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# GTR196A Reflective Photocell



Compatible with the following Richmond motors.		
Sliding / Cantilever Motors		
GTR156 & GTR212 ✓	GTR061 & GTR207 ✓	
Swing Motors		
GTR099 ✓	GTR058 ✓	GTR062 & GTR078 ✓
GTR500 & GTR501 ✓	GTR502 & GTR503 ✓	
! Compatible with a large range of other manufacturers gate/garage openers.		

## Technical Specs:

- **Range: 10 metres**
- **Power Supply: 24-volt DC**
- **IP54 rating. Suitable for outdoor use.**
- **Current draw: 10mA (standby) 20mA (active)**
- **Light Source: Infrared LED**
- **Operating temperature: -5°C to 60°C**
- **Material: ABS**

## Installing your reflective photocell:

Attach the Infrared sender and reflector on a fixed structure with minimal movement.

- Any vibration/movement may lead to a break in the Infrared beam and incorrect operation of the gate.

Ensure both units are installed at a height that will correctly detect any vehicles and pedestrians.

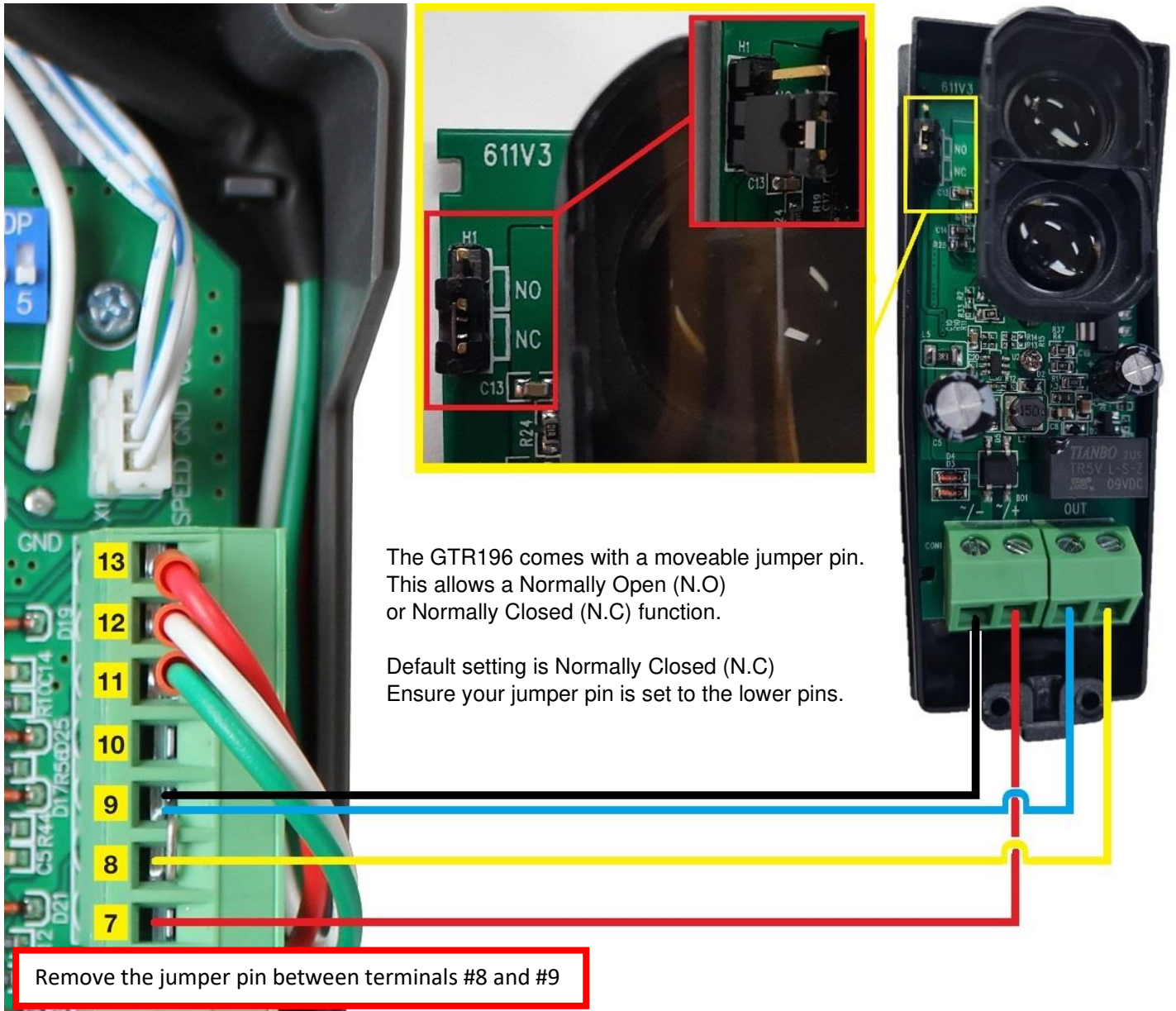
- eg: If mounted too low, the Infrared beam will operate underneath a vehicle.
- If necessary, fit multiple sensors as shown on the last page of this manual.

