

# Downee

# SHORT ----- CUTS



*All business  
No bullsh\*t*

## RODMAN 24V : TRADE MANUAL

# WELCOME!

Fed up with all the fluff found in manufacturer's instructions? The backbone of Short Cuts manuals is short and snappy info to get the best results fast.

Produced in-house by the team at Downee, Short Cut manuals are created using plain English and our own real-world install experiences. We've chopped off the fat leaving only the meaty bits you need to get a gate system rocking in record time.

Don't feel like reading? No worries! Video versions of Short Cut manuals are in the Tech Area page for this motor on our website.

## INDEX

### STEP

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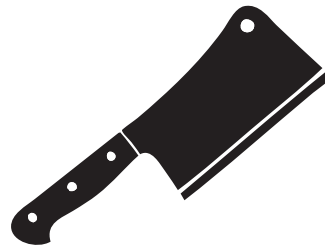
Look for the video of this manual on the Rodman area on our website

**TROUBLESHOOTING:** Call us on our Tech Support line **1800 241 733**

# BEFORE YOU GO ON SITE

## TOOLS TO GET THE JOB DONE

- Screwdrivers (including small flat-blade for wire connections)
- Pliers
- Stanley Knife
- Hammer Drill
- Spirit Level
- Sockets Set
- 5mm Masonary Drill Bit
- M10 Tap



## EXTRA MATERIALS NEEDED

- 2-Core Cable + Earth 1.5mm<sup>2</sup> Flexible cable
- 14G Tek Screws (x50) or 25mm M10 Bolts (Optional to secure brackets)
- Flexible Conduit
- 5mm Masonary Tappers or Green Plugs

## RODMAN KITS

### START KIT

These kits include the minimum parts to get a high performing swing gate automation set up.

#### KIT INCLUDES

- Motor/s
- Control Box (Controller & receiver)
- Remote (Two)
- Mount Brackets (Two)

### SP START KIT

As above + External Transformer

### PRO KIT

For more advanced installations, the Pro Kit includes two extra remotes and a pair of reflective sensors pre-wired to the controller.

#### KIT INCLUDES

- Motor/s
- Control Box (Controller & receiver)
- Remote (Four)
- Mount Brackets
- Reflective Sensors (Two)

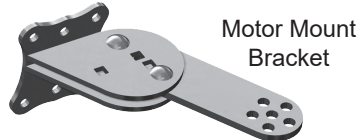
### SP PRO KIT

As above + External Transformer

# GATES

Check gates are in excellent operating condition. Gates in poor operation will give you trouble and prematurely wear out an automation system.

## MOTOR MOUNT

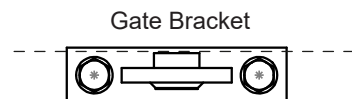


### TIPS

1. If possible mount the motor halfway up the gate.
2. When setting up a motor's position use the spirit level on everything!

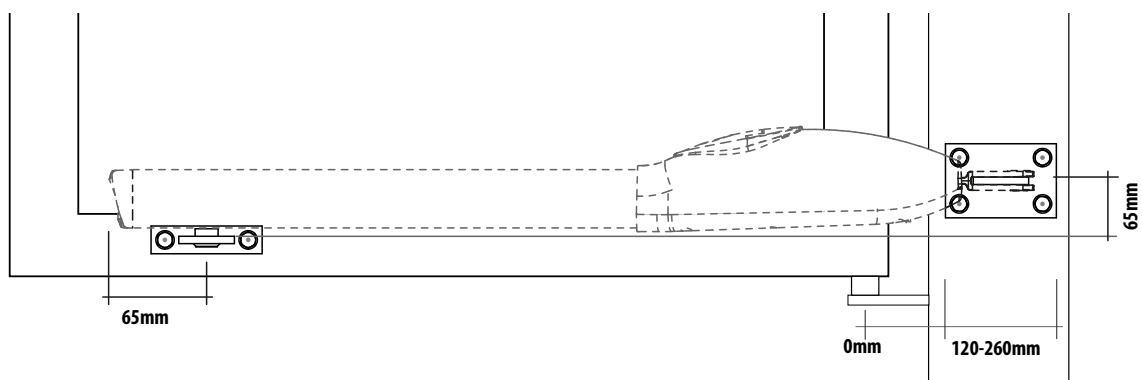
1. Hold the motor in the position it will sit on the gate.

