

# 24VDC SMART POWERPACK PSU INSTALLATION MANUAL



# Company Profile



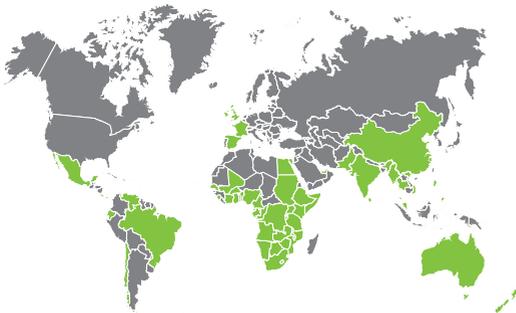
**In-house R&D development team**

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**100% testing of products**



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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

The 24VDC **SMART PowerPack** was developed to complement CENTURION 24V gate operators, and is ideal for busy sites that require a higher duty cycle than can be afforded by battery-driven operators, thanks to the fact that the **SMART PowerPack** can run a rated gate directly off of mains and, therefore, there is no need to ensure that the batteries have enough capacity to deal with the higher duty required on a busy site.

The **SMART PowerPack** is also the perfect match for sites where battery backup is not a concern as the grid is either stable or there are solar or generator solutions in place to ensure that the power supply to the operator is uninterrupted.

For added flexibility, the **SMART PowerPack** has the option to use batteries for backup in cases where the mains supply is not stable. This allows for a higher duty cycle when mains is present, but also allows the gate to operate should there be an interruption in mains power.

The **SMART PowerPack** supports higher-capacity batteries, with the battery charge rate effortlessly configurable using the MyCentsys Pro mobile app.

Additionally, the **SMART PowerPack** boasts a built-in charger, obviating the need for purchasing an external unit, thereby saving on costs and adding to the convenience and efficiency offered by this power solution.

## 1.1. Important Safety Information



### 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 install the equipment in an explosive atmosphere: the presence of flammable gases or fumes is a serious danger to safety
- Before attempting any work on the system, turn off electrical power to the operator and disconnect the batteries
- 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 hydraulic 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
- Make sure that the earthing system is correctly constructed and that all metal parts of the system are suitably earthed
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety
- Do not activate your gate unless it is in view and you can determine that its area of travel is clear of people, pets, or other obstructions
- **NO ONE MAY CROSS THE PATH OF A MOVING GATE —**  
always keep people and objects away from the gate and its area of travel
- **NEVER LET CHILDREN OPERATE OR PLAY WITH THE GATE CONTROLS**
- Secure all easily-accessed gate opener controls in order to prevent unauthorised use of the gate
- Do not in any way modify the components of the automated system

- Never short-circuit the battery and do not attempt to recharge the batteries with power supply units other than that supplied with the product, or manufactured by Centurion Systems (Pty) Ltd Safety devices must be fitted to the installation to guard against mechanical movement risks such as crushing, dragging and shearing
- Always fit the warning signs visibly to the inside and outside of the gate
- The installer must explain and demonstrate the manual operation of the gate in case of an emergency and must hand over the User Guide/Warnings to the user
- The installer must explain these safety instructions to all persons authorised to use this gate, and be sure that they understand the hazards associated with automated gates
- 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
- Everything not expressly specified in these instructions is not permitted

## 1.2. Lightning Protection

The **SMART PowerPack** utilises the same proven surge protection philosophy that is used in all our products. While this does not guarantee that the unit will not be damaged in the event of a lightning strike or power surge, it greatly reduces the likelihood of such damage occurring. The earth return for the surge protection is provided via the mains power supply earth and/or earth spike located next to the operator.



