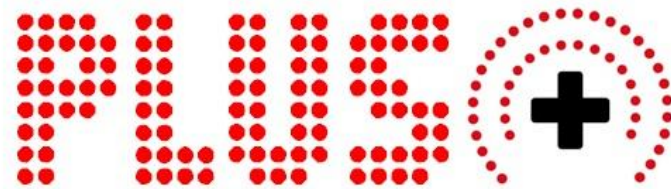


ELEVATOR LIGHTING



LED SHAFT LIGHTING

INSTALLATION & OPERATING MANUAL

AUGUST 2016

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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
- Instant Start
- 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 240 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	6000 - 6500 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
Power Consumption	30mA per meter. Max 1 amp at 50 meters
Dimensions	18.5mm x 9mm (wxh)
Weight	215 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	150°

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.

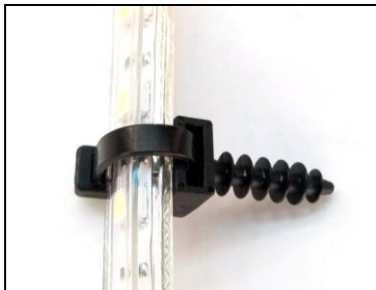
Installation Guide for PLUS LED Shaft Lighting:

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.

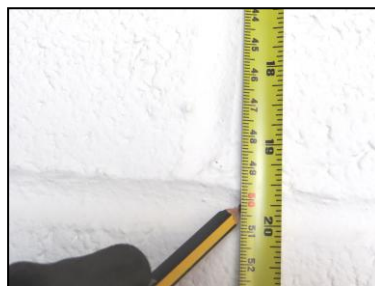


LED SHAFT LIGHTING INSTALLATION

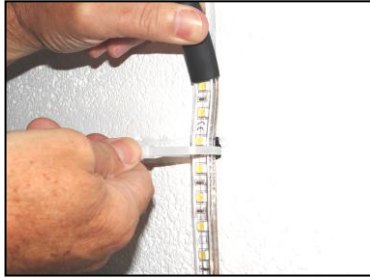
1. For fixing the PLUS LED Shaft Lighting use the Knock-in Wall Mounts provided.



2. 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.



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+, SL-, SEL+ & SEL-

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

4. POWER SUPPLY SPECIFICATION

Part Number: 90000

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: 280 x 250 x 100mm Powder Coated Steel

Supply Voltage: 230V AC 50/60 Hz

Maximum Output Assisted Lamps: 6 W

Maximum Lamp Output Power P1-P2, P3-P4, P5-P6 & P7-P8: 12 W

Maximum Power of the Output: 12V + 15% permanent: 2.4 W (200mA)

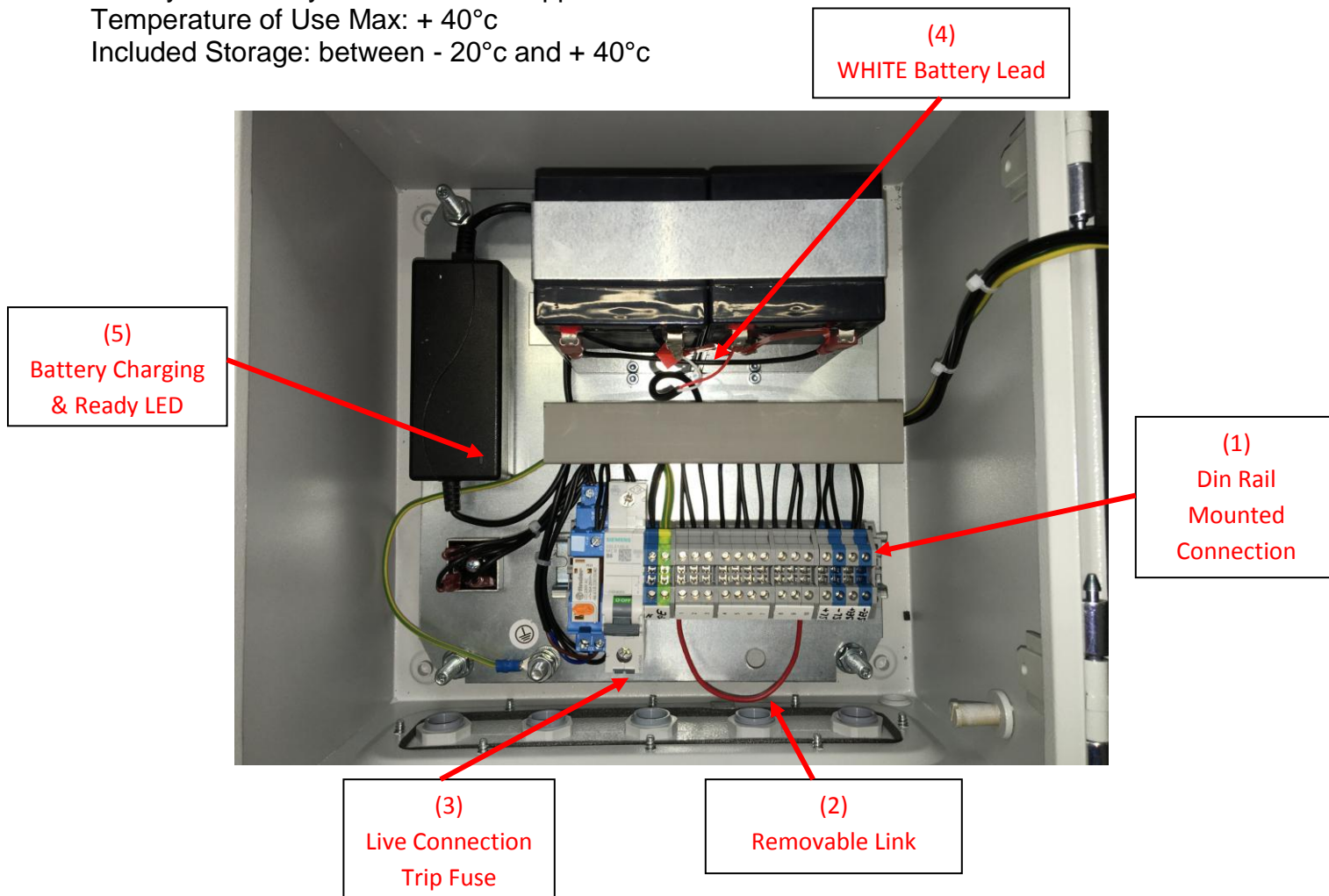
Type of Battery: Lead 12V DC 4.5 Ah (type V0) **FIAMM** ®

