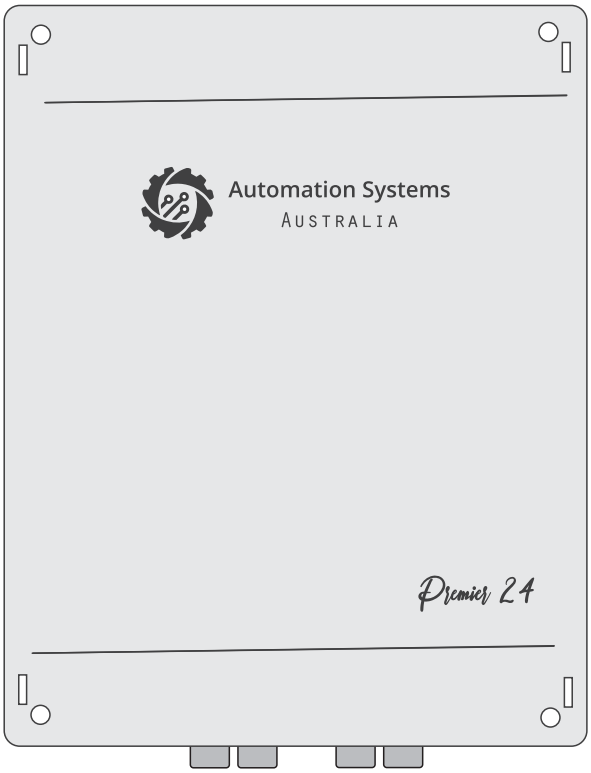
Automation Systems
AUSTRALIA

Premier SW24

Advanced Digital Swing Gate Controller



Step by Step Simple Installation Guide on Page 2

REV 0

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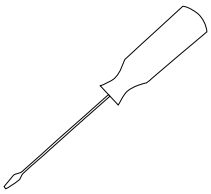
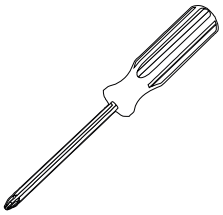
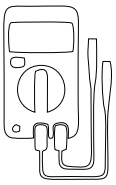
Tools Required



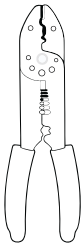
2/2.5mm Flat Head for Terminal Connections



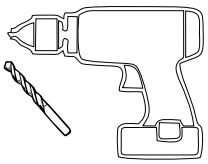
#1 Phillips Head or Bit (130mm length min.) Fixing to wall/post



Multi Meter (not essential)



Wire Stripper

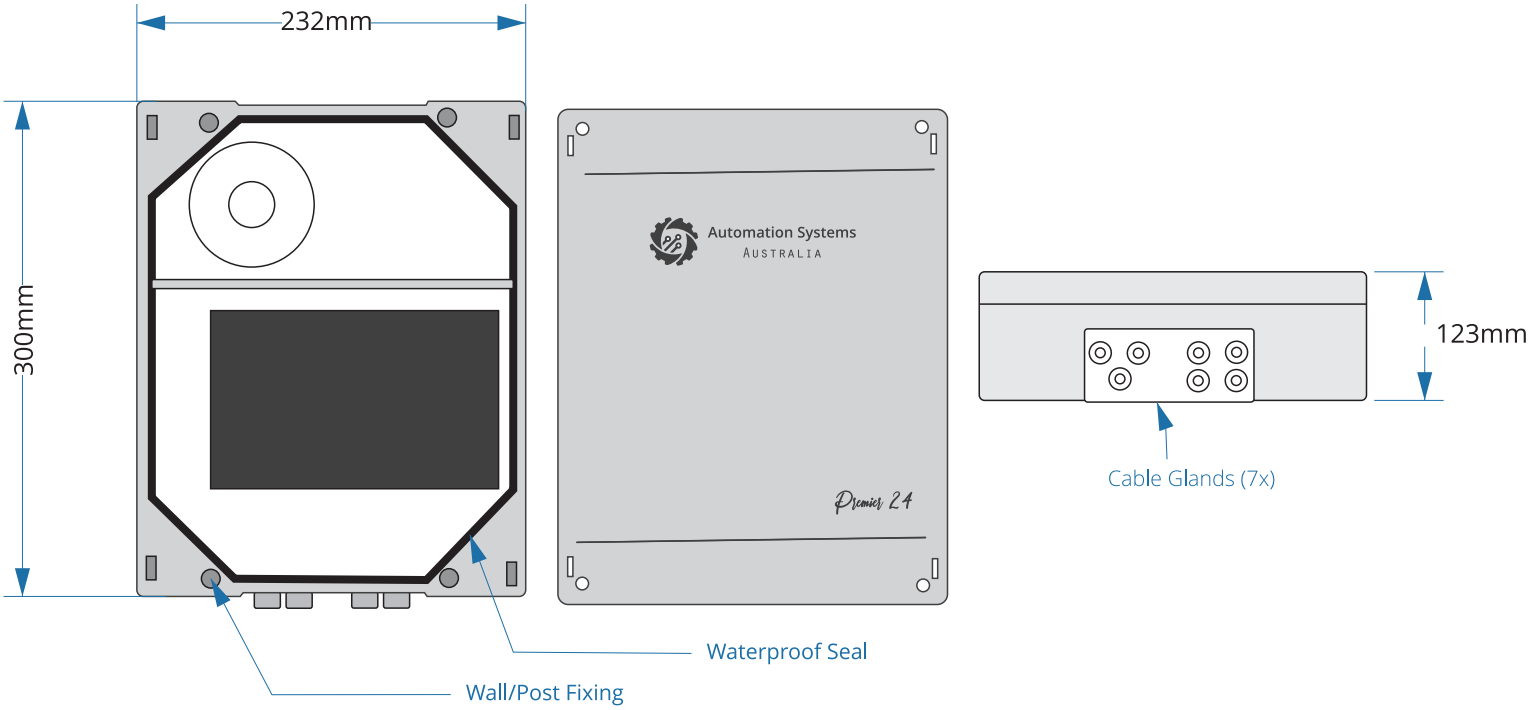


Drill and Drill Bits

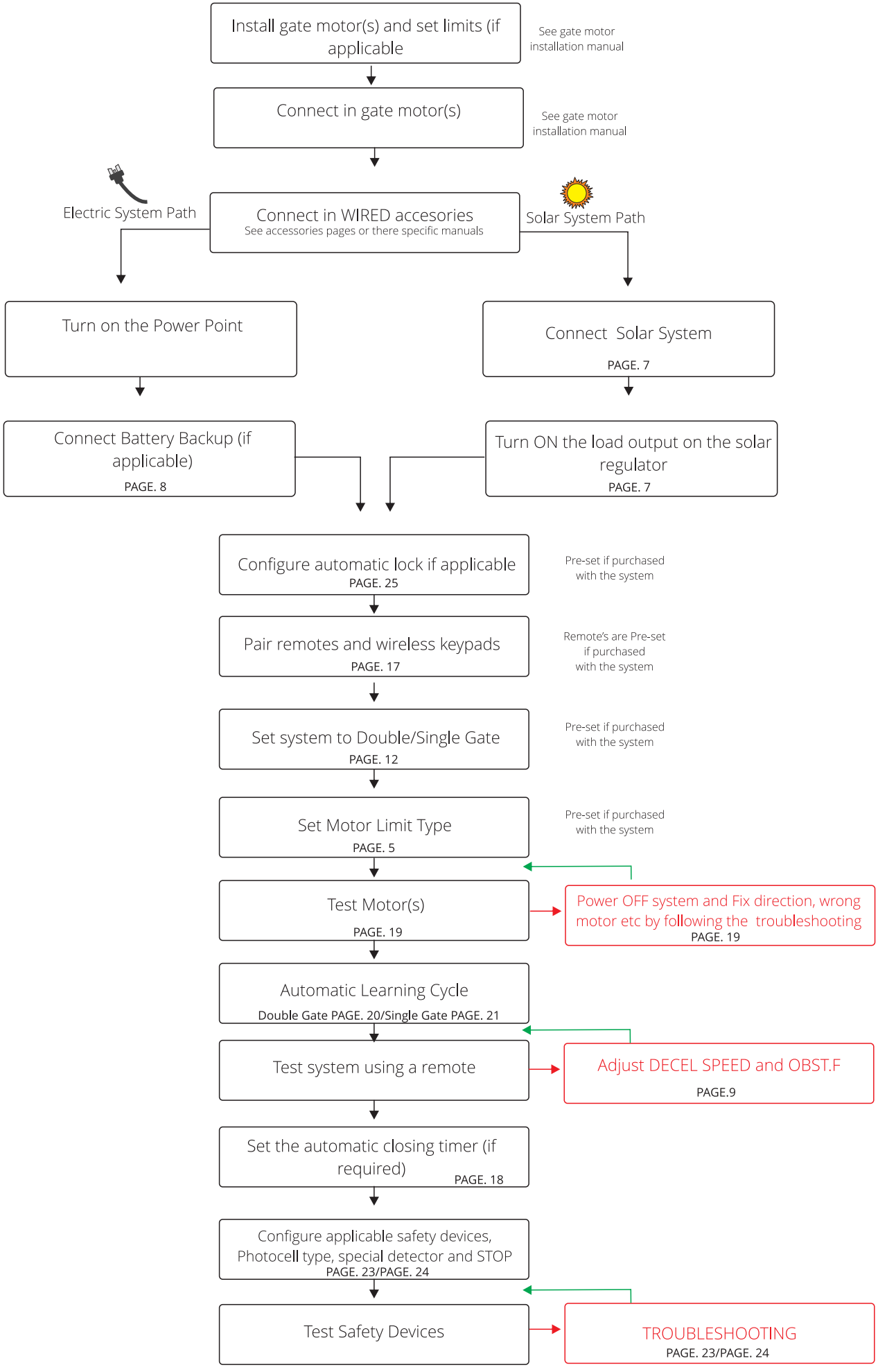
Specifications

Operating Voltage	24V AC/24V DC
Standby Consumption	~20mA
Battery Backup	Yes
Motor Outputs	TWO (Total Max. 12A)
Motor Limit Support	Direct to PCB, Wired In series and No Limits
Automatic Lock Support	YES, Electric and Magnetic Locks (24V) (Max. 2A)
Light Output	Yes (Max 1A)
Accesories Power	12V DC (250mA)
Safety Inputs	Photocell, Detector, Safety Edge
Operation Temprature	-10°C to +60°C
Remote Button Capacity	192
Duty Cycle	70%