**In order to ensure that the surge protection is effective, it is essential that the unit is properly earthed.**

## 2. Specifications

### 2.1. Physical Dimensions

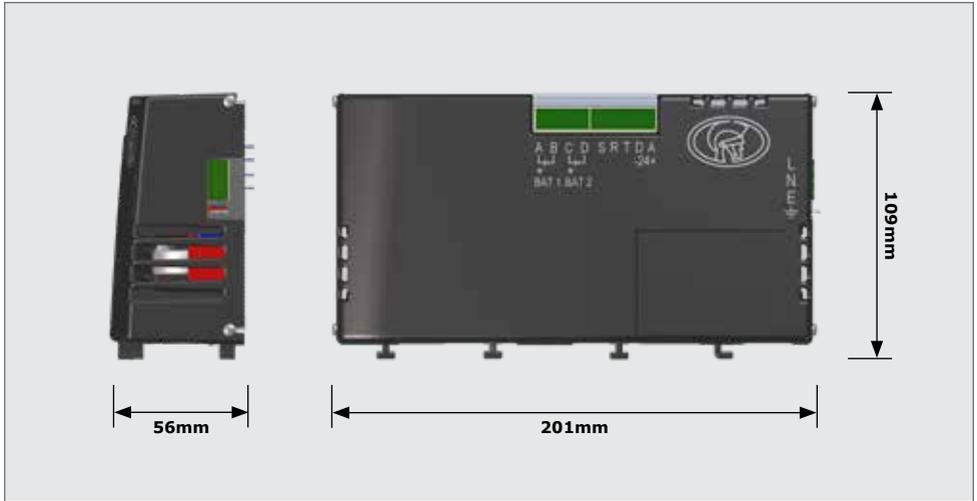


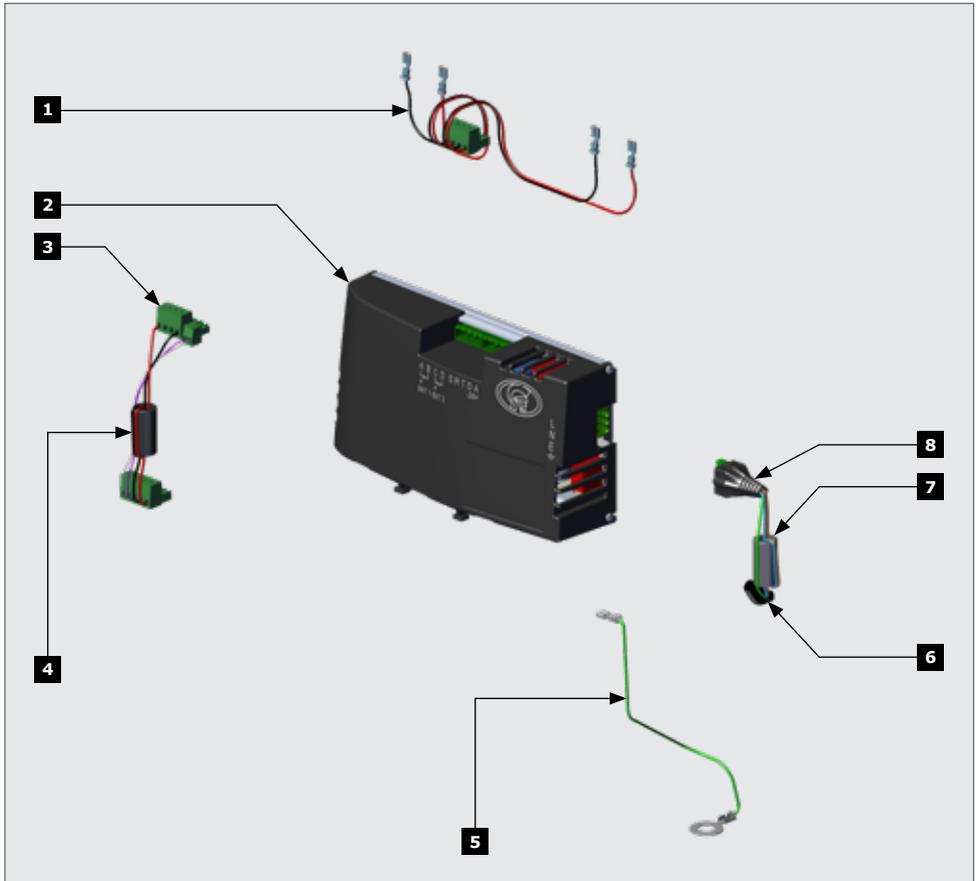
FIGURE 1. SMART POWERPACK PHYSICAL DIMENSIONS

### 2.2. Technical Specifications

<b>Input voltage</b>	220V - 240V AC 50/60Hz
<b>Current consumption (mains)</b>	2A peak
<b>SMART PowerPack Current output</b>	7.5A @ 27.6V +/- 5% (207W) 18A peak (497W)
<b>Charge Rate</b>	2A, 3.5A, 5A or 7.5A (selectable via the MyCentsys Pro Mobile Application)

