

MIDI  
TRAFFIC  
LIGHT

**TRAFFIC  
CONTROL  
ACCESSORIES**

# Company Profile



1986



1990



1995



1999



Centurion Systems  
today

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



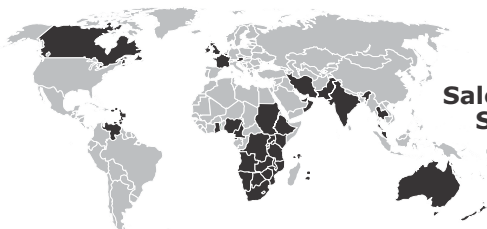
**Manufacture to  
international  
quality standard  
ISO 9001:2008**



**100%  
testing of  
products**



**Competent  
after-sales  
technical support**



**Sales and support throughout  
Southern Africa and over  
50 countries worldwide**

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**Safety  
FIRST**

# IMPORTANT Safety Instructions

## ATTENTION

To ensure the safety of people, it is important that you read all 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 beginning to install the product;

- Switch off mains supply to the barrier
- Isolate the battery supply by unplugging the battery connector on the controller
- Installation of the **Midi Traffic Light** must be carried out by a suitably qualified person
- Do not in any way modify the components
- Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger
- Centurion Systems does not accept any liability caused by improper use of the product, or for use other than that for which it 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
- The installer must explain the operation of the Midi Traffic Light and any safety hazards to the end user – refer to section "Installation Handover"
- **Anything not expressly specified in these instructions is not permitted.**

## 1. General description



FIGURE 1

The CENTURION **Midi Traffic Light** is an effective access control ancillary solution that enables the user to visually indicate when it is safe for a vehicle to proceed into or out of an access controlled area. While the traffic light is most often used in tandem with roadway spikes, it can be interfaced with virtually any automated system including standalone traffic barriers and even sliding gate operators.

The two output colour states, namely red and green, are displayed via a collection of superior quality LEDs that are highly visible both in bright and low-light conditions. The red output will be displayed whenever the traffic light relay is in the normally-closed state, while the green LEDs will illuminate when the relay state changes to normally-open.

The wing-shaped brackets supplied with the kit allow the traffic light to be rotated 180° in either direction.

Two configurations of the CENTURION **Midi Traffic Light** are available, namely:

### **Post Mount**

The traffic light is fitted to the post supplied with the kit and the post is in turn fitted to a traffic barrier.

### **Wall Mount**

The traffic light is mounted directly to a wall or other supporting structure using the supplied wall brackets. This configuration will typically be used in applications other than traffic barrier access control.