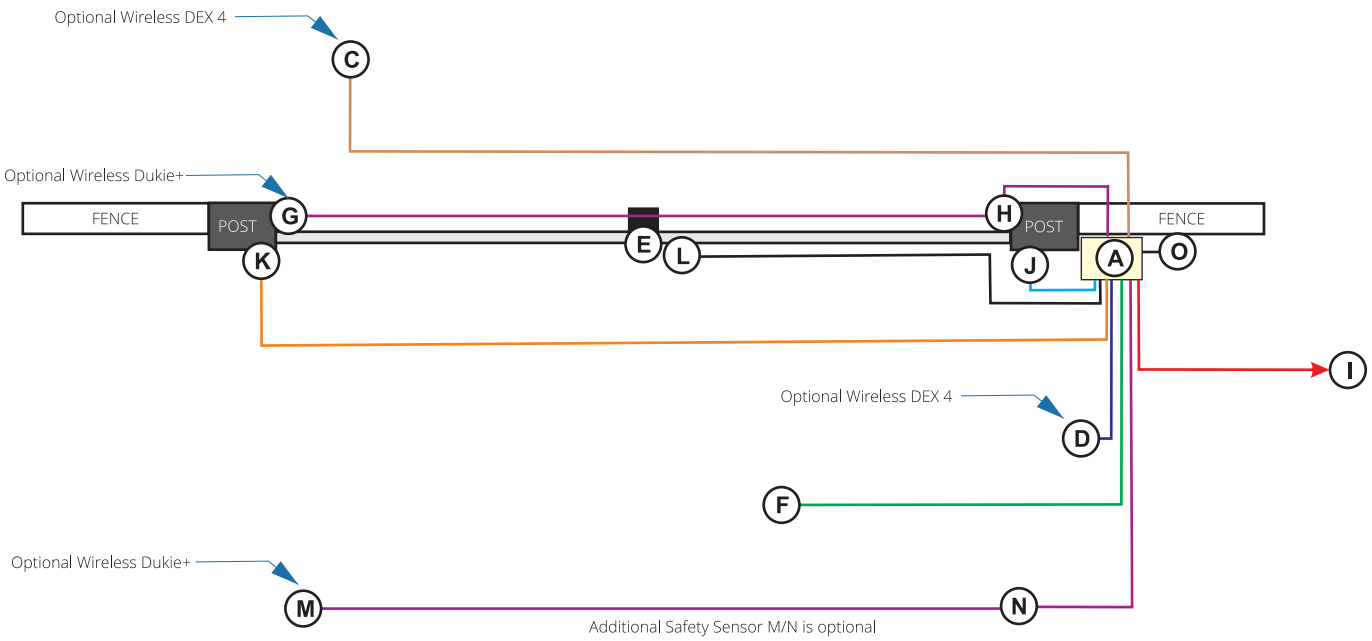
Dimensions



Step by Step Installation Guide

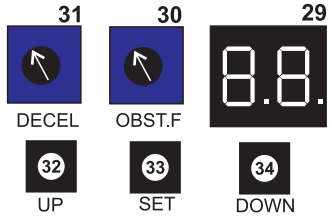


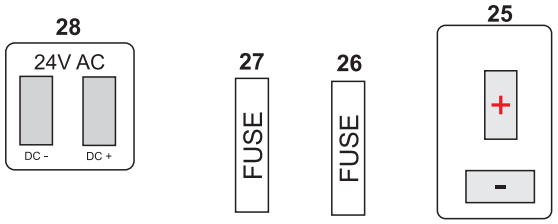
Installation Layout



Number	Accesory	Requirments
A	Gate Controller	Power by mains, outdoor transformer or Solar
C	Entry Keypad	Dex 4 (wireless), All others wired to gate controller by 4 core cable
D	Exit Keypad	Dex 4 (wireless), All others wired to gate controller by 4 core cable
E	Driveway Ground Stop	Double Swing Gates Only, Single Swing Gate should have stop on gate post
F	Induction Loop	Housed inside gate controller with 1 core cable for the driveway loop
G	Photocell Transmitter	No cable required for Dukie+, Standard Dukie 2 core Cable to gate controller
H	Photocell Receiver	4 Core cable to gate controller
I	Gate Controller Power Source	Mains, Outdoor Transformer or Solar Panel to the Gate Controller
J	Motor "2"	Master Motor typically 2 core cable to gate controller
K	Motor "1"	Slave Motor (NOT USED SINGLE GATE) typically 2 core cable to gate controller
L	Fortress Automatic Lock	2 core cable to gate controller
M	ADDITIONAL Photocell Transmitter	Optional Additional Safety Device, No cable required for Dukie+, Standard Dukie 2 core Cable to gate controller
N	ADDITIONAL Photocell Receiver	Optional Additional Safety Device, 4 Core cable to gate controller
O	Automatic Light	2 core cable to gate controller

Controller Layout





29. Digital Display
30. Obstacle Detect Adjustment (OBST.F)
31. Slow Speed Adjustment (DECEL)
32. UP Button
33. SET/OK Button
34. DOWN Button

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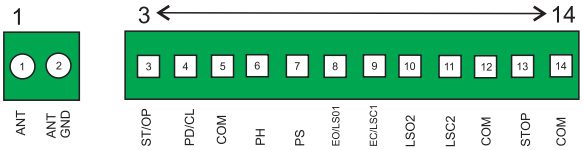
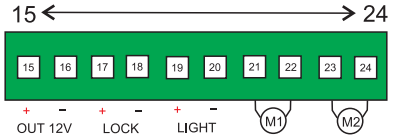
25. Battery Terminal
26. Battery Output Fuse (Blade 25A)
27. 24V AC Input Fuse (Blade 25A)
28. 24V AC Input/ 24V DC Solar REGULATOR Input





1. Antenna
2. ANT GND

3. Start/Open Input (N/O Circuit)- Set by operating logic
4. Pedestrian/Close Input (N/O Circuit)
5. COMMON to 3,4,6,7
6. Photocell Input (Configurable for N/O or N/C Circuit)
7. Special Detector
8. OP Edge/LSO-1 (open edge device or DIRECT LIMIT M1 Open)
9. CL Edge/LSC-1 (close edge device or DIRECT LIMIT M1 Close)
10. LSO-2 DIRECT LIMIT M2 Open
11. LSC-2 DIRECT LIMIT M2 Close
12. COMMON to 8,9,10,11
13. STOP Input (Configurable for N/O or N/C Circuit)
14. COMMON to 14

15. +12V DC Accessories (Regulated)
16. -12V DC Accessories
17. Lock Output + (Transformer voltage)
18. Lock Output -
19. Light Output + (Transformer voltage)
20. Light Output -
21-22. M1 Terminal (SLAVE)
23-24. M2 Terminal (MASTER/SINGLE GATE)

Display Screen Status

General

Standby

Opening
Fast Speed 0.5 Second Flash
Slow Speed 1 Second Flash

Closing
Fast Speed 0.5 Second Flash
Slow Speed 1 Second Flash


Battery Backup Mode (Flashes)

Automatic Closing Timer

Safety Status

Photocell Input Active

STOP Input Active

Photostop Input Active (Special Detector)

Detector Input Active (Special Detector)

Edge Input Active (Opening Edge)

Edge Input Active (Closing Edge)

Operating Input Status

Start Input Active

Operating Logic


Pedestrian Input Active

Operating Logic

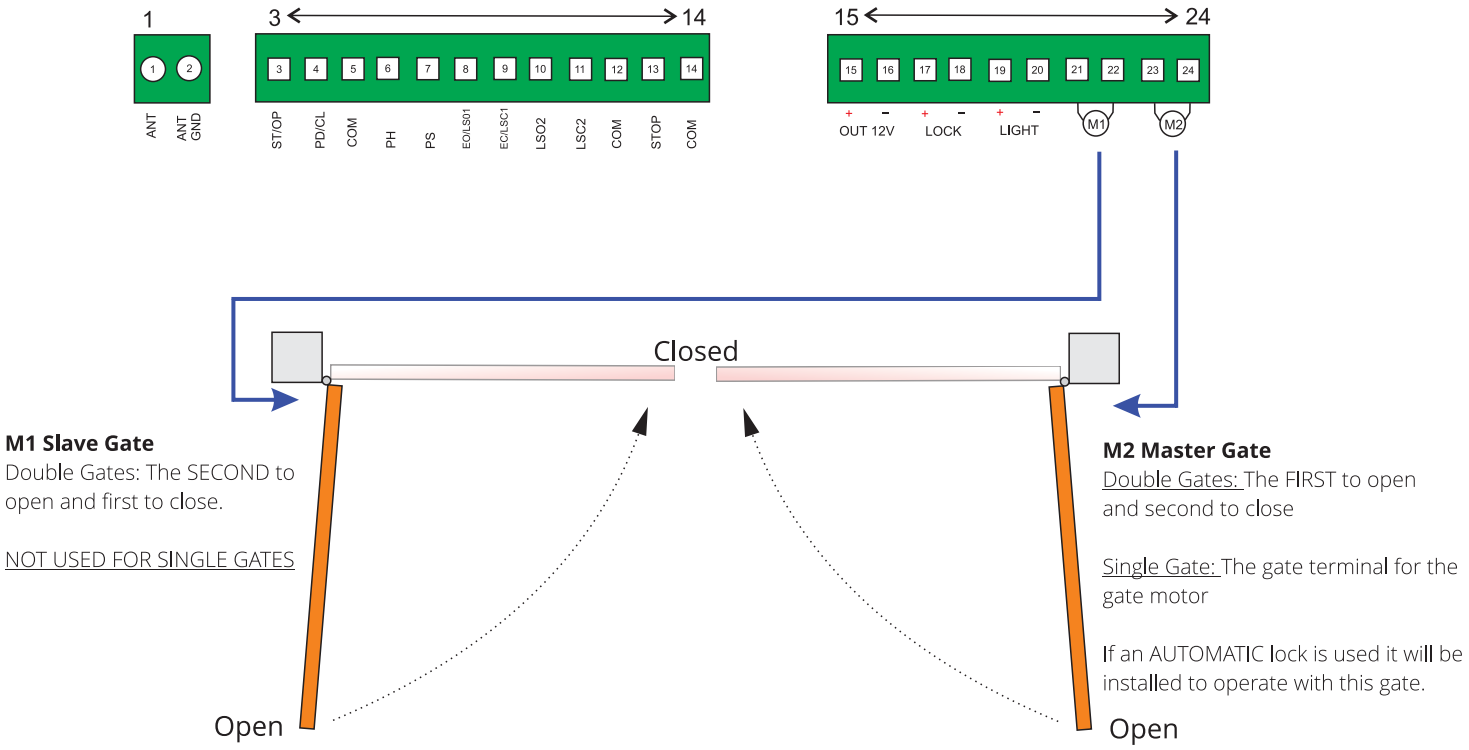

Open Input Active

Operating Logic


Close Input Active

Operating Logic


Gate Motor Logic



M1 Slave Gate
Double Gates: The SECOND to open and first to close.

NOT USED FOR SINGLE GATES

M2 Master Gate
Double Gates: The FIRST to open and second to close

Single Gate: The gate terminal for the gate motor

If an AUTOMATIC lock is used it will be installed to operate with this gate.

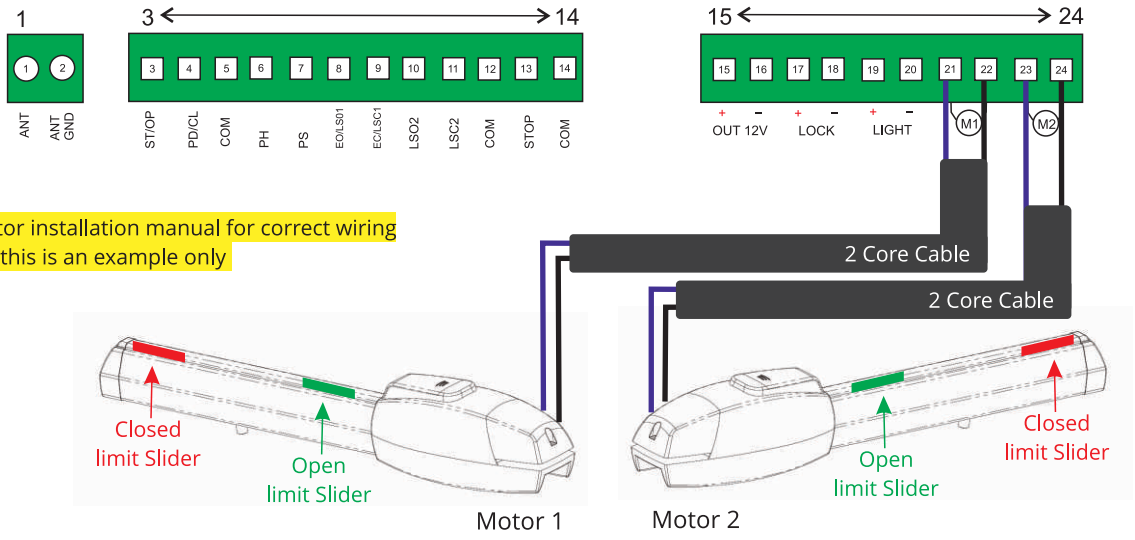
Internal SERIES Limit Switch Gate Motor Connection

COMMANDO, BANDIT and DINGO Series Motors

Majority of Automation Systems Australia supplied equipment uses the pre-wired method illustrated below which is limit switches in each motor and an internal control card, this method is superior due to conservation on cable and labour and preserves a tidy hassle free setup.

Limit Switches in SERIES to Motor

Feature is enabled and ready to detect limits.



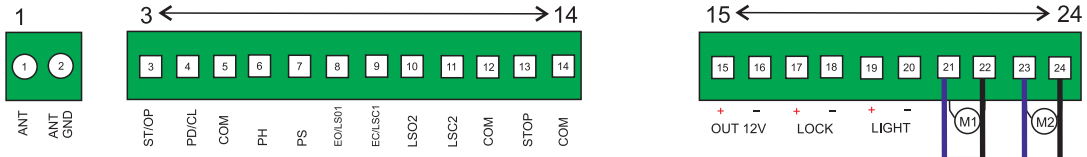
Refer to gate motor installation manual for correct wiring this is an example only

No Limit Switch/Overcurrent Gate Motor Connection

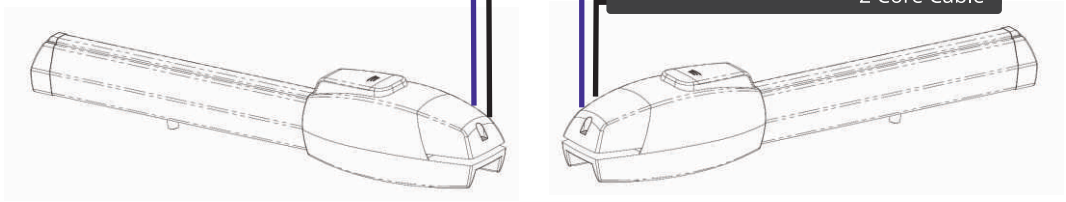
In the case where the gate motor does not use a limit switch or you wish to install without the use of limit switches please follow the illustration below.

