING AREA	GROSS WEIGHT
RT-70	F	925070000	BL 2x15W	51W/100VA	80 m <sup>2</sup>	
RT-70/HACCP	F	925070001	HACCP 2x15W	51W/100VA	80 m <sup>2</sup>	
RT-72	G	925072000	BL 2x15W (2sided)	51W/100VA	160 m <sup>2</sup>	
RT-72/HACCP	G	925072001	HACCP 2x15W (2sided)	51W/100VA	160 m <sup>2</sup>	
RT-74	F	925074000	BL 4x15W (2sided)	100W/200VA	160 m <sup>2</sup>	
RT-74/HACCP	F	925074001	HACCP 4x15W (2sided)	100W/200VA	160 m <sup>2</sup>	

**REPLACEMENTS FOR RT-70, RT-70/HACCP**

TYPE	CODE	DESCRIPTION	GROSS WEIGHT
A-1055	927105500	Glue board (10 pieces)	

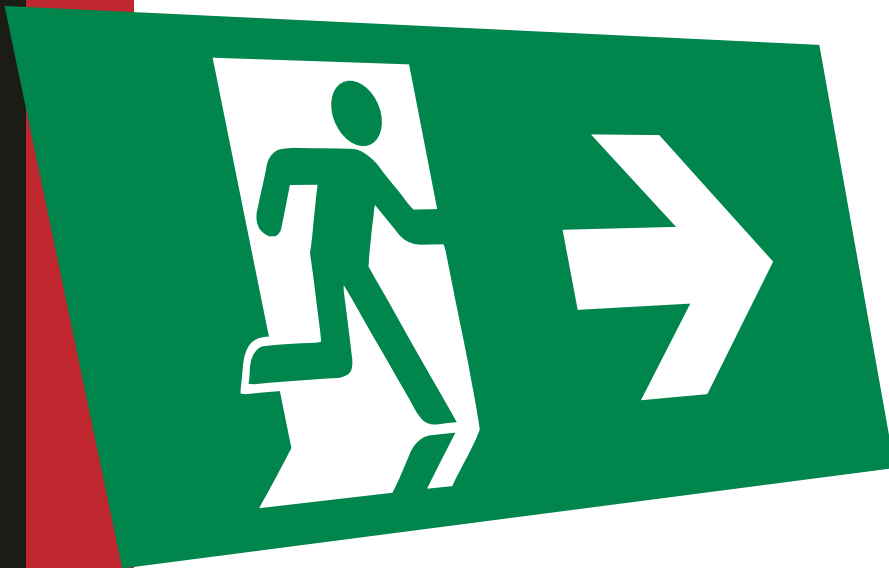








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**MARKING SIGNS  
REPLACEMENTS - ACCESSORIES**

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# MARKING SIGNS

They are installed in areas where it is vital to guide and inform the public without the need of emergency illumination.



SP-214/S229



SP-214/S228



SP-214/S232



SP-215/S65R  
SP-216/S65R

\* Please mention the type of the sign with extension of the required marking diagram. i.e. SP-314/S229



Additional cost for drawings out of catalog.

## MARKING SIGNS PVC from the "SAFETY PANEL" series

TYPE	CODE	DESCRIPTION
SP-210/Ph	980221000	Marking sign from PVC with 0.75mm thickness (10x10cm) fosforize
SP-214	980221400	Marking sign from PVC with 0.75mm thickness (21x21cm)
SP-214/Ph/S229	980221401	Marking sign from PVC with 0.75mm thickness (21x21cm) fosforize
SP-214/Ph/S252	980221402	Marking sign from PVC with 0.75mm thickness (21x21cm) fosforize
SP-214/Ph/S228	980221403	Marking sign from PVC with 0.75mm thickness (21x21cm) fosforize
SP-215	980221500	Marking sign from PVC with 0.75mm thickness (13.5x 31.5cm)
SP-215/Ph	980221501	Marking sign from PVC with 0.75mm thickness (13.5x 31.5cm) fosforize
SP-216	980221600	Marking sign from PVC with 0.75mm thickness (21 x 42.5cm)



Please mention the type of the sign followed by the type of the marking e.g. S-00800/S65L