Ensure the Infrared sender is not facing directly into the sun or any reflective surface at any time throughout the day.

- This is most commonly an issue when the sun is low, during mornings and evenings.

## How to Connect to the GTR156 & GTR212 control board:

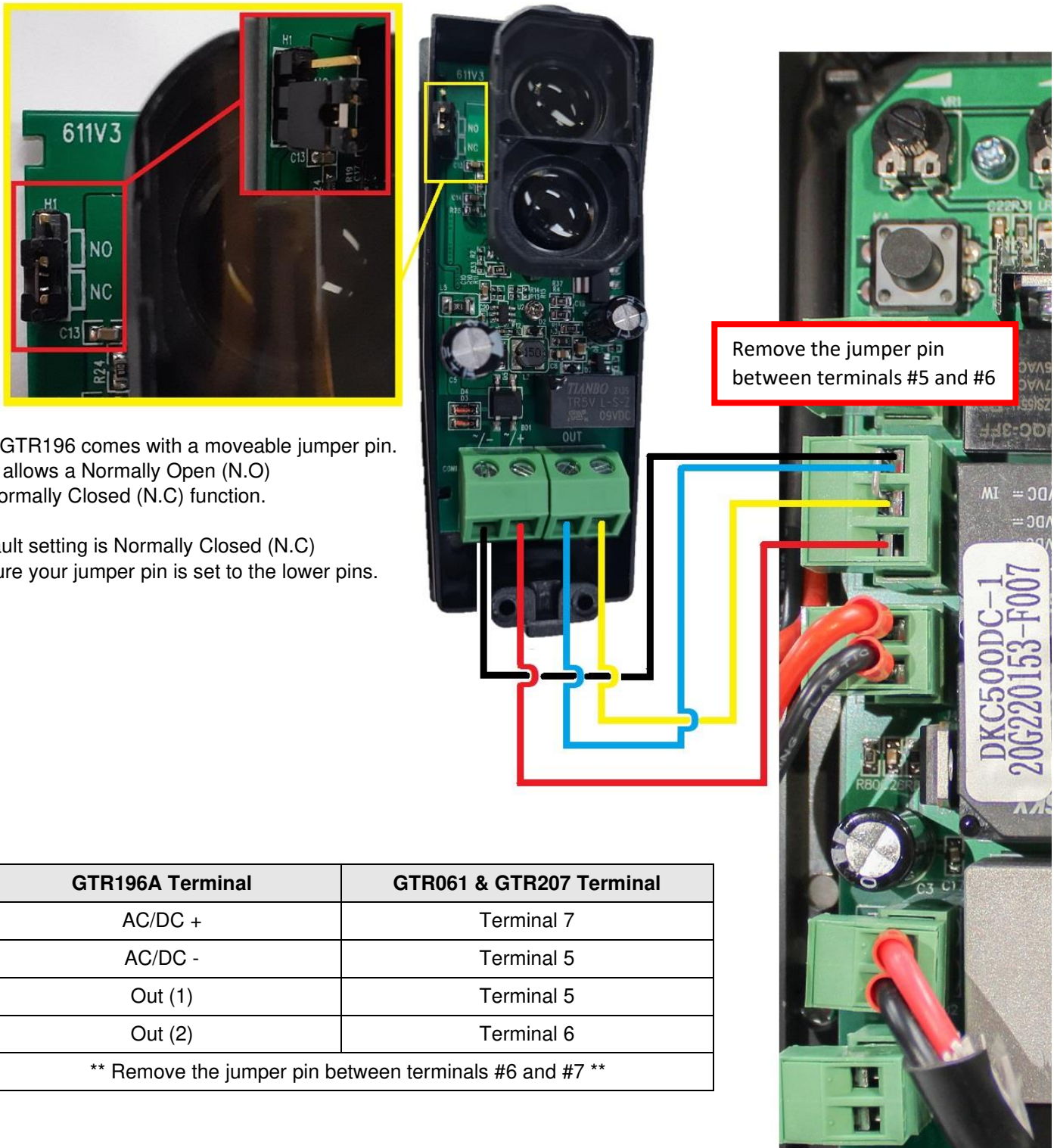
The diagram below shows how to connect the wires from the **GTR196A** reflective photocell to the **GTR156 & GTR212** automatic slide gate opener.