SL Limit Switches in SERIES to Motor

nt Feature is disabled and ready to detect by over current.



Refer to gate motor installation manual for correct wiring this is an example only



External Wiring Limit Gate Motor Connection (5/6 Wire Gate Motors)

Not typically used BUT each motors limits COULD be wired in the below configuration if the need arises.

This would require the system to be configured as follows

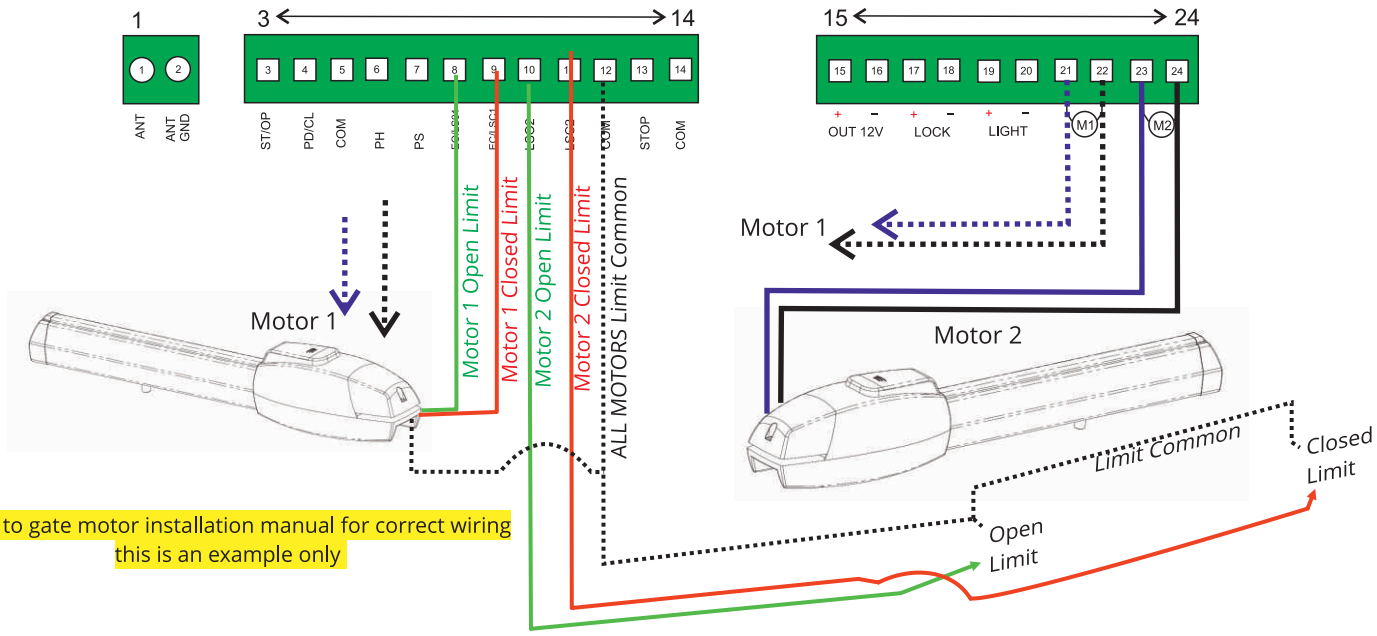
LS Direct to control board Limit Switches (NOT in series to motor)

nc Sets the controller to accept NORMALLY CLOSED limit switches directly to the control board limit switch terminals

no Sets the controller to accept NORMALLY OPEN limit switches directly to the control board limit switch terminals

SL Limit Switches in SERIES to Motor

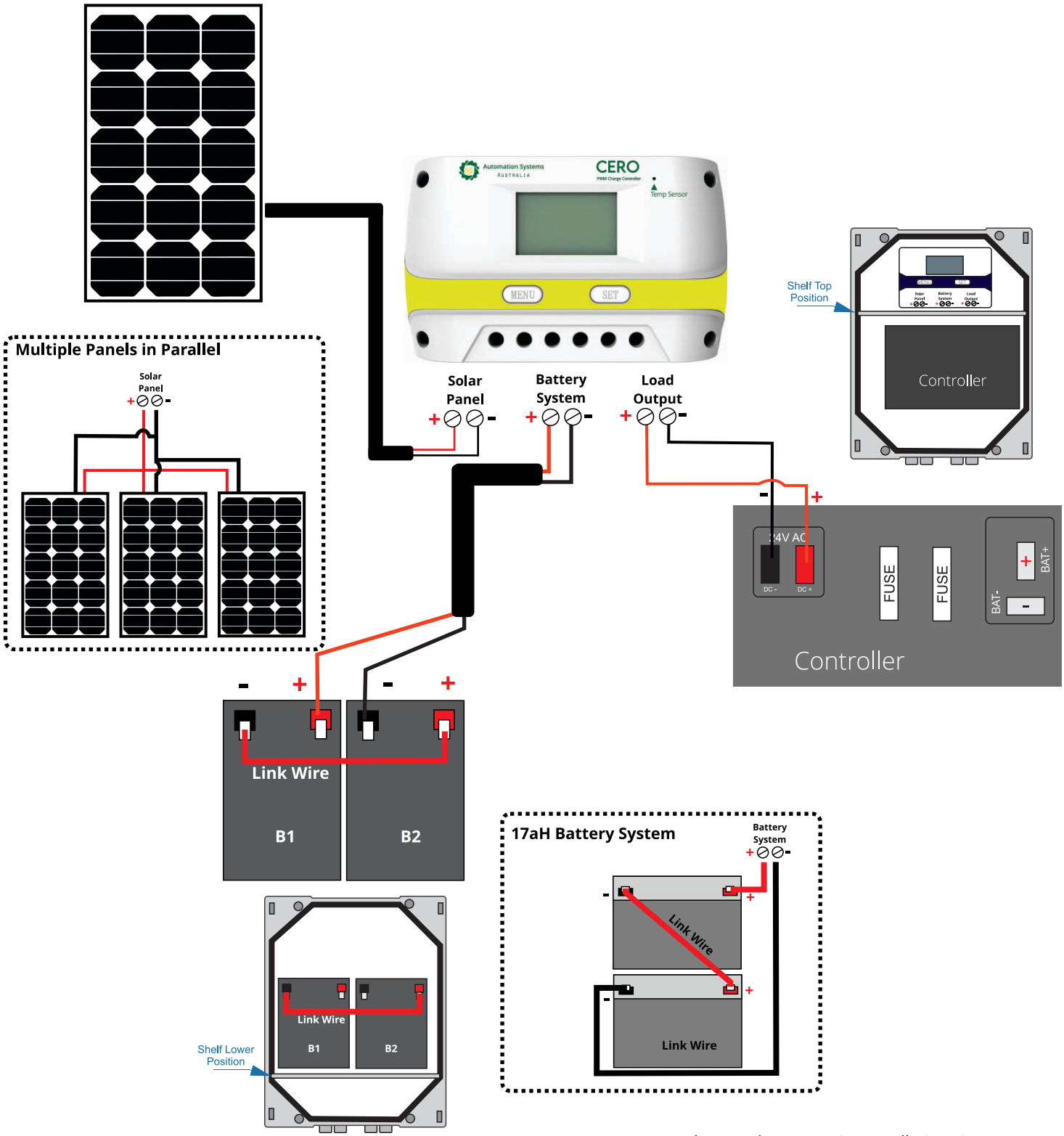
nt Feature is disabled, Used for over current motors OR motors requiring the Limit Switches wired DIRECTLY to the controller

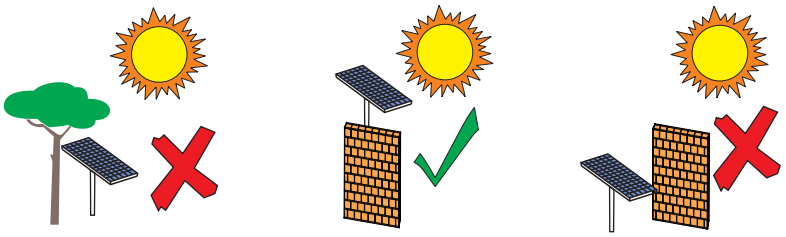


Refer to gate motor installation manual for correct wiring this is an example only

CERO Standalone Solar System Connection

A standalone solar system is a totally off grid solution used for green energy initiatives or simply when its not possible to run power to the gate system. To conserve power constant power draw devices such as wired keypads and magnetic locks are not to be used. The alternatives are wireless keypads (use there own batteries) and electric locks (only powered for two seconds per cycle).





1. A solar panel CANNOT be installed under a tree, it requires sun to charge and maintain the batteries.

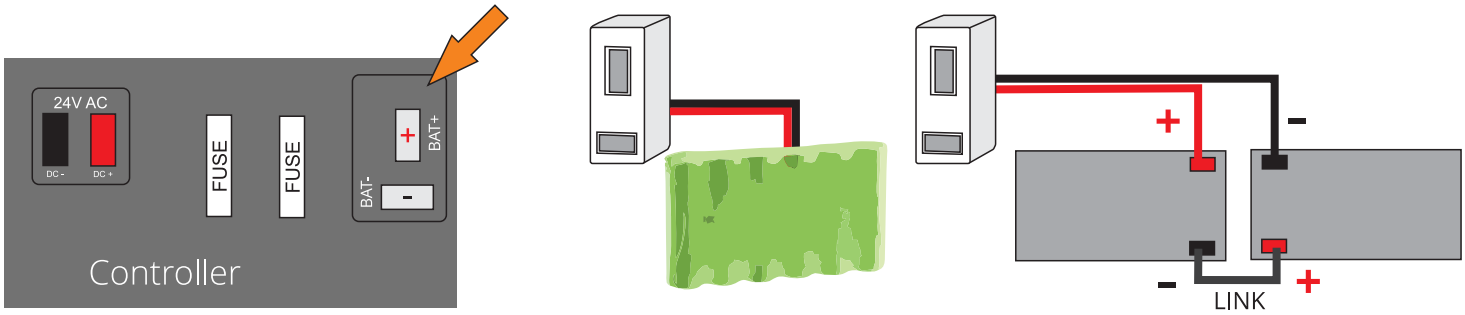
2. A solar system is often maintenance free BUT the batteries may require a external charge in the winter months due to lack of sun (rare).

3. Constantly powered accessories such as wired keypads will increase the standby current draw, solar panel or battery upgrades may be required if sufficient collection is not achieved.

Battery Backup Connection

The battery backup will allow for uninterrupted usage in case of a power disruption. The battery backup system can operate the gate for a period of 24 to 36 hours during the power disruption. Once the power is restored the system will automatically recharge the battery system ready for the next use.

Note: When in battery backup mode the slowdown is disabled automatically to overcome any difference in speed.



Battery Pack

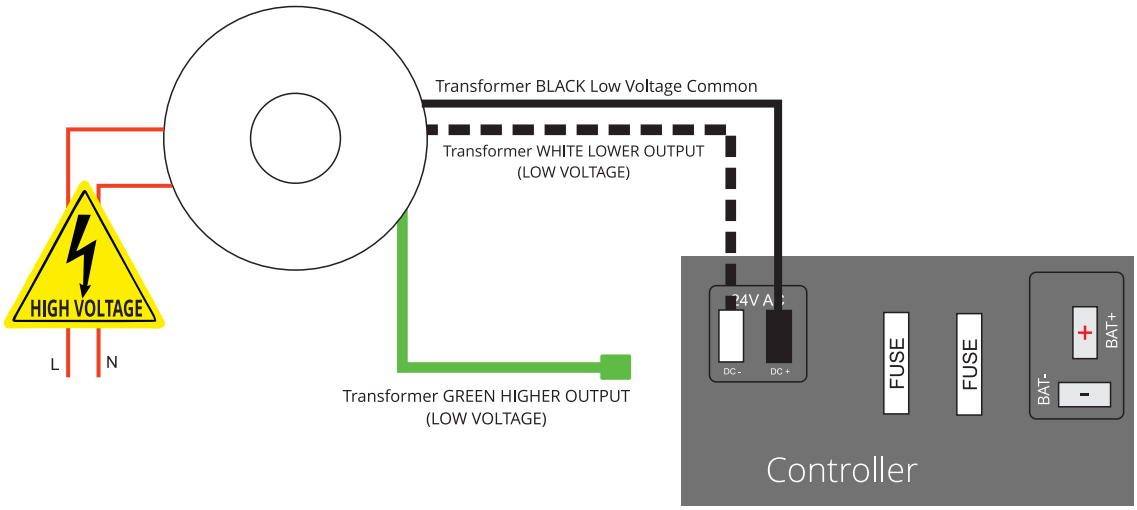
To connect the battery backup simply plug the two pin connector in the correct orientation into the battery port on the controller.

