# SECTOR II RECTANGULAR BOOM POLE LED INSTALLATION MANUAL

**Centurion Systems (Pty) Ltd**
**www.centsys.com.au**

CENTSYS

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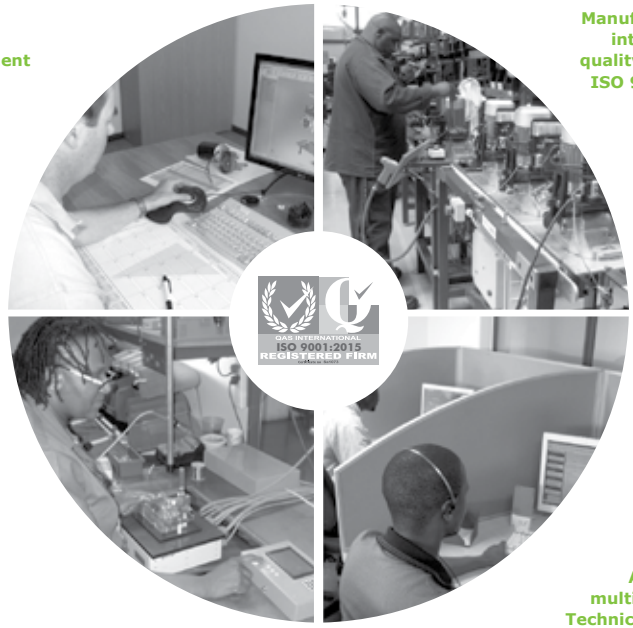
1986 1990 1995 1999 Today

**In-house R&D development team**

**Manufactures to international quality standard ISO 9001:2015**

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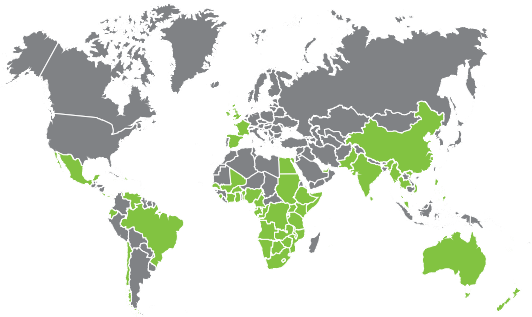

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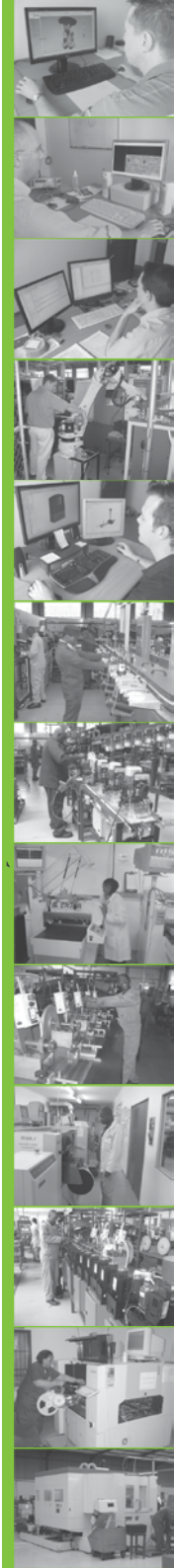

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**Icons used in this manual**

This icon indicates tips and other information that could be useful during the installation.

This icon denotes variations and other aspects that should be considered during installation.

**This icon indicates warning, caution or attention! Please take special note of critical aspects that MUST be adhered to in order to prevent injury.**

# 1. Introduction

**ATTENTION!**

**To ensure the safety of people and possessions, it is important that you read all of the following instructions.**

**Incorrect installation or incorrect use of the product could cause serious harm to people.**

**The installer, being either professional or DIY, is the last person on the site who can ensure that the operator is safely installed and that the whole system can be operated safely.**

## Warnings for the Installer

**CAREFULLY READ AND FOLLOW ALL INSTRUCTIONS before installing the product.**

- All installation, repair, and service work to this product must be carried out by a suitably qualified person
- Do not activate your barrier unless you can see it and can determine that its area of travel is clear of people, pets, or other obstructions
- **NO ONE MAY CROSS THE PATH OF A MOVING BARRIER**. Always keep people and objects away from the barrier and its area of travel
- **NEVER LET CHILDREN OPERATE OR PLAY WITH THE BARRIER CONTROLS**
- Secure all easily-accessed barrier controls in order to prevent unauthorised use of the barrier
- Do not in any way modify the components of the automated system
- Do not install the equipment in an explosive atmosphere: the presence of flammable gasses or fumes is a serious danger to safety
- Before attempting any work on the system, cut electrical power to the operator and disconnect the batteries
- Always ensure that the boom pole is in the raised position before disconnecting AC and DC power to the Traffic barrier to prevent damage to the controller
- The mains power supply of the automated system must be fitted with an all-pole switch with contact opening distance of 3mm or greater. Use of a 5A thermal breaker with all-pole circuit break is recommended
- Make sure that an earth leakage circuit breaker with a threshold of 30mA is fitted upstream of the system
- Never short-circuit the battery and do not try to recharge the batteries with power supply units other than that supplied with the product, or manufactured by Centurion Systems (Pty) Ltd
- Make sure that the earthing system is correctly constructed, and that all metal parts of the system are suitably earthed