GTR196A Terminal	GTR156 Terminal
AC/DC +	Terminal 7
AC/DC -	Terminal 9
Out (1)	Terminal 8
Out (2)	Terminal 9
** Remove the jumper pin between terminals #8 and #9 **	

## How to Connect to the GTR061 & GTR207 control board:

The diagram below shows how to connect the wires from the **GTR196A reflective photocell** to the **GTR061 & GTR207** automatic slide gate opener.



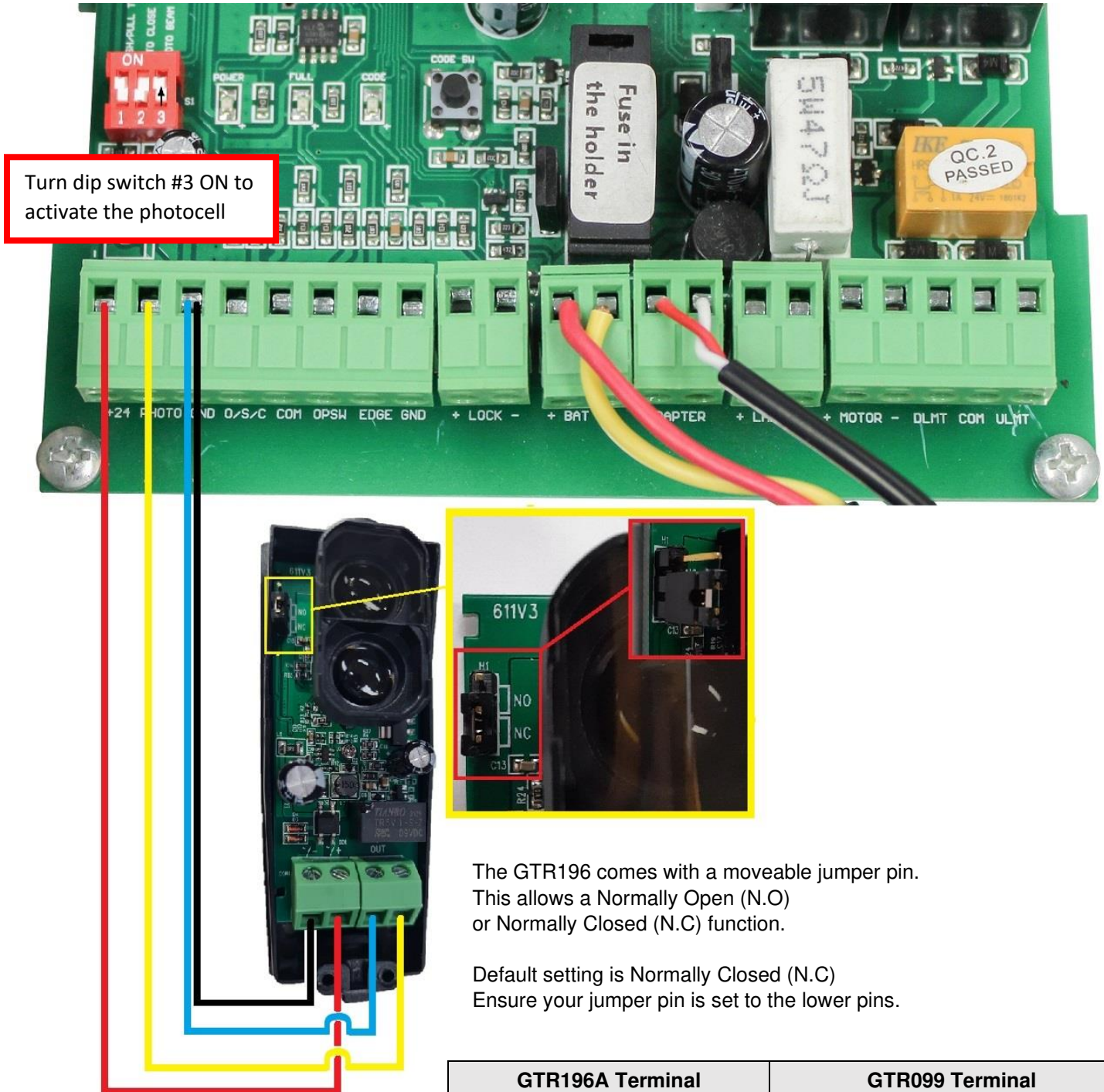
The GTR196 comes with a moveable jumper pin. This allows a Normally Open (N.O) or Normally Closed (N.C) function.