SLA Batteries

To connect the battery backup plug in the spade connectors according to the above illustration then plug the two pin connector in the correct orientation into the battery port on the controller.

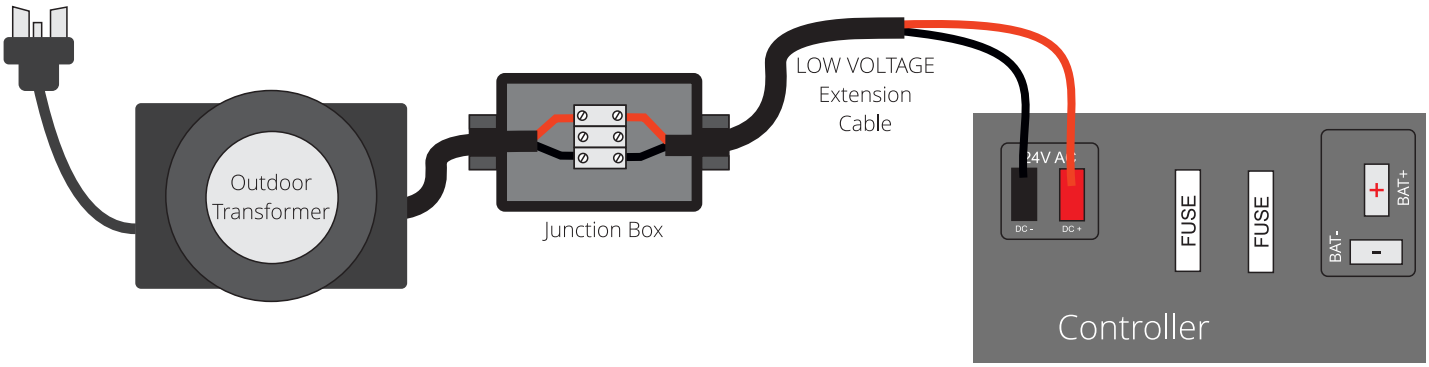
Multi Output Toroidal Transformer (Internal)

The transformer on a mains powered system is the primary source of power, it takes the high voltage input and transforms to low voltage which is connected to the controller. By default the controller uses the lower of the two outputs (white wire) which is typically suggested for most gate installs however incase required due to environmental forces it would be suggested to swap the lower output (white wire) for the higher output (green wire).



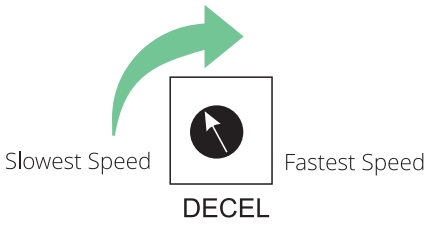
Outdoor Low Voltage Weatherproof Transformer

Where a power point is not available at the gate the Outdoor Transformer is used as the primary source of power, it takes the high voltage input and transforms to low voltage which is connected to the controller through the low voltage extension cable for a maximum distance of 120 metres.



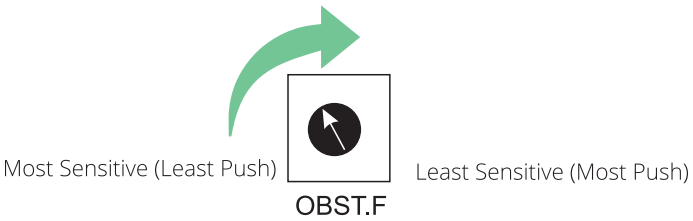
“Decel” Slow Speed/De-acceleration Adjustment

The “De-acceleration” Trim pot is the slow speed trimmer allowing a fine tuning of the SLOW Speed portion of the operating cycle, Typically adjustment range is 20% to 50% from the slowest speed (minimum)depending on gate size, weight and inertia.



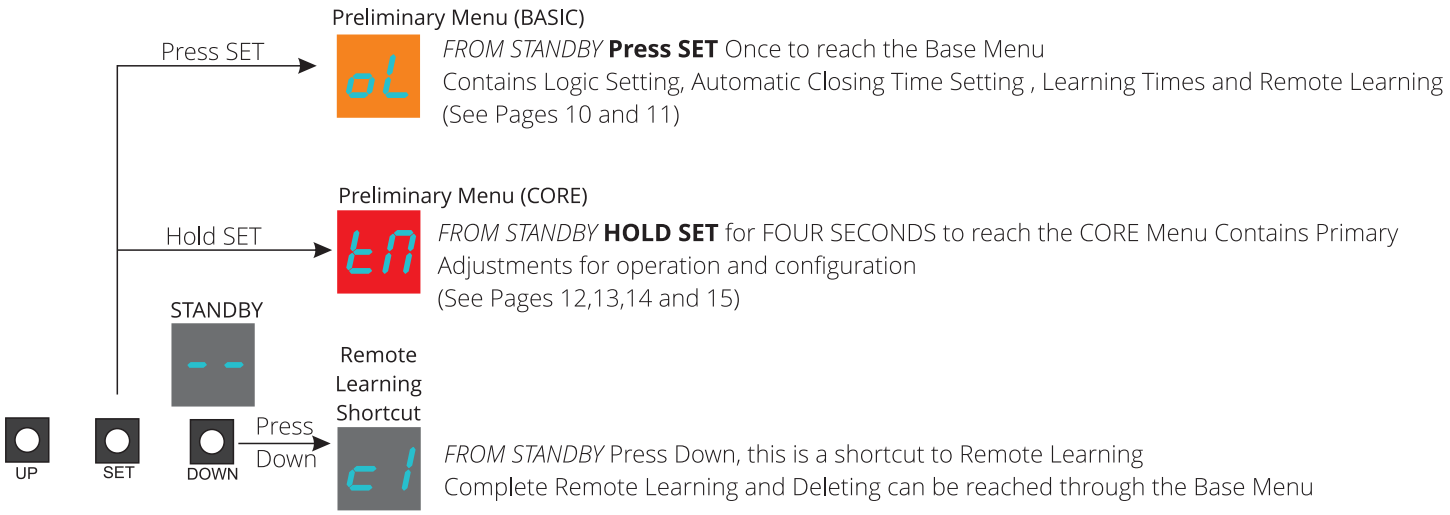
“OBST.F” Obstuction/Overcurrent Adjustment

The “Obstruction Force” Trim pot is the pressure sensing adjustment before the controller recognises cut-off.
Gate and Environmental factors will determine how high or low to adjust based on gate weight, wind resistance and the required power to operate the motor.
Setting too high will affect how quickly the controller will shut off under load or accident.
setting too low can cause the controller to shut off too early (too sensitive) and cause intermittent operations.

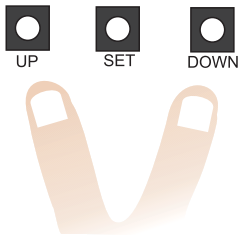


System Menu Hierarchy

Throughout the manual to simplify identification the two preliminary menus will be displayed with a coloured background as illustrated below, any sub-menus and exit will be displayed with a grey background.



EXIT will take you back one level
From preliminary menus it will return to standby
From any setting menu it will cancel the change and return you to the preliminary menu



If in a setting adjustment and you wish to cancel press UP and DOWN together momentarily to return back one level.

If in a preliminary menu it will function the same as scrolling to exit.

Basic Menu

Setting the system Operating Logic (Default Standard)

Standard
Operates OPEN/CLOSE by remote and/or wired-wireless accessories

Standard WITH Automatic Closing Timer Adjust the Automatic Closing Timer in SP menu
Operates OPEN remote and/or Wireless Accessories with an automatic closing timer (can still be closed earlier by remote and/or wired-wireless accessories)
Timer can be cancelled using the STOP feature

Typical Complex
Operates OPEN/CLOSE by remote and/or wired-wireless accessories with the WIRED input terminals switching to loop detector mode OPEN Terminal and CLOSE Terminal

Typical Complex WITH Automatic Closing Timer Adjust the Automatic Closing Timer in SP menu
Operates OPEN/CLOSE by remote and/or wired-wireless accessories with the WIRED input terminals switching to loop detector mode OPEN Terminal and CLOSE Terminal along with an automatic closing timer (can still be closed earlier by remote and/or wired-wireless accessories)
Timer can be cancelled using the STOP feature

Secure Complex Mode WITH Automatic Closing Adjust the Automatic Closing Timer in SP menu
Ignores additional commands during opening, Can latch a timer circuit to hold the gate open, automatic closing by unlatching a timer (allows auto close timer countdown to begin), no other methods to close.

Wired Input Terminals		Operating Logic	Remote Channels	
Terminal 3 (ST/OP)	Terminal 4 (PD/CL)	oL	c1	c2
OPEN /STOP/ CLOSE	Ped. OPEN /STOP/ CLOSE	St At	OPEN /STOP/ CLOSE	Ped. OPEN /STOP/ CLOSE
OPEN	CLOSE	oc	OPEN	CLOSE
OPEN	CLOSE	oA	OPEN	CLOSE
OPEN	N/A	cd	OPEN	N/A

"OPEN" only commands always restart an automatic closing timer (if applicable).
any "STOP" command by remote control always cancels the automatic closing timer (if applicable).
any "CLOSE" command will bypass the automatic closing timer (if applicable) and close the gate.

Lc Remote and Wireless Keypad Learning/Deleting
Detailed Page 16 & 17

- **c1** C1 Command
- **c2** C2 Command
- **rt** Delete WITH the wireless component present
- **rn** Delete by memory position
- **r3** Delete the entire memory (format)

SP Automatic Closing Time (Default 10 seconds)

- **99** Only valid when using an OPERATION LOGIC **oL** that uses automatic closing
  01= Immediate Close
  2-299= Delayed automatic Closing Time by the set value in Seconds

Lt Learn Working Times

- **Au** Automatic Learning
- **Mn** Manual Learning

dN Motor Test (operate gates manually)

- **o1** Open M1
  Hold SET to Operate
- **c1** Close M1
  Hold SET to Operate
- **o2** Open M2
  Hold SET to Operate
- **c2** Close M2
  Hold SET to Operate

EH Exit the menu

Core Menu

Manual Adjustment of Motor Working Time Menu (fine tuning of times)

-  Total Working Time of M1
-  Starting Time of Slowdown for M1
-  Total Working Time of M2
-  Starting Time of Slowdown for M2
-  Opening Delay between M2 and M1 (Default 02)
-  Closing Delay between M1 and M2 (Default 05)
-  Automatic Lock Relay Operation Time (Default 02)

Single Gate Mode (Default Double Gate)

-  Single Gate Mode
-  Double Gate Mode

Factory Default the Settings

-  Restore to Factory Default (Wireless memory is not affected)
-  Cancel without change

Release Torque at the End of Travel (Default nt)

-  Release end of travel torque (motors without Limit Switches ONLY)
  Reverses 0.5 seconds in the opposite direction after reaching the full open/closed position
-  Does not release the torque at the end of travel

LS Direct to control board Limit Switches (NOT in series to motor)

- **nc** Sets the controller to accept NORMALLY CLOSED limit switches directly to the control board limit switch terminals
  Opening **Eo** AND Closing edge **Ec** inputs must be set to **dS**
- **no** Sets the controller to accept NORMALLY OPEN limit switches directly to the control board limit switch terminals
  Opening **Eo** AND Closing edge **Ec** inputs must be set to **dS**

Eo Opening Safety Edge Input (Default ds)

- **dS** Disabled
- **nc** Normally Closed Circuit
  Direct Limit Switch Mode **LS** CANNOT be used in this instance as the terminals are reserved for an edge sensor
- **no** Normally Open Circuit
  Direct Limit Switch Mode **LS** CANNOT be used in this instance as the terminals are reserved for an edge sensor
- **An** Analogue Edge with 8K2 Resistance
  Direct Limit Switch Mode **LS** CANNOT be used in this instance as the terminals are reserved for an edge sensor

Ec Closing Safety Edge Input (Default ds)