- Safety devices must be fitted to the installation to guard against mechanical movement risks, such as crushing, dragging and shearing
- It is recommended that at least one warning indicator light be fitted to every system
- Always fit the warning signs visibly to the inside and outside of the barrier
- The installer must explain and demonstrate the manual operation of the barrier in case of an emergency, and must hand over the user guide to the user
- Explain these safety instructions to all persons authorised to use this barrier, and be sure that they understand the hazards associated with traffic barriers
- Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger
- Dispose of all waste products like packing materials, worn-out batteries, etc. according to local regulations
- Always check the obstruction detection system and safety devices for correct operation
- Neither Centurion Systems (Pty) Ltd, nor its subsidiaries, accepts any liability caused by improper use of the product, or for use other than that for which the automated system was intended
- This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the service life/operation of the product and/or be a source of danger
- Anything that has not been specified in these instructions may be considered a risk to your safety, and the safety of others. If you are unsure of an installation matter, please contact your nearest distributor

# 2. Product Identification

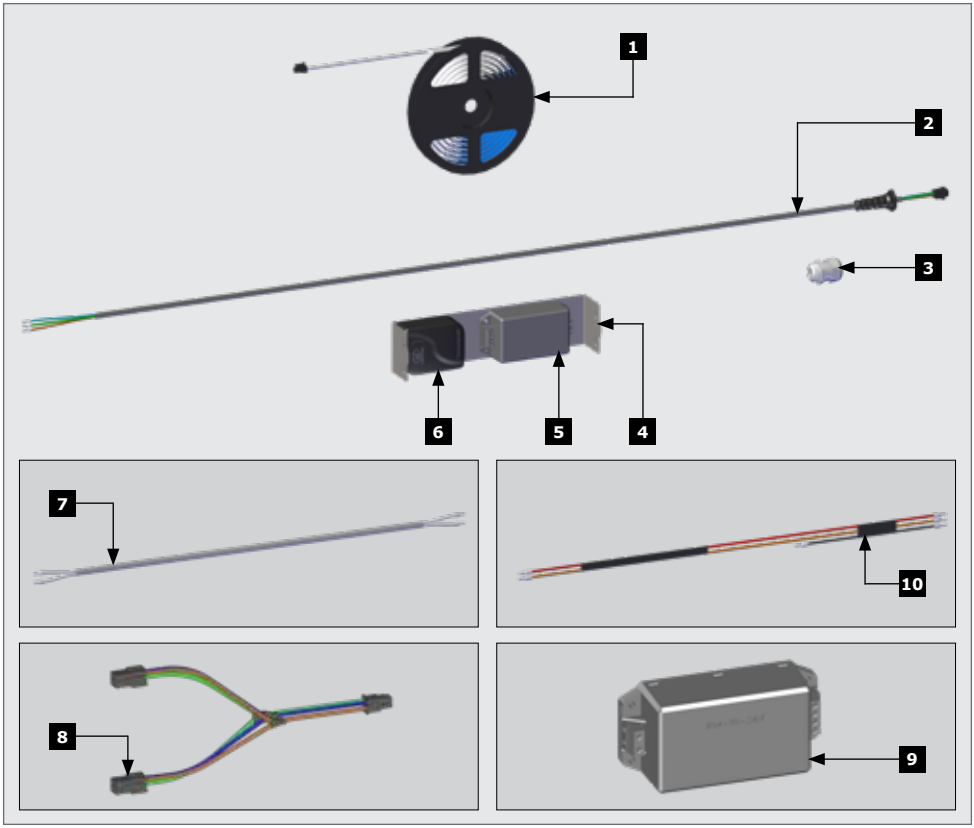


**FIGURE 1. PRODUCT IDENTIFICATION**

1. LED strip
2. Boom pole harness
3. Cable gland
4. Mounting bracket
5. 60W LED power supply
6. Multi-function relay
7. LED PSU harness
8. Dual LED PSU harness[1]
9. 90W LED power supply[1]
10. Relay wiring harness

1. Only required for a dual LED installation.

# 3. Physical Installation

## 3.1. Mounting the PSU and Relay

**The following steps should only be performed once the rectangular boom pole has been successfully fitted onto the SECTOR II.**

**Always ensure that the boom pole is in the raised position before disconnecting AC and DC power to the Traffic barrier to prevent damage to the controller.**

Disconnect both AC and DC power to the **SECTOR II** before doing any work.

1. Open the SECTOR II cabinet.
2. From the top of the inner flap, mark and centre punch hole positions at 76mm and 107mm.

Ensure that both holes are 8mm away from the edge.