## LEGENDS / MARKING SIGNS

TYPE	CODE	DESCRIPTION
S-00800	807008000	Exit sticker 215x65 mm for the "Slim Light" luminaires
S-10800	807108000	Exit sticker 195x90mm for the "Classic Light" & "Comfort Light" luminaires
S-10060	807100600	Exit sticker 240x95mm for the GR-1006/9L/-, GR-1006 luminaires
S-10090	807100900	Exit sticker 240x100mm for the GR-1009/L luminaires
S-11100	807110000	Exit sticker 260x80mm for the "Professional Light" luminaires
S-31100	807310000	Exit sticker 280x110mm for the "Easy Light" luminaires
S-31101	807310002	Exit sticker 242x131mm for the "Easy Light" luminaires
S-51100	807510000	Exit sticker 310x140mm for the "Double Light" luminaires
S-91100	807910000	Exit sticker 260x120mm for the "Global Light" luminaires
S-93593	705690016/17/18	Exit sticker 260x120mm (waterproof) for the "Weather Light" luminaires
SP-114	922114000	Double sided PVC 6mm marking panel PVC 6mm for the "Easy Light" GR-310 luminaires
SP-115	922115000	Double sided PVC 6mm marking panel PVC 6mm for the "Comfort Light" luminaires
SP-116	922116000	Double sided PVC 6mm marking panel PVC 6mm for the "Easy Light" GR-3xx/A luminaires

## LEGENDS / MARKING OVERLAY (MLD, SLD, ZLD)

TYPE	CODE	DESCRIPTION
SW-28/L	804012228	Marking overlay, left indication (GR-xLD28)
SW-28/R	804012028	Marking overlay, right indication (GR-xLD28)
SW-28/DR	804012128	Marking overlay, down right indication (GR-xLD28)
SW-28/DL	804012328	Marking overlay, down left indication (GR-xLD28)
SW-28/UL	804012429	Marking overlay, up left indication (GR-xLD28)
SW-28/UR	804012428	Marking overlay, up right indication (GR-xLD28)
SW-34/R	804012034	Marking overlay, right indication (GR-xLD34)
SW-34/L	804012534	Marking overlay, left indication (GR-xLD34)
SW-34/DR	804012134	Marking overlay, down right indication (SLD-34)
SW-34/DL	804012634	Marking overlay, down left indication (SLD-34)
SW-34/UR	804012234	Marking overlay, up right indication (SLD-34)
SW-34/UL	804012235	Marking overlay, up left indication (SLD-34)
SW-44/L	804013544	Marking overlay, left indication (SLD-44)
SW-44/DR	804014444	Marking overlay, down right indication (SLD-44)
SW-44/DL	804014544	Marking overlay, down left indication (SLD-44)
SW-44/R	804013444	Marking overlay right indication (GR-xLD44)
SW-44/UR	804012444	Marking overlay, up right indication (GR-xLD44)
SW-44/UL	804012445	Marking overlay, up left indication (GR-xLD44)

They are installed in areas where it is vital to guide and inform the public without the need of emergency illumination.


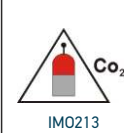


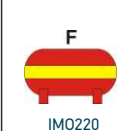
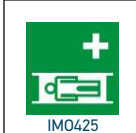
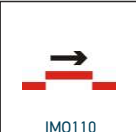
# MARKING SIGNS

The symbols below are according to European Norms.

SAFE CONDITION SIGNS													
FIRE EQUIPMENT SIGNS													
MANDATORY ACTION SIGNS													
PROHIBITION SIGNS													
WARNING SIGNS													

# PHOTO LUMINESCENT MARKING SIGNS FOR SHIPS

The symbols below are according to European Norms.