Primary Fuse: Timed 315mA

Battery: Autonomy 2 Hour / Time Support 24 h

Temperature of Use Max: + 40°C

Included Storage: between - 20°C and + 40°C



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 **(1)**
- 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

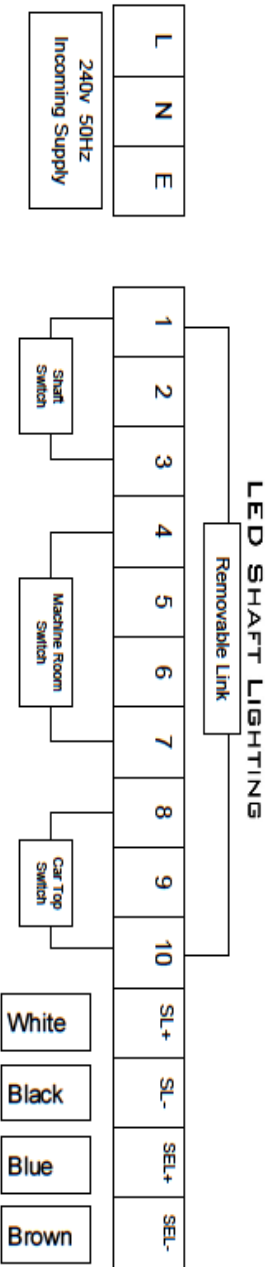
1. A Cable entry glad plate has been provided in the Power Supply enclosure for the incoming Supply and the out-going supply to the PLUS LED Shaft Lighting.
2. Connect the incoming main Supply voltage: 230VAC 50/60 Hz ***The mains power must be turned off prior to connection of the PLUS LED Shaft Lighting.*** Live connection is connected to the trip fuse **(3)** and the neutral to terminal N. And Earth to terminal PE
3. The terminals for the PLUS LED Shaft Lighting are marked SL+, SL-, 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 transportation and should be removed when the connecting to the lighting switches.** (only remove the link on the power supply if this function is being used)
5. Wiring between the LED Shaft Lighting terminal box to the Power Supply is not provided. The cable between the Shaft Lighting connection box and the Power Supply is the responsibility of the installer and should be suitably sized for the installation.

The terminals for these connections are marked in both the LED Shaft Lighting terminal box and the power supply and are marked as SL/- (black) SL/+ (white) SEL/- (brown) SEL/+ (blue). These connections are for both the main LED Shaft Lighting and the Emergency Shaft Lighting.



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PLUS+



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



Before making any connection ensure the Power Supply is switched off

LED Shaft Light connected to SL+, SL-, SEL+ & SEL- will operate under normal supply conditions and also operate as emergency lights, should the main incoming 240V to the Power Supply fail.

A shorting link is installed between Terminals 1 and 10 for transportation and should be removed when connecting to the lighting switches. (Only remove the link on the Power Supply if the switch function is being used)

PLUS+

LED SHAFT LIGHTING

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 240V A.C supply is permanently fed and PLUS LED Shaft Lighting is fitted. Switch on the Trip Fuse (3) 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

1. Once the wiring has been completed, connect the WHITE battery terminal (4)
2. Switch on the mains voltage supply. Allow 24 hours charge before running the LED PLUS Shaft Lighting into Emergency Mode.
3. Check the battery charging LED (6) is illuminated RED. It will change to GREEN when fully charged.
4. 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.

5. Release the button and the all the LED Shaft Lighting will illuminate for normal operation.
6. Replace the Emergency Power Supply Enclosure Lid.

WEBSITE: www.jandlelevatorcomponents.com