3. Drill two 6mm holes.

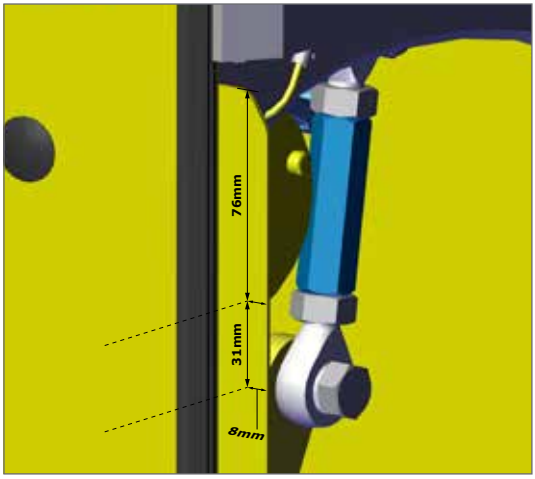


FIGURE 2

4. Repeat steps 2 and 3 on the other inner flap.

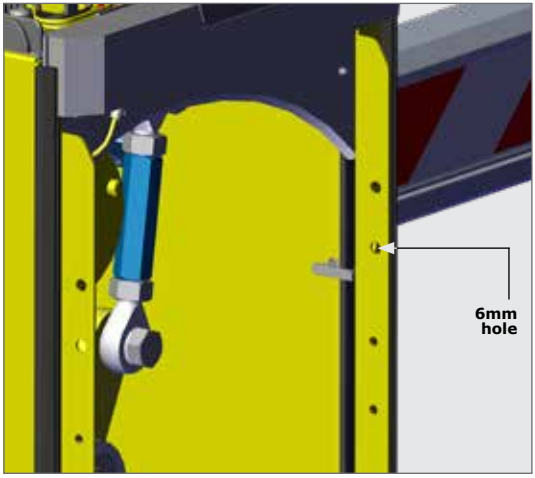


FIGURE 3

5. Bend the metal tabs on the mounting bracket outwards.

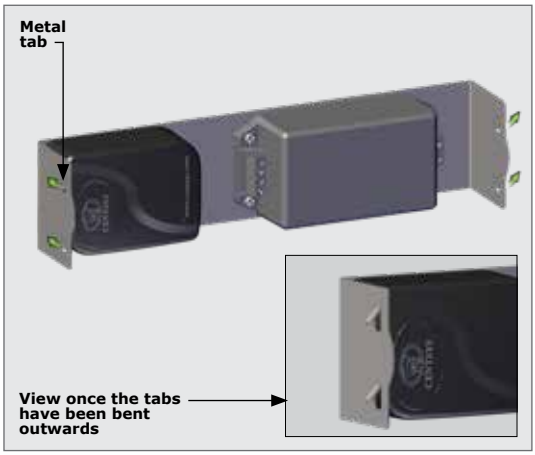


FIGURE 4

6. Fit the mounting bracket into the four newly-drilled holes on the inner flaps of the cabinet.

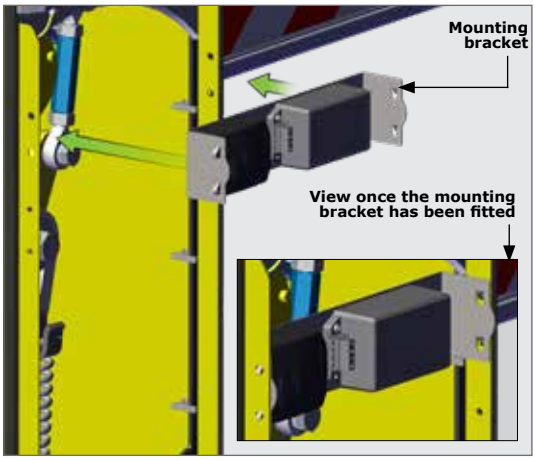


FIGURE 5

## 3.2. Boom pole modifications (single LED)

1. Remove the silicone plug and plastic bumper from the rectangular boom pole.
2. Mark and centre punch a hole position 30mm away from the end of the Coupling.

Ensure that the hole is facing the direction of traffic.

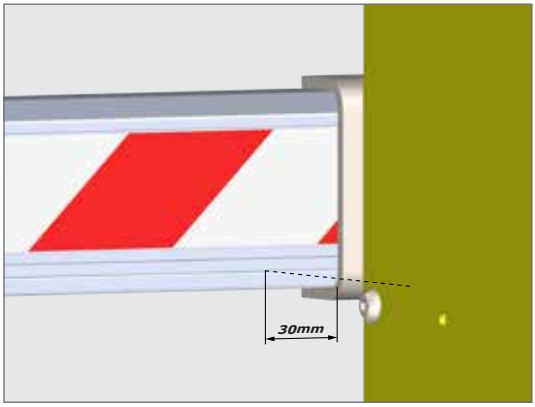


FIGURE 6

3. Drill one 12mm hole.

**The hole must be drilled through only one wall of the boom pole.**

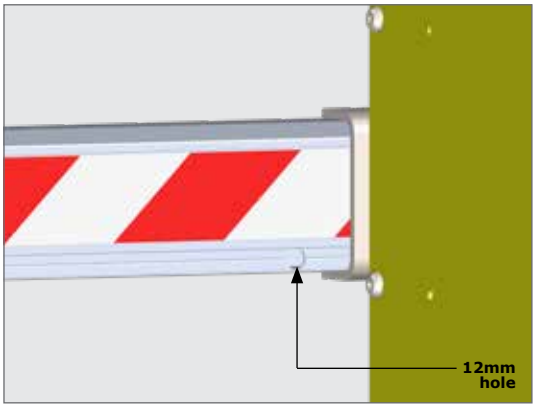


FIGURE 7

4. Route the LED harness through the 12mm hole, making sure that the cable can reach the end of the pole.

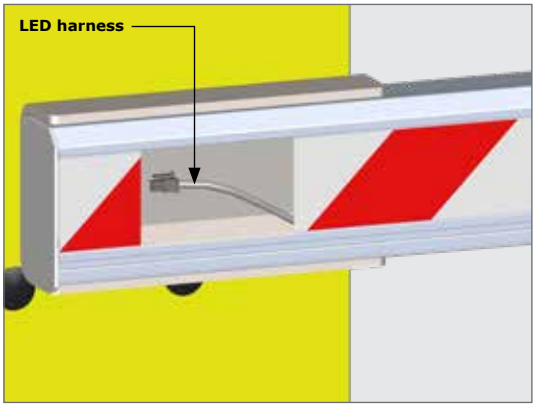


FIGURE 8

5. Stick the LED strip to the boom pole by removing the backing. Start from the side nearest to the 12mm hole.

**Only the backing should be peeled off the LED strip.**

**Do not attach the LED strip to the underside of the boom pole, i.e. the surface facing the ground, as doing so will result in damage to the LEDs in the instance where the pole collides with a vehicle due to tailgating. It is recommended that the strip is attached to the side of the boom pole that is facing oncoming traffic.**