TABLE 1

### 3. Product Identification



**FIGURE 2. PRODUCT IDENTIFICATION**

- |  |  |
|--|--|
| 1. Battery Harness (not supplied in kit) | 5. Earth Harness (not supplied in kit) |
| 2. <b>SMART PowerPack PSU</b>            | 6. Mains In                            |
| 3. Power Supply Harness                  | 7. Mains Ferrite (Fitted by Installer) |
| 4. Power Supply Harness Ferrite          | 8. Mains Plug and Cover                |

## 4. SMART PowerPack Installation

### 4.1. Removing the Existing Charger



**BEFORE PROGRESSING!**  
Isolate and disconnect  
the Mains Voltage.

Disconnect the Battery harness from the Charger at point A.

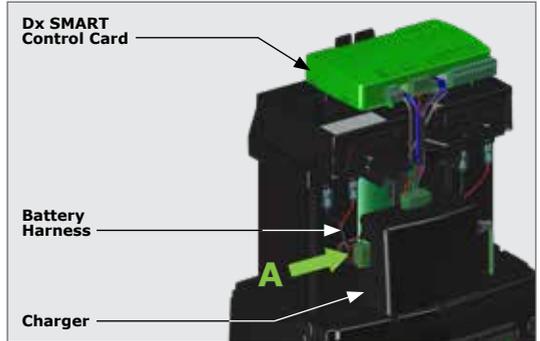


FIGURE 3

Disconnect the Charger from the Dx SMART Control Card at Point "B".



Note that there are two connector blocks that need to be disconnected from the Control Card.

Disconnect the Earth Harness from the Charger at Point "C". Ensure that Mains is Isolated before disconnecting the mains connector at Point "D"

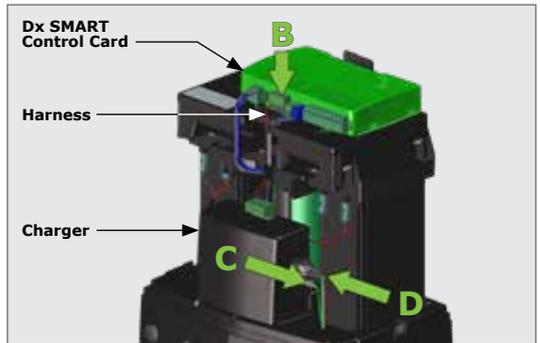


FIGURE 4

Remove the Charger from the Lower Battery Tray by gently pushing the Charger slightly down whilst pulling it away from the SMART Operator. It should slide forward and off with ease.

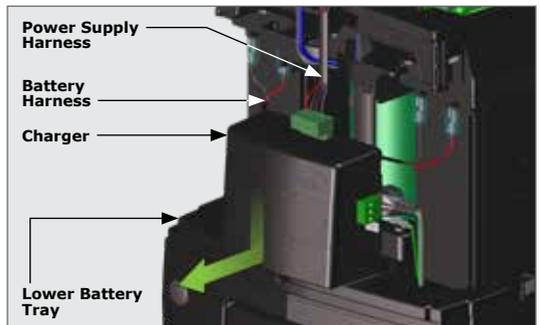


FIGURE 5

## 4.2. Preparing the In-Coming AC Mains



**WARNING!**  
ENSURE THAT THE INCOMING MAINS IS ISOLATED!

1. Strip the AC Mains Sheath back far enough to add the Ferrite.



If required, make a joint to extend the wires of the in-coming AC Mains Cable should they be too short.

2. Push only the Live and Neutral wires through the centre of the Ferrite (Step 1).
3. Once through the Ferrite, loop only the Live and Neutral wires back through the Ferrite tightly (Step 2).

