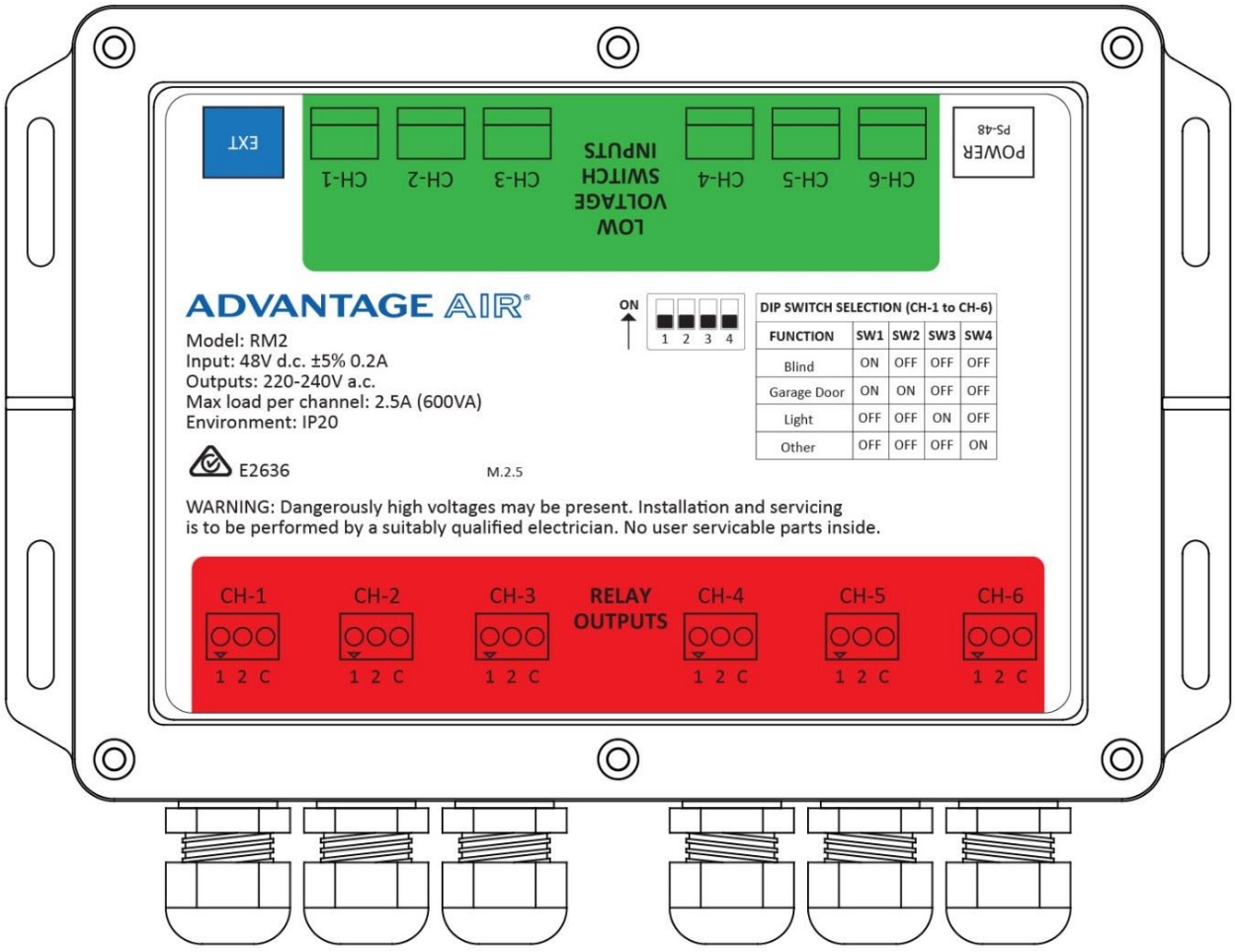
RM2 (Relay Module 2)

Installation Manual



Advantage Air Aust. Pty Ltd
115 Vulcan Rd, Canning Vale WA 6155
Ph: 1300 850 191 or email: techsupport@advantageair.com.au

1. Electrical Safety

1.1 General

The RM2 must be installed and/or used in accordance with your local wiring rules, regulations and standards.

If you are unsure about any part of installation, contact a licensed electrician before proceeding.

Some steps of the installation process are required to be completed only by a licensed electrician; these steps are marked with this symbol

The RM2 (Relay Module 2) conforms to the following standards:

AS/NZS 60669.2.1:2013

IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11

While the RM2 is primarily a Safety Extra Low Voltage (SELV) system (48V DC), installations may have a mix of 240V and SELV wiring and switches

Always ensure the MAIN POWER breaker is OFF before opening, connecting, configuring or modifying the RM2.

DO NOT MEGGER TEST (Insulation Resistance Test)

- Unplug PS-48 and PSU-ACDC before megger testing
- Do not Megger test ELV switches or module inputs.

The RM2 system runs at Safety Extra Low Voltage (SELV - 48V DC). Megger tests (Insulation Resistance) do not apply, as they will damage the equipment.

1.2 Specifications

Input voltage	48VDC ±5%, 0.2A
Output relay voltage	220-240VAC
Max output load	2.5A (600VA)
Environmental	IP20

TIP: See Load Guidelines section.

2. Installation

2.1 Mounting

The RM2 can be installed onto any flat surface using screws:

1) use thread diameter 4 - 5mm
2) use head size 9 - 11mm diameter.
3) minimum thread length of 15mm.

Example for screwing into timber: 8Gx15mm button head screw.

Care must be taken to ensure that the internal PCB is totally free of any foreign objects such as stray wire strands before applying power. Failure to ensure this may result in permanent damage to the RM2 that is not covered under warranty.

Note: It is highly recommended that the RM2 be mounted vertically as shown in the photos below. In situations where the RM2 cannot be mounted vertical, it should be securely fixed to a flat surface.

Mounting Example:

2.2 System Size

A maximum of 72 switch inputs is allowed per MyPlace system.

Up to 12 modules total. A mix of LM's, RM's and RM2's can be used, with a maximum of 12 in total.

2.3 Load Guidelines

The max load is 600VA per channel.

What you can connect to each channel depends upon its VA rating and inrush current.

For example, as a guideline, one RM2 channel can control:

- 300W of low voltage lighting - where electronic transformers are used. This includes all 240V powered LED lights, and low voltage halogen lighting.
- 600W of 240V halogen or other filament lighting.
- Three typical interior blind motors.
- You can control over 600VA using a suitable external relay or contactor.
    - For example: Hager ESC125 contactor