- **dS** Disabled
- **nc** Normally Closed Circuit
  Direct Limit Switch Mode CANNOT be used in this instance as the terminals are reserved for an edge sensor
- **no** Normally Open Circuit
  Direct Limit Switch Mode CANNOT be used in this instance as the terminals are reserved for an edge sensor
- **An** Analogue Edge with 8K2 Resistance
  Direct Limit Switch Mode CANNOT be used in this instance as the terminals are reserved for an edge sensor

Pc Photocell Input

- **nc** Sets the controller to accept NORMALLY CLOSED photocell
- **no** Sets the controller to accept NORMALLY OPEN photocell OR NO PHOTOCELL CONNECTED

SP STOP Button Input

- **nc** Sets the controller to accept NORMALLY CLOSED Stop Button
- **no** Sets the controller to accept NORMALLY OPEN Stop Button OR NO STOP Button CONNECTED

Kickback Stroke (Default nt)

-  Provides a full speed jolt (0.5s) at the end of closing to aid in the latching of an electric lock, motors with limit switches only
-  Feature is disabled

Soft Start

-  Instead of starting motor(s) at full speed the operation begins at a reduced speed then ramps to full speed
-  Feature is disabled

Limit Switches in SERIES to Motor (Default ys)

-  Must be enabled when using a motor WITH limit switches and they are wired through the motor, i.e only a total of TWO wires directly back to the control board
-  Feature is disabled, Used for over current motors OR motors requiring the Limit Switches wired DIRECTLY to the controller

Receiver Mode (1 Button/4 Button Receiver Mode) (Default 1b)

-  One Button Mode for Open-Stop Close and Another Button for Pedestrian Open-Stop-Close STRONGLY RECOMENDED
-  Four Button Layout

Automatic Lock Mode

-  Magnetic Lock Mode (Magnetic Bar)
  Power OFF to Unlock
-  Electric Lock Mode (Solenoid Lock)
  Power ON to Unlock

Special Detector Input (Default dt)

Photostop Mode (Normally Closed Circuit)
Similar to a typical photocell input but also incorporates the opening cycle.
1.During opening it will pause gate till clear
2.During auto close it will restart the timer
3.During close it will stop the gates and re-open
4.Whilst closed it will inhibit the operation of opening until clear again

Detector Mode (Normally Open Circuit) OR NO SENSOR CONNECTED
Used to signal the system that the gate has been used and is ready to close.
1.If detected whilst opening it will finish the opening then IMMEDIATELY close
2.Whilst closing it will re-open gate then IMMEDIATELY close the gate
3.Whilst open it will tell the gate to close

Light Mode

Flashing illumination ON/OFF during the cycle

Static illumination during the cycle

Remote Learning

C1 Command Learning

1 → From the standby screen press the SET button once

2 → Cycle to Lc and press SET

3 → Cycle to c1

4 → Press the button you wish to use on the remote

The display will also show you the enrolled position it has been stored in the memory, this can be noted incase you wish to delete a specific remote later.

C2 Command Learning

1 → From the standby screen press the SET button once

2 → Cycle to Lc and press SET

3 → Cycle to c2

4 → Press the button you wish to use on the remote

The display will also show you the enrolled position it has been stored in the memory, this can be noted incase you wish to delete a specific remote later.

Operating Logic

oL

Residential

St At

Commercial & Industrial

oc oA

cd

Lc Remote Channels

c1	c2
OPEN /STOP/ CLOSE	Ped. OPEN /STOP/ CLOSE Pedestrian for Double Swing Gates Only
OPEN	CLOSE
OPEN	N/A

Delete by remote button

1 → From the standby screen press the SET button once

2 → Cycle to Lc and press SET

3 → Cycle to rt

4 → Press the button on the remote you wish to delete

Delete by enrollment number

1 → From the standby screen press the SET button once

2 → Cycle to Lc and press SET

3 → Cycle to rn and press SET

4 → Cycle to the enrolment number you wish to delete and press SET

Delete entire memory

1 → From the standby screen press the SET button once

2 → Cycle to Lc and press SET

3 → Cycle to rA and press SET

4 → Cycle to YS and press SET to confirm deleting all remotes
OR
Cycle to nt to cancel

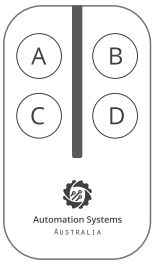
Remote Usage

A Operate this Gate Open - Stop - Close (Programmed to C1)
(also stops the automatic closing timer if pressed during the countdown)

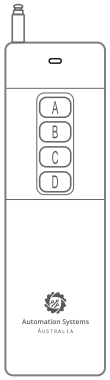
B Operate Pedestrian Open - Stop - Close (Programmed to C2 when Double Gates)
(also stops the automatic closing timer if pressed during the countdown)

C Operate a garage door

D Operate another Gate Open - Stop - Close
(also stops the automatic closing timer if pressed during the countdown)



STX4K
Maximum Clear Line of Sight 100 Metres Operating Distance



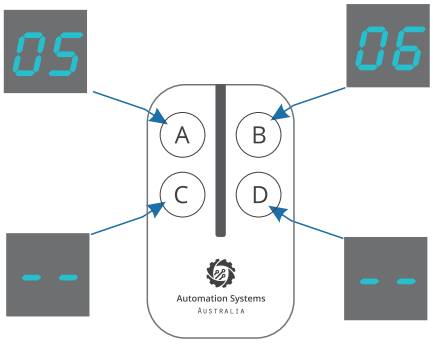
STX4L
Maximum Clear Line of Sight 800 Metres Operating Distance

Identify the enrollment Number

From the standby Screen press each button on the remote INDIVIDUALLY, the number displayed on the screen upon each button press is the enrollment number, one remote MAY have multiple enrollment numbers based on the paired features

Button is enrolled as 05

Button is enrolled as 06



No Response, Not Enrolled

No Response, Not Enrolled

Wireless Keypad Learning

The easist way to pair a keypad is to take it to the gate controller BEFORE installing onto the post or fence. The installation steps below detail the procedure using the default codes. It is suggested to change the codes AFTER completing the procedure and testing using the default code.
Default code 1111= Channel 1 of Keypad, Default code 2222= Channel 2 of Keypad

Operation Command Learning

1 

From the standby screen press the SET button once

2 

Cycle to Lc and press SET

3 

Cycle to c1

4 
Type **1111**

The display will also show you the enrolled position it has been stored in the memory, this can be noted incase you wish to delete a specific remote later.

Pedestrian Gate (Double Swing Gate)

1 

From the standby screen press the SET button once

2 

Cycle to Lc and press SET

3 

Cycle to c2

4 
Type **2222**

The display will also show you the enrolled position it has been stored in the memory, this can be noted incase you wish to delete a specific remote later.

Setting the Automatic Close Timer

1 

From the standby screen press the SET button once

2 

Cycle to oL and press SET

3 

For residential homes select At

For apartments, complexes, industrial see Operating Logic Options Page 10

4 

To set the time cycle to SP

01= Immediate Close
2-299= Delayed automatic Closing Time by the set value in Seconds
DEFAULT IS 10 Seconds

5 

once complete cycle to EH to return to standby

Display example up to 99 Seconds

Display example GREATER than 99 Seconds and up to 199 Seconds

Display example GREATER than 199 Seconds and up to 299 Seconds

Motor Test Mode

The purpose of motor testing is to identify the correct operating procedure before the time travel calibration. The information that can be gained from the motor test is if the motors are wired:
a) Correct polarity meaning they operate in the correct direction according to the control board.
b)The limit switches have been correctly set for the OPEN and CLOSED position. This test can be repeated an unlimited amount til all is set correctly.
c) The correct operating sequence FOR DOUBLE GATES

O2 will open Gate 2 (M2) - The MASTER gate with the AUTOMATIC LOCK if used, First gate to open/ONLY GATE IF SINGLE GATE
C2 will close Gate 2 (M2) - Second gate to close IF double gates/ONLY GATE

O1 will open Gate 1 (M1) - Second gate (SLAVE) to open IF double gates
C1 will close Gate 1 (M1) - First gate to close IF double gates
O1/C1 is not used for single gate systems

NOTE: Safety Inputs are disabled during this stage

1

From the standby screen press the SET button once

2

Cycle to dn and press SET

3

Cycle to o2 and HOLD set, whilst holding set it will OPEN M2 and It will stop on the limit switch, release the SET Button.

* IF the gate does NOT stop on the limit switch, or too early see "Troubleshooting LS" below.
*If the gate Closes instead of Opening see "Troubleshooting MP" below.
*DOUBLE GATES- This SHOULD be the first gate to open, if not see "Troubleshooting WM"

4

SINGLE GATE SKIP to STEP 7

Cycle to c2 and HOLD set, whilst holding set it will CLOSE M2 and It will stop on the limit switch, release the SET Button.

IF the gate does NOT stop on the limit switch see "Troubleshooting LS" below.

5

Cycle to o1 and HOLD set, whilst holding set it will OPEN M1 and It will stop on the limit switch, release the SET Button.

* IF the gate does NOT stop on the limit switch, or too early see "Troubleshooting LS" below.
*If the gate Closes instead of Opening see "Troubleshooting MP" below.

6

Cycle to c1 and HOLD set, whilst holding set it will CLOSE M1 and It will stop on the limit switch, release the SET Button.

IF the gate does NOT stop on the limit switch see "Troubleshooting LS" below.

Cycle to EH to return to previous menu

Troubleshooting MP
If the gate(s) close whilst using the open feature this is easily resolved and must be rectified prior to moving forward.
1. Confirm which of the gate motor(s) is operating in the wrong direction
2. Power down the controller
3. Reverse the wires in the IDENTIFIED motor output terminal (this it the wires going to the gate motor)

Troubleshooting LS
If the gate(s) travel past the desired stop point OR stops too early the limit switch is misconfigured and will need to be adjusted.
1. Confirm which of the limit switches is not set correctly (open limit/close limit)
2. Adjust the relevant limit cam/slider (refer to your gate motors installation manual)

Troubleshooting WM
In the case of double gates IF the gate that should open second is opening on O1 this must be rectified prior to moving forward.
1. Power down the controller
2. SWAP the wires in M1 terminal to M2 and the wires in M2 to the M1 terminal

Learn Time Calibration for Double Gate

The automatic learning procedure will teach the gate controller the operational times for the gate motors travel, this will allow for the correct calibration and introduce a slowdown at the appropriate position along with the relevant protection cut off time.

Please ensure that the motors testing procedure has been completed successfully before following the below procedure (page 19).
Please ensure that the system is set to DOUBLE GATE mode before proceeding (page 12).

NOTE: Safety Inputs are disabled during this stage

1 

From the standby screen press the SET button once

2 

Cycle to dn and press SET

3 

Cycle to o2 and HOLD set, whilst holding set it will OPEN M2 and It will stop on the limit switch, release the SET Button

4 

Cycle to o1 and HOLD set, whilst holding set it will OPEN M1 and It will stop on the limit switch, release the SET Button

5 

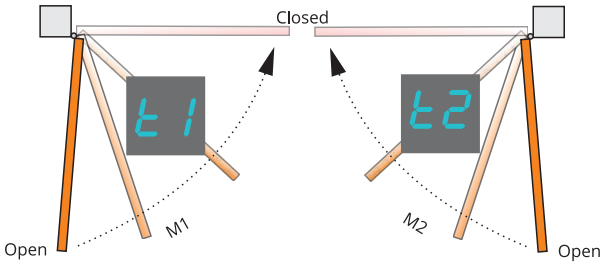
Cycle to EH to return to previous menu

If during the o2 or o1 stage the gates did not open completely return to the motor test page and see **Troubleshooting LS**.

6 

Cycle to Au for automatic learning and press SET

7 M1 will close til it reaches the limit or stop t1 will be displayed during the operation.
once complete then
M2 will close to the limit or stop t2 will be displayed during the operation.



Troubleshooting OBS
If AFTER the Automatic learning stage Au the gate(s) did not completely open or completely close BUT was successful during the learning phase from earlier then adjust the obstruction force potentiometer clockwise SLIGHTLY and re-test.

THIS ADJUSTMENT IS NOT USED DURING THE LEARNING
Adjust in small increments only until function correctly, do not adjust in large increments

Learn Time Calibration for Single Gate

The automatic learning procedure will teach the gate controller the operational times for the gate motors travel, this will allow for the correct calibration and introduce a slowdown at the appropriate position along with the relevant protection cut off time.

Please ensure that the motors testing procedure has been completed successfully before following the below procedure (page 19).
Please ensure that the system is set to SINGLE GATE mode before proceeding (page 12).