## 2. 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.

### 3. Product identification

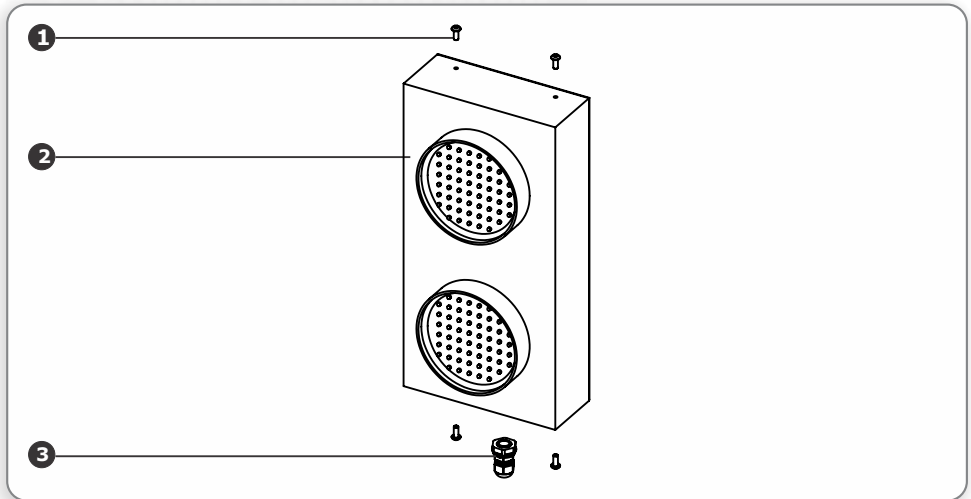


FIGURE. 2A. MIDI TRAFFIC LIGHT

1. M4 x 10 fixing screw
2. **Midi Traffic Light**
3. Cable gland

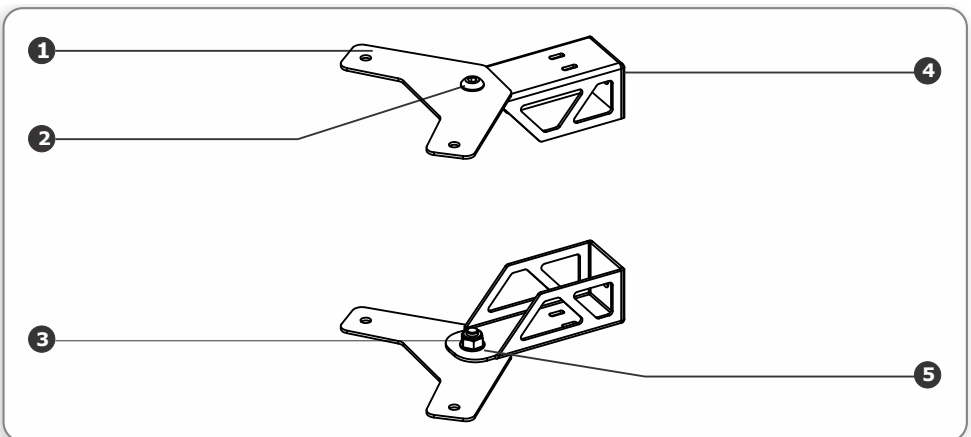
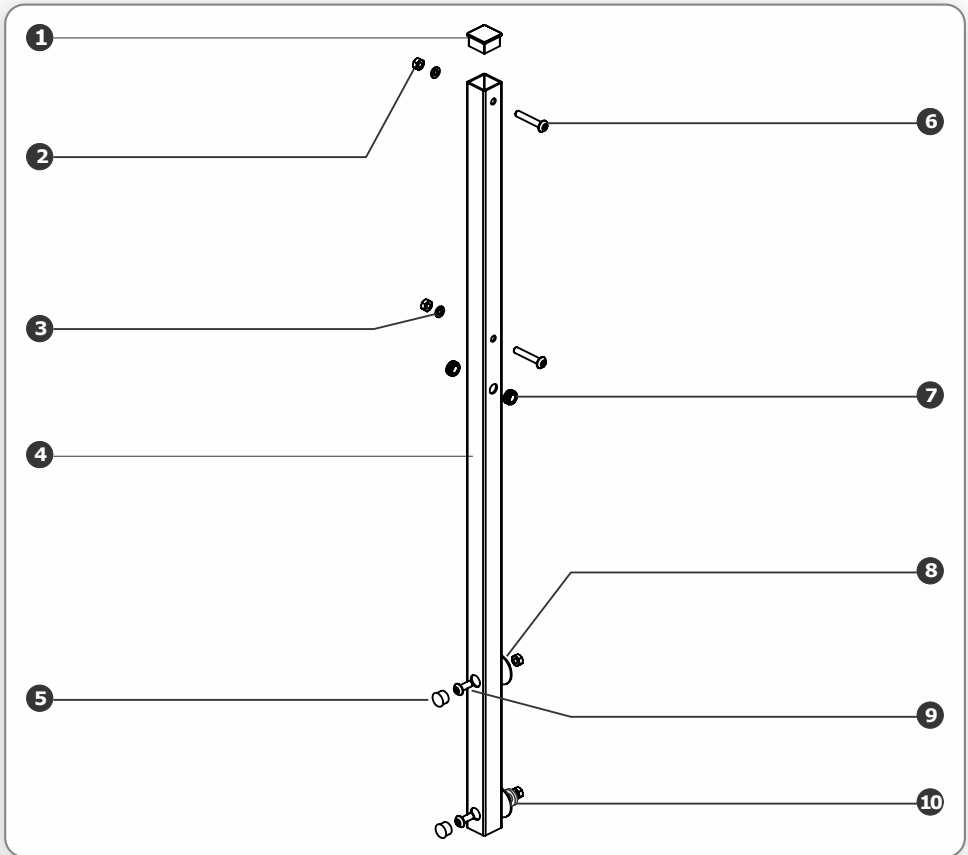


FIGURE. 2B. WALL MOUNT BRACKET

1. Traffic Light bracket
2. Stainless steel hexagon socket button head M6 x 12
3. Stainless steel nut M6 nylock
4. Wall bracket
5. Stainless steel flat washer M6



**FIGURE. 2C. PEDESTAL MOUNT BRACKET**

1. Plastic end plug
2. Stainless steel nut M6
3. Stainless steel spring washer M6
4. Upright mount post
5. Panel plug
6. Stainless steel hexagon socket button head M6 x 35
7. Grommet (inside Ø7)
8. M6 fender washer
9. Stainless steel hexagon socket button head M6 x 16
10. Spring washer



## 4. Technical specifications

Supply Voltage	12 – 24V DC 85V – 265V AC, 50Hz	
Colours	Red	Green
LED Qty	45pcs	45pcs
Power Consumption	≤ 6W	
Lifespan	±50 000 hours	
Housing Material	Aluminium	

## 5. Required tools

- 10mm ring spanner
- 4mm Allen key
- 3mm flat screwdriver
- #1 Phillips screwdriver
- Cable Ties
- Side cutter
- Chalk or marking pen
- Electric drill

## 6. Site consideration

### General considerations for the installation

- The **Midi Traffic Light** must be clearly visible to oncoming traffic and nothing must obstruct the device after it has been installed
- If the installer is to drill holes in a barrier that does not provide pre-drilled holes, they must ensure that the drilling does not affect the internal electronic assembly
- There must be a minimum distance of 300mm between the top of the barrier housing and the bottom wall bracket hole
- To prevent shearing of the traffic barrier housing, ensure that big enough washers are used when securing the post to the housing
- It is also the responsibility of the installer to adequately seal the mounting holes using silicone or a similar sealant, in order to prevent the ingress of moisture, dirt and insects

## 7. Midi Traffic Light installation procedure

- Make sure that the mains supply to the barrier has been switched off
- Ensure that the battery supply has been isolated by unplugging the connector on the controller



The steps documented below must be adhered to as closely as possible in order to successfully complete the installation of the CENTURION **Midi Traffic Light**.

It is important to first decide on the most suitable configuration, be it Post Mount or Wall Mount, for the site and then refer to the appropriate section in this guide.

The CENTURION SECTOR traffic barrier makes provision for the fitment of the traffic light by means of two mounting holes on either side of the housing. However, the CENTURION **Midi Traffic Light** can be retro-fitted onto the majority of traffic barriers, refer to the section **Post Mount** – Other traffic barriers (including older SECTOR models)

### Post Mount - SECTOR

1. Fit the two wall brackets onto the post using the two M6x35 stainless steel button head cap screws supplied with the kit. Secure the cap screws with the M6 spring washer and stainless steel nut (also provided) and tighten using a 10mm ring spanner. The wall brackets must face each other.



For aesthetic purposes, it is recommended that the cap screw is inserted from the back of the post so that the head sits unobtrusively flush with the post.