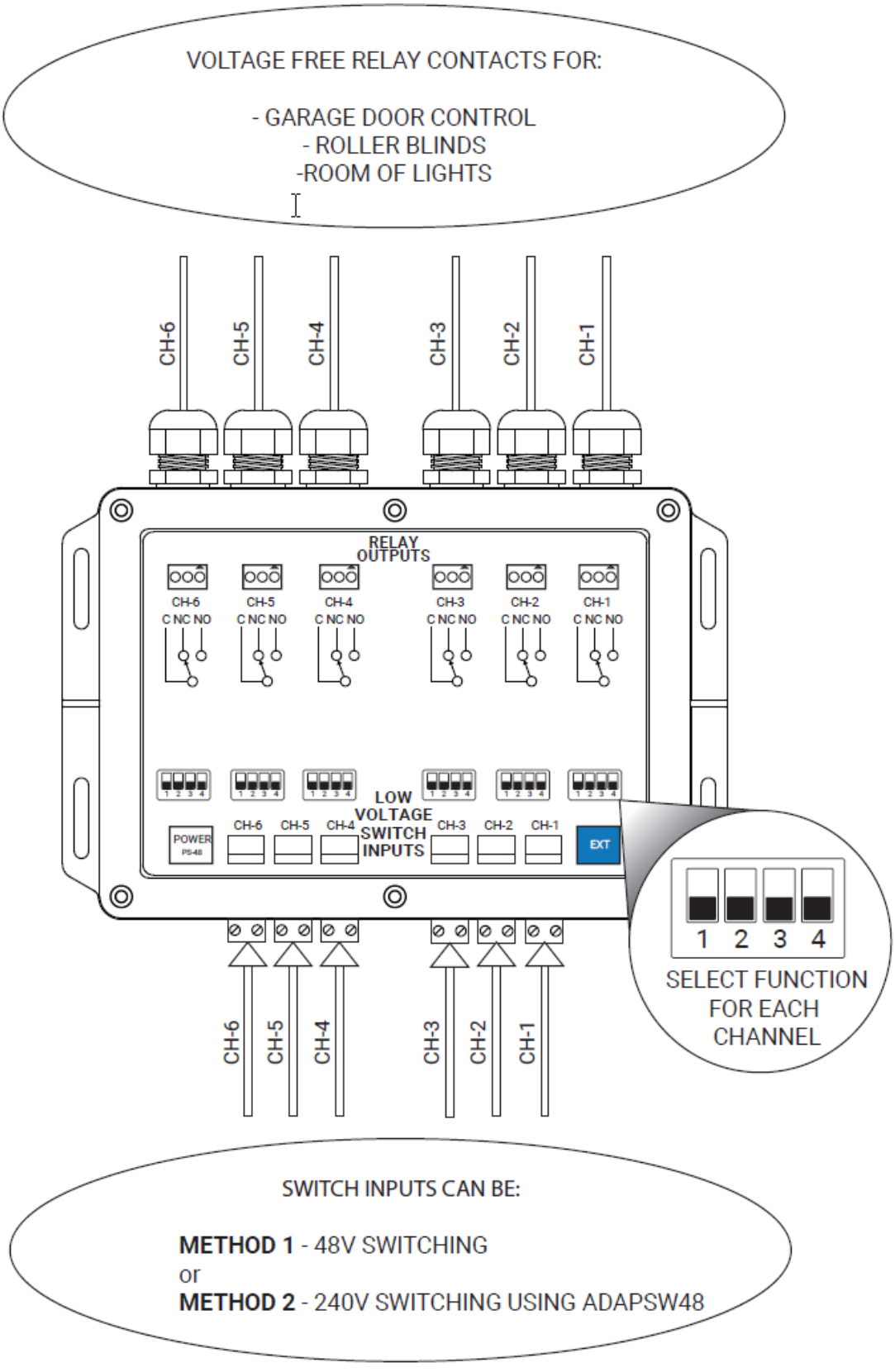
2.4 Power Points

Install a power point for each PS48 and another for the PSUACDC power supply unit (for the Control Box). (see Section 9 for power supply connection options).

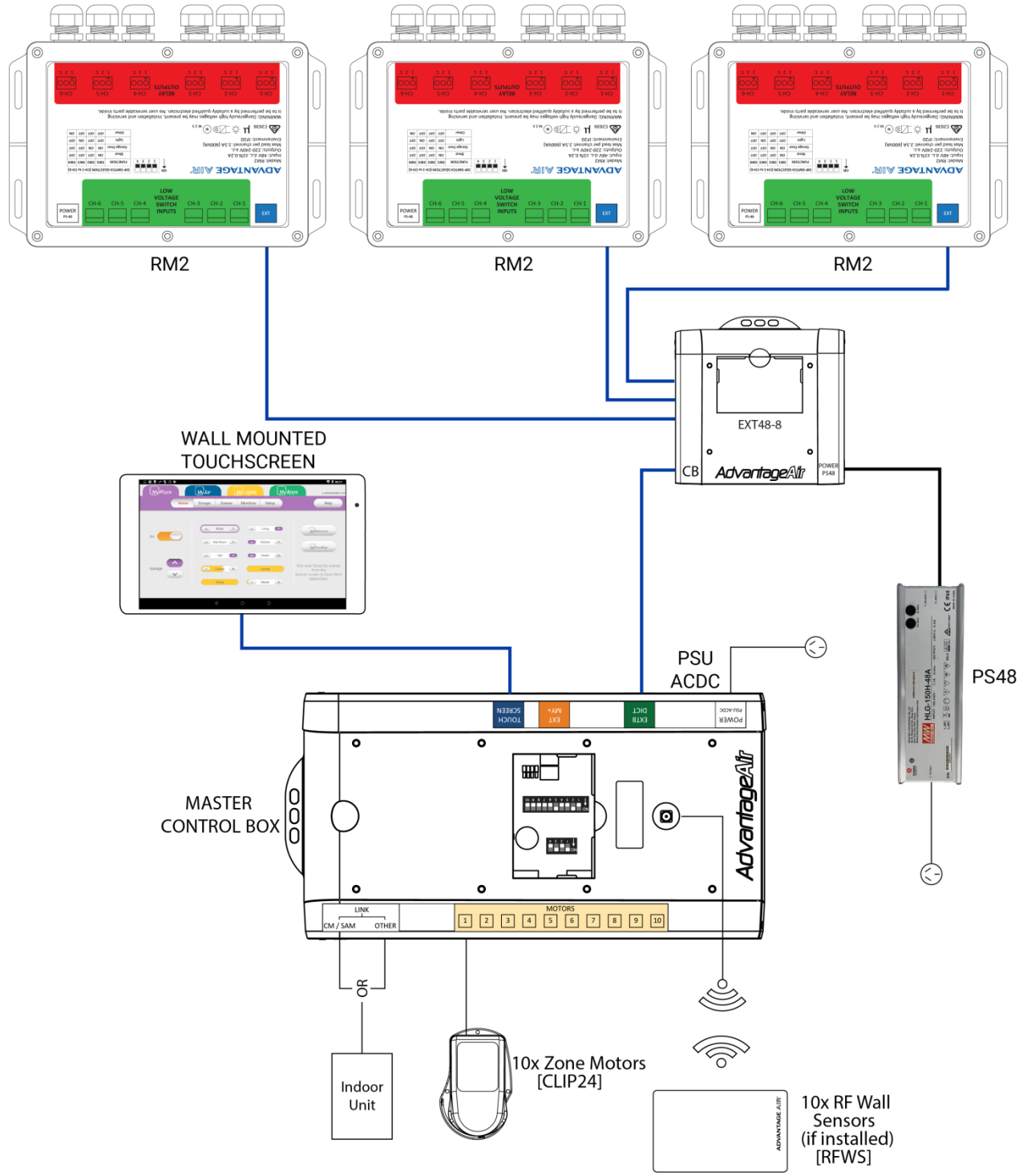
Installation of power circuits and power points must be completed by a licensed electrician.