2. Mark the gate where the motor sits on top of the gate bracket (right).



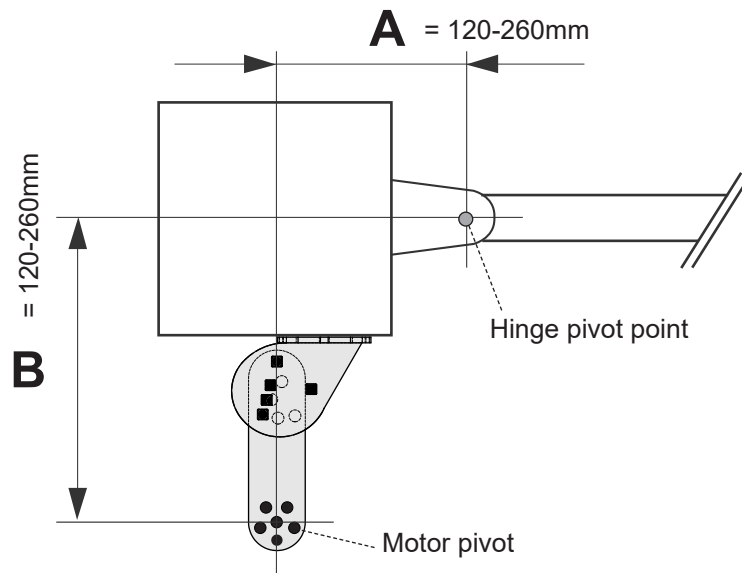
3. With a spirit level, mark a level line across to the gate post. Place another mark 65mm above it. This is the centre line for the motor mount bracket (below). Mark the gate post 120 & 260mm from the centre of the hinge.

4. Now you've got the mount position, place a tek screw into the motor mount bracket. Grab the spirit level to get it straight before the second tek screw goes in.

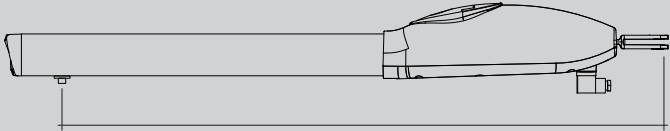


# GATE ANGLE

**TIP** Keep the A & B distance close to the same. Between 120-260mm.

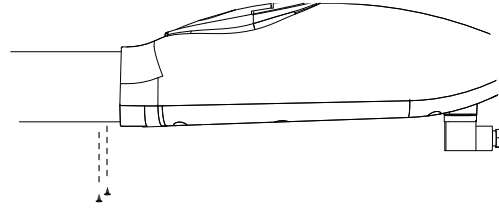


1. Check the B-distance. Play around with different holes to get measurements close as possible.

		A															
		120		140		160		180		200		220		240		260	
B	100	98°	560	106°	578	112°	597	117°	615	122°	634	126°	653	129°	672	121°	660
	120	96°	576	103°	592	109°	609	114°	626	119°	644	123°	663	126°	680	116°	660
	140	94°	592	100°	607	106°	622	111°	639	116°	656	120°	673	119°	680	110°	660
	160	93°	609	98°	622	104°	637	109°	652	113°	668	117°	685	112°	680	106°	660
	180	91°	626	97°	639	102°	652	107°	667	111°	682	115°	698	106°	679	101°	659
	200	91°	644	96°	656	100°	668	105°	682	109°	696	107°	697	101°	677	96°	657
	220			95°	673	99°	685	103°	698	107°	711	100°	696	96°	676	92°	656
	240			94°	691	98°	702	102°	714	100°	713	95°	693	91°	673		
		C Grey Columns								Open Gate Angle Light Grey Columns							
																	
		C															

# HANGING THE MOTOR

1. Unlock the motor using the key.
2. Remove the cover off the worm drive - undo the two phillips head screws under the cover (right). Spin the brass spindle to 50mm from the end. If you have end stops place them onto the worm thread now.
3. Bolt the motor on the Motor Mount Bracket in the round hole selected to get the A-Distance. Tighten nylon lock nut & back off half a turn.