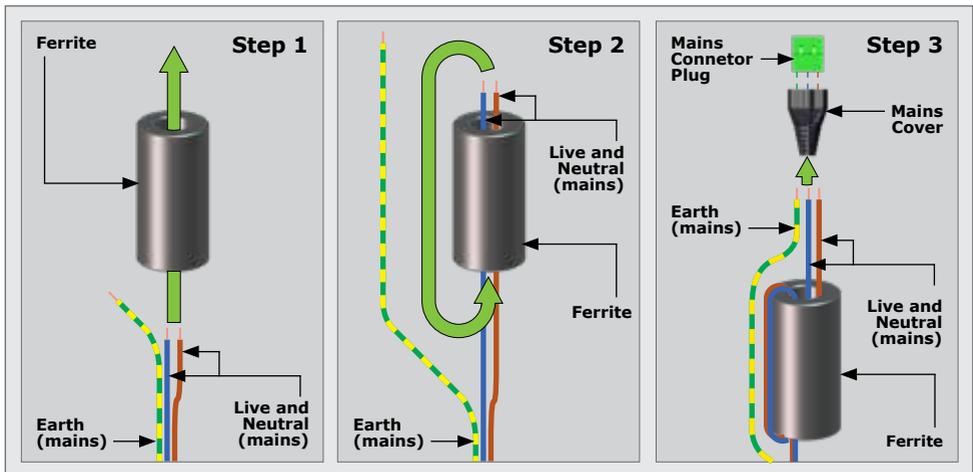


FIGURE 6

4. Push the Live, Neutral and Earth wires through the smaller end of the Mains Cover, and connect them to the Mains Connector Plug (Step 3).



Refer to the Right-Hand Side of the **SMART PowerPack** to ensure the wires are connected to the Mains Connector Plug in the correct positions.

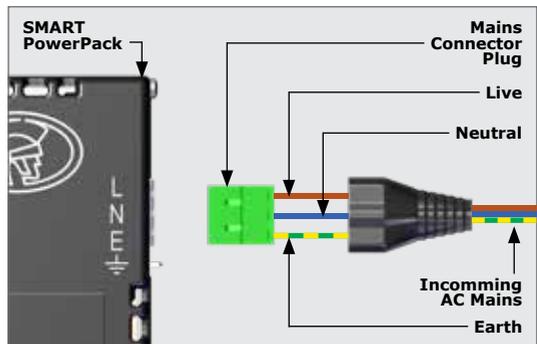


FIGURE 7

### 4.3. Placing the SMART PowerPack into Position

Place the **SMART PowerPack** into position by aligning the four feet at the bottom of the **SMART PowerPack** with the four slots found on top of the Lower Battery Tray.

Place the feet of the **SMART PowerPack** into the four holes on the Lower Battery Tray. Firmly press the **SMART PowerPack** down, and push it toward the Electric Motor, sliding it along the slots.

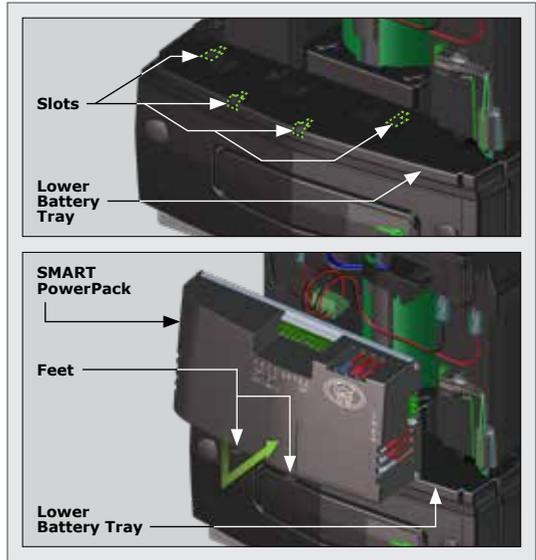


FIGURE 8. SMART POWERPACK PLACEMENT

### 4.4. Reconnecting the Harnesses

#### 4.4.1. Connecting the Power Supply Harness

Connect the top end of the Power Supply Harness to the Dx SMART Control Card.



The top end of the harness has two connector blocks. Ensure both are connected.

Ensure the Blue Override Plug is still connected securely into its Blue Connector.

There are two connection points at the top of the **SMART PowerPack**. Connect the bottom end of the Power Supply Harness to the right connection point on the top of the **SMART PowerPack** as shown in Figure 9.