3. Overviews

3.1 RM2 Overview



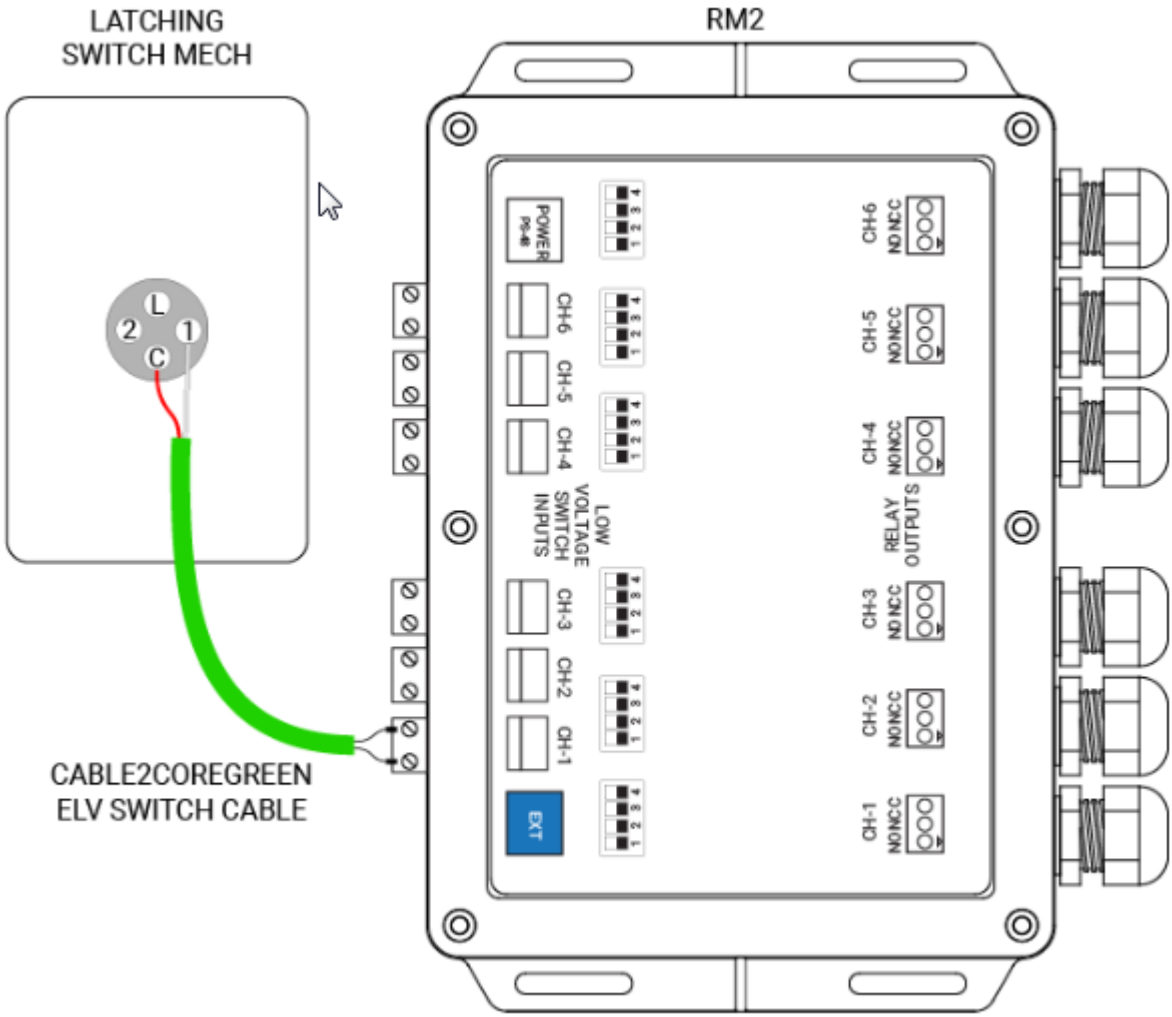
3.2 System Overview



4. Switch Wiring Options

4.1 48V Switching – Method 1

Low voltage wiring to the wall switch. Connects to “LOW VOLTAGE SWITCH INPUT” on the RM2. Suitable for Roller Blinds, and 240V lights.



Note: Wall Switches should be fitted for each channel of blinds and lights.

Recommended: use latching push button type wall switches (for blinds and lights).

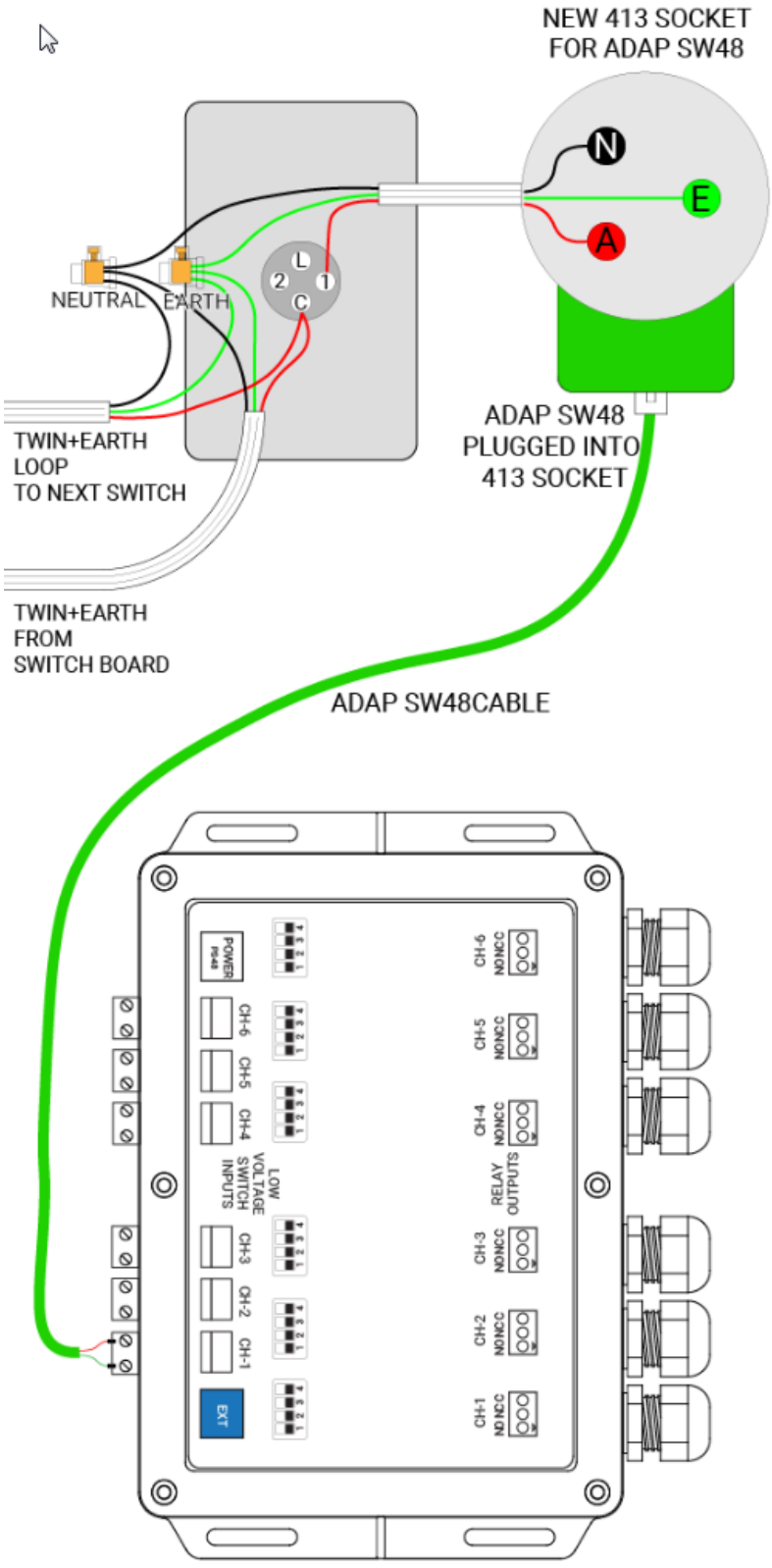
Example: Use Clipsal 30PB (not bell press). Regular switches can also be used for lights (Clipsal 30M).

OR

4.2 240V Switching (using ADAP SW48) – Method 2

Leave the existing house wiring in place and use the ADAP SW48.

When using the ADAP SW48, ensure you use the ADAP SW48CABLE10 or ADAP SW48CABLE20 to connect to the “LOW VOLTAGE SWITCH INPUT” on the RM2.



4.3 Polarity Sensitive ADAP 48SWCABLE10/20

4.4 Using the ADAP SW48 with Clipsal Saturn or similar LED lit switches

If you require Clipsal Saturn (and similar other types) light switches that have a LED indicator light, then 240V will be required at the switches to operate the LED. The 48V switch wire coming off the RM2 is unable to control the LED.

Please refer to the wiring instructions provided by the switch manufacturer for recommended configurations.

5. Garage Doors

MyPlace allows you to open or close your garage door, and MyPlace will send a notification alert to your mobile phone if your garage door is left open.

5.1 Compatibility

Some garage doors have multiple settings for accepting inputs from third party control systems.

The garage door motorised opener must be able to accept momentary "pulse" open/closed signals.

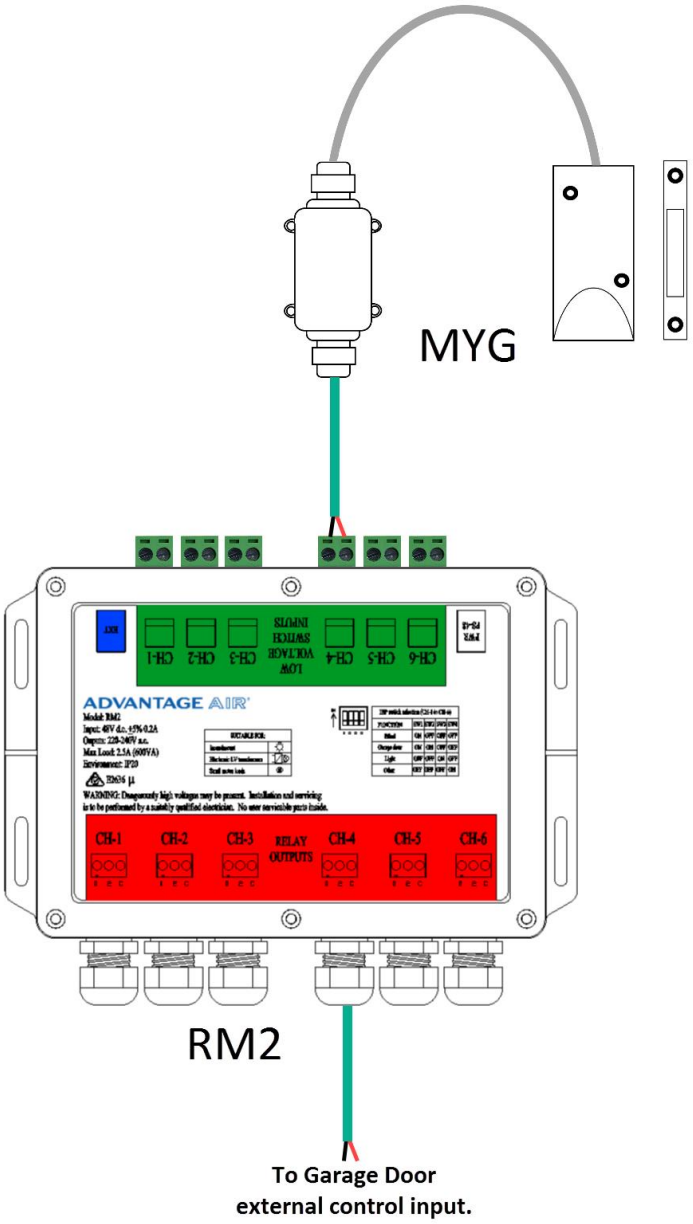
A setting on the Garage Door controls may be required to be changed.