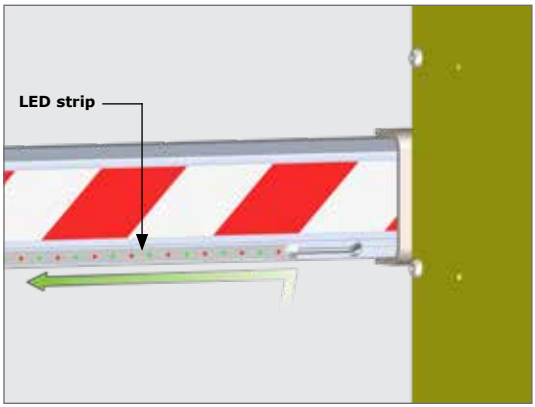


FIGURE 9

If the LED strip needs to be shortened, it can be cut at either terminals indicated in figure 10.

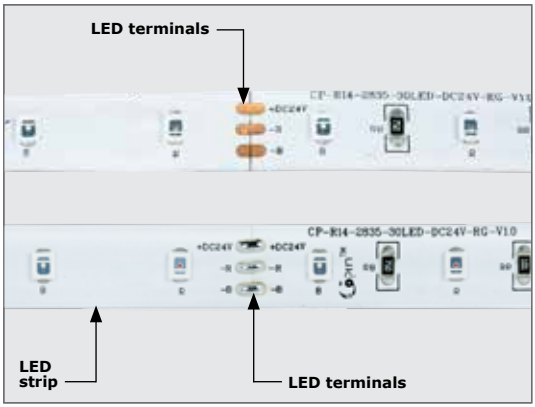


FIGURE 10

6. Remove the end cap from the boom pole.
7. Remove the circular knock-out from the end cap and pull the boom pole harness through the end cap.

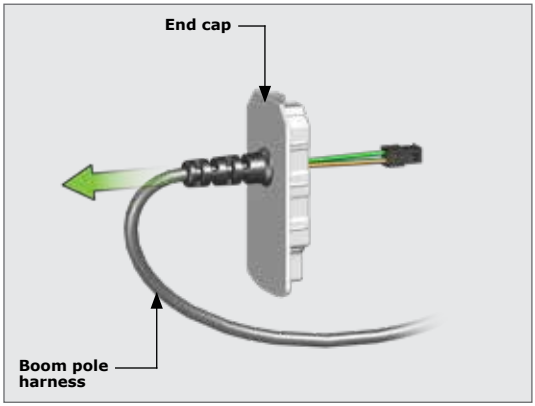


FIGURE 11

8. For a right-hand installation, remove the plastic plug A from the cabinet as shown in Figure 12 and fit the cable gland into the hole. For a left-hand installation, remove the plastic plug B from the cabinet and fit the cable gland into the hole.
9. Route the boom pole harness through the cable gland.