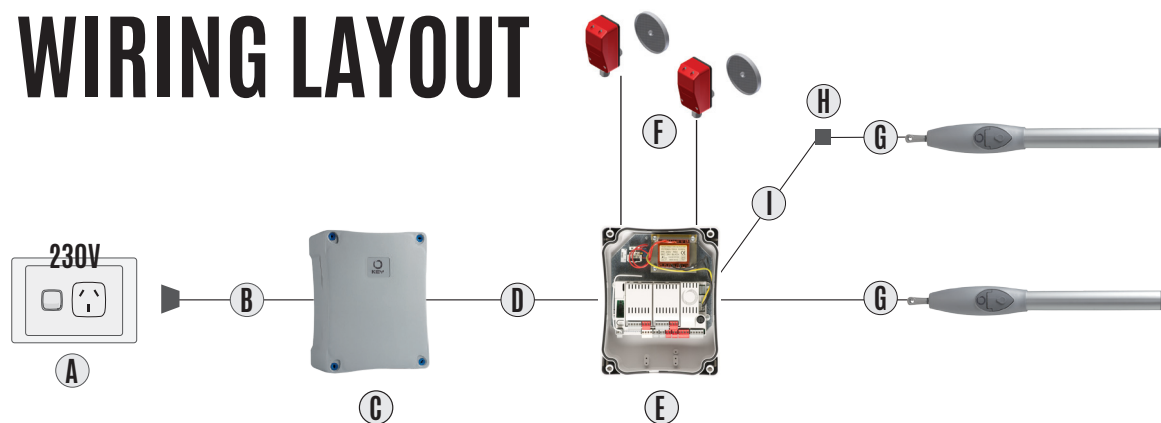
## GATE BRACKET

### TIP

Ground stops for the closed position keep the gates positioned together when closed and reduce the risk of motor damage.

1. Place spirit level on the worm shaft - mark up the gate mount bracket position. When the first Tek screw is in drop the spirit level on the bracket.
2. Move the gate until the motor's spindle drops into the gate bracket. Bolt the shaft to the bracket. Drop your spirit level on the shaft to check it's level.
3. Open & close the gate by hand to check it slides smoothly.

# WIRING LAYOUT



<b>A</b>	Power point	<b>E</b>	Control Box.
<b>B</b>	1m cable with 230V plug (pre-wired)	<b>F</b>	Reflective photocells (Pro kit only)
<b>C</b>	Optional external transformer (SP Kit only - not supplied)	<b>G</b>	Motor (double motor kit) pre-wired with 1mtr of 5-core cable
<b>D</b>	External transformer cable (SP Kit only - not supplied) 0-20m: 2-core + earth 1.5mm² flex cable 20-50m: 2-core + earth 3mm² flex cable	<b>H</b>	Weatherproof junction box
		<b>I</b>	2-core + earth 1.5mm² flex cable (not supplied)

## **WARNING: 230V power is present**

Don't turn on power point until all power cables are safely connected.

## EXTERNAL TRANSFORMER (SP KIT)



Mount the external transformer (**C**) at a power point outside the house. If the power cable between the transformer and gate is 20+m from the gate use a heavier 3mm core cable (up to 50m).

The 24V power supply leaving the external transformer is harmless. Cables can be run above ground or just below the surface. 230V cable needs a 600mm deep trench - it's the law.

## 24V

24V models have transformers inside the Control Box (E) with a power cable that connects to the mains power point at the gate.

## WIRING DIAGRAM (PAGE 10)

# CONTROL BOX

## IMPORTANT

Only connect the control box to 230V AFTER wiring is connected.