For Garage Doors the RM2 "LOW VOLTAGE SWITCH INPUT" is used by the Garage Door Sensor (MYG).

Brand	**Model**	**Garage Door External Control Input**
B&D	SDO-4V1	AUX/OSC & 0V
Dynamic Openers	OL6P	PUSH BUTTON & COMMON/GROUND
Merlin	prolift 230T	connect to each terminal labelled "manual control"
Glidermatic / Gliderol	GTS2000	GND + ST
Jaytech	CK1200	GND + PB

For up to date compatibility info please see https://www.advantageair.com.au/support/ or call us on 1300 850 191 or email techsupport@advantageair.com.au for assistance.

5.2 Garage Door Wiring Diagram



The switches use SELV compliant voltages. DO NOT connect switches or cable which contain 240V mains, or other voltages.

5.3 Garage Door Sensor Wiring

The MYG consists of two parts; the sensor, and a junction box.

Garage door sensor parts:

1) The part with wires should be mounted in a permanent position to detect the door when it is closed.
2) The rectangular part (magnet) must be mounted to the door.
3) The two parts must come close to each other (20-40mm) when the garage door is closed.
4) Angle bracket included for mounting if needed.

The Garage door sensor must detect **when the door is closed**.

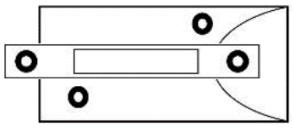
5.4 Photo Electric Sensor Required

All garage doors and motorised openers should be installed in accordance to AS/NZS60335.2.95. Advantage Air highly recommends that Photo-Electric safety beams are installed when door openers are integrated with MyPlace. Please consult further with your garage door and motorised opener supplier.

5.5 Garage Door Sensor - Location

The Garage Door Sensor (included in MYG) can be installed near the ground, along the side of the garage door or near the top. This will be site specific depending on construction and design.

The ideal distance between the sensor and magnet is 2 to 4 cm **when the garage door is closed**. The magnet should be centred (or close to) between the two mounting holes of the sensor as shown in the image shown below for optimal sensitivity.

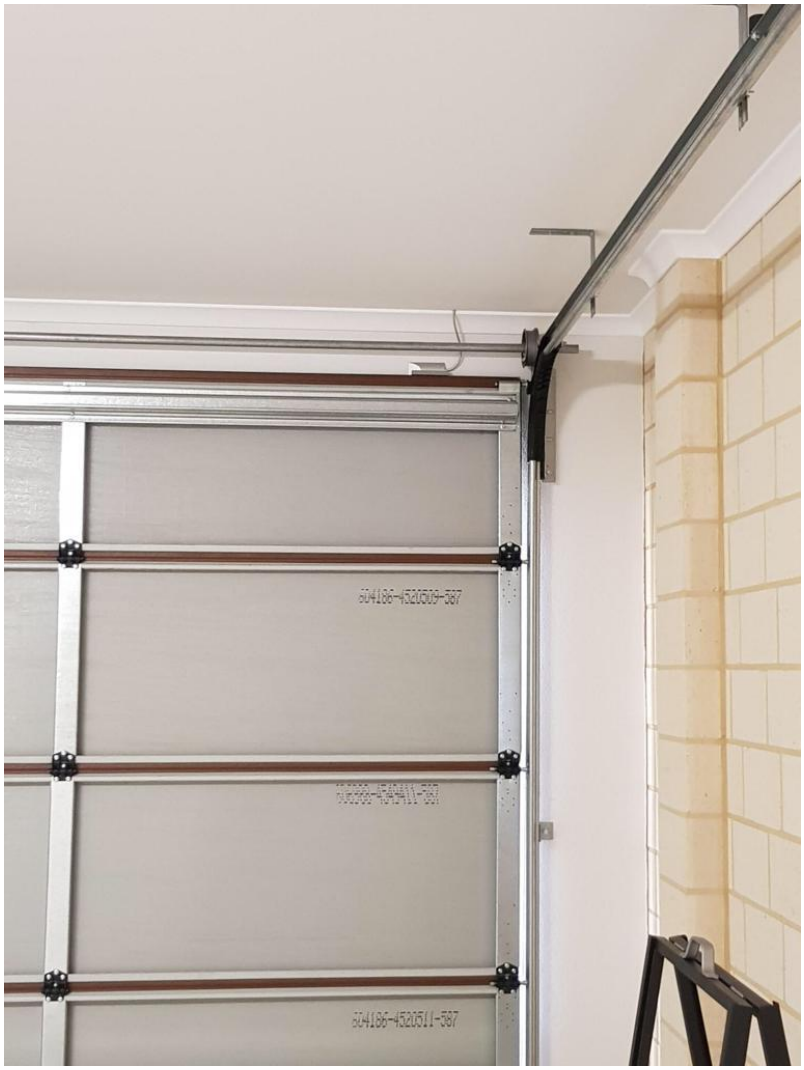


If the sensor does not detect door closure or is detecting unreliably, the magnet can be moved left or right 5 to 10 millimetres to resolve the issue.

5.6 Relay Output Wiring for Garage Door Opener

Channel Function	N/O Terminal	N/C Terminal	'C' Terminal
Garage Door	WIRE 1	Not Used	WIRE 2

5.7 Garage Door Sensor - Installation Example – up top



5.8 Garage Door Sensor - Installation Example – on the ground

6. Roller Blinds

MyPlace allows you to set your blind as fully open, fully closed or partly open by using the blind stop function.

NOTE: The blind stop feature is only available on RM2 modules identified with a label showing RM2S. The channel DIP switches must be set correctly for this to be enabled – Refer to section 8.1
The feature allows users to stop the roller blinds any time during travel from the MyPlace App.

6.1 Compatibility

SUITABLE MOTORS FOR MOTORISED ROLLER BLINDS USED WITH MYPLACE

MANUFACTURER	MODEL NUMBER	IMPORTANT MOTOR REQUIREMENTS
SOMFY	LS40 3/30	• NEEDS 3 OR 4 WIRES • HARDWIRED 240V • Mechanical/Manual Limit Setting on Motor • MUST NOT be controlled via any other remote control/ apps/wireless/radio
ACMEDA	ML S45	
MOTOLUX	80213**1000**	
MOTOLUX	MT35P-6-28-240/50	
ALPHAMOTORS	WSS40-5/28	

SUITABLE WALL SWITCHES FOR AUTOMATED ROLLER BLINDS

Please use latching push button switches for the blinds (not bell press).

MANUFACTURER	MODEL NUMBER	IMPORTANT WALL SWITCH REQUIREMENTS
CLIPSAL	30PB	• LATCHING PUSH BUTTON SWITCH (not bell press)

It is recommended to use a latching push button such as 30PB. Clipsal 30M can also be used.

For up to date compatibility info please check our website: www.advantageair.com.au/support

Note: Wall Switches should be fitted for each channel of blinds and lights.

6.2 Setting the Blind limits – top and bottom

Note: Be very careful when setting the blind top and bottom limits.

Incorrect procedure can cause the roller blind motor to damage the roller blind and its mountings, and cause it to fall.

Set up as follows:

There are two settings to adjust on the motor shaft.

- One for up
- One for down

You can see small arrows that show you the direction or travel (rotation of the motor).

1. Set the initial “up” position by rotating the “-” for 15-20 full turns
2. Set the initial “down” position by rotating the “-” for 15-20 full turns

3. Be prepared to cut the power to the blind if it keeps moving.
4. Apply Power to the blind.
5. Choose “Down” on the wall mounted touch screen.
6. Adjust the down direction “+” screw until the blind lowers to the correct position.

7. Choose “Up” on the wall mounted touch screen
8. Adjust the up direction “+” screw until the blind raises to the correct position.

6.3 Roller Blind Motors Can Overheat

In some cases, when roller blinds are rolled up and down, repetitively, the roller blind motor will overheat. This is a safety mechanism inside the roller blind motor, and may vary from brand to brand. It will also vary depending upon the ambient temperature and the fitted roller blinds width, height, and weight.