Default setting is Normally Closed (N.C) Ensure your jumper pin is set to the lower pins.

GTR196A Terminal	GTR061 & GTR207 Terminal
AC/DC +	Terminal 7
AC/DC -	Terminal 5
Out (1)	Terminal 5
Out (2)	Terminal 6
** Remove the jumper pin between terminals #6 and #7 **	

## How to Connect to the GTR099 control board:

The diagram below shows how to connect the wires from the **GTR196A reflective photocell** to the **GTR099** automatic swing gate opener.



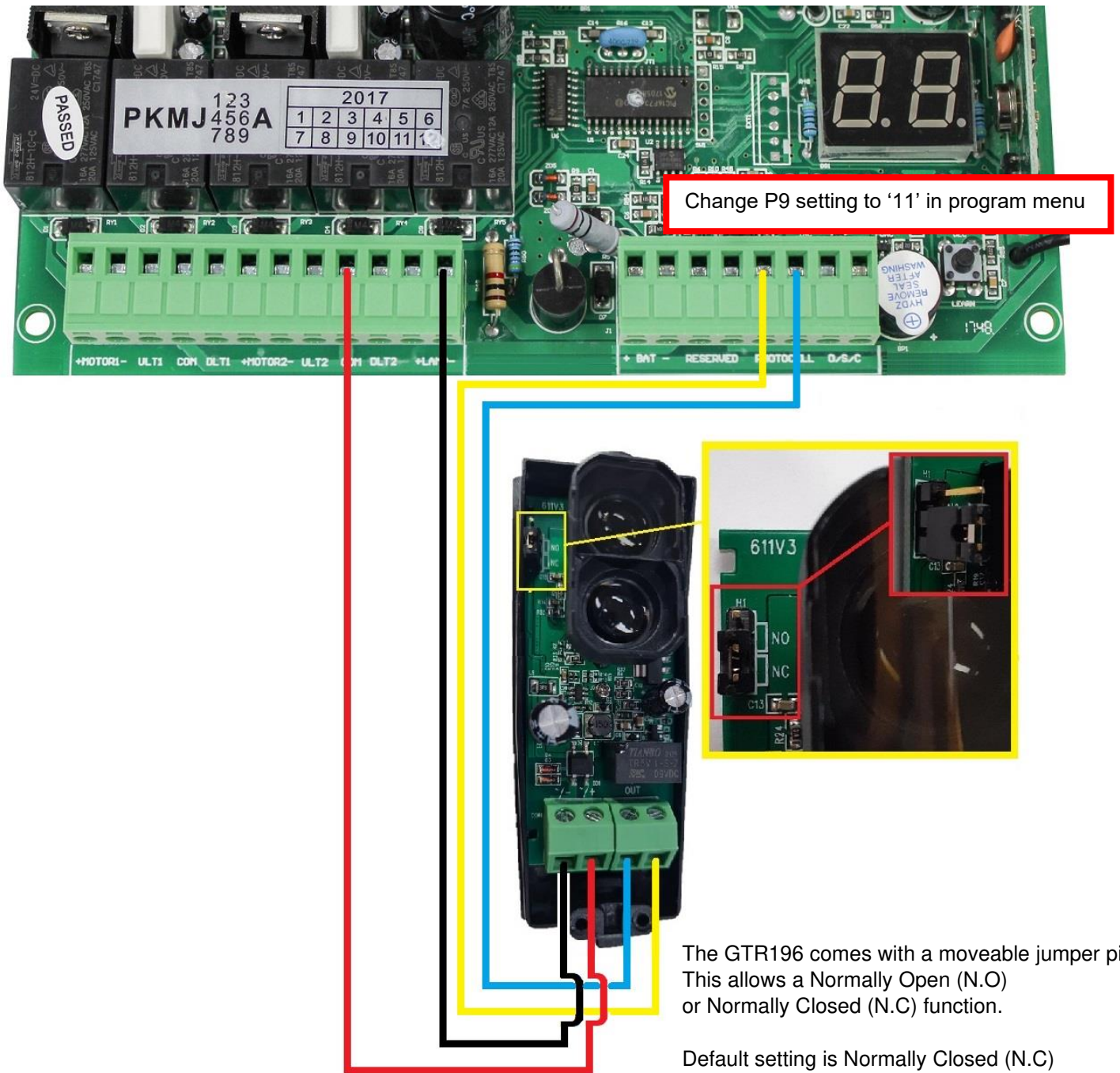
The GTR196 comes with a moveable jumper pin. This allows a Normally Open (N.O) or Normally Closed (N.C) function.

Default setting is Normally Closed (N.C) Ensure your jumper pin is set to the lower pins.