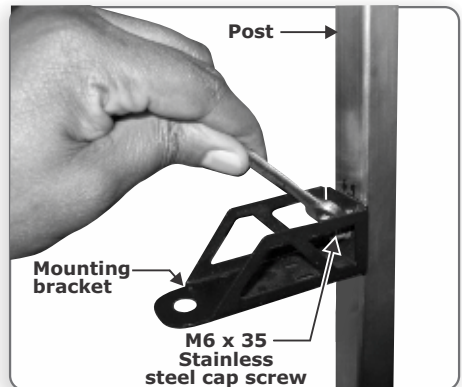


FIGURE 3

2. The two wing-shaped traffic light brackets must now be fixed to the wall brackets using the supplied M6x12 stainless steel button head screws.



For aesthetic purposes, it is recommended that the button head screw is inserted from above for the top traffic light bracket and from below for the bottom bracket.

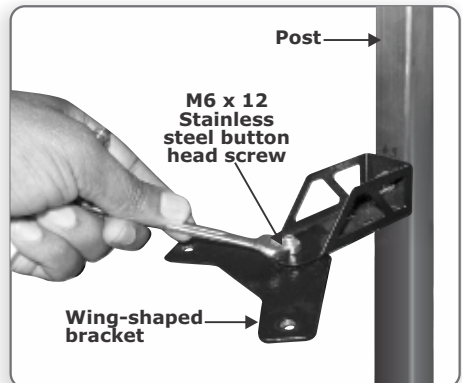


FIGURE 4

3. Fit the **Midi Traffic Light** assembly between the wing-shaped brackets and secure using the supplied M4 x 10 fixing screws.



It is recommended that the traffic light assembly is fitted last, being the heavier of the objects

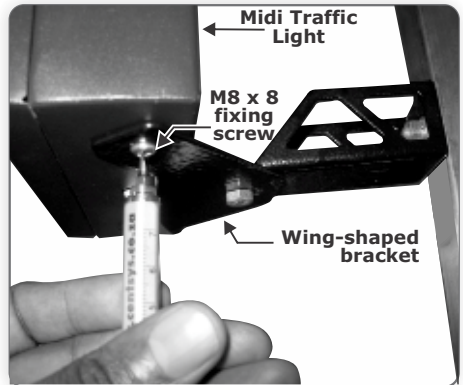


FIGURE 5

4. Route the traffic light harness through the cable entry hole and down through the post so that it protrudes from the bottom.

It is recommended that this step is completed prior to mounting the post, as the presence of the M6 cap screws used for mounting might make it difficult to route the cable.



- To facilitate easy routing of the harness through the post:
- Remove the cable gland not being utilised i.e. the gland opposite the side on which the traffic light is fitted
- Using a flat screwdriver, guide the cable downwards and proceed to feed it until it protrudes from the bottom of the post
- Replace the cable gland

5. Decide on which side of the SECTOR the traffic light is to be mounted, and remove the two panel plugs as shown in Figure 6

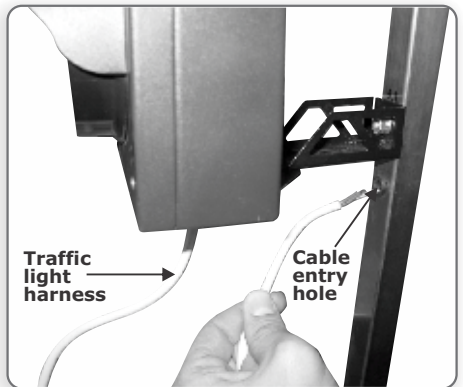


FIGURE 6

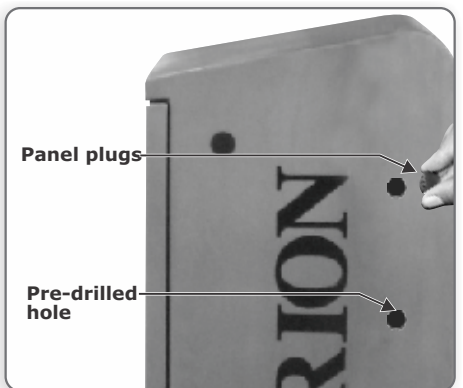


FIGURE 7

- Use the two M6 x 16 cap screws provided with the kit to fasten the pedestal to the barrier housing. Ensure that the cap screws are sufficiently tightened as failing to do so may result in the structural integrity of the enclosure being compromised.



Use the supplied fender washer, spring washer and nut in order to secure the cap screws.



It is recommended that the nut and washers are fitted on the inside of the traffic barrier housing.

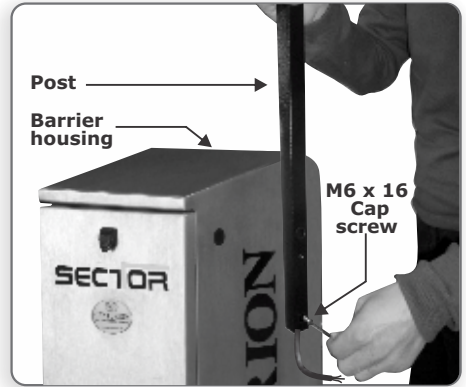


FIGURE 8

## Post Mount – Other Traffic Barriers (including older SECTOR models)

- Fit the two wall brackets onto the post using the two M6x35 stainless steel button head cap screws supplied with the kit. Secure the cap screws with the M6 spring washer and stainless steel nut (also provided) and tighten using a 10mm ring spanner.



For aesthetic purposes, it is recommended that the cap screw is inserted from the back of the post so that the head sits unobtrusively flush with the post.

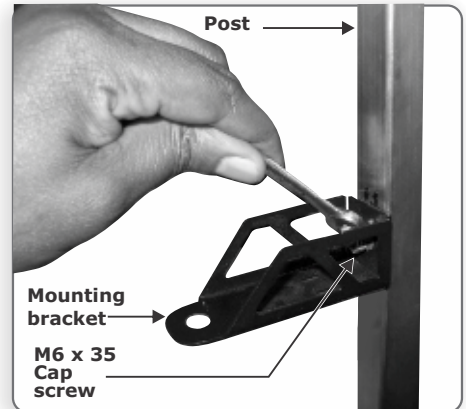


FIGURE 9

- The two wing-shaped traffic light brackets must now be fixed to the wall brackets using the supplied M6x12 stainless steel button head screws.