NOTE: Safety Inputs are disabled during this stage

1 

From the standby screen press the SET button once

2 

Cycle to dn and press SET

3 

Cycle to o2 and HOLD set, whilst holding set it will OPEN M2 and It will stop on the limit switch, release the SET Button

4 

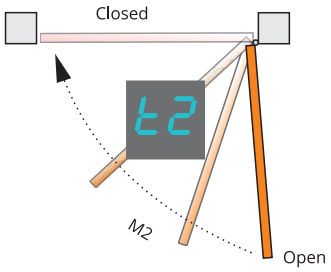
Cycle to EH to return to previous menu

If during the o2 stage the gate did not open completely return to the motor test page and see **Troubleshooting LS**.

5 

Cycle to Au for automatic learning and press SET

6 M2 will close to the limit or stop t2 will be displayed during the operation.



Troubleshooting OBS

If AFTER the Automatic learning stage Au the gate did not completely open or completely close BUT was successful during the learning phase from earlier then adjust the obstruction force potentiometer clockwise SLIGHTLY and re-test.

THIS ADJUSTMENT IS NOT USED DURING THE LEARNING
Adjust in small increments only until function correctly, do not adjust in large increments

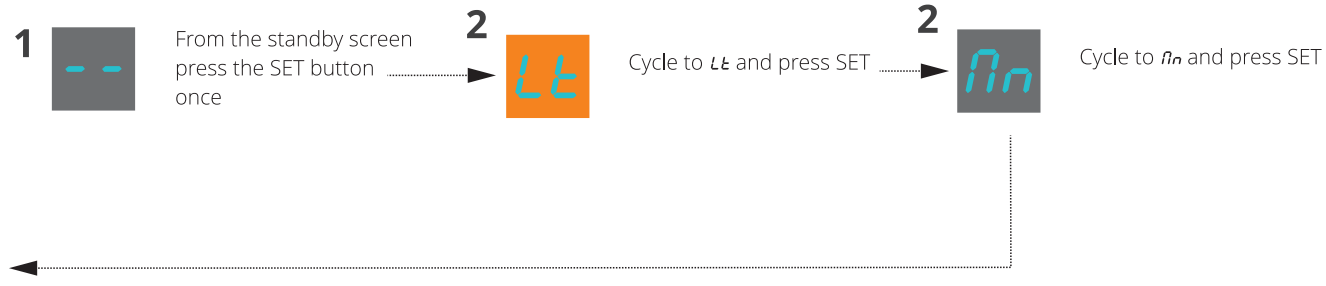
Advanced Manual Learn Time Calibration for Double Gate

The advanced manual learning procedure is used when the gates are unable to learn correctly during the automatic learning phase, it is a higher detail operation as the installer provides input on the gate slow down (DECEL) and Stop Positions (when no limits are used) .

Please ensure that the motors testing procedure has been completed successfully before following the below procedure (page 19).
Please ensure that the system is set to DOUBLE GATE mode before proceeding (page 12).

Please ensure gates are closed prior to proceeding

NOTE: Safety Inputs are disabled during this stage



A. Both gates begin to open in a slow speed (you can fine tune the slow speed trimmer to increase/decrease the speed whilst observing the operation), once both gates are OPEN press OK
B. Press OK to begin the closing phase of the learning, M1 will begin to close
C. Press OK again to command M2 to begin closing
D. Press OK again to set the slowdown position of M1
E. Press OK again to set the slowdown position of M2

If limit switches are installed AND set correctly the controller will detect the closed point and automatically finish the manual learning.
If no limit switches are used OR limits are not set correctly:
F. Press OK to stop M1 in the closed position
G. Press OK to stop M2 in the closed position

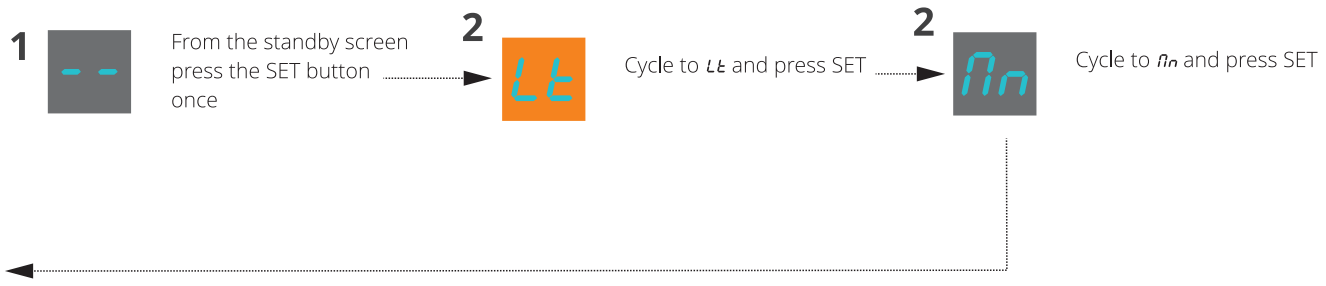
Advanced Manual Learn Time Calibration for Single Gate

The advanced manual learning procedure is used when the gate is unable to learn correctly during the automatic learning phase, it is a higher detail operation as the installer provides input on the gate slow down (DECEL) and Stop Positions (when no limits are used) .

Please ensure that the motors testing procedure has been completed successfully before following the below procedure (page 19).
Please ensure that the system is set to SINGLE GATE mode before proceeding (page 12).

Please ensure gates are closed prior to proceeding

NOTE: Safety Inputs are disabled during this stage



A. The gate begin to open in a slow speed (you can fine tune the slow speed trimmer to increase/decrease the speed whilst observing the operation), once the gate is OPEN press OK
B. Press OK to begin the closing phase of the learning, M2 will begin to close
C. Press OK again to set the slowdown position of M2

If limit switches are installed AND set correctly the controller will detect the closed point and automatically finish the manual learning.
If no limit switches are used OR limits are not set correctly:
D. Press OK to stop M2 in the closed position

DUKIE and DUKIE+ Photocells

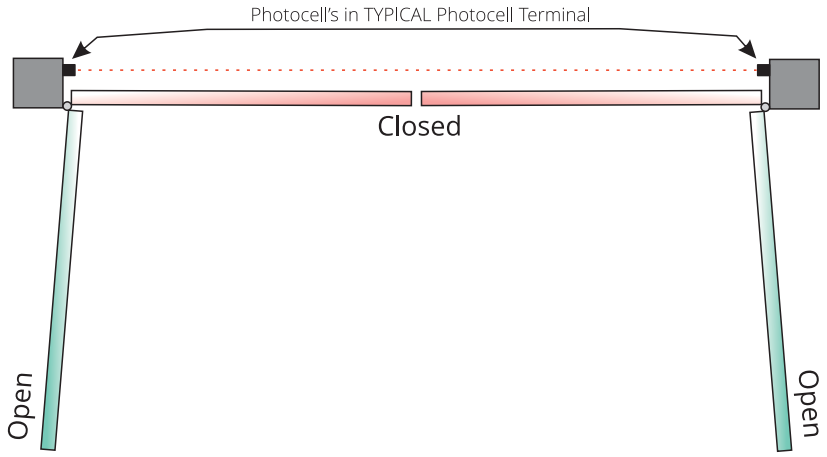
Typical Photocell Arangment

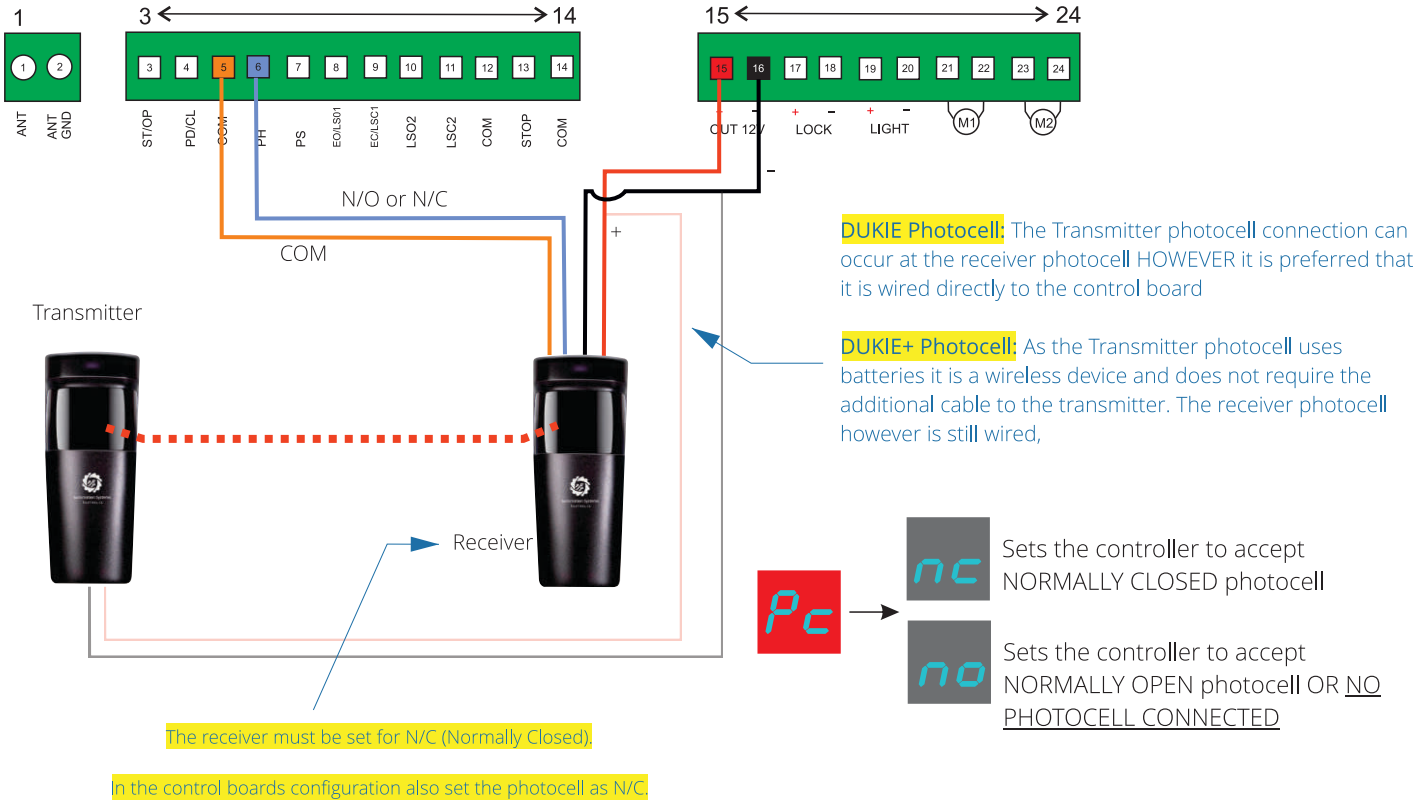
SEE NEXT PAGE ON SPECIAL DETECTOR AND PHOTOSTOP

Photocells are a necessity when automating, they provide an additional layer of safety by infrared beam across the driveway.

The photocell terminal is used as the primary photocell connection which will revert the gate back to open when an obstacle is detected during close. If an obstacle is present before a close command then it will prevent closure til the obstacle is clear.

In the case where the automatic closing timer is used then each time an obstacle passes through the photocell infrared beam the timer will restart.