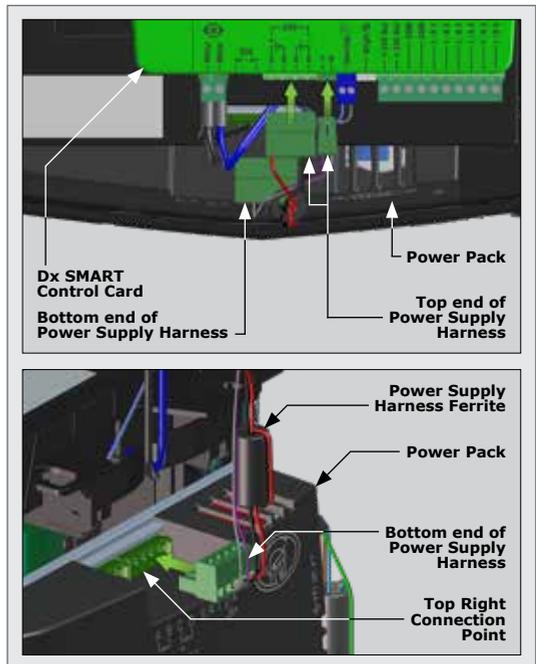


FIGURE 9

### 4.4.2. Connecting the Earth and AC Mains to the SMART PowerPack

Connect the AC Mains Cable Connector that was previously prepared in Section 4.2. into the connector on the right-hand side of the **SMART PowerPack**.



Once connected, remember to slide the Karson Cover over the Karson Connector for added protection.

Connect the Earth Wire to the Earth Tab on the right-hand side of the **SMART PowerPack** just below the AC Mains.

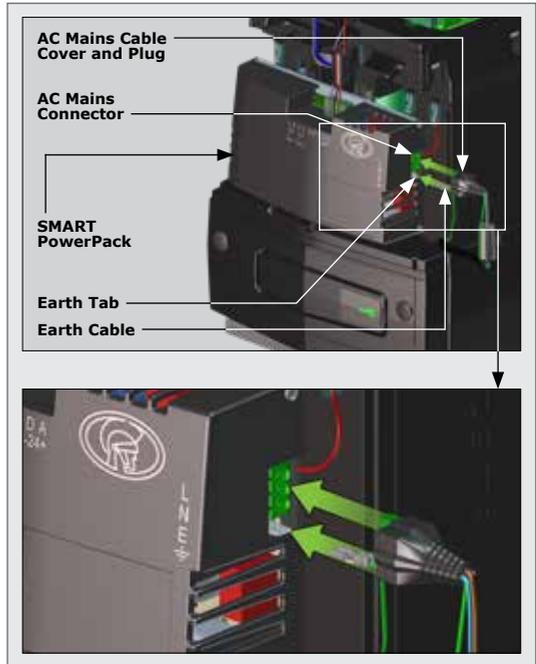


FIGURE 10

### 4.4.3. Connecting the Battery Harness (If battery back-up is required)



Ensure that the battery polarity is correct prior to connecting to the **SMART PowerPack**, and that the battery terminals are insulated and do not touch the **SMART PowerPack** enclosure.

There are two connection points at the top of the **SMART PowerPack**. Connect the existing Battery Harness Plug to the left connection point on the top of the **SMART PowerPack** as shown in Figure 11.

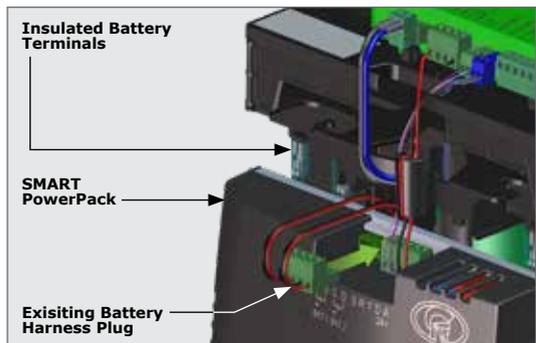


FIGURE 11

Once all the electrical connections are done, and verified, turn on the AC Mains supply to the **SMART PowerPack**.

## 4.5. Completing the Installation

Use the MyCentsys Pro mobile application to configure the **SMART PowerPack** for the installation site's individual requirements.

1. Scan the QR Code in Figure 12.
2. Select the App Store applicable to the operating system being used, either Apple App Store, Android Google Play Store or the Huawei App Gallery.
3. Download and install the application.

