

**ELEVATOR
LIGHTING**



LED SHAFT LIGHTING

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LED SHAFT LIGHTING

**INSTALLATION
&
OPERATING
MANUAL**

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LED SHAFT LIGHTING

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LED SHAFT LIGHTING

1. INTRODUCTION

LED LIGHTING TECHNOLOGY FOR LIFTS

REDUCED INSTALLATION TIME

PLUS LED Shaft Lighting system is a unique and cost effective way of providing lift shaft lighting to meet the new EN81-20 regulations. Quick to install, providing both normal and emergency lighting in one simple system.

LONG LIFETIME & LUMEN MAINTENANCE

LEDs maintain over 70% of their original luminous flux at 50,000 hours — long after conventional light sources have burned out.

BETTER FOR THE ENVIRONMENT

Unlike many conventional lighting technologies, LEDs contain no mercury or heavy metals. Not only are LEDs better for the environment during their operational life, the disposal of LEDs will not further pollute our world's landfills with hazardous waste.

LED LIGHT IS DIRECTIONAL

Conventional light fixtures waste approximately 20% to 50% of the light generated due to the lack of directionality of the light source. LED-based fixtures overcome this handicap by making use of a directional point light source.

LED OPERATIONAL LIFETIME IS NOT AFFECTED BY SHOCK OR VIBRATION DAMAGE

Shocks and vibration shorten the lifespan of a traditional light bulb.

THE BENEFITS OF OUR LED LIGHTING

High Lumen Output
Tremendous Energy Savings
Reduced Installation Time
Long Life
No Glare or Strobe Effect
No Dust Absorption or Yellowing
IP Protection Rating to IP 65

ENERGY SAVING LIGHTING

Save up to 80% on power consumption. Cost effective solutions for LED Shaft Lighting.





2. PLUS LED SHAFT LIGHTING

PLUS LED Shaft Lighting system is a unique and effective way of providing Lift Shaft Lighting to meet the new EN81-20 regulations.

The system is run the full length of the shaft with a continuous linear strip of LED lights protected to class II and IP65.

The lighting strip is a linear strip of lighting which runs the complete length of the lift shaft and has two separate circuits one supplying 230 volts to 54 LED light per meter length and the second circuit providing 24 volts to 6 LED lights per meter length for Emergency Lift Shaft Lighting.

The PLUS LED comes complete with its own power supply with a 3 hour back-up system for use in the event of power failure. The power supply also has terminals provided for 3 way switching of the shaft lighting offering the facility to switch the lighting on and off from the top of car, machine room and the lift pit.



LED SHAFT LIGHTING TECHNICAL SPECIFICATION

Technical Specification 240 v Standard Light	
Colour Temperature	4000 - 4500 K
Vertical Illumination [@1M]	80 Lux
Operating Temperature	-20°C - 50°C
No. LED's Normal Lighting	54 LED per meter
Angle of Radiation	120°
Input Voltage	230-240 V AC 50/60Hz
Output Voltage	230-240 V DC
Dimensions	18.5mm x 9mm (wxh)
Weight	145 grams per meter
Lifetime	50,000 hours mttf (Mean Time To Failure)
Protection class	2
IP Protection	IP 65
Compliance	EN81-20
Length	8 - 51 meters
Fixings	Knock-in wall mounts every 2 meters
Technical Specification 24 v Emergency Light	
Vertical Illumination [@1M]	5 Lux
No. LED's Emergency Lighting	6 LED per meter
Emergency Back up	3 hours
Voltage	24 V DC
Angle of Radiation	120°
Power Consumption	30mA per meter. Max 1 amp at 50 meters



3. PLUS LED SHAFT LIGHTING INSTALLATION



Safety Information:

The installation of the Lighting should only be carried out by a qualified person. All wirings must have a 5 cm distance away from any moving parts. The Power Supply voltage is 230V AC. The max 6.0amp rated fuse should be used to protect the LED Lighting per 50 m length or for each LED Light unit. A separate Power Supply connection is necessary for each individual length. Make sure the PVC coat of the light is not damaged; otherwise this could cause a short circuit. Never install the Lighting under live power conditions and never try to repair the light yourself if damaged. Never turn or squeeze the PLUS LED Lighting strip itself. Despite great robustness, the lighting can be damaged by rough handling. Careful handling is therefore necessary.