GTR196A Terminal	GTR099 Terminal
AC/DC +	Terminal 1 (+24V)
AC/DC -	Terminal 3 (GND)
Out (1)	Terminal 3 (GND)
Out (2)	Terminal 2 (Photo)
** Change dip switch #3 to ON **	

## How to Connect to the GTR058 control board:

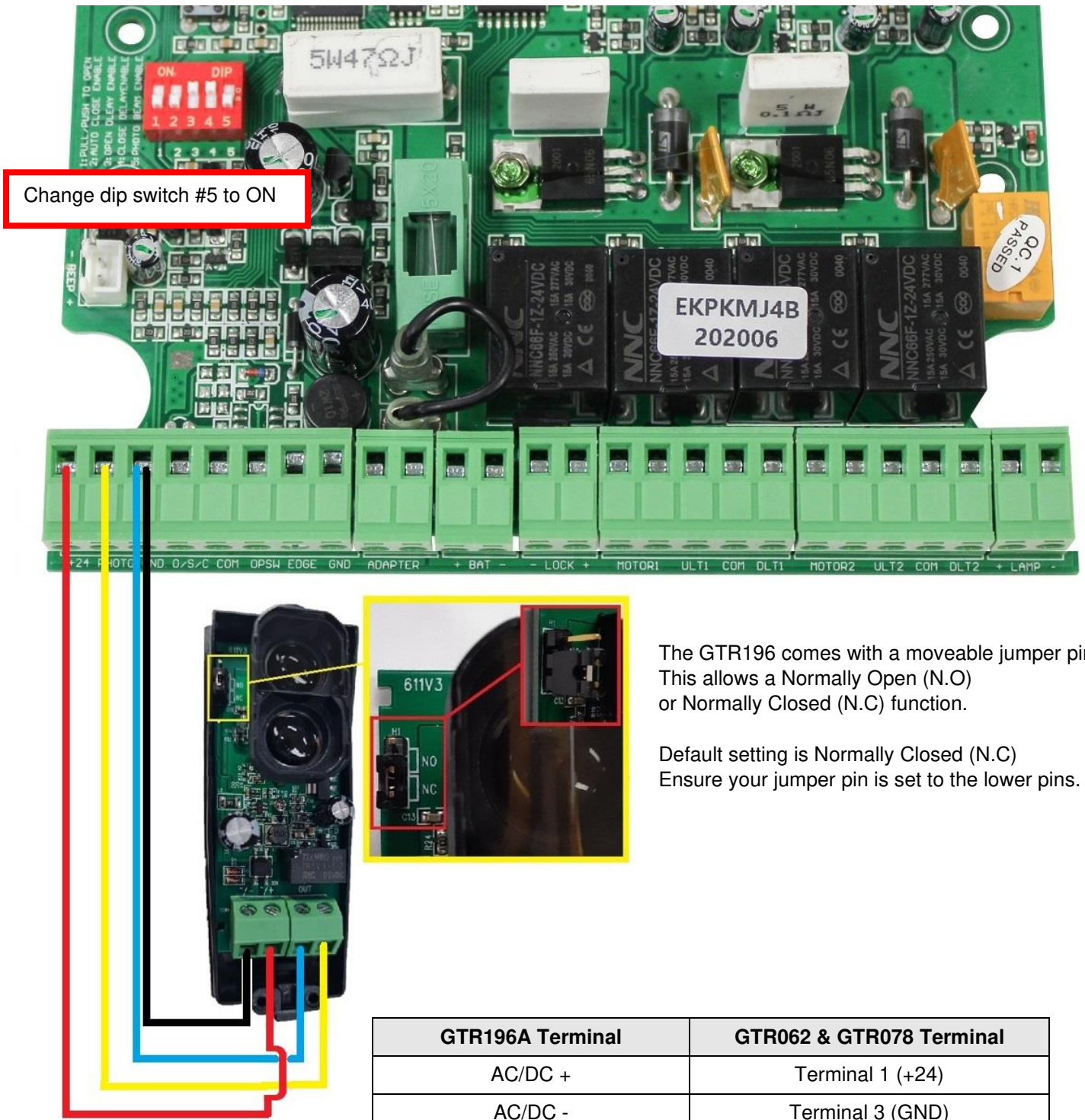
The diagram below shows how to connect the wires from the **GTR196A reflective photocell** to the **GTR058** automatic swing gate opener.



GTR196A Terminal	GTR058 Terminal
AC/DC +	Terminal 9 (COM)
AC/DC -	Terminal 12 (LAMP-)
Out (1)	Terminal 18 (PHOTOC)
Out (2)	Terminal 17 (PHOTOC)
** Change P9 setting to '11' in program menu **	

## How to Connect to the GTR062 & GTR078 control board:

The diagram below shows how to connect the wires from the **GTR196A reflective photocell** to the **GTR062 & GTR078** automatic swing gate opener.