For aesthetic purposes, it is recommended that the button head screw is inserted from above for the top traffic light bracket and from below for the bottom bracket.

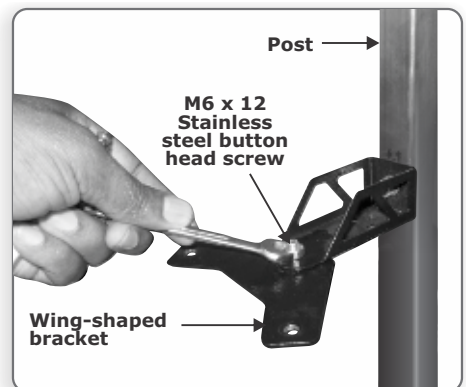


FIGURE 10

3. Fit the **Midi Traffic Light** assembly between the wing-shaped brackets and secure using the supplied M4x8 fixing screws.



It is recommended that the traffic light assembly is fitted last, being the heavier of the objects

4. Route the traffic light harness through the cable entry hole and down through the post so that it protrudes from the bottom as shown in Figure 12.

It is recommended that this step is completed prior to mounting the post, as the presence of the M6 cap screws used for mounting might make it difficult to route the cable.



- To facilitate easy routing of the harness through the post
- Remove the cable gland not being utilised i.e. the gland opposite the side on which the traffic light is fitted
- Using a flat screwdriver, guide the cable downwards and proceed to feed it until it protrudes from the bottom of the post
- Replace the cable gland

5. When retro-fitting the CENTURION **Midi Traffic Light** onto traffic barriers other than SECTOR, two mounting holes must be drilled in the barrier housing on the side on which the light is to be fitted.

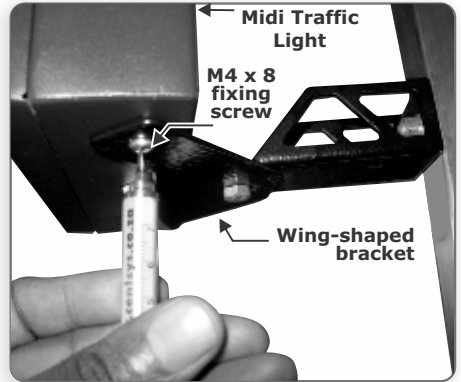


FIGURE 11

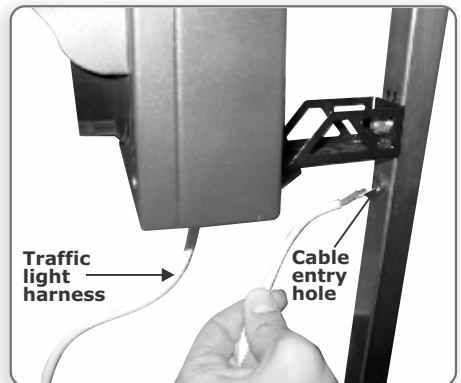


FIGURE 12

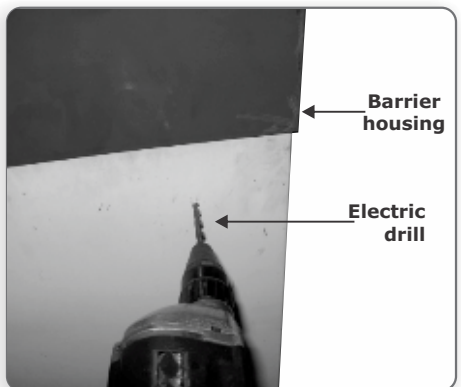


FIGURE 13



There must be a minimum distance of 300mm between the top of the barrier housing and the bottom wall bracket hole and a pitch of approximately 150mm between the two mounting holes. See Figure 14. In cases where the barrier's top cover is of such proportions that it does not allow for the holes to be drilled in the recommended locations, they can be drilled at a lower position.

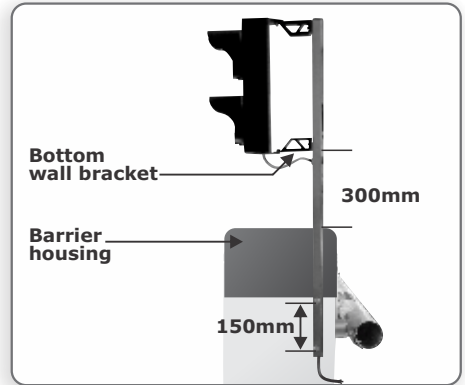


FIGURE 14



To prevent shearing of the traffic barrier housing, ensure that big enough washers are used when securing the post to the housing. It is also the responsibility of the installer to adequately seal the mounting holes using silicone or a similar sealant, in order to prevent the ingress of moisture, dirt and insects

6. Use the two M6 x16 cap screws provided with the kit to fasten the post to the barrier housing.

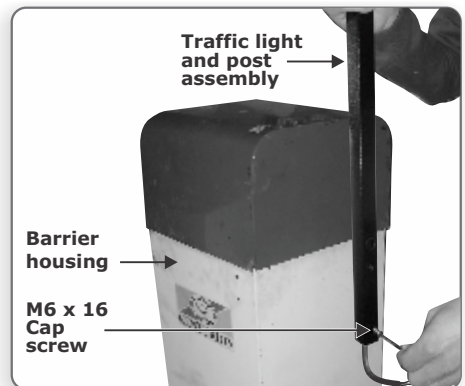


FIGURE 15

## Wall Mount

1. Mark the points on the wall or structure where the wall brackets are to be mounted, taking care to ensure that they are exactly level.



The wall brackets must be spaced approximately 268mm apart, and the traffic light can also be used as a template to determine the position of the mounting holes.