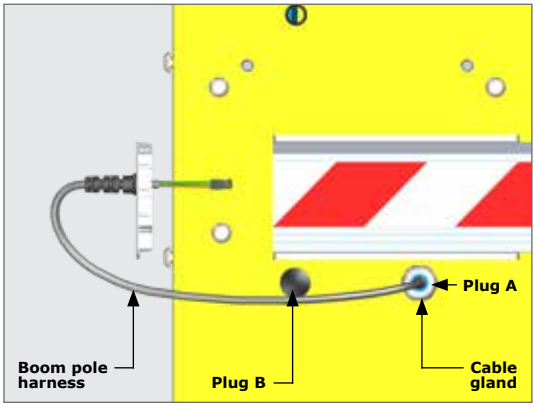


FIGURE 12

10. Connect the boom pole harness to the LED harness and refit the end cap.

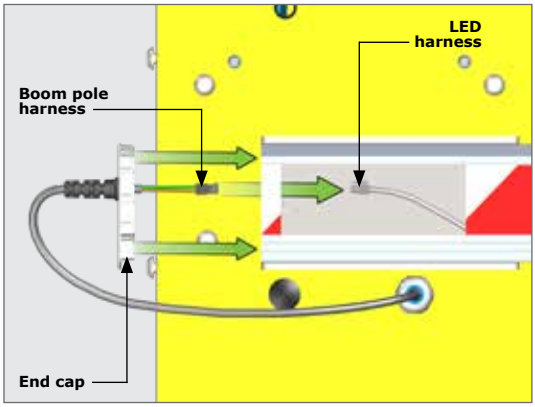


FIGURE 13

11. Refit the plastic bumper and then the silicone plug.

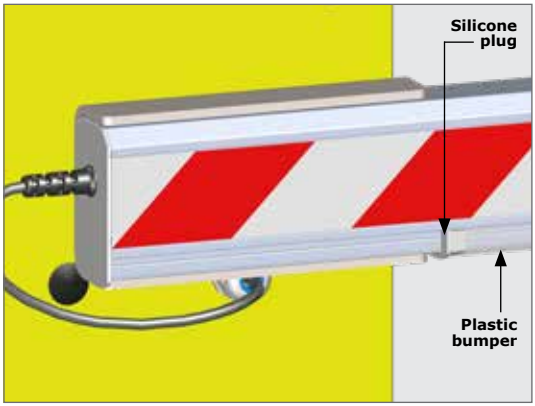


FIGURE 14

## 3.3. Boom pole modifications (dual LED)

**Ensure that you use a 90W LED power supply for a dual LED installation.**

Remove the silicone plug and plastic bumper, and repeat step 2 - 5 from Section 3.2 on both sides of the rectangular boom pole.

1. Remove the end cap from the boom pole.
2. Remove the circular knock-out from the end cap and pull the boom pole harness through the end cap.

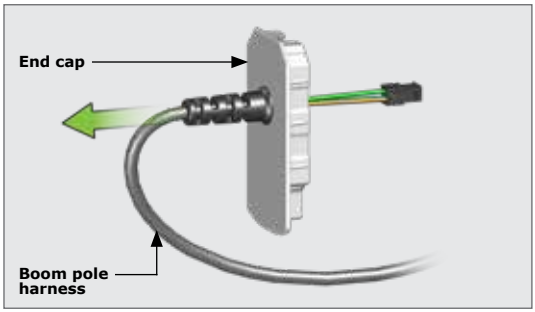


FIGURE 15

3. For a right-hand installation, remove the plastic plug A from the cabinet as shown in Figure 16 and fit the cable gland into the hole. For a left-hand installation, remove the plastic plug B from the cabinet and fit the cable gland into the hole.
4. Route the boom pole harness through the cable gland.