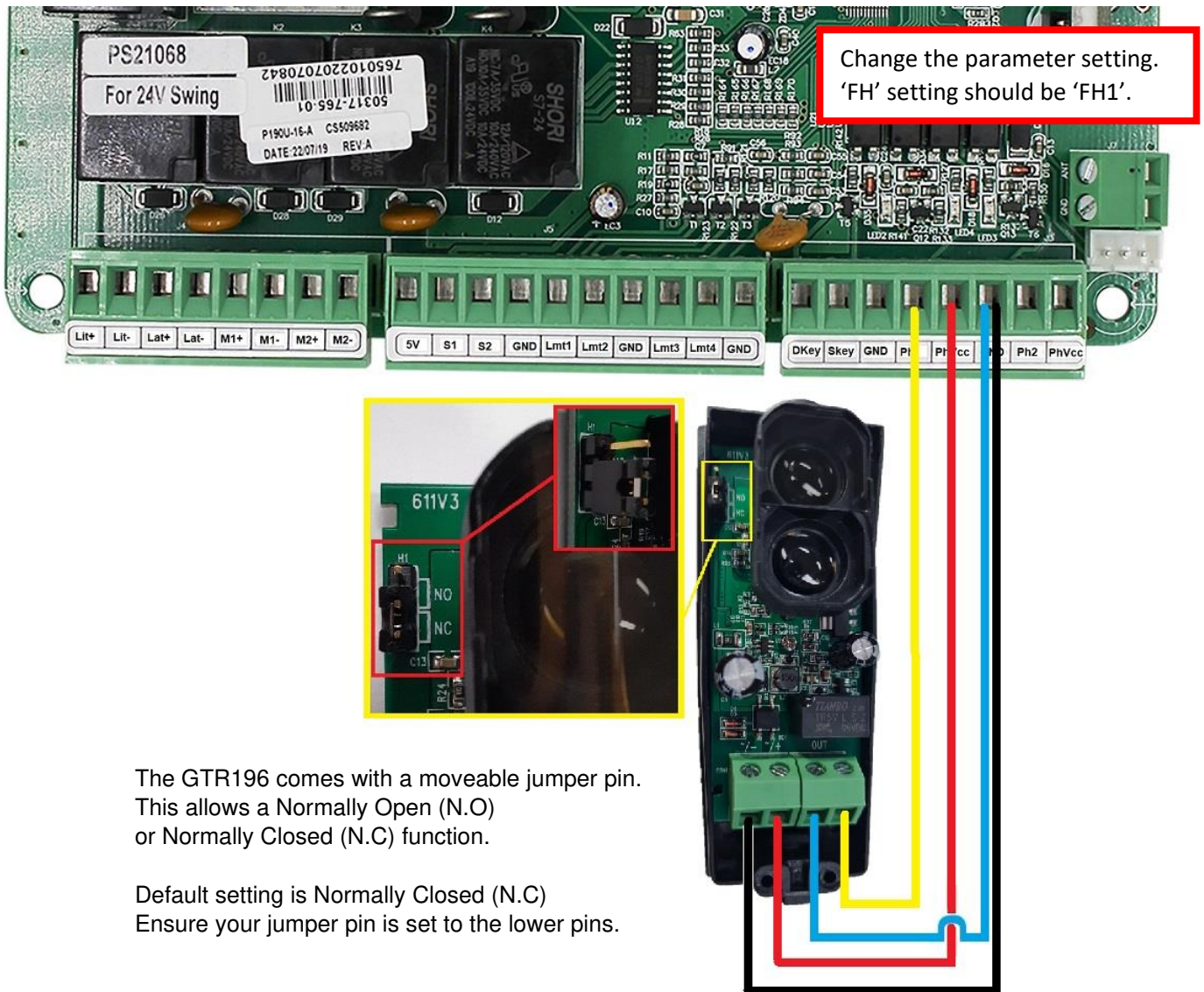
The GTR196 comes with a moveable jumper pin. This allows a Normally Open (N.O) or Normally Closed (N.C) function.

Default setting is Normally Closed (N.C) Ensure your jumper pin is set to the lower pins.

GTR196A Terminal	GTR062 & GTR078 Terminal
AC/DC +	Terminal 1 (+24)
AC/DC -	Terminal 3 (GND)
Out (1)	Terminal 3 (GND)
Out (2)	Terminal 2 (PHOTO)
** Change dip switch #5 to ON **	

## How to Connect to the GTR500, GTR501, GTR502 & GTR503 control board:

The diagram below shows how to connect the wires from the GTR196A reflective photocell to the GTR500, GTR501, GTR502 & GTR503 automatic swing gate opener.