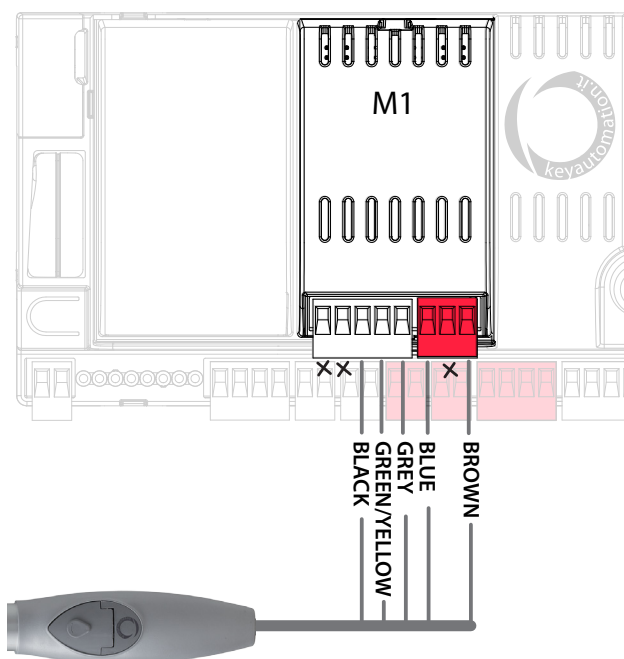
Mount the control box using the holes. Run the motor power cable into the control box.



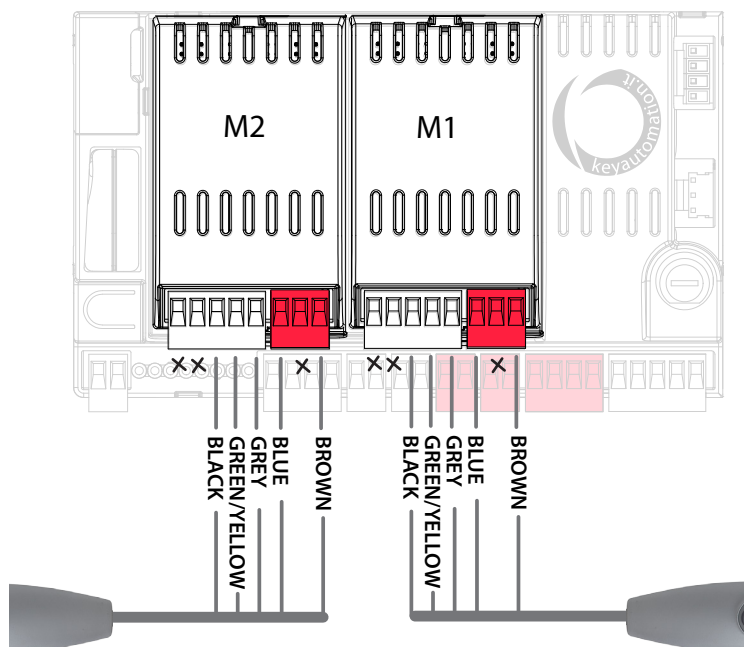
Mount holes are outside the sealed area.

1. Mount the control box. If the gate is close to an outdoor 230V power point the control box can be mounted up to 10m max from the gate. Any further and you'll need the external transformer option.
2. Unplug the connectors from the power module. Run the motor's cable through gland on bottom of the control box and connect cables as shown below.
3. The 24V power used here is low voltage. 24V systems can be safely wired by anybody.
4. Connect and turn on 230V power.

## SINGLE MOTOR power connection



## DOUBLE MOTOR power connection



MOTOR CABLE	FUNCTION
Blue.....	Opening
Brown.....	Closing
Black.....	+ encoder
Yellow/green.....	S encoder
Grey.....	- encoder



# PROGRAMMING

## PALM PROGRAMMER

To make it easy to understand the digital screen uses whole words for instructions.

### TIP

Palm Programmer is held with velcro. Detach it to see the screen better.