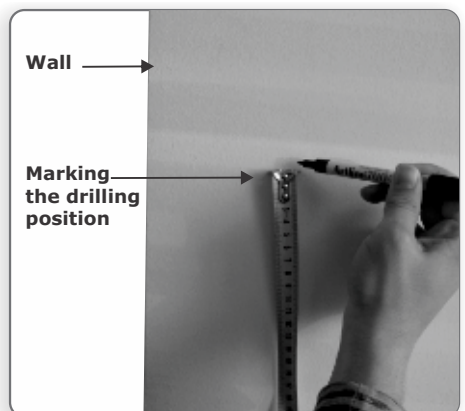


FIGURE 16

2. Drill mounting holes for the wall brackets. Note that the holes in the brackets themselves have a diameter of 6.5mm and the drilled holes as well as mounting equipment must be sized accordingly.

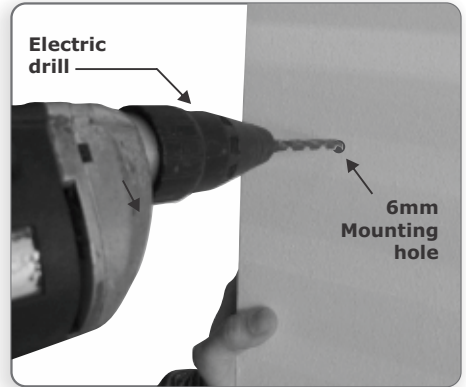


FIGURE 17

3. Mount the wall brackets using the most appropriate means.

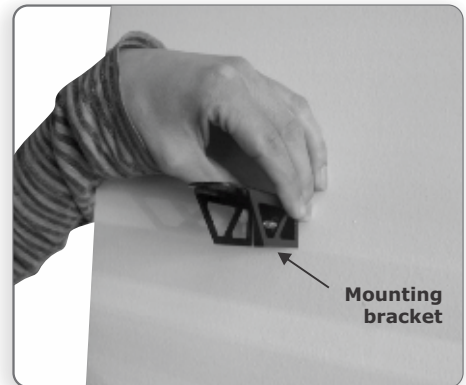


FIGURE 18

4. Fit the two wing-shaped traffic light brackets onto the wall brackets and secure using the supplied M6 x 12 stainless steel hexagon button head cap screws.



For aesthetic purposes, it is recommended that the button head screw is inserted from above for the top traffic light bracket and from below for the bottom bracket.

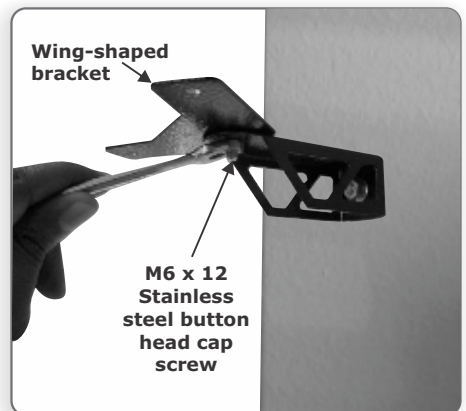


FIGURE 19

5. Fit the traffic light assembly between the wing-shaped brackets and secure using the supplied M4x8 fixing screws.

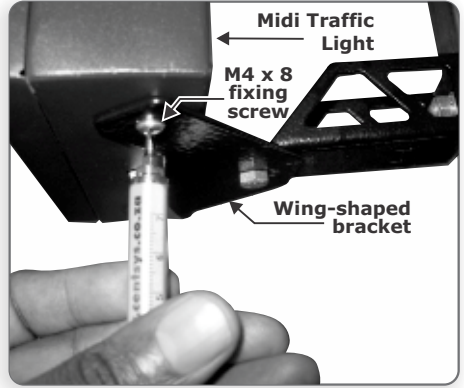


FIGURE 20



## 8. Electrical Setup on a SECTOR barrier

### Post Mount

Take care to ensure that the cable loop is well clear of the boom pole arm and/or barrier skirt as the harness could potentially get hooked while the pole is in motion and lead to the cable and/or hardware being damaged. It is recommended that the harness is tied off using a cable tie after routing.



1. Remove the panel plug located directly below the boom pole coupler to expose the cable entry hole. Typically, the entry hole closest to the side on which the traffic light is installed will be utilised.

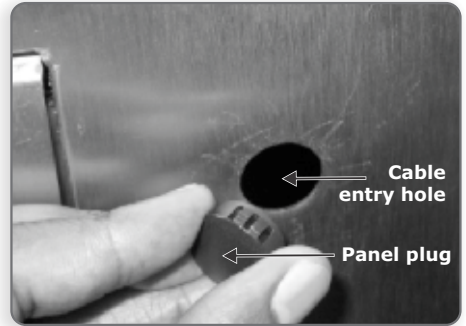


FIGURE 21

2. Fit the cable gland (supplied) into the opening as illustrated in Figure 22.

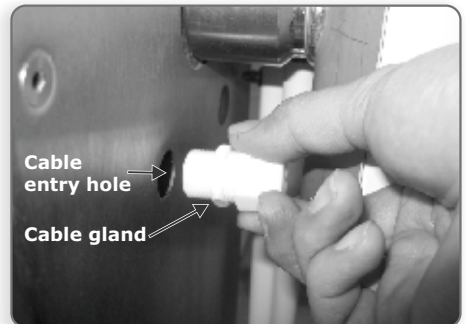


FIGURE 22

3. Feed the harness through the cable gland.

Take care to ensure that the cable loop is well clear of the boom pole arm and/or barrier skirt as the harness could potentially get hooked while the pole is in motion and lead to the cable and/or hardware being damaged. It is recommended that the harness is tied off using a cable tie after routing.