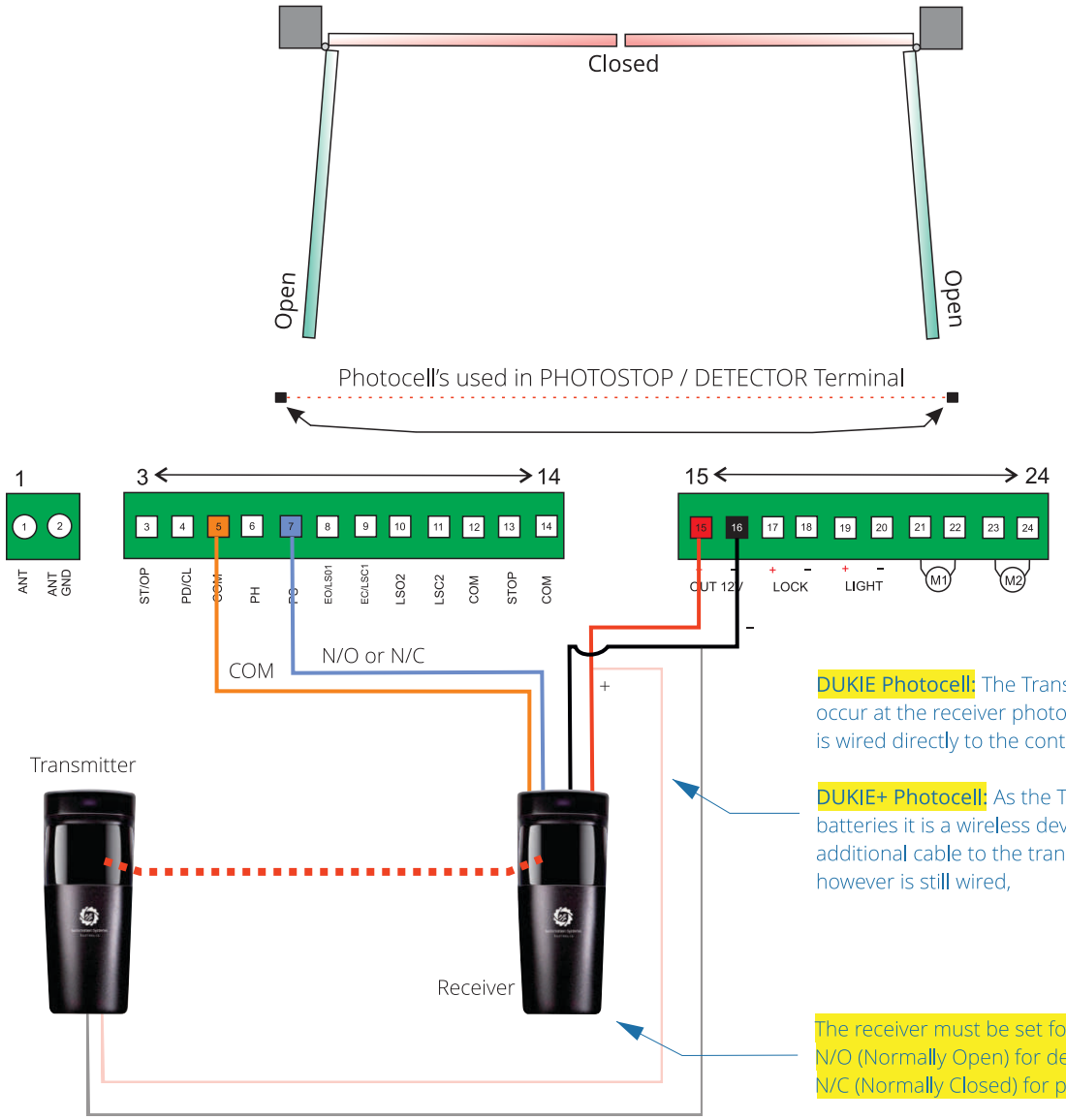
Troubleshooting PC

If after powering the system on you receive the error Pc displayed it means one of the following:
1. Bad photocell alignment or there is an obstacle, wave your hand in front of the RECEIVER photocell, you should hear a very low audibility click, this means the photocell is in alignment. No click means bad alignment, incorrect/bad wiring or no power at one or both each cells- check there LED indicators.
2. Wired/set for wrong relay on photocell, if totally covering the photocell the error disappears on the display It means the wiring/selection jumper on the RECEIVER photocell is incorrect OR the incorrect setting within the photocell menu has been chosen.

Special Detector Mode / Photostop

SEE PREVIOUS PAGE ON TYPICAL PHOTOCELL CONNECTION

An additional set of photocells installed just past the gates open position. Ideal for scenarios requiring a command to close after the vehicle has passed through OR carport safety, outwards opening gate open prevention, etc.



DUKIE Photocell: The Transmitter photocell connection can occur at the receiver photocell HOWEVER it is prefered that it is wired directly to the control board

DUKIE+ Photocell: As the Transmitter photocell uses batteries it is a wireless device and does not require the additional cable to the transmitter. The receiver photocell however is still wired,

The receiver must be set for either :
N/O (Normally Open) for detector mode or
N/C (Normally Closed) for photostop mode.

SP →

PS

Photostop Mode (Normally Closed Circuit)
Similar to a typical photocell input but also incorporates the opening cycle.
1.During opening it will pause gate till clear
2.During auto close it will restart the timer
3.During close it will stop the gates and re-open
4.Whilst closed it will inhibit the operation of opening until clear again

dt

Detector Mode (Normally Open Circuit) OR <u>NO SENSOR CONNECTED</u>
Used to signal the system that the gate has been used and is ready to close.
1.If detected whilst opening it will finish the opening then after two seconds close
2.Whilst closing it will re-open gate then after two seconds close the gate
3.Whilst open it will tell the gate to close

Troubleshooting PS/DT

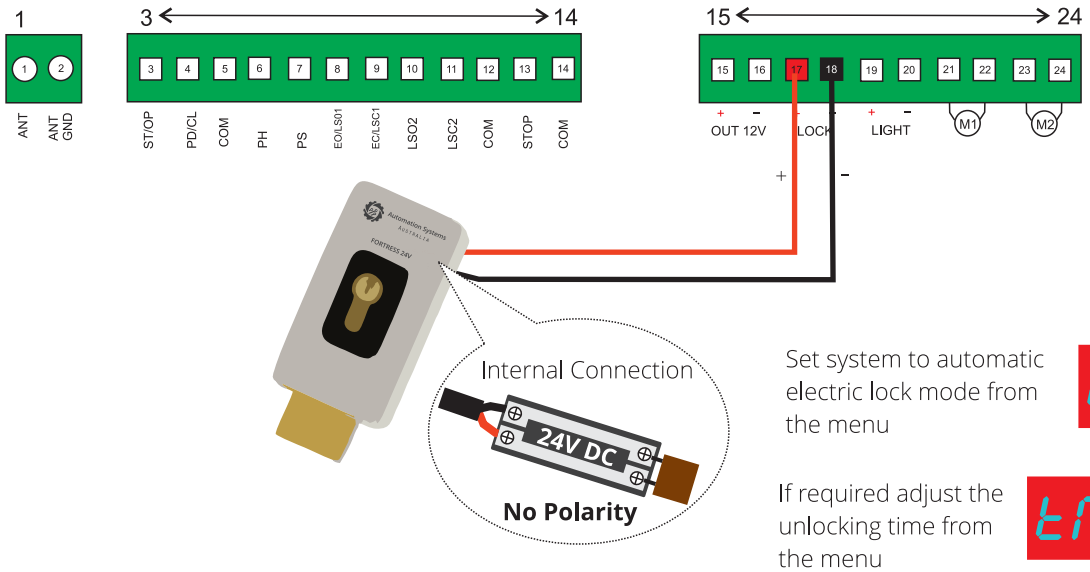
PS

dt

If after powering the system on you receive the error PS or dt displayed it means one of the following:
1. Bad photocell alignment or there is an obstacle, wave your hand in front of the RECEIVER photocell, you should hear a very low audibility click, this means the photocell is in alignment. No click means bad alignment, incorrect/bad wiring or no power at one or both each cells- check there LED indicators.
2. Wired/set for wrong relay on photocell, if totally covering the photocell the error disappears on the display It means the wiring/selection jumper on the RECEIVER photocell is incorrect OR the incorrect setting within the special detector menu has been chosen.

Fortress EL Automatic Electric Lock

The Fortress EL automatic electric lock will engage mechanically when closed into the latching plate and automatically release on the opening cycle. It provides added security and holding characteristics to prevent forces from pushing against the gate(s).



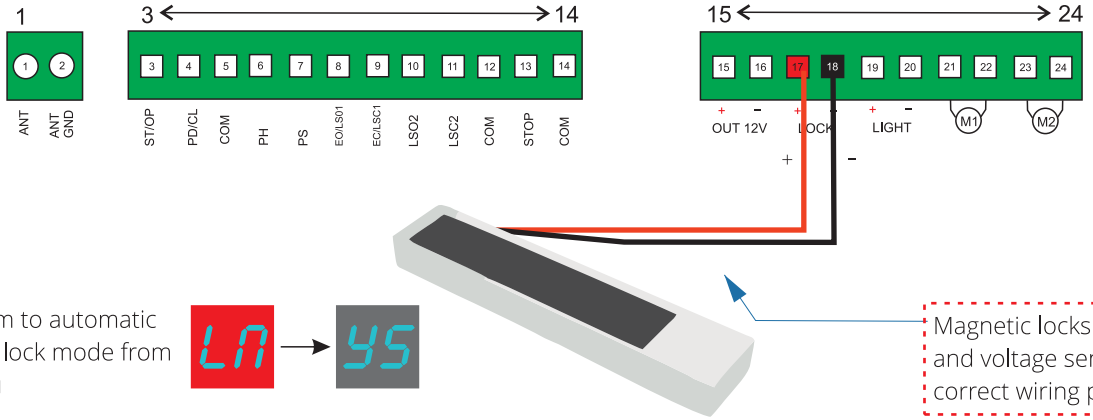
Set system to automatic electric lock mode from the menu

If required adjust the unlocking time from the menu

FORTRESS ML Magnetic Lock

NOT SUITABLE FOR SOLAR

The FORTRESS ML automatic magnetic lock will engage electrically when closed against by magnetizing to the armature plate and automatically release on the opening cycle. Just like an electric lock it also provides added security and holding characteristics to prevent forces from pushing against the gate(s). Benefit of a magnetic lock is that it can be mounted in different methods to the electric locks traditional mounting arrangements.

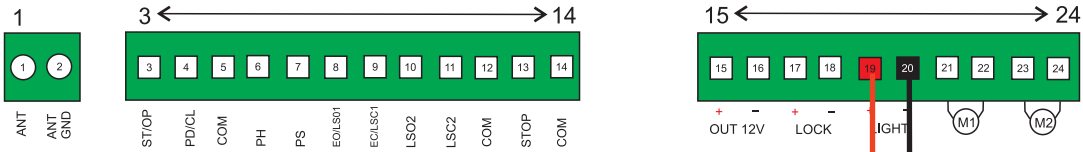


Set system to automatic magnetic lock mode from the menu

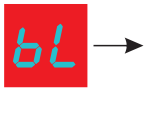
Magnetic locks ARE polarity sensitive and voltage sensitive items, ensure correct wiring prior to connection

If required adjust the unlocking time from the menu

Warning Light Output

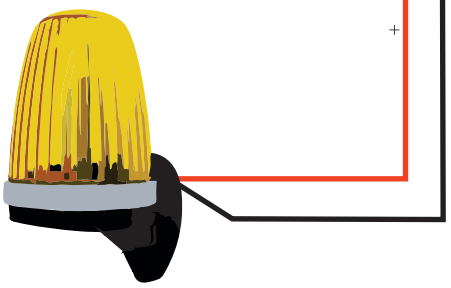


Set system to Flashing or Static Illumination



Flashing illumination ON/OFF during the cycle

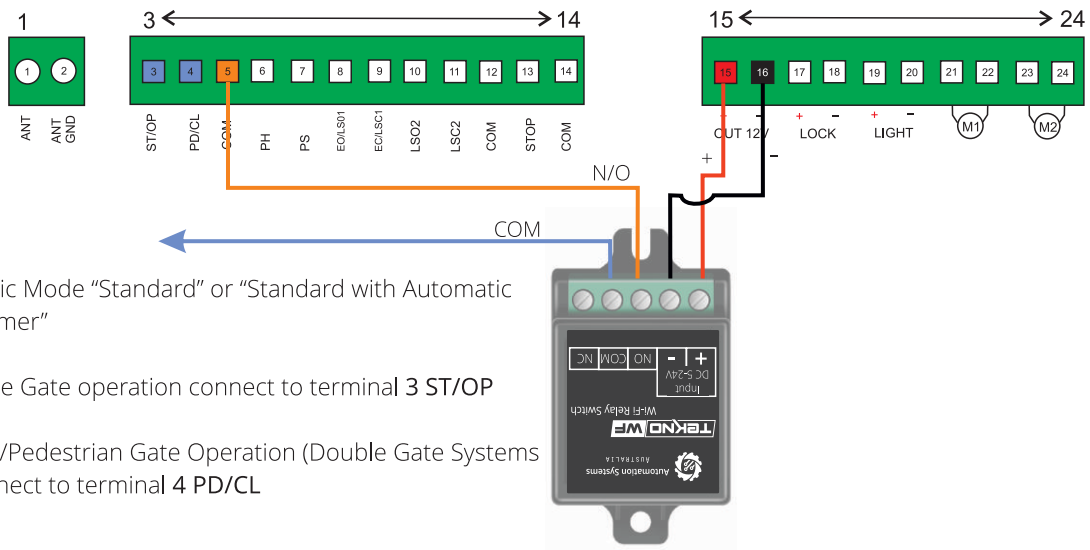
Static illumination during the cycle



THIS IS NOT A DRIVEWAY LIGHT OUTPUT, Courtesy/Warning Lights Only

Tekno Wi-Fi APP Switch

The Tekno Wi-Fi App Switch integrates into the system allowing for operation by APP anywhere in the world, the Tekno module requires good 2.4GHZ connection to the Wi-Fi of the premises.