 IMO101	 IMO111	 IMO203	 IMO213	 IMO223	 IMO233	 IMO243	 IMO406	 IMO417
 IMO102	 IMO112	 IMO204	 IMO214	 IMO224	 IMO234	 IMO244	 IMO408	 IMO418
 IMO103	 IMO113	 IMO205	 IMO215	 IMO225	 IMO235	 IMO301	 IMO409	 IMO419
 IMO104	 IMO114	 IMO206	 IMO216	 IMO226	 IMO236	 IMO302	 IMO410	 IMO420
 IMO105	 IMO115	 IMO207	 IMO217	 IMO227	 IMO237	 IMO401	 IMO411	 IMO421
 IMO106	 IMO116	 IMO208	 IMO218	 IMO228	 IMO238	 IMO402	 IMO412	 IMO422
 IMO107	 IMO117	 IMO209	 IMO219	 IMO229	 IMO239	 IMO403	 IMO413	 IMO423
 IMO108	 IMO118	 IMO210	 IMO220	 IMO230	 IMO240	 IMO404	 IMO414	 IMO424
 IMO109	 IMO201	 IMO211	 IMO221	 IMO231	 IMO241	 IMO405	 IMO415	 IMO425
 IMO110	 IMO202	 IMO212	 IMO222	 IMO232	 IMO242	 IMO406	 IMO416	 IMO426
						 IMO427	 IMO428	 IMO429

### LAMPS (1 year guarantee )

TYPE	CODE	DESCRIPTION
A-960	401001015	Fluorescent lamp 15W
A-980	401000015	Fluorescent lamp 15W(Black light)-UV for RT-12,RT-22,RT-24
A-980/HACCP	401005015	Unbreakable fluorescent lamp 15W(Black light)-UV for RT-22, RT-24
A-983	401000008	Fluorescent lamp 8W(Black light)-UV for RT-11,RT-30
A-983/HACCP	401005008	Unbreakable fluorescent lamp 8W(Black light)-UV for RT-30/HACCP
A-984	401000018	Fluorescent lamp 20W(Black light)-UV for RT-14,RT-50,RT-52
A-984/HACCP	401005020	Unbreakable fluorescent lamp 20W(Black light)-UV for RT-50, RT-52
A-985	401000036	Fluorescent lamp 40W (Black light)-UV for RT-15,RT-60,RT-62
A-985/HACCP	401005040	Unbreakable fluorescent lamp 40W(Black light)-UV for RT-60,RT-62
A-987	401013026	Lamp PL 26W(Black light)-UV for RT-36
A-993	401001006	Fluorescent lamp 6W /D
A-994	401001008	Fluorescent lamp 8W /D
A-995	401001018	Fluorescent lamp 18W
A-999	401003011	Fluorescent lamp 11W PL or Dulux S/E

### BATTERIES (1 year guarantee )

TYPE	CODE	DESCRIPTION
B-936/HT60SC	601134840	Battery Ni-MH 4.8V/ 4Ah
B-970/HT	601212415	Battery pack Ni-Cd 2.4V/ 1.5 Ah
B-971/HT	601212430	Battery pack Ni-Cd 2.4V/ 3 Ah
B-972/HT	601213615	Battery pack Ni-Cd 3.6V/ 1.5 Ah
B-973/HT	601214815	Battery pack Ni-Cd 4.8V/ 1.5 Ah
B-974/HT	601213640	Battery pack Ni-Cd 3.6V/ 4Ah
A-920	603001226	Battery 12V/2,6Ah
A-926	601003606	Battery Ni-Cd 3,6V/600mAh
A-978	601000012	Battery Ni-Cd 1.2V/ 1.5Ah
A-986	603001270	Sealed lead acid battery Pb 12V/ 7Ah
A-988	603000645	Lead acid battery 6V/ 4Ah
A-989	603001211	Lead acid battery Pb 12V/ 1.3Ah
A-991	927991000	Lead acid battery Pb 24V/ 2Ah
A-992	603001220	Lead acid battery Pb 12V/ 2Ah
A-925/HT	601103606	Battery 3.6V/600mAh Ni-MH HT (halogen free)
A-931/HT	601233610	Battery Ni-Cd 3,6V/1Ah HT with cable & connector (halogen free)
A-965/HT	601103612	Battery 3.6V/1,5Ah Ni-MH HT (1200) (halogen free)
A-1200	603101233	Lead acid battery 12V/ 33Ah
A-1202	603101255	Lead acid battery 12V/ 55Ah
B-952/HT	601113620	Battery 3,6V/2Ah Ni-MH HT (halogen free)
B-949/HT	601233630	Battery Ni-Cd 3,6V/3Ah HT (halogen free)
B-974/HT	601213640	Battery Ni-Cd 3,6V/4Ah HT (halogen free)
C-930/HT	601104812	Battery 4,8V/1,2Ah Ni-MH (halogen free cable) AWG16
B-954HT	601134820	Battery 4,8V/2Ah Ni-MH HT (halogen free)
B-941/HT	601214830	Battery Ni-Cd 4,8V/3Ah HT (halogen free)
B-979/HT	601214840	Battery Ni-Cd 4,8V/4 Ah HT (halogen free)
A-961	603001290	Lead acid battery 12V/9Ah (halogen free)