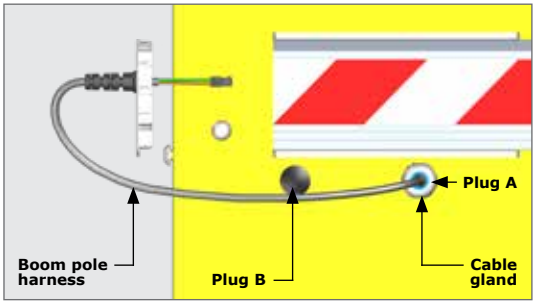


FIGURE 16

5. Connect the boom pole harness to the dual LED harness.

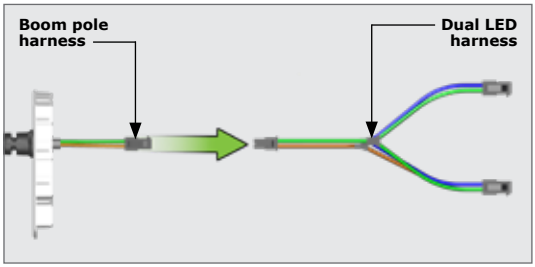


FIGURE 17

6. Connect each end of the dual LED harness to an LED harness and refit the end cap.

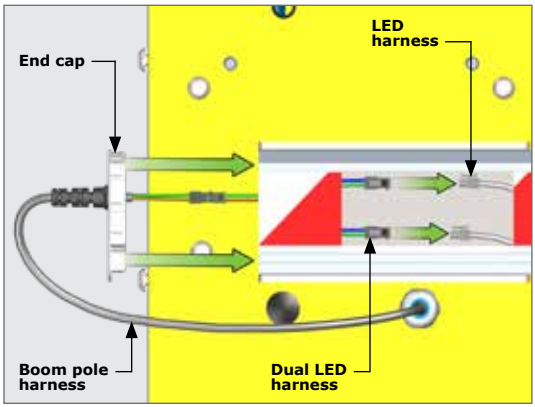


FIGURE 18

7. Refit the plastic bumper and the silicone plug.

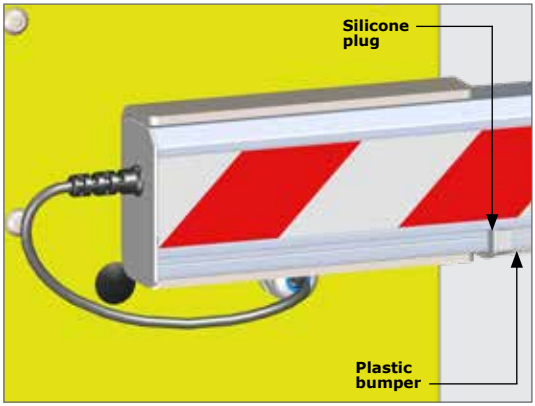


FIGURE 19

# 4. Completing the Installation

## 4.1. Wiring the Control Card (single LED)

### 4.1.1. Option 1

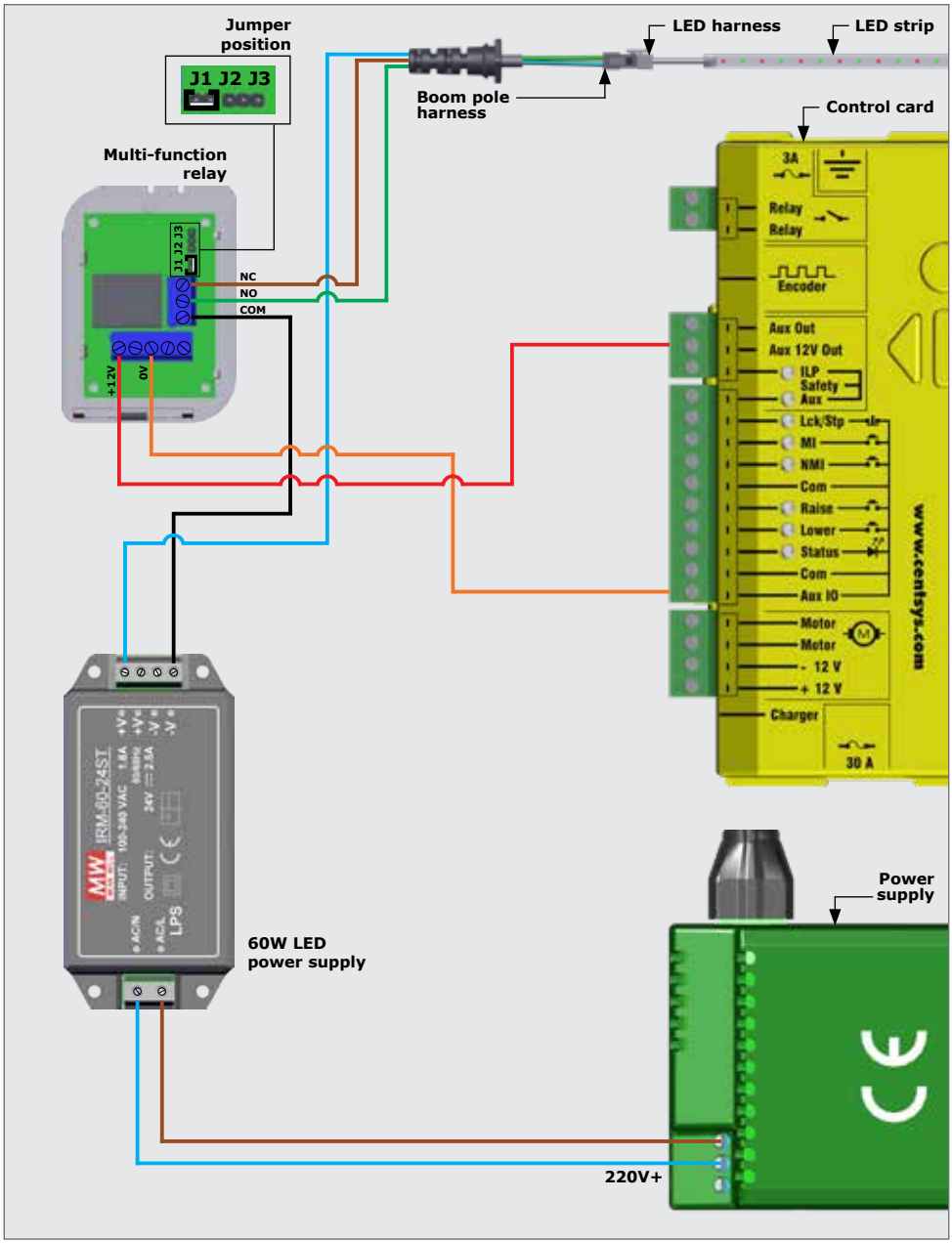


FIGURE 20

### 4.1.2. Option 2

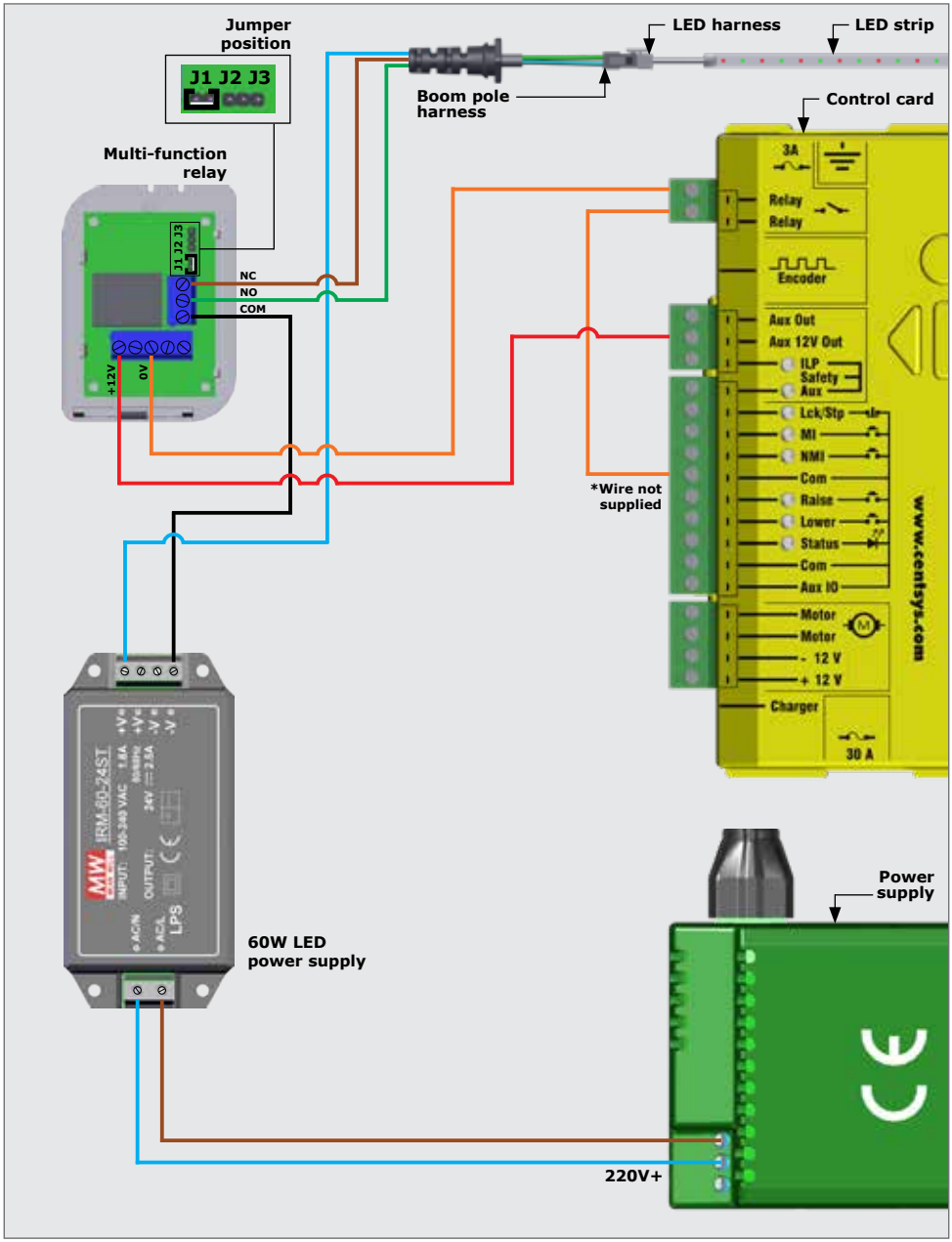


FIGURE 21

## 4.2. Wiring the Control Card (dual LED)

### 4.2.1. Option 1

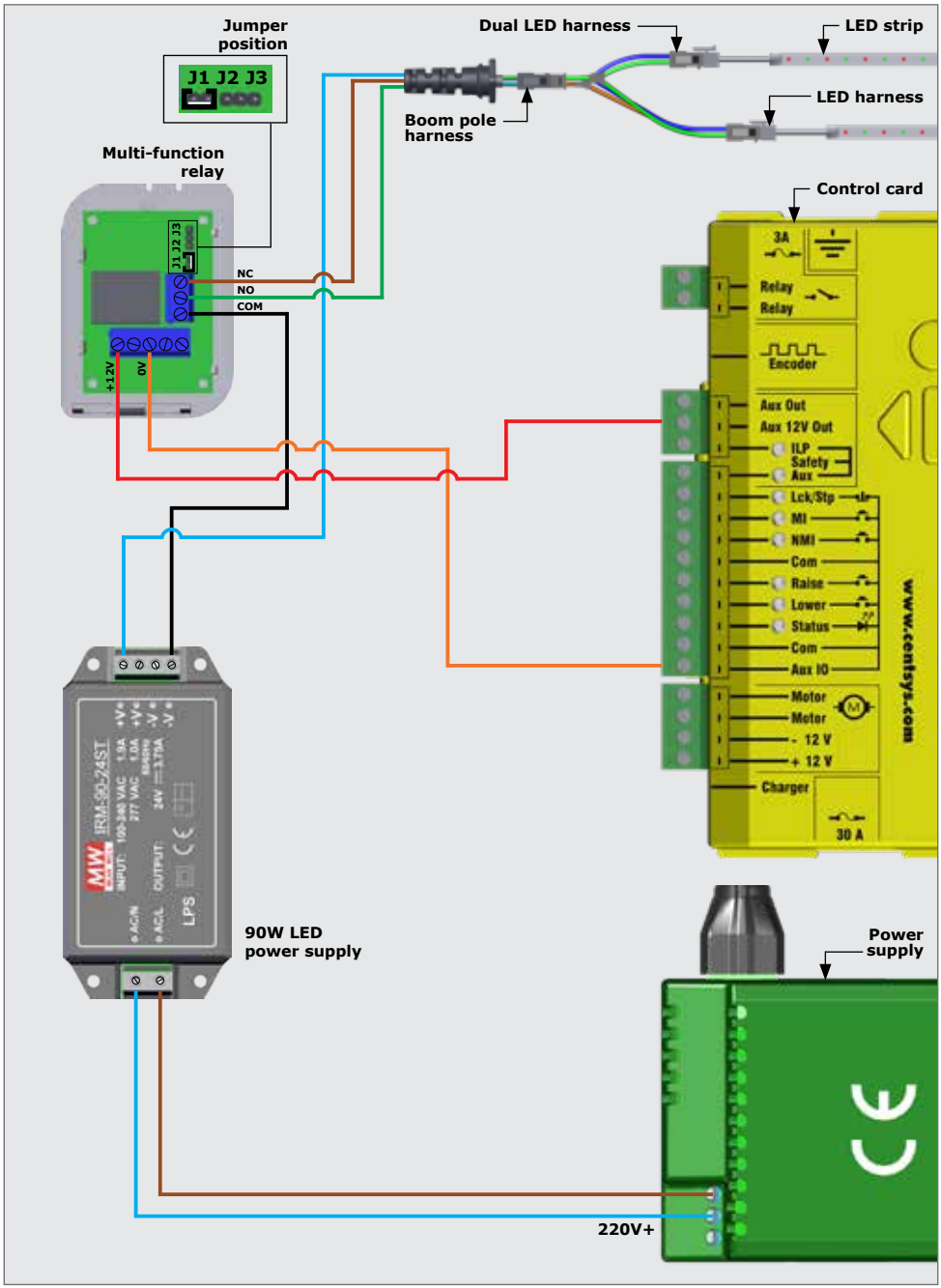