If it overheats, then the roller blind motor stops.

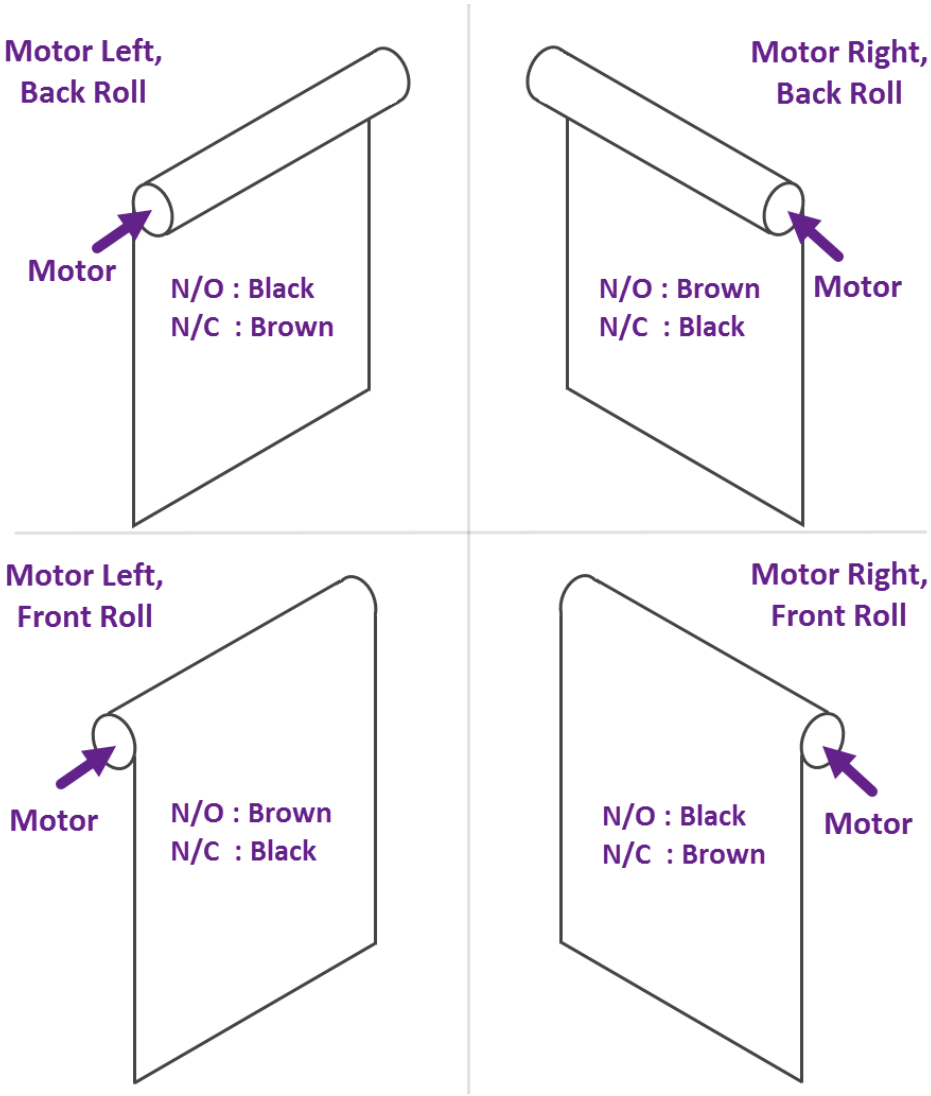
Pressing buttons on the MyPlace Apps or wall switch will not make the motor move again. The motor will stay stopped until it cools down.

When the roller blind motor does cool down, it will return to the last position set via the MyPlace App or wall switch.

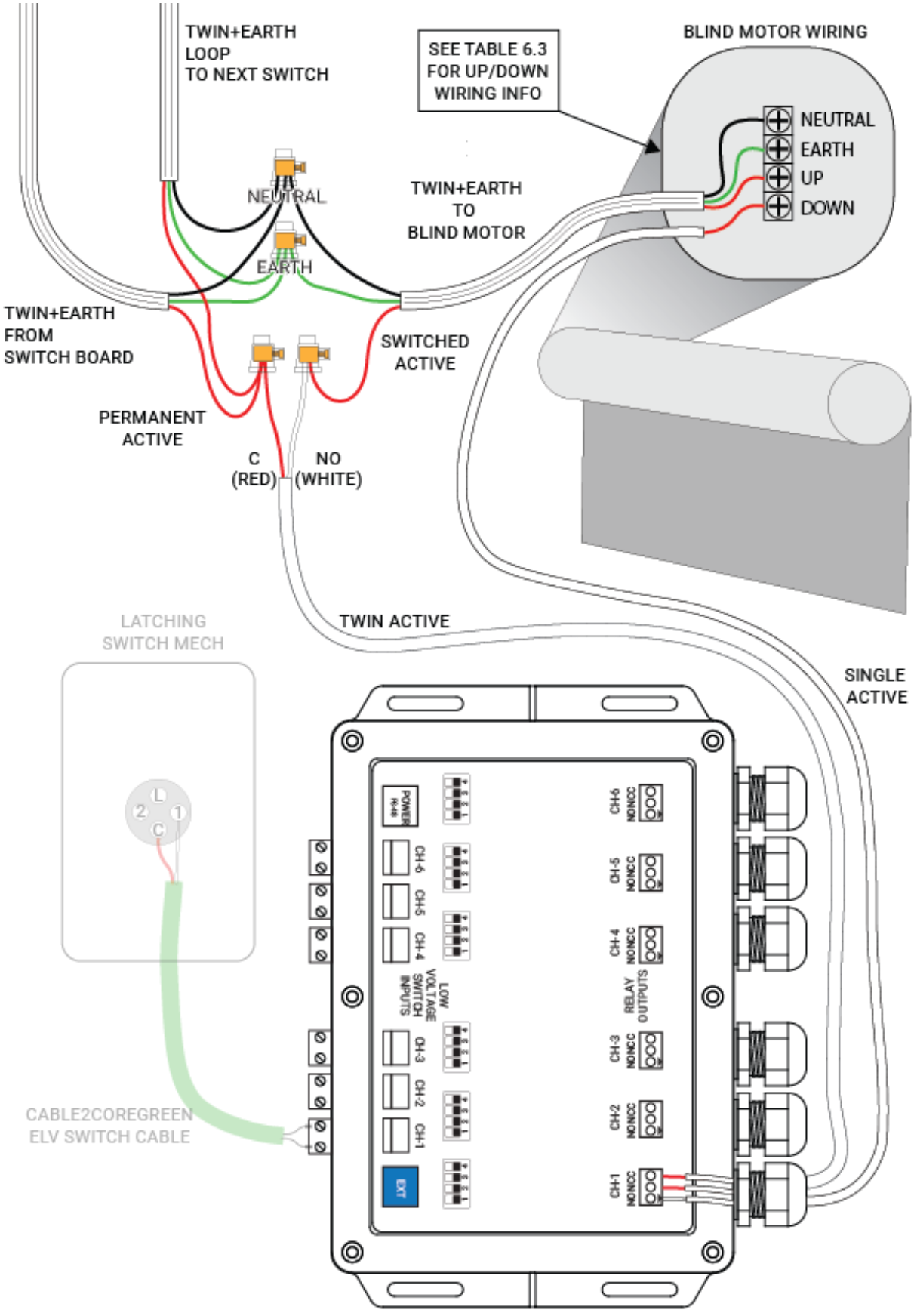
6.4 Roller Blind 240V Wiring

The wiring of the roller blind motor depends upon the side that the motor is mounted, and how the roller blind is mounted, as below.