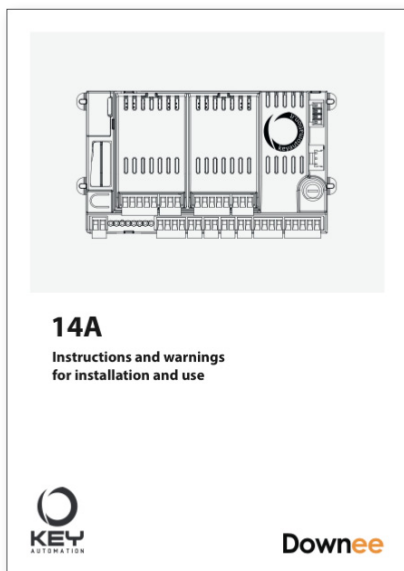
1. After the welcome message the screen will show '**14A**'. Press **Yes** then it'll ask you to choose the following:
2. Choose a language '**English**'
3. Choose '**Quick Programming**'
4. Installation type. Press **Yes** for '**Swing Gate**'
5. Click **Yes** when you see '**Warning! Data will be deleted**'
6. Select Motor type? Scroll to '**PS400-24**' (Rodman's code) select **Yes**.
7. It'll ask if you have these accessories:  
**Foto** (photocells) **1** - Press **Yes** or **No**  
**Foto 2** - Press **Yes** or **No**  
**Safety devises enabled during programming** - Press **No**\*  
**Sensitive edge** - Press **Yes** or **No**  
**Stop button** - Press **Yes** or **No**  
  
\* *Safety devices enabled during programming will show. Press No. Knocking out the photocells during programming will let you walk around without triggering the safety. IMPORTANT: Keep the area clear of all objects.*
8. Unlock motor(s), position in the middle (45°) and '**Lock Motor**' will show. When the gate is in position and the motor locked press **Yes**. The gate should OPEN with '**Learning Opening**' showing on the display. If the gate starts to CLOSE scroll down to reverse it.

11. The gate will slowly open & close to learn the limits. Check the gate works smoothly. **'Opening completed'** & **'Double leaf?'** will show. Click **No** if it's a single gate and it'll finish learning the closing parameter. Click **Yes** if your install has two gates and the second gate will go through it's opening parameters.
12. **'Learning Closing M1'** (M1 = gate 1) then **'Programming success fully completed'** will show when done. Press **Yes** to finish.
13. Auto Programming is complete.
14. The SBS button let's you operate the gate and check motor operation before the remote is connected.

Press **Yes** to **'Basic Settings'** to adjust parameters (Customised Settings)

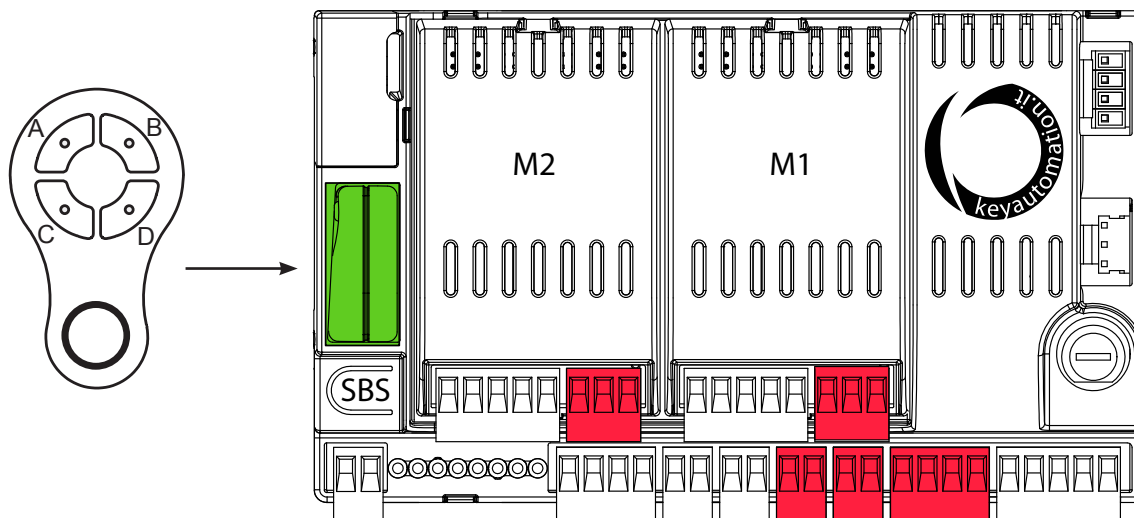
## CUSTOMISED SETTINGS

See **page 25** in the manufacturers manual for details.