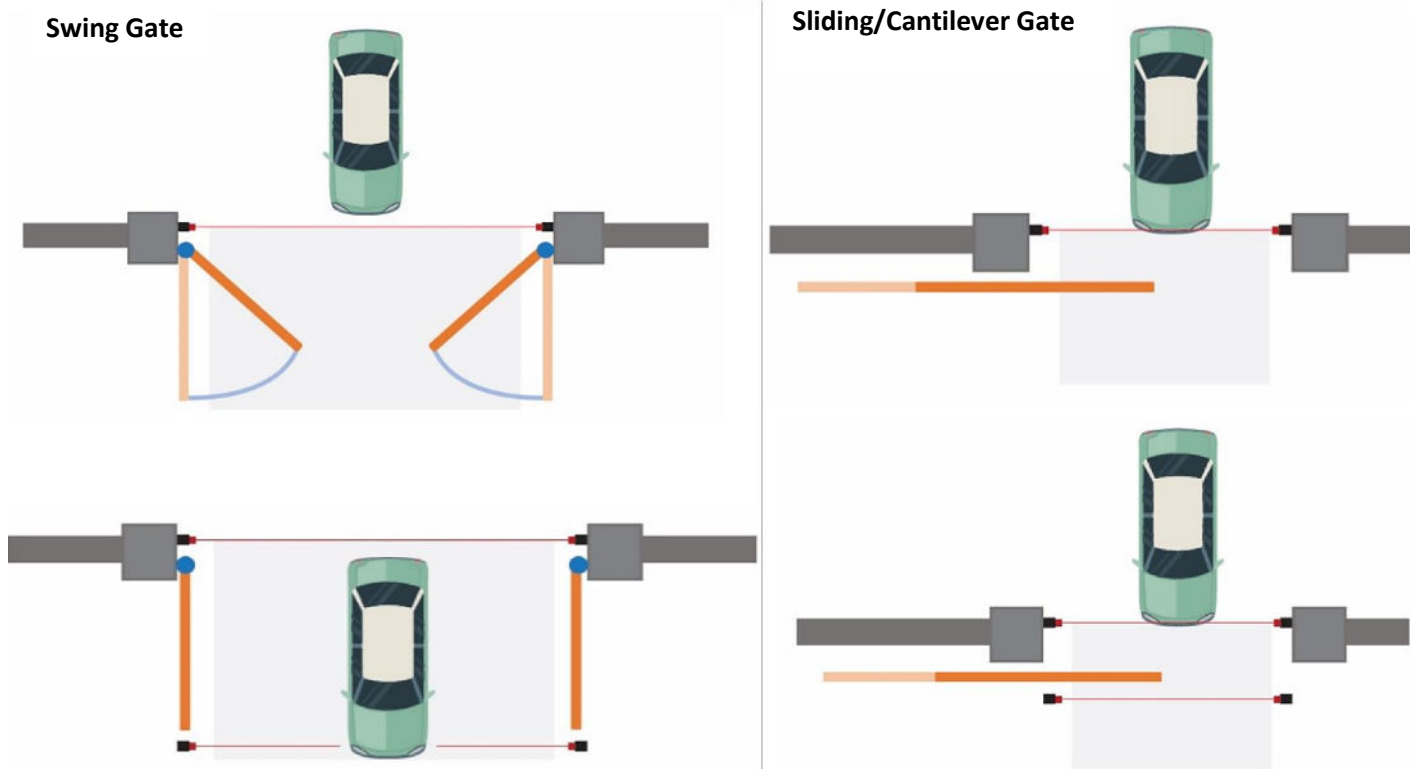
The GTR196 comes with a moveable jumper pin. This allows a Normally Open (N.O) or Normally Closed (N.C) function.

Default setting is Normally Closed (N.C)  
Ensure your jumper pin is set to the lower pins.