FIGURE 22

### 4.2.2. Option 2

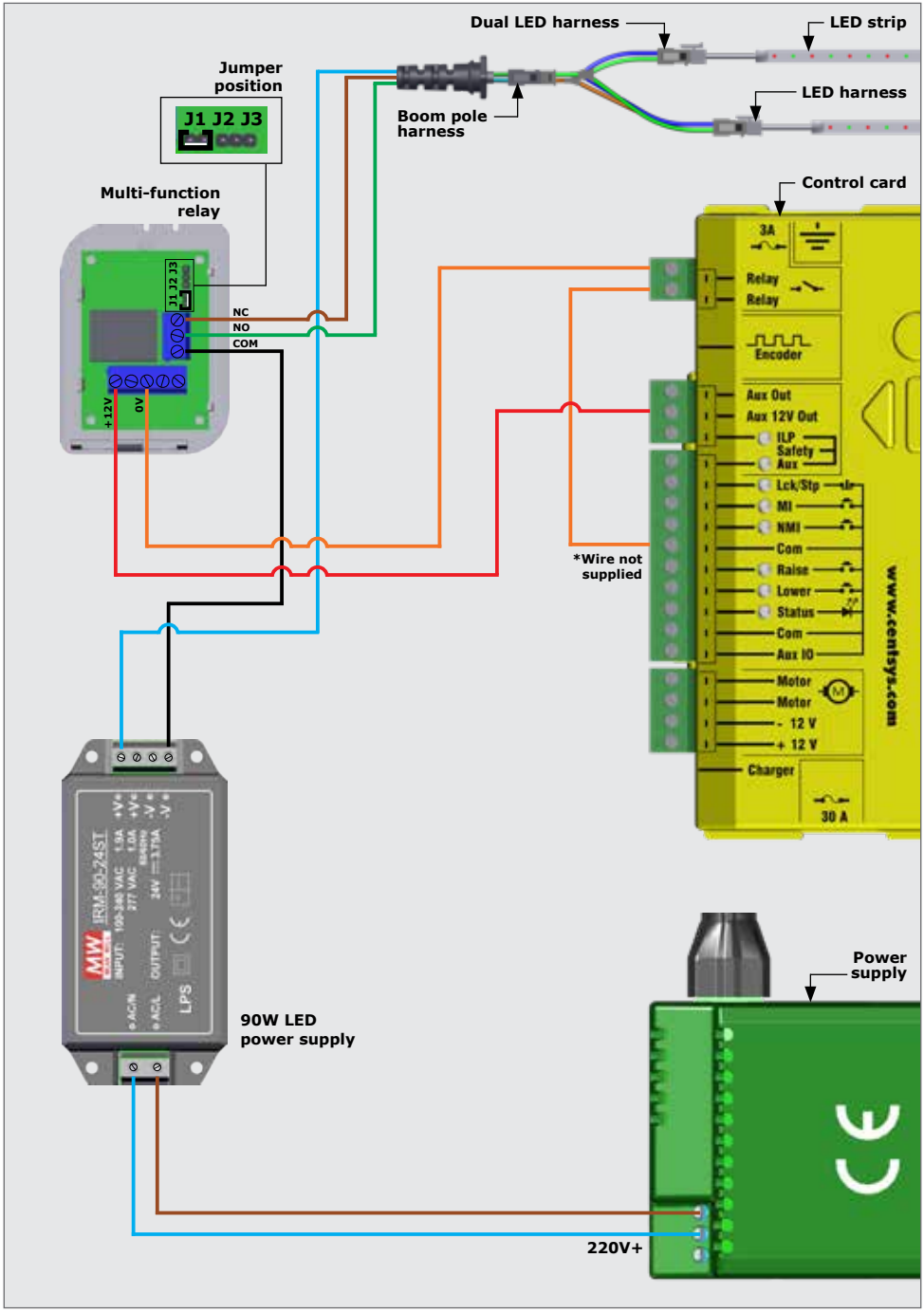


FIGURE 23

## 4.3. New Controller setup

### 4.3.1. Settings for Option 1

- Long press the oblong button to access Settings
- Scroll down to "Traffic Light" menu and press the oblong button
- Select "XIO" as the output function
- Choose the desired trigger level
  (This is the angle of the pole when the LEDs will change from red to green)

### 4.3.2. Settings for Option 2

- Long press the oblong button to access Settings
- Scroll down to "Traffic Light" menu and press the oblong button
- Select "RLY" as the output function
- Choose the desired trigger level
  (This is the angle of the pole when the LEDs will change from red to green)

## 4.4. Old Controller setup

**The following steps can only be performed using wiring option 1.**

### 4.4.1. Settings for Option 1

- Long press the oblong button to access Settings
- Scroll down to "Safety" menu and press the oblong button
- Select "External Boom Status Indication"
- Select "XIO" as the output function
- Turn "Raised Indication" ON
- Turn all other options OFF

# 5. Installation Handover

Once the **LEDs** have been successfully installed and its operation tested, it is important for the operation and safety considerations to be explained to the end-user of the system.

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