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# CONNECT THE REMOTE



The RX4X receiver (green) can be used on up to four different automation systems. See the RX4X manual for more info.

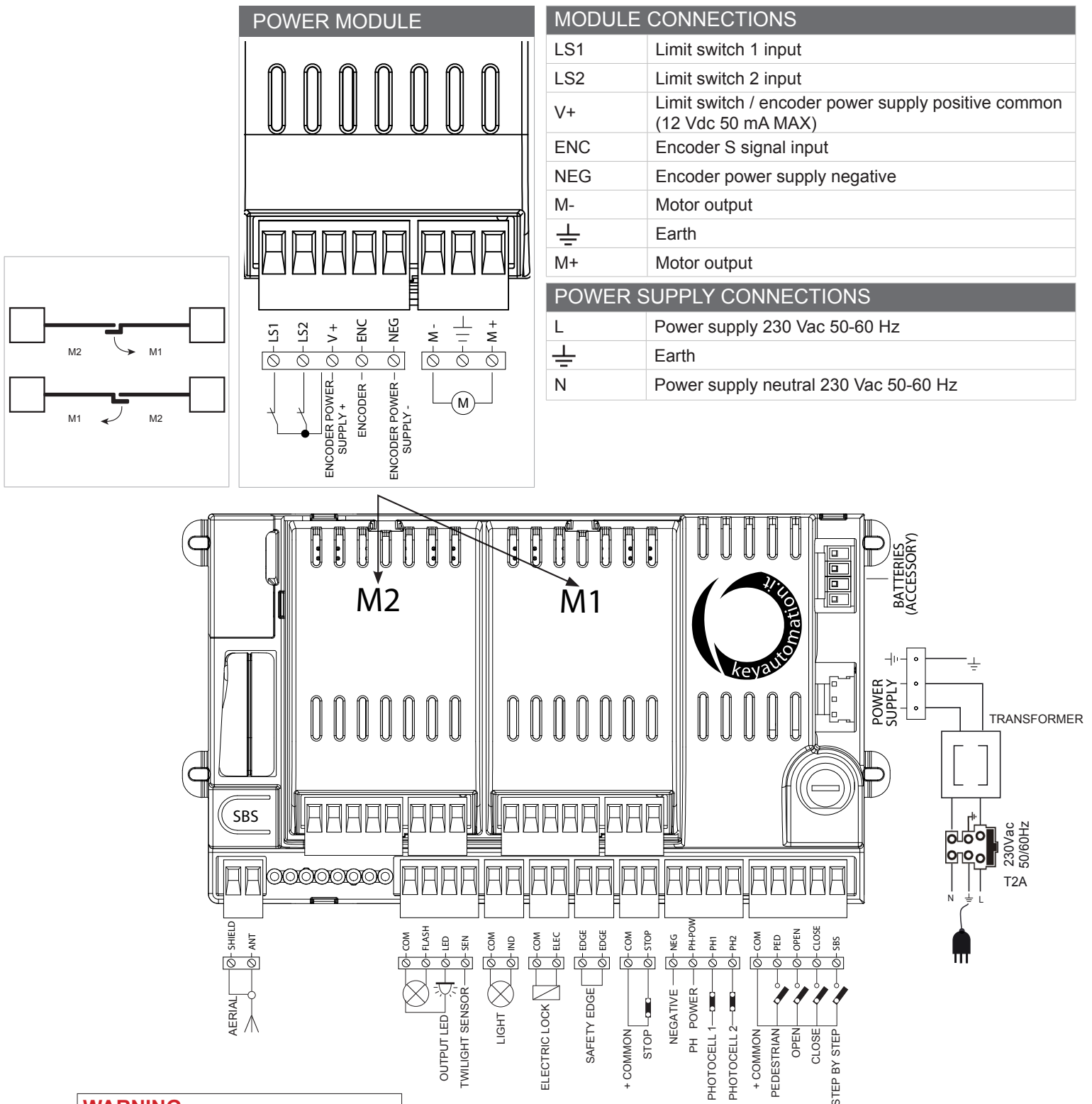
1. Starting at **14A**, scroll to '**RX4X**', press **Yes**, '**Add TX**' (remote), press **Yes**.
2. '**Select Channel 1-5**' is asking if you want to include the functions below on the remote.