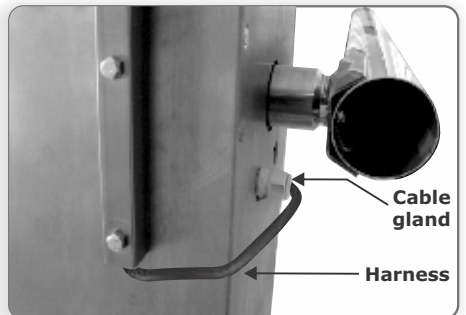
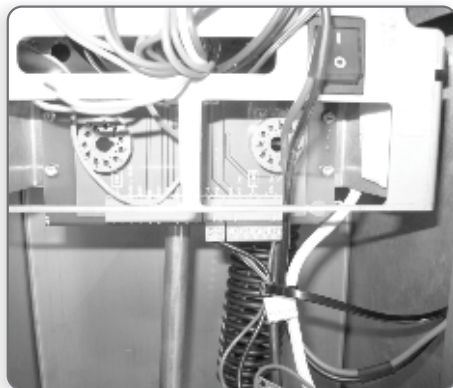


FIGURE 23

4. Tie the harness to the SECTOR gearbox using the supplied cable tie. This is to avoid the harness getting entangled in the barrier's moving parts and causing equipment damage.