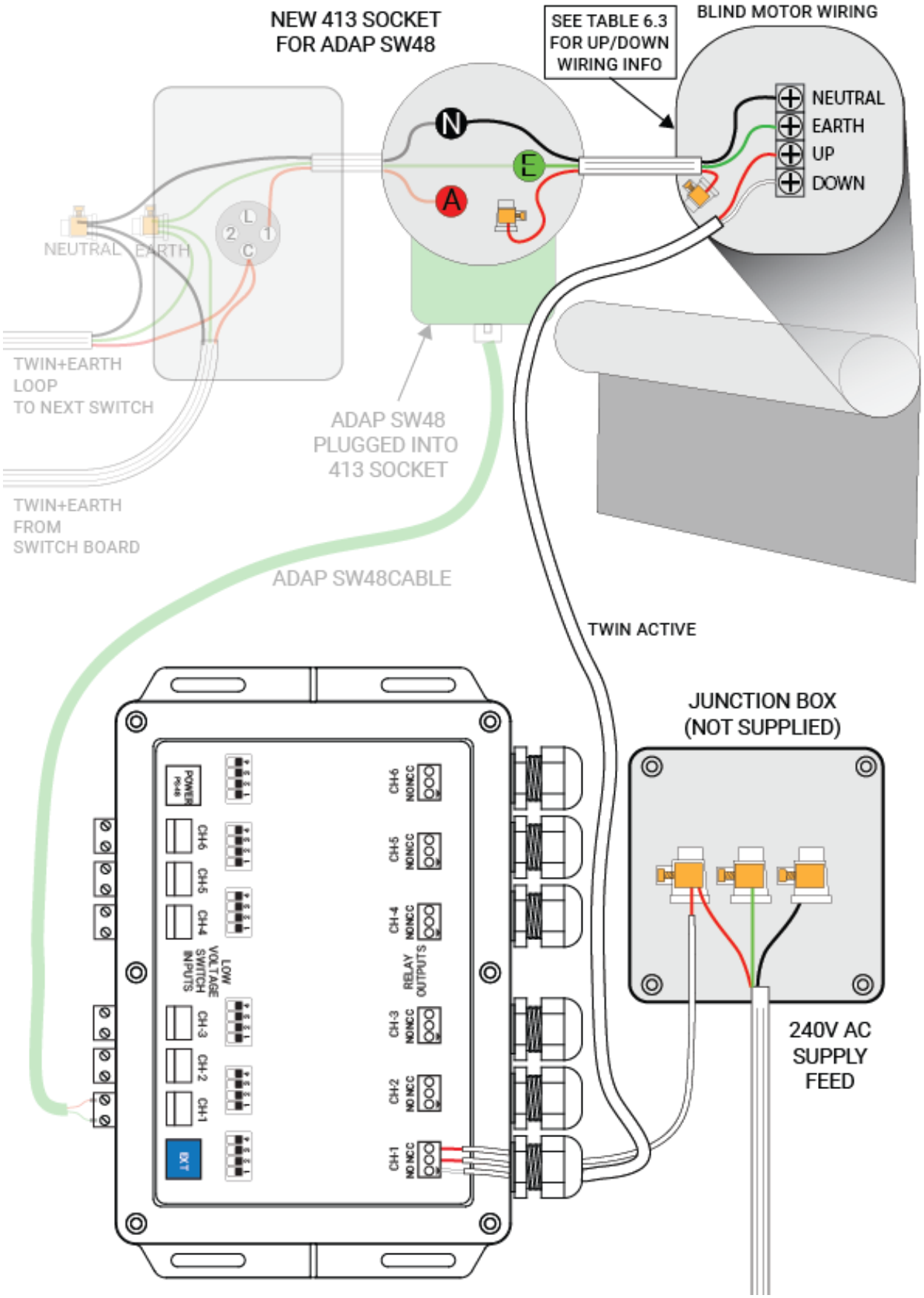
Channel Function	N/O Terminal	N/C Terminal	'C' Terminal
Motor Left, Back Roll Motor Right, Front Roll	Black wire of roller blind motor	Brown wire of roller blind motor	Active
Motor Left, Front Roll Motor Right, Back Roll	Brown wire of roller blind motor	Black wire of roller blind motor	Active



6.5 Roller Blind Wiring – Method 1 (Using 48V switching on inputs)



6.6 Roller Blind Wiring – Method 2 (using 240V switching [using ADAP SW48] on inputs)



7. Lights 240V Wiring

7.1 Important introduction

Note: Do not use the RM2 as a junction box.

Only run wires into the RM2 for direct connection to N/O, N/C and C for each channel.

1) Ensure all power is turned off.
2) Remove the lid of the RM2.
3) Pass the wire through the cable gland.
   Note: The outside diameter needs to be 5-10mm.
4) Screw the cables to the channel terminals as shown in the table below.
   Note: Strip length: 6mm.

Channel Function	N/O Terminal	N/C Terminal	'C' Terminal
Light	Load	Not used	Active
Other device	Load	Not used	Active

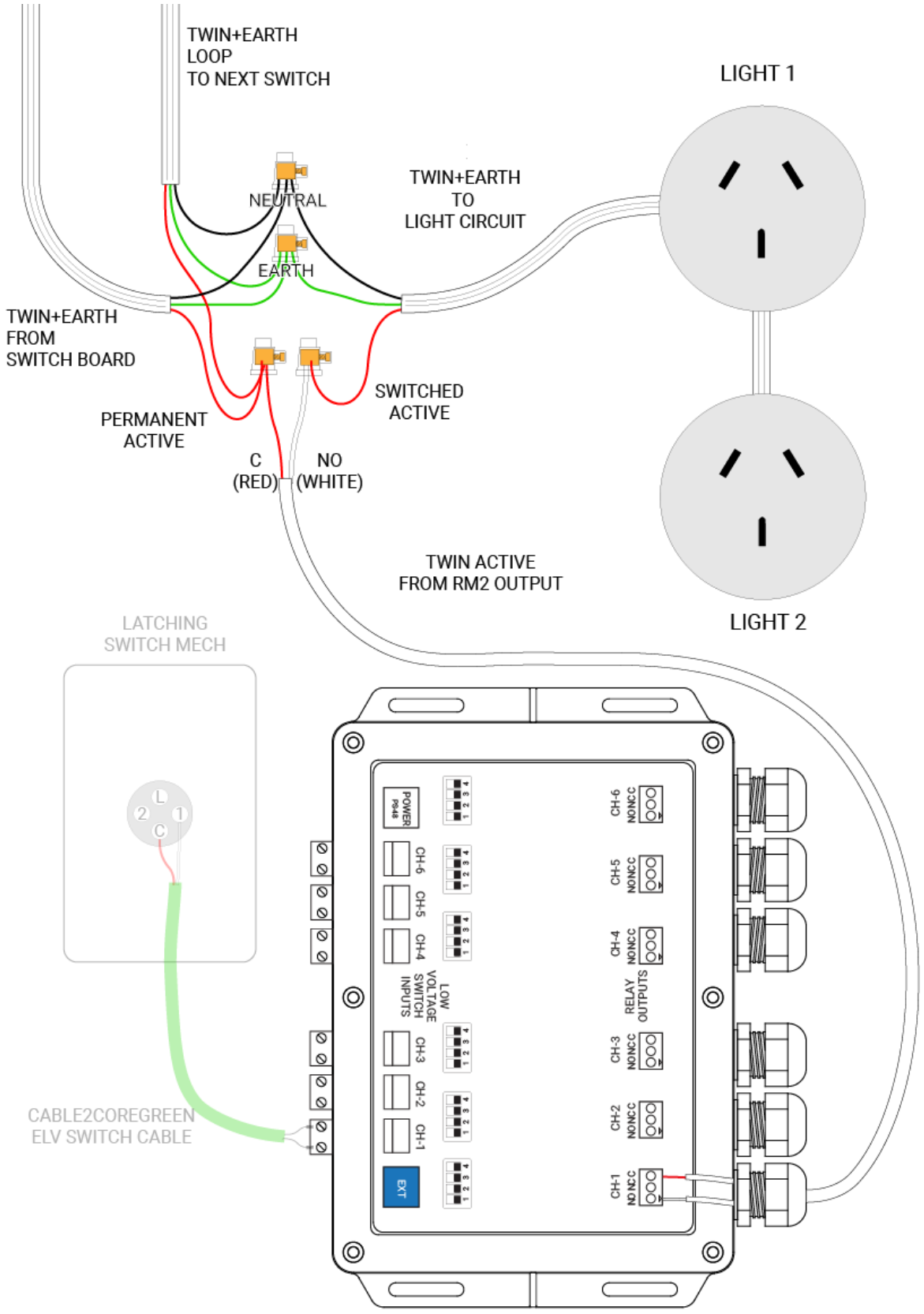
5) Tighten the cable glands.
6) Set the DIP switches (in the next section).
7) Replace the lid with 6 screws.

The relay outputs must be wired and housed in accordance with the applicable wiring rules, regulations and standards.

All 240V mains wiring must be done by a licensed electrician.