Installation Guide for PLUS LED Shaft Lighting:

The most suitable mounting position is a wall where there are no other components and parts installed that could influence the luminosity. Ideally, it would be next to the landing door access. Before installing the PLUS LED Shaft Lighting, you need to check if the Power Supply will come from the top or bottom of the shaft. The maximum distance to the pit floor and to the headroom ceiling should be 50 cm, please consider this recommended distance before starting the installation. The PLUS LED Shaft Lighting has to be installed **from the top of the shaft down** and fixed to the wall the Knock-in wall mounts provided. The PLUS LED Shaft Lighting has to be on the front side. Distance between the fixings is 2 m. The Power Supply needs to be connected as described in Section 4 below, according to the circumstances and situation on site.

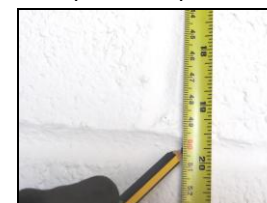


LED SHAFT LIGHTING INSTALLATION

- For fixing the PLUS LED Shaft Lighting use the Knock-in Wall Mounts provided.



- Using a 6.0 mm drill bit, drill the first hole 50 cm from the top of the lift shaft. Using the Knock-in Wall Mounts provided, push this into the hole as shown.





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3. Secure the lighting strip to the Knock-in Wall Mount with the cable tie.



4. Continue the installation of the PLUS LED Shaft Lighting, making a fixing every 2 meters, for the full length of the Shaft Lighting.

5. Securely fix the Terminal Connection Box at the top of the lift shaft



6. Make the wiring connections between the PLUS LED Shaft Lighting Terminal Connection Box at the top of the shaft and the Power Supply. These terminals are marked SL/L, SL/N, SEL+ & SEL-

(The cable for connecting between the LED shaft lighting terminal box and the power supply is not provided with this kit)

- 7.



SL/L = 230v +
SL/N = 230v -
SEL+ = 24v +
SEL- = 24v -

When using the 90000SML
Emergency Power Supply, match
up terminals in Connection Box
to terminals in EPS Unit.



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4. POWER SUPPLY SPECIFICATION

Part Number: 90000SML

Function: PLUS LED Lighting Power Supply

Type: Maintained (24VDC Power Supply maintained when 240VAC supply is lost, automatic switching to battery voltage)

Compatible Lamps: PLUS LED Shaft Lighting

Features:

Casing: 255 x 180 x 110 mm

Material: Plastic

Housing Protection: IP66

Weight: 3.5 KG

Supply Voltage: 230V AC 50/60 Hz

Type of Battery: Lead 12V DC 4.5 Ah (type V0) **FIAMM**®

Battery: Autonomy 2 Hour / Time Support 24 h

Temperature Range: - 20°C to + 60°C

1. Test Button for Emergency Light
2. Rectifier with Semi Conductor Protection
3. DC/DC Converter
4. Battery
5. Battery Charger

6. Terminals
7. Wire Link for Immediate Shaft Lighting
8. Lighting Strip Isolation Relay
9. Power Failure Indication Relay
10. Main Fuse





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4.A POWER SUPPLY



Connection:

The power of your installation must be turned off prior to connection of this product

- Open the housing to access the Din Rail mounted Connection Terminals (6)
- Use the connection plan on the inside lid and as part of this document (connecting the Power Supply)
- Only PLUS LED Shaft Lighting should be connected to this Power Supply.