**CHANNEL**    1 = Open-stop-close (Step-by-Step operation)  
                  2 = Pedestrian access (Part open)  
                  3 = Open only (Using auto close in basic settings)  
                  4 = Lights on/off (Only available on Key Automation light system)  
                  5 = All (channels 1 - 4)\*

\* Using channel 5 will stop you from using channel 4 for other connections eg. garage door

3. Scroll and select a channel, press and hold the remote button you've chosen for that channel. '**Transmitter Saved**' lets you know when connection is made. Repeat with any spare remotes.
4. Add the another channels, using a different button for each channel.
5. To quit the menu, press '**No**'. The receiver automatically quits if idle for 10sec.

# WIRING DIAGRAM



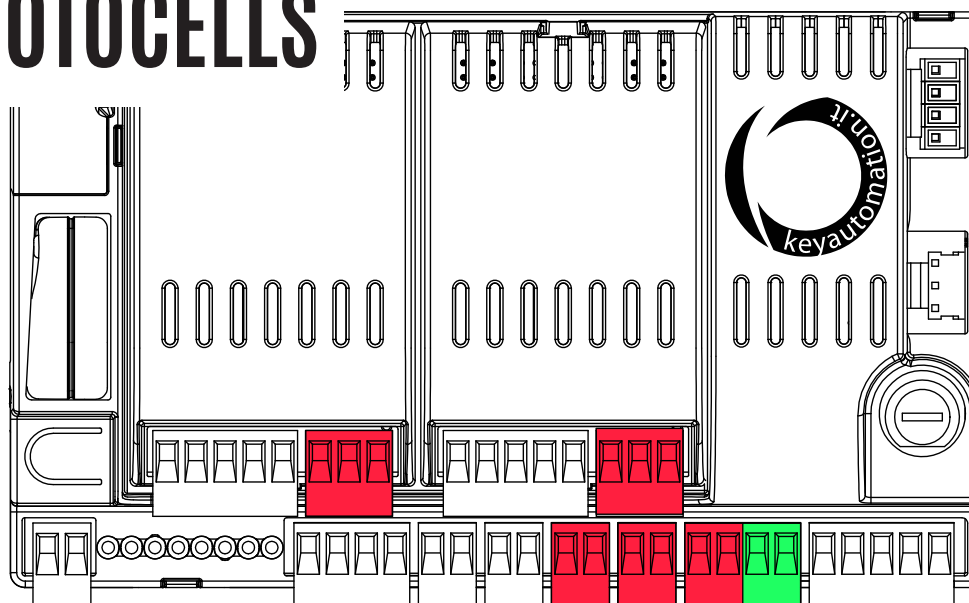
## WARNING

Do not undertake any wiring if the power is connected.

## CUSTOMISED SETTINGS

Details on how to adjust the gate performance and parameters for accessories is in the 14A manual on page 25.

# PHOTOCELLS

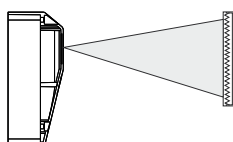


Photocells supplied in a Pro Kit, come pre-wired with connector for the cable into the control board.

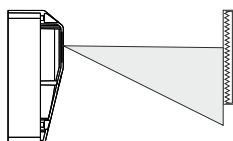
1. Flick off the power and pull the plug.
2. Mount photocell-1 onto the gate post. This sensor only works when the gate is closing.
3. Mount photocell-2 onto a freestanding post. Connects to the sensor installed at the end of the leaf in open position. It's purpose is to stop the gate opening or closing.
4. Flick the power back on.

Photocell-2 (PH2)

Photocell-1 (PH1)



LED lights up:  
100 % of the cone of light is  
hitting the reflector



LED flashing:  
Less than 100 % of the cone  
of light is hitting the reflector

The sensor is spring-mounted. Adjust the beam using the 3 phillips head screws inside the sensor.



Pre-wired Sensor