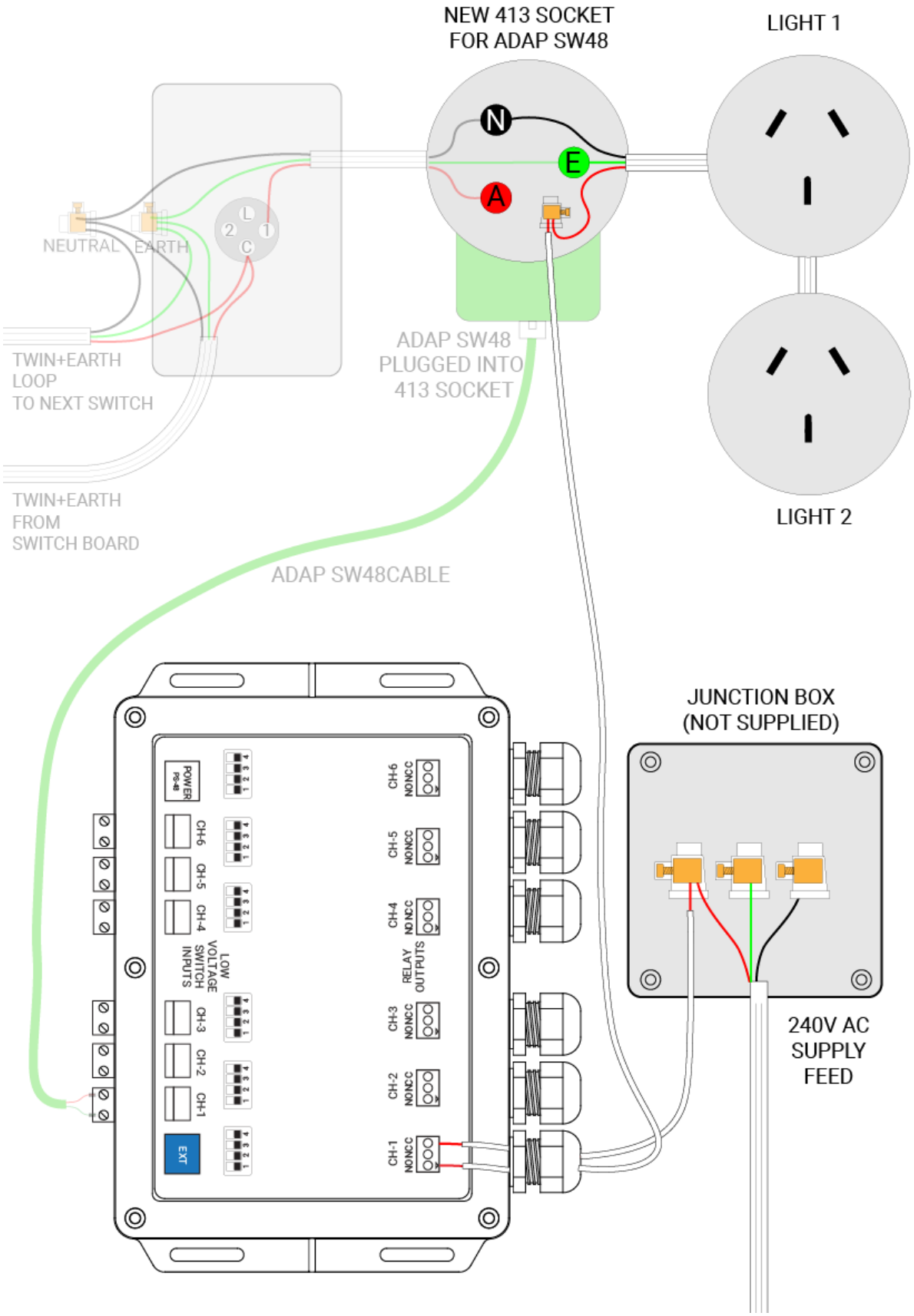
7.2 240V Wiring - Method 1 (using 48V switching on inputs)

This method uses low voltage switching, and controls 240V lights.



7.3 240V Wiring – Method 2 (using 240V switching [using ADAP SW48] on inputs)

This method uses 240V switching, and controls 240V lights.



8. Channel Setup

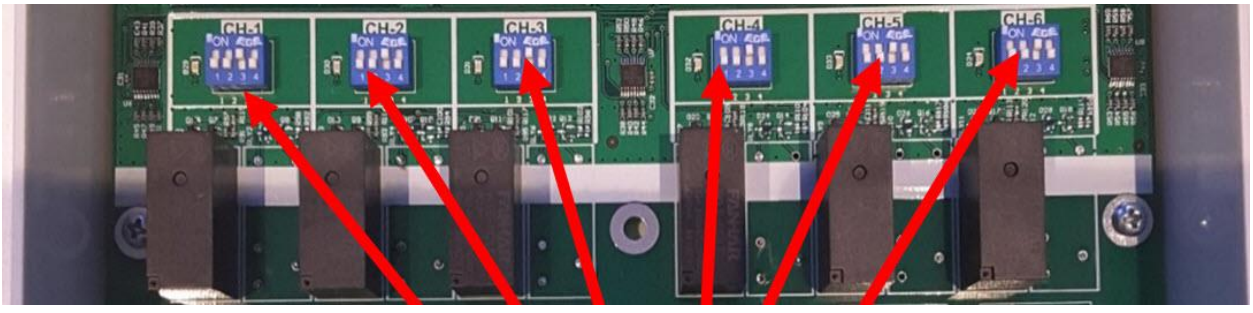
8.1 DIP Switch Setup

1) Remove the RM2 lid
2) Set the DIP switch for each channel according to what will be operated by the channel (see the table below for DIP settings)
3) Close the lid

DIP SWITCH SELECTION (CH-1 TO CH-6)				
FUNCTION	**SW1**	**SW2**	**SW3**	**SW4**
Blind	ON	OFF	OFF	OFF
Blind Stop*	OFF	ON	OFF	OFF
Garage Door	ON	ON	OFF	OFF
Light	OFF	OFF	ON	OFF
Other	OFF	OFF	OFF	ON

* This feature is only available on modules identified with a label marked RM2S.
Set the Dip Switches to “Blind Stop” for each roller blind channel if stop is desired.

Ensure mains power is turned off before removing the lid.



Channel DIP Switches

8.2 Rename each channel / button

Rename each button on the Wall Mounted Touch Screen

Go to: MyPlace (purple tab) > Setup > Setup Buttons > choose the pencil to rename

8.3 DIP Switch set to “other”

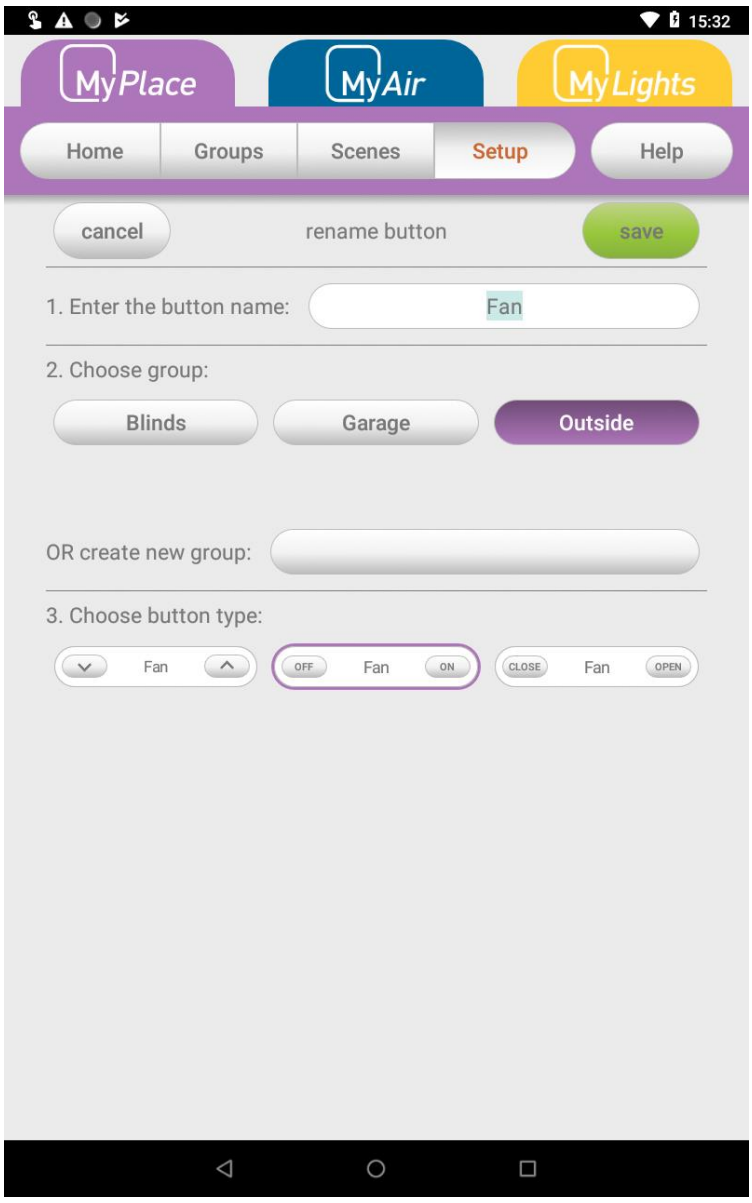
When you select “other” on Table 8, you can choose the button types that will display to the user.