## ACCESSORIES / REPLACEMENTS

### ACCESSORIES / REPLACEMENTS

TYPE	CODE	DESCRIPTION
A-82/Ni	927082002	External decorative lag, nickel case
A-82/G/SQ	927082003	External decorative lag, silver-pink pearlescent case
A-82/SL/SQ	927082004	External decorative lag, gold case
A-100	927010000	40 cm Extension rod for "Double Easy Light"
A-536	927536000	Recess wall mounting base for fire alarm call points
A-632	980163200	Recess mounting base
A-752	752000008	Spray for testing the smoke detectors
A-982	953000315	High voltage transformer for RT-14, RT-15
A-1013	927101300	Recess mounting base for "Professional Light"
A-1014	927101400	Double sided conversion diffuser for "GR-5XX" (Double light)
A-1015	927101500	Recess mounting base for "Classic Light"
A-1017	927101700	Double sided diffuser "Weather Light"
A-1018/PL	927101801	Recess mounting base for MLD-28, DLD-28
A-1020/PL	927102001	Recess mounting base for MLD-34, DLD-34
A-1021	980210210	Recess mounting base for MLD-44, DLD-44
A-1022	927102200	Set for ceiling installation 20 cm for MLD / DLD
A-1025	927102500	Set for ceiling installation 40 cm for MLD / DLD
A-1026	927102600	Set for ceiling installation 60 cm for MLD / DLD
A-1027	927102700	Set for ceil. instal. with chain up to 50 cm for "Eco Light"
A-1030	980103000	Protective grid for RT-3X for external use
A-1048	927104800	Glue board (12 pieces) for RT-3X
A-1050	927105000	Glue board(single sided) for RT-22 (1 piece)
A-1052	927105200	Glue board (double sided) for RT-24 (1 piece)
A-1055	927105500	Glue board 10 pcs.
A-1068	927106800	Glue board(12 pieces) or "Professional Deluxe"
A-1079	508000104	10 cm Ext. rod for "Project Light-Lounge Light-Box Light"
A-1080	508000105	10 cm Extension rod with ceiling eyelet for "Project-Lounge"
A-1081	508000106	20 cm Extension rod for "Project-Lounge Light"
A-1082	508000107	40 cm Extension rod for "Project-Lounge Light"
A-1083	508000108	Connection tie for "Project-Lounge Light"
A-1084/SL	801567864	Plastic base for flag mounting (silver) for "Project Light"
A-1085/SL	801567862	Plastic base for ceiling mounting (device terminal)
A-1086	927108600	Metallic ceiling mounting rosette (device terminal)
A-1087/SL	801389862	Plastic base for wall mounting (silver) for "Project"
A-1090	927109000	Set accessories for installation for "Project Light"
A-1100	921110000	Software for BSR-1116 & USB cable
A-1121	927311210	Accessory set used for hanging the "Light Box" on a ceiling
A-1156	927115600	Software for BSR-1156/N & USB cable
A-2000/W	927200000	Set of right / left screw hiding cup for GR-2000, white colour
A-2000/B	927200001	Set of right / left screw hiding cup for GR-2000, bronze colour
A-2100	980210000	Software for BSR-21xx & USB cable
A-3016	927301600	Recess mounting base for "Easy Light"
A-3018	980330180	Suspended ceiling mounting springs for "Easy Light"; "SLD"
A-9000	927900001	Ceiling Bracket for GR-9xx/xxL
A-9100	927910001	Plastic double sided diffuser "Weather Light" GR-19xx
A-9100/ST	927910000	Plastic double sided diffuser for self-testing "Weather Light" GR-19xx
A-1130	927311300	Set of accessories for ceiling mounting (1m) (ZLD-128-134)
A-1131	927311310	Set of accessories for ceiling mounting (0,5m) (ZLD-128-134)
A-1132	927311320	Set of accessories for ceiling mounting 0,25m) (ZLD-128-134)
A-1133	927311330	Accessory for vertical wall mounting (ZLD-128-134)
AN-100	980110001	Antenna 2.5m for Wi-Dac2
Base-401	980184011	Base for movement detectors BS-405 & BS-409
BOX-3016	980130160	Base for installing detectors in air-ducts
BS-818/T	940818001	Wireless transmitter for programmable room thermostat with batteries 2xAA
BS-819/T	940819001	Wireless transmitter for programmable room thermostat - boiler with batteries 2xAA
BS-818/R	940818002	Wireless receiver for programmable room thermostat with batteries 2xAA
BS-819/R	940819002	Wireless receiver for programmable room thermostat - boiler with batteries 2xAA
C-100	980310000	Protective metallic grid for "Professional Light"
C-101	980310100	Protective metallic grid for "Global Light"
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The following conditions shall apply to any estimates, offers or acknowledged orders prepared in connection with any sales made outside Greek Territory by Olympia Electronics S.A.