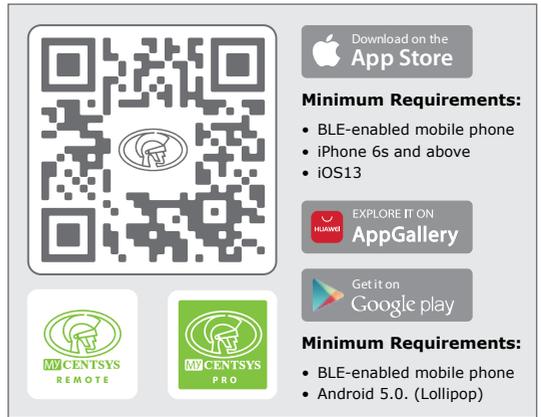


FIGURE 12

Alternatively, go directly to the app store of the operating system being used, and search for the app "**MyCentsys Pro**". Download and install the application onto the smartphone.

1. Once installed, open the application.
2. From the list of operators, select the operator that is applicable to this installation.
3. Connect to the relevant operator.
4. Use the app by following the prompts to configure the **SMART PowerPack**.

Once all the necessary harnesses have been connected, and the **SMART PowerPack** has been configured, ensure that the Camlock is in the "**unlocked**" position, and place the SMART Operator Cover onto the gearbox.

Once the cover is secured in place, lock the Camlock to lock the cover in place.

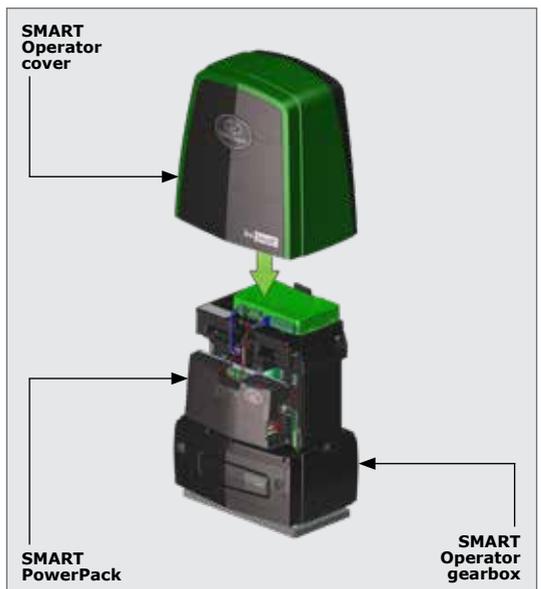


FIGURE 13

## 5. Warranty Information



You can register your product(s) online at [www.centsys.com](http://www.centsys.com), which will assist you in keeping a record of your date of purchase or installation, serial numbers, etc.

All of our products are manufactured with extreme care, thoroughly inspected and tested.

The goods supplied by us shall be subject to the provisions of sections 55 to 57 of the Consumer Protection Act (68/2008) except where the provisions of the warranty contained in our product documentation are more favourable to the purchaser.

Subject to the warranty contained in our product documentation, if applicable, our products are warranted for a period of twenty-four months after delivery.

However, it is expressly noted that batteries carry a six month warranty due to the nature of these products being such that they are subject to possible misuse. Please note that warranties will be honoured on a carry-in basis; in other words, the product in question must be taken in to one of our branches, or to the authorised reseller that the product was purchased from, for assessment and, if necessary, repair. For equipment not of our manufacture, the warranty as supplied by the original manufacturer will apply if such warranty is more favourable to the purchaser than the relevant provisions of the Consumer Protection Act (Act 68/2008 of South Africa), or any other applicable law as so required in different countries in which the product was sold.

Such warranty is valid only once full payment has been received for such goods.

### **Australian customers:**

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure

### **Any warranty may be voidable on any equipment which:**

1. Has not been installed in accordance with the installation instructions provided.
2. Has been subject to misuse or which has been used for any purpose other than that designed for by the manufacturers.
3. Has damage caused as a result of handling during transit, atmospheric conditions (including lightning), corrosion of metal parts, insect infestation, power surges or other forces outside of the control of the manufacturer.
4. Has been repaired by any workshop and / or person NOT previously authorised by the manufacturer.
5. Has been repaired with components not previously tested, passed or authorised by Centurion Systems (Pty) Ltd, South Africa or one of its subsidiary companies.



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