**FIGURE 24**

# 9. Midi Traffic Light – SECTOR standalone/ SECTOR with CLAWS Direct Drive wiring

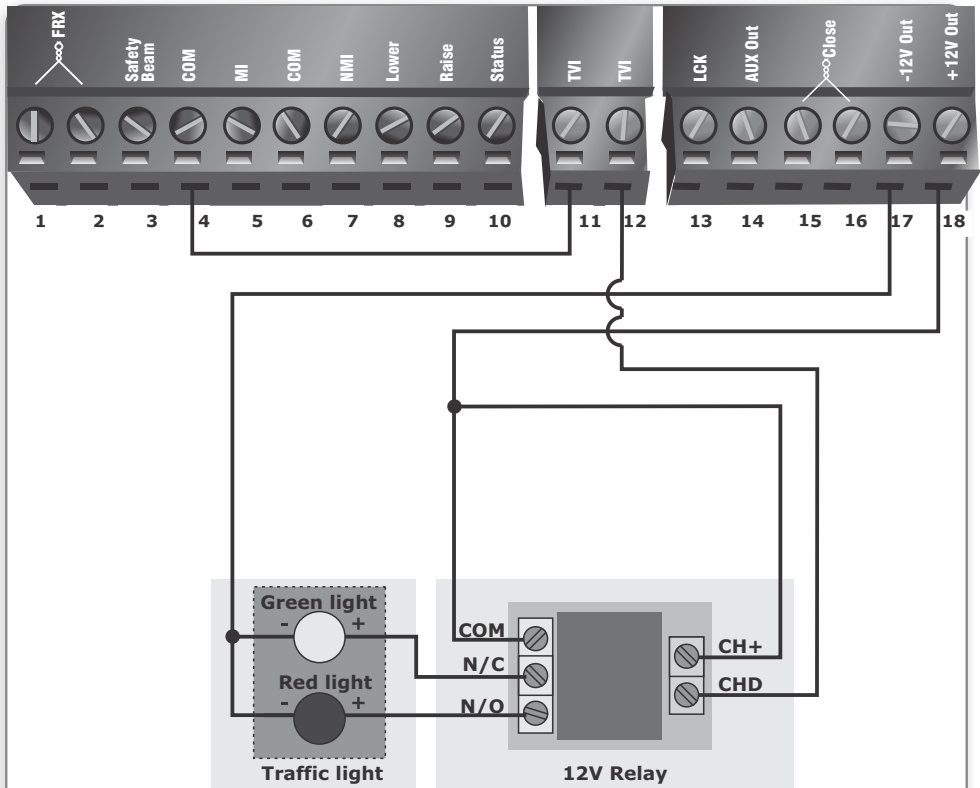


FIGURE 24

# 10. Midi Traffic Light – SECTOR with CLAWS Independent Drive Wiring

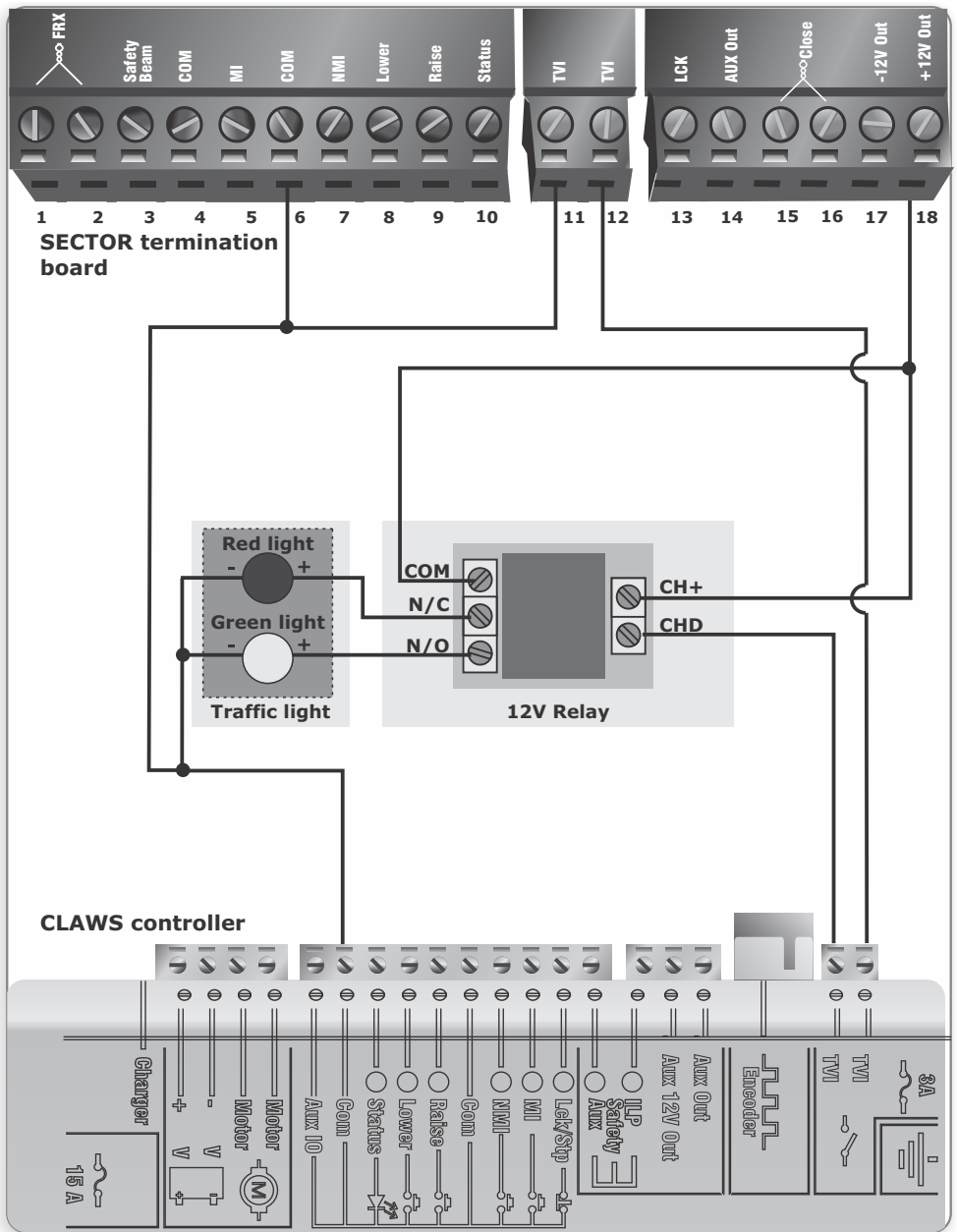


FIGURE 25

# 11. Midi Traffic Light – CLAWS Independent Drive Wiring

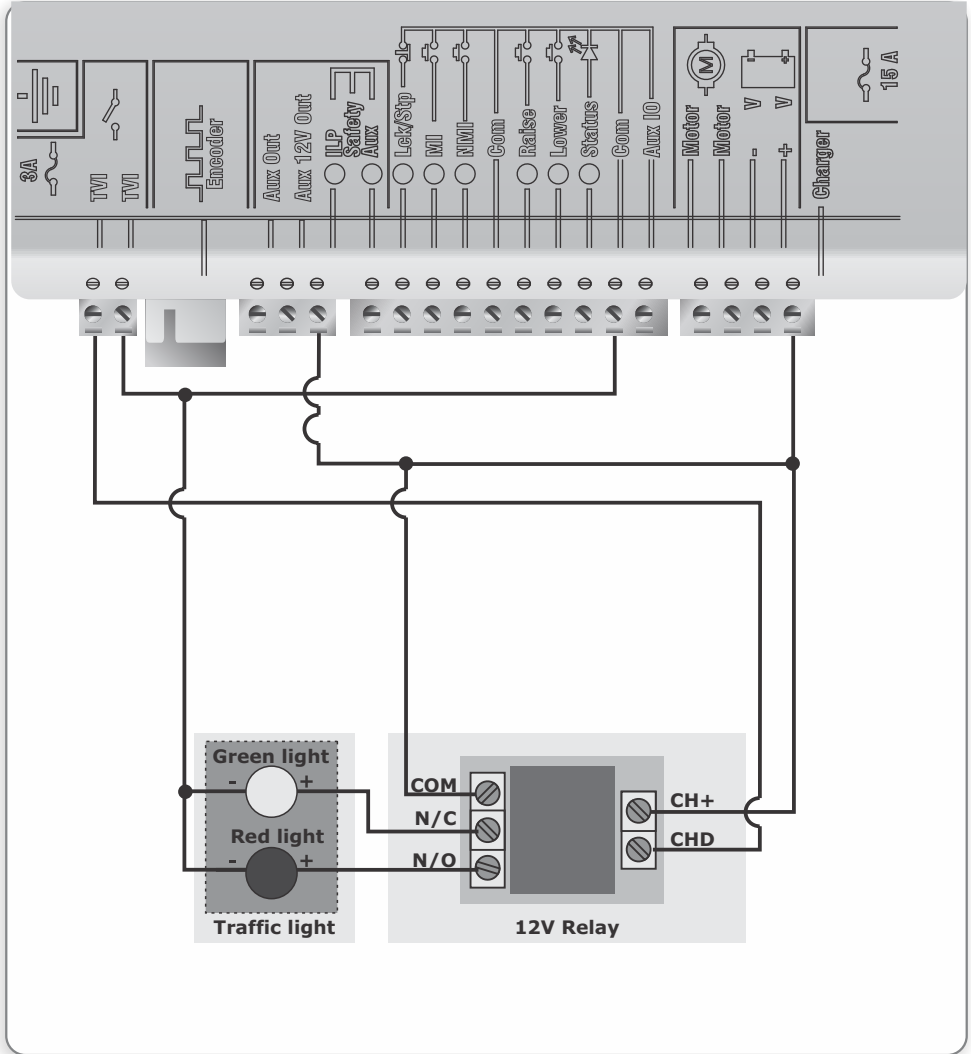


FIGURE 26

## 12. Settings

### Standalone SECTOR/SECTOR with CLAWS Direct Drive

- Access the setup menu by pressing and holding the oblong button for a period of at least two seconds
- Using the directional arrows, navigate to **Menu 7: TVI Output**
- Access this menu by momentarily pressing the oblong button
- Access submenu **7.1.: TVI Output Function**, and configure the output function as **TVI**
- Exit this submenu and navigate to submenu **7.2.: TVI Output** polarity
- Configure the polarity as **NO**
- Exit setup by pressing the round button twice