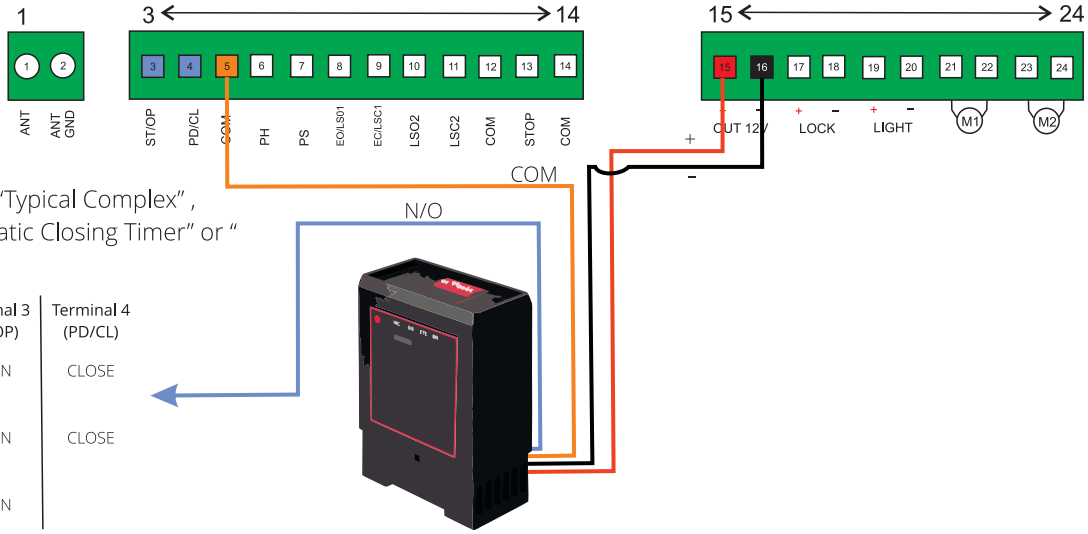
Using Logic Mode “Standard” or “Standard with Automatic Closing Timer”

For Double Gate operation connect to terminal 3 ST/OP

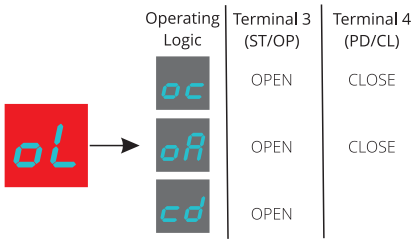
For Single/Pedestrian Gate Operation (Double Gate Systems Only) connect to terminal 4 PD/CL

Loop Detector

Typically for commercial and industrial use the loop detector can be used to command an OPEN or a CLOSE operation when detecting a vehicle.



Only Used with Logic Modes “Typical Complex” , “Typical Complex with Automatic Closing Timer” or “ Secure Complex”

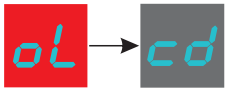


Operating Logic	Terminal 3 (ST/OP)	Terminal 4 (PD/CL)
oC	OPEN	CLOSE
oA	OPEN	CLOSE
cd	OPEN	

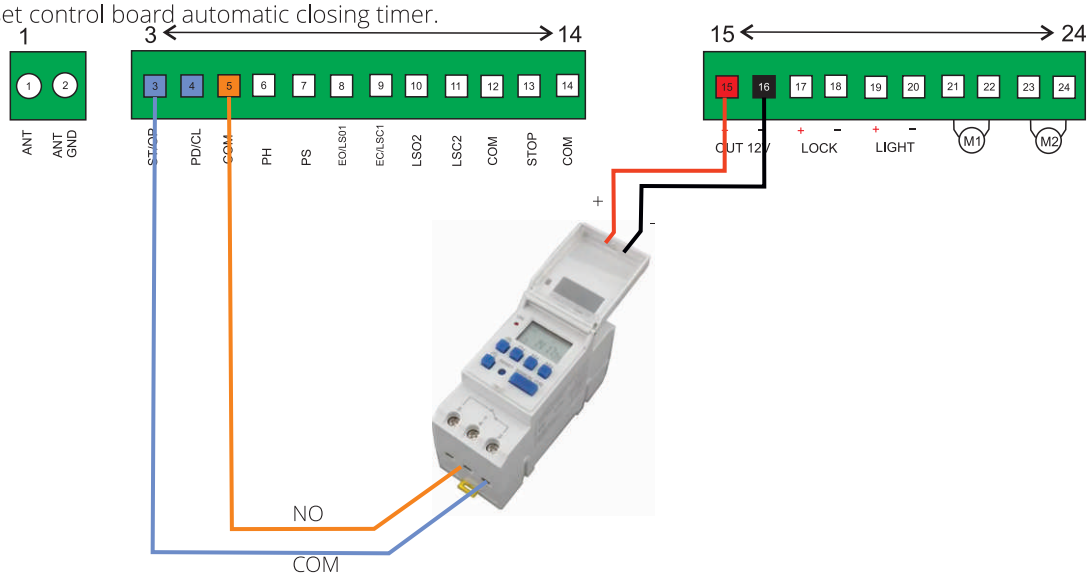
Digital Weekly Timer (12 Volt Version)

Typically for commercial and industrial the gate an be set to open at a certain time (and hold open), then close also at a set time. Multiple times can be programmed for all 7 days of the week selectively.

All other operations (outside of weekly time, eg. After Hours) by other access control devices such as a keypad will result in an automatic closing after the set control board automatic closing timer.

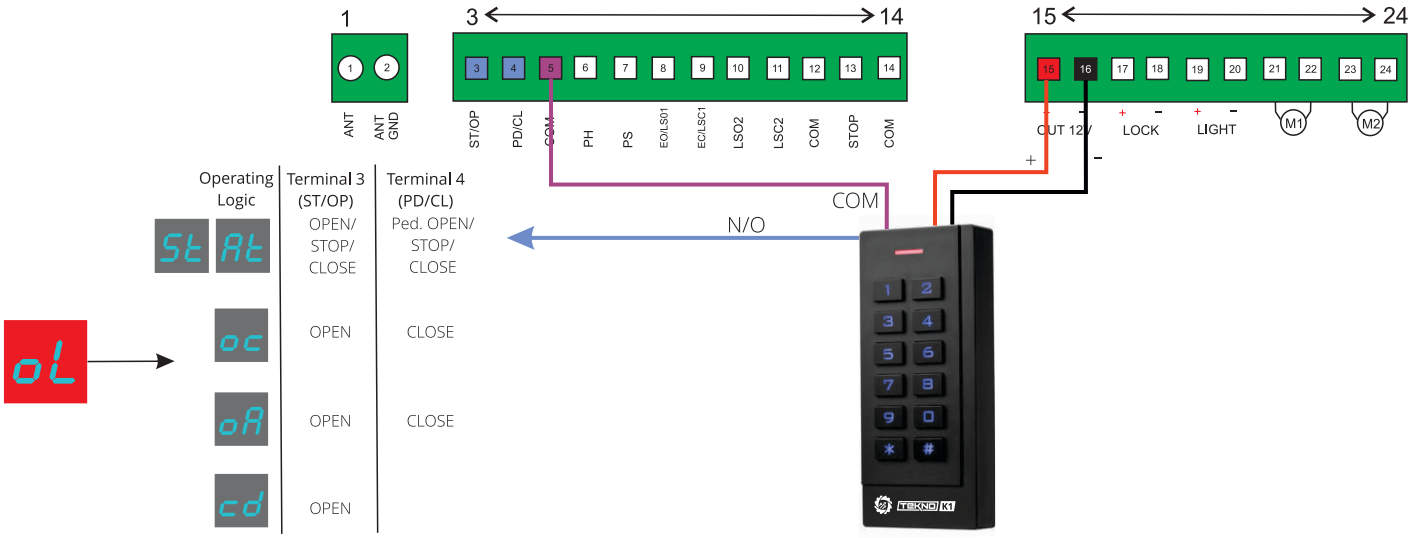


Only Used with Logic Mode “ Secure Complex”



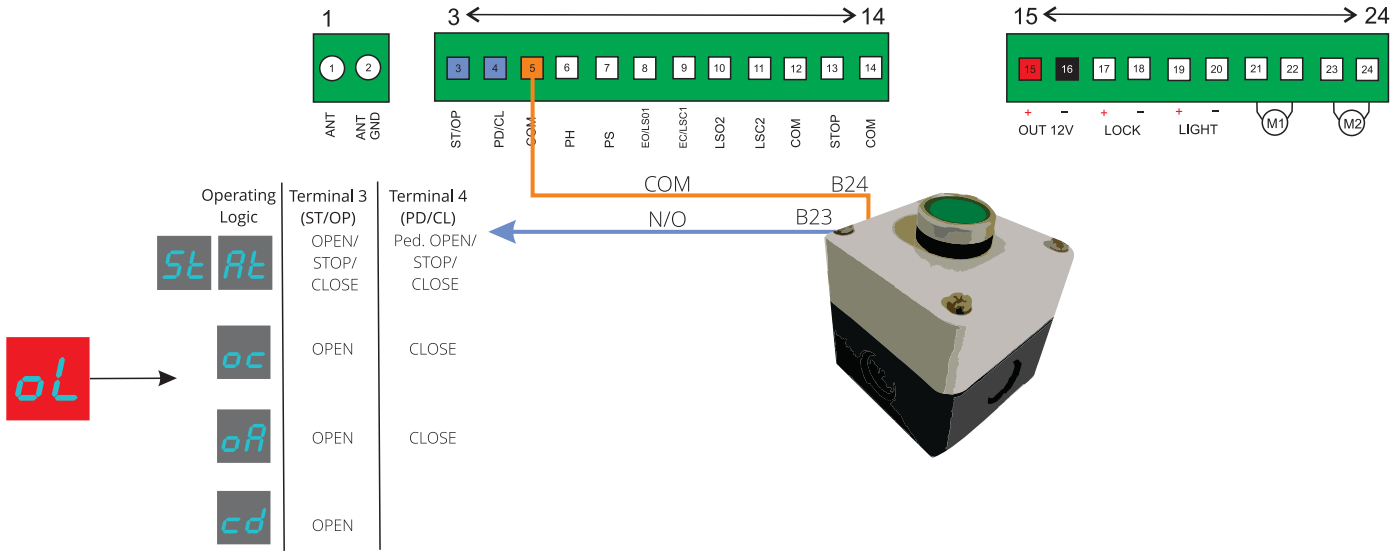
Tekno K1 Wired Keypad

A Tekno K1 wired keypad is typically (but not exclusively) used in a commercial or industrial environment as a wireless keypad can be used in a residential home. A wired keypad has little to no maintenance required as its power feed is supplied by the system through wiring.



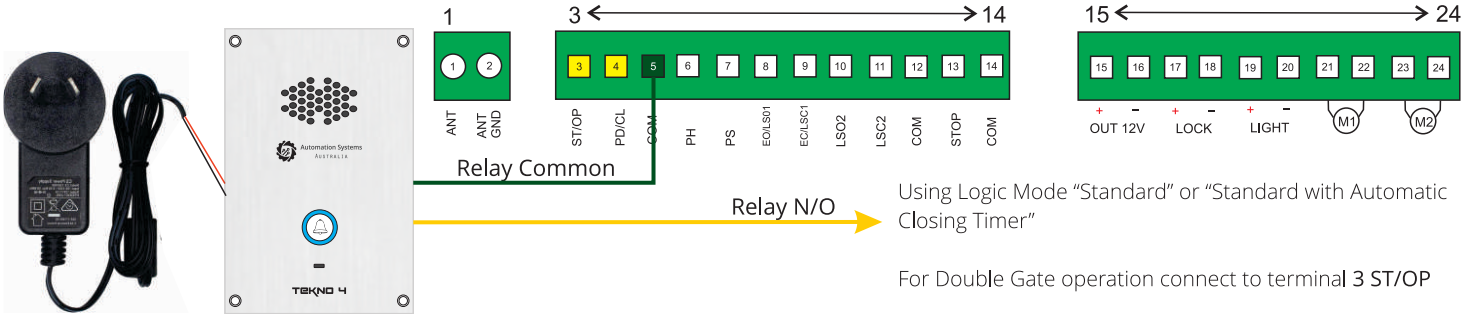
Push Button

Suitable for all applications a push button can be used to operate the gate simply by pressing the button.



Tekno 4 GSM Intercom

The Tekno 4 GSM intercom allows totally wireless TWO WAY communication to any user, anywhere in the world using the mobile network. It allows for the automatic gate operation by pressing * during a call or by sending an SMS command at any time.