4.B CONNECTING THE POWER SUPPLY

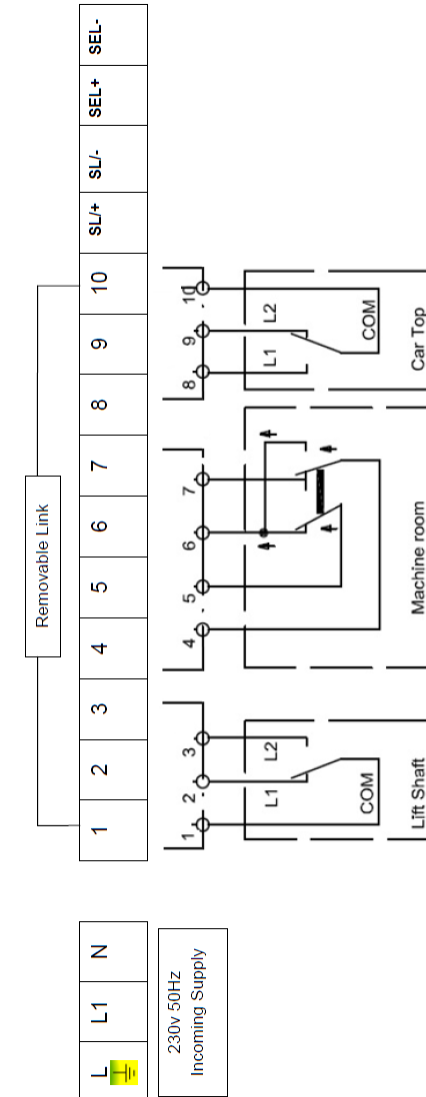


CHECK THE ELECTRICITY SUPPLY IS SWITCHED OFF

1. A Cable entry glad plate has been provided in the Power Supply enclosure for the incoming Supply and the out-going supply to the PLUS LED Shaft Lighting.
2. Connect the incoming main Supply voltage: 230VAC 50/60 Hz The mains power must be turned off prior to connection of the PLUS LED Shaft Lighting. The prime conductor is connected to Terminal L1, Neutral to N and Earth to Terminal .
3. The terminals for the PLUS LED Shaft Lighting are marked SL/L, SL/N, SEL+ & SEL-
4. Terminals are provided for 3 way switch of the LED Shaft Lighting. Terminals 1, 2 and 3 are for the switch in the lift shaft. Terminals 4, 5, 6 and 7 are for the machine room light switch and Terminals 8, 9 and 10 are for the light switch on the car top. A shorting link is installed between terminals 1 and 10 for immediate shaft lighting without the connection of any switch. Remove the link when connecting switches to Terminals 1 & 10 (7).



LED SHAFT LIGHTING



⚠ Only use PLUS LED Shaft Lighting supplied with this Power Supply

👉 Before making any connection ensure the Power Supply is switched off

LED Shaft Lighting connected to SL/L, SL/N, SEL+ & SEL- will operate under Normal Supply conditions and also operate as Emergency, should the main incoming 230v to the Power Supply fail.



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5. BATTERY



1. This product contains a battery. It should not be stored for more than 6 months without the recharge!

For long discharge following a cut of mains supply of long duration, the battery should be replaced. See date of manufacture on label.

N.B. In accordance with the Guidelines 2006/95/EEC "low voltage". 89/336/EEC "COS". & Standard RoHS

2. Do not connect the battery supply until **230V A.C** supply is permanently fed and PLUS LED Shaft Lighting is fitted. Switch on the Trip Fuse (10) Allow 24 hours charge before running the Shaft Lighting in Emergency Mode.
3. The Batteries supplied with this Power Supply are not covered under the warranty of the product.

6. COMMISSIONING & TEST

- Once the wiring has been completed, connect the cable lug to the negative lug terminal of the battery.
Attention! Sticker on lid of Emergency Power Supply.
- Switch on the mains voltage supply. Allow 24 hours charge before running the LED PLUS Shaft Lighting into Emergency Mode.
- Press and hold the Test Button on the front lid of the Emergency Power Supply Enclosure. The LED lights will switch off for a short while and the Emergency LED will illuminate and will stay on for as long as the button is held on.
- Release the button and the all the LED Shaft Lighting will illuminate for normal operation.
- Replace the Emergency Power Supply Enclosure Lid.



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6.A WIRING DIAGRAM