### SECTOR with CLAWS Independent Drive:

#### SECTOR controller

- Access the setup menu by pressing and holding the oblong button for a period of at least two seconds
- Using the directional arrows, navigate to **Menu 4: Modes of Operation**
- Access this menu by momentarily pressing the oblong button
- Select **SPK** as the desired Mode of Operation
- Press the round button once to ascend one menu level
- Navigate to **Menu 7: TVI Output**
- Access submenu **7.1.: TVI Output Function**, and configure the output function as **TVI**
- Exit this submenu and navigate to submenu **7.2. TVI Output polarity**
- Configure the polarity as **NO**
- Exit setup by pressing the round button twice

#### CLAWS controller:

- Access the setup menu by pressing and holding the oblong button for a period of at least two seconds
- Using the directional arrows, navigate to **Menu 2: Safety**
- Access this menu by momentarily pressing the oblong button
- Scroll to and enter submenu **2.5.: External Boom Status Indication**
- Scroll to and enter submenu **2.5.1.: Indicator Output**
- Set the output to TVI
- Scroll to and enter submenu **2.5.2.: Lowered Indication**. Set it to **ON**
- Exit this menu by momentarily pressing the round button
- Scroll to and enter **Menu 7: TVI Output**
- Configure the **TVI** Output Function (submenu 7.1.) as **TVI**
- Exit setup by pressing the round button twice

## Testing the Midi Traffic Light

Test the operation of the CENTURION **Midi Traffic Light** by triggering the co-installed device(s). The traffic light should respond as follows depending on which device(s) is/are co-installed:

**Standalone SECTOR** – The red light must be permanently on while the boom pole is in the lowered position (normally-closed circuit), and change to green whenever the barrier is triggered to raise (normally-open circuit).

**CLAWS Independent Drive** – The red light must be permanently on while the spikes are raised, changing to green when they are lowered.

**SECTOR with CLAWS** - The red light must be permanently on while the boom pole is in the lowered position (normally-closed circuit) and the spikes are raised, and change to green whenever the barrier is triggered to raise (normally-open circuit) and the spikes lowered.

# 13. Electrical Setup on other barriers

## Post Mount

1. Drill a cable entry hole in the barrier housing on the side on which the **Midi Traffic Light** is installed. Refer to the supplied cable gland to get an indication of the size of the hole to be drilled.

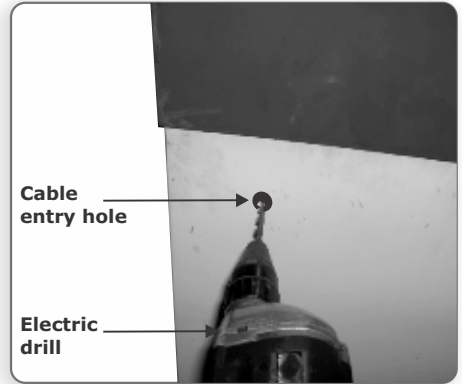


FIGURE 27

2. Fit the cable gland (supplied) into the opening.

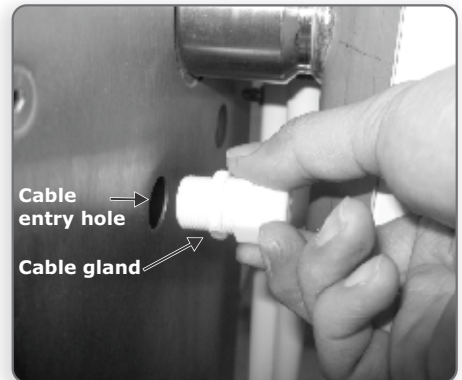


FIGURE 28

3. Feed the harness through the cable gland.

Take care to ensure that the cable loop is well clear of the boom pole arm and/or barrier skirt as the harness could potentially get hooked while the pole is in motion and lead to the cable and/or hardware being damaged. It is recommended that the harness is tied off using a cable tie after routing.

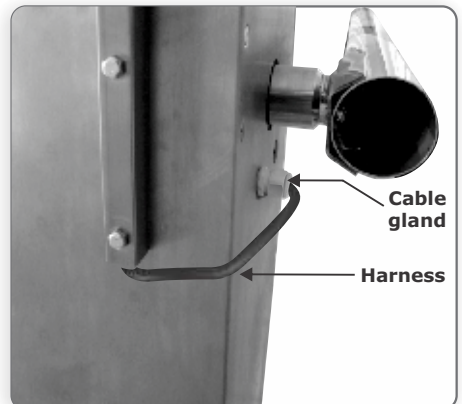


FIGURE 29



## Wall mount

1. Route the **Midi Traffic Light** harness to the access control device on which it is to be used



Use cable saddles to secure the harness if it is to run along a wall, and conduit where it is to run along the ground to prevent the ingress of moisture.

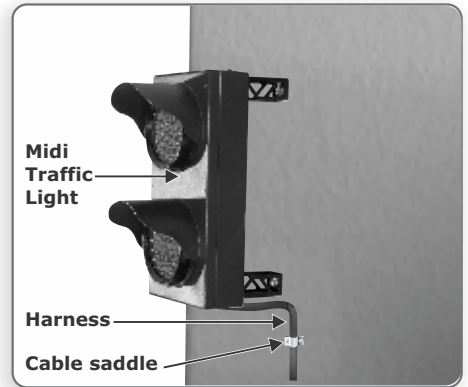


FIGURE 30

## 14. Installation handover

Once the **Midi Traffic Light** has been successfully installed and its operation tested, it is important that the operation and safety considerations are explained to the end user.

# Notes

Notes

Lined area for writing notes.



# Notes

Notes

Lined area for writing notes.





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**Sharecall Technical Support 0861 003 123 or**  
**+27 11 699 2481**  
from 07h00 to 18h00 (GMT+2)

**(Sharecall numbers applicable when dialed from within South Africa only)**



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