The choices are:

- Up/Down (arrows)
- On/Off
- Open/Closed

You can see the 3 button types below.

You can choose the button type on the Button Setup page, at the same time that you change the name for that button. The selected button type has a purple outline here. Example:



8.4 Purple Blue Yellow – which tabs will be shown

Please see the table of Tabs below that the end user will see on their MyPlace wall mounted touch screen, based on what they have installed – and what modules are used for the install.

Acronyms:

ELV Lights = 48V extra low voltage lights.

BOG = Blinds, Other, Garage Door.

If MyAir is installed:				
no Lights and no BOG	✓	×	×	CB8
System has BOG	✓	✓	×	CB8 + RM2
System has Lights (240V or ELV), no BOG	✓	✓	✓	CB8 + LM/RM (or RM2)
System has Lights (240V or ELV) and also has some BOG	✓	✓	✓	CB8 + LM/RM and RM2

If No MyAir is installed:				
System has BOG	×	✓	×	CB9Z MYP + RM2
System has Lights (240V or ELV), no BOG	×	×	✓	CB9Z MYP + LM/RM (or RM2)
System has Lights (240V or ELV) and also has some BOG	×	✓	✓	CB9Z MYP + LM/RM and RM2

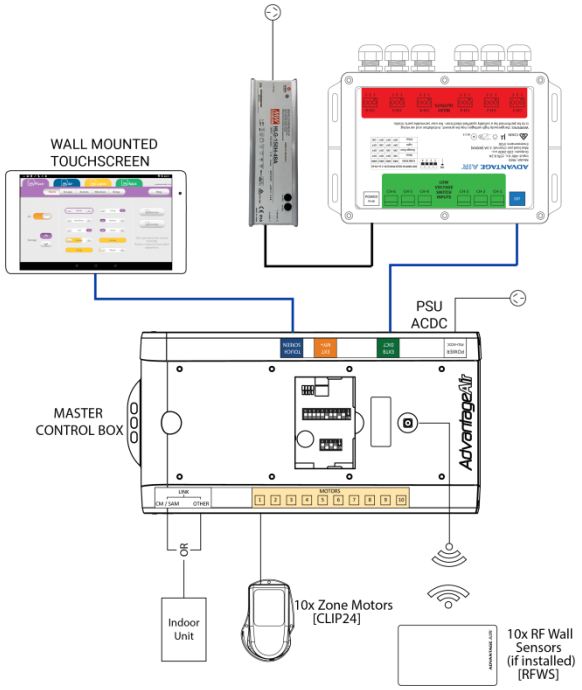
(or CB ZL)

9. Power Supply Options

The RM2 has two power supply connection options:

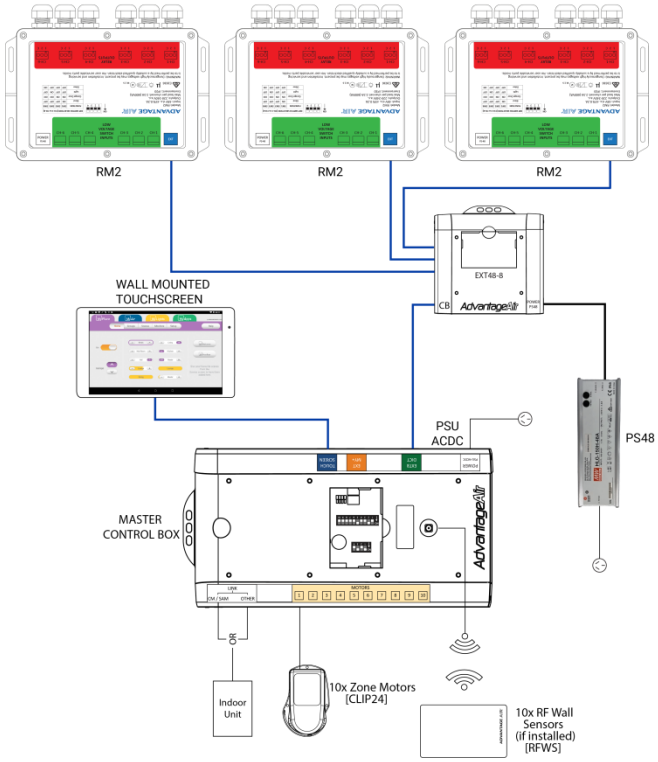
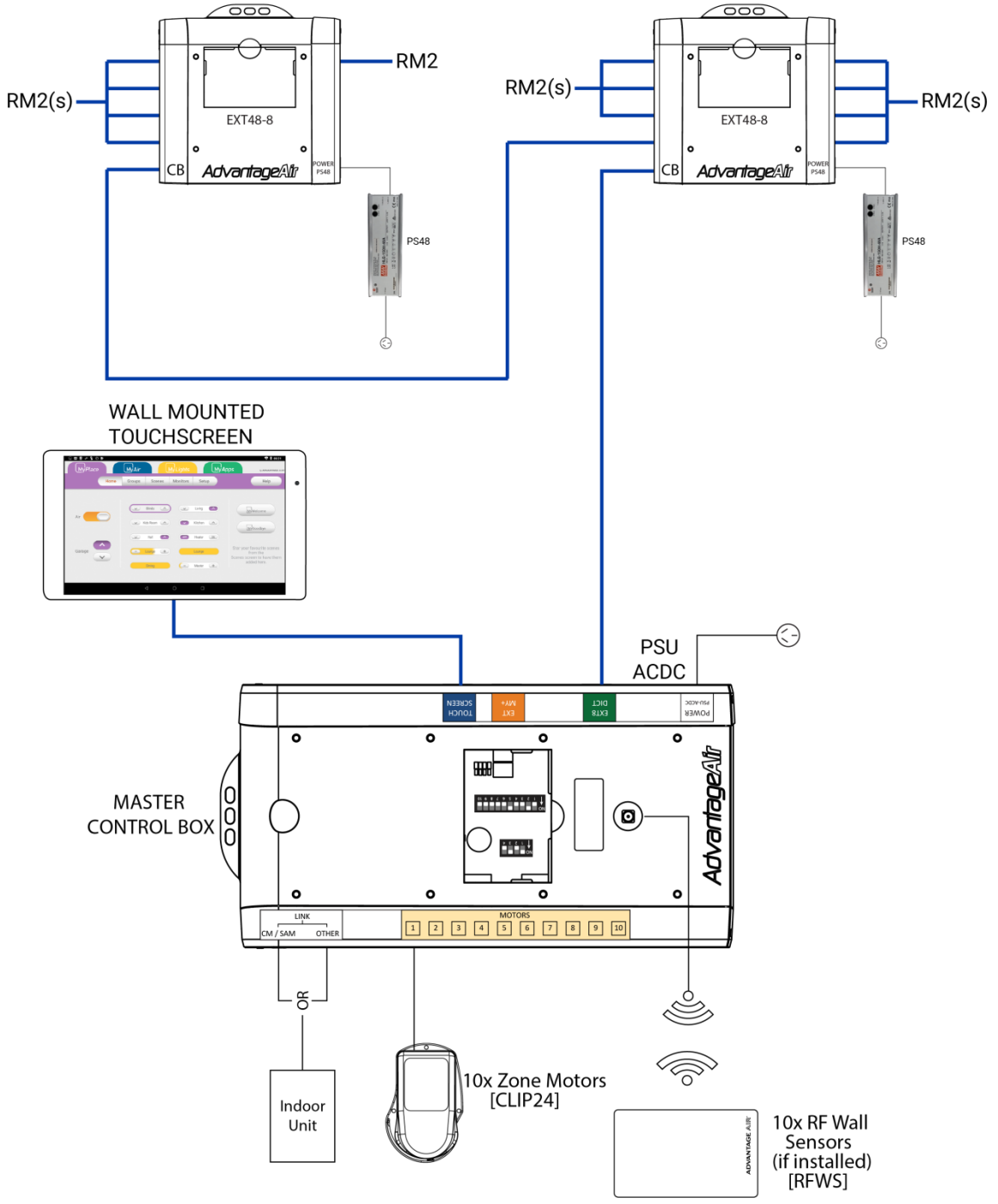
9.1 Single RM2

Connect the PS-48 directly into the RM2 module.



9.2 Multiple RM2s

An EXT-48 can be used to share power from each PSU48 to8x RM2s.



10. More than 8x RM2s