## 1. GENERAL CONDITIONS

By ordering goods, the buyer simultaneously proceeds to the acceptance of the export sales terms herein contained, regardless of any conditions, which may appear on the buyer's documents and subject to any special conditions accepted in writing.

## 2. PURCHASE ORDERS

The orders should be sent to Olympia Electronics in writing via e-mail or fax. In case that an order is lower than the amount of EURO 1000,00 then the buyer is charged EURO 75,00 fixed administrative cost.

## 3. PURCHASE ORDER CANCELLATION

Olympia Electronics reserves the right to cancel an order in case that information is given by a data bank that the customer faces serious financial problems.

## 4. DISPATCH OF AN ORDER

The delivery terms vary by case and depend on the agreement between Olympia Electronics and the buyer. The terms in force are indicated on the invoice.

## 5. PRICES

Valid prices are the ones that are mentioned in the official export price list of Olympia Electronics. Olympia Electronics reserves the right to make any modification.

## 6. TERMS OF PAYMENT

Terms of payment are specified on the invoice. In case that the buyer does not apply the specified terms of payment, Olympia Electronics reserves the right to issue an extra invoice charging customer the legal expenses for a period equal to the delay of the outstanding payment.

## 7. SAMPLES

Each potential buyer has the right to receive free of charge samples with value not exceeding EURO 50,00. The transportation cost of the samples is charged to the potential buyer.

## 8. LIMITED RESPONSIBILITY

Olympia Electronics is not responsible in case of mistreatment or bad operating conditions of goods by the buyer. Therefore the buyer cannot take any action against Olympia Electronics

## 9. WARRANTY

Olympia Electronics guarantees the quality, condition and operation of the goods. The period of warranty is specified in the official catalogue of Olympia Electronics and also in the technical leaflet, which accompanies each product. This warranty ceases to exist if the buyer does not follow the technical instructions included in official documents given by Olympia Electronics or if the buyer modifies the goods provided or has any repairs or re-setting done by a third party, unless Olympia Electronics has fully agreed to them in writing. The defected goods can be returned only after a written confirmation by Olympia Electronics. Olympia Electronics reserves the right to repair or to replace the returned goods and to or not charge the buyer depending on the reason of defection. Olympia Electronics reserves the right to charge or not the buyer the transportation cost.

## 10. LEGAL DISPUTES



In case of disputes arising from the interpretation or the performance of the contract agreed upon, Thessaloniki Greek court will be the only competent court.

## 11. INSURANCE

In case of any damage during delivery, the client must not sign for the collection of the goods so as Olympia Electronics to be able to claim this damage from the insurance company, otherwise Olympia Electronics is not responsible for the damage.

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