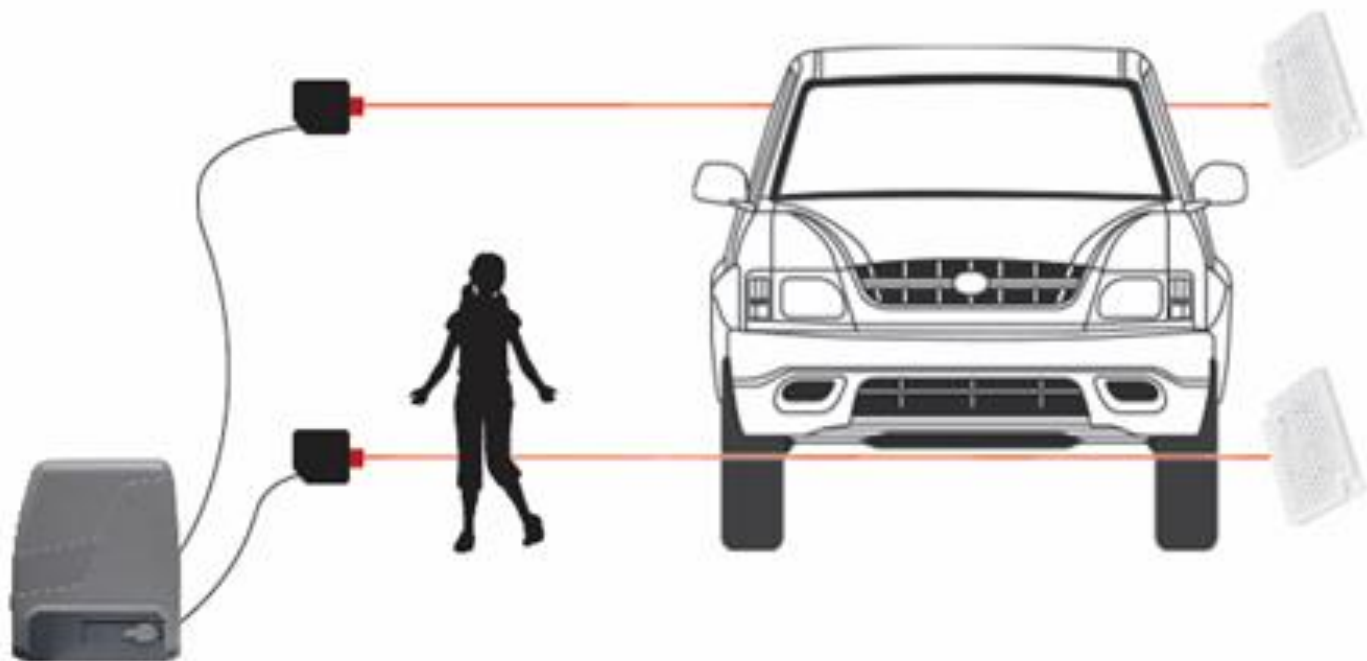
GTR196A Terminal	GTR500 thru GTR503 Terminal
AC/DC +	Terminal 24 (GND)
AC/DC -	Terminal 23 (PhVcc)
Out (1)	Terminal 24 (GND)
Out (2)	Terminal 22 (Ph1)
** Change parameter setting FH to FH1 (ON) **	

## Wiring multiple photocells for additional detection/safety:

Multiple photocells can be wired to allow for different vehicle sizes and increased safety/detection. When wired correctly, only one photocell needs to be obstructed to correctly detect obstacles.



Photocells set at different heights will allow for detection of pedestrians and different vehicle types/sizes.





## Troubleshooting

Problem	Possible Reason	Solution
Gate will not close at all	<ol style="list-style-type: none"> <li>1. Incorrect or loose wiring</li> <li>2. Photocell is not aligned.</li> <li>3. Photocell is obstructed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check that your wiring is correct and that the photocell powers when the remote is pressed to operate the gate.</li> <li>2. Check the reflector aligns with the sender unit. Start close and move away.</li> <li>3. Check that nothing is obstructing the reflector line of sight to the receiver.</li> </ol>
The gate will close sometimes, but not every time	<ol style="list-style-type: none"> <li>1. Photocell is affected by moisture or fog on the lens.</li> <li>2. Photocell is affected by sunlight or reflective surfaces.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the photocell or reflector for signs of moisture on the lens. Raise them higher off the ground or place a cover over/under the photocell and reflector.</li> <li>2. Make sure the photocell and reflector do not point towards direct sunlight, or any reflective surface.</li> <li>3. Move the photocell or reflector away from any reflective gate surfaces (colourbond, white sheen surfaces etc.)</li> </ol>
The gate stops when closing and reopens	<ol style="list-style-type: none"> <li>1. Photocell is detecting an obstruction</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure the photocell is not obstructed by any moving gate parts.</li> <li>2. Make sure that both the sender unit and the reflector are mounted to a solid structure and no vibration is present on either part.</li> </ol>
Gate will only operate when the photocell is obstructed	<ol style="list-style-type: none"> <li>1. The NO/NC terminal bridge is set incorrectly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the NO / NC terminals bridge inside the top left of the photocell. This needs to be set to the two lower pins.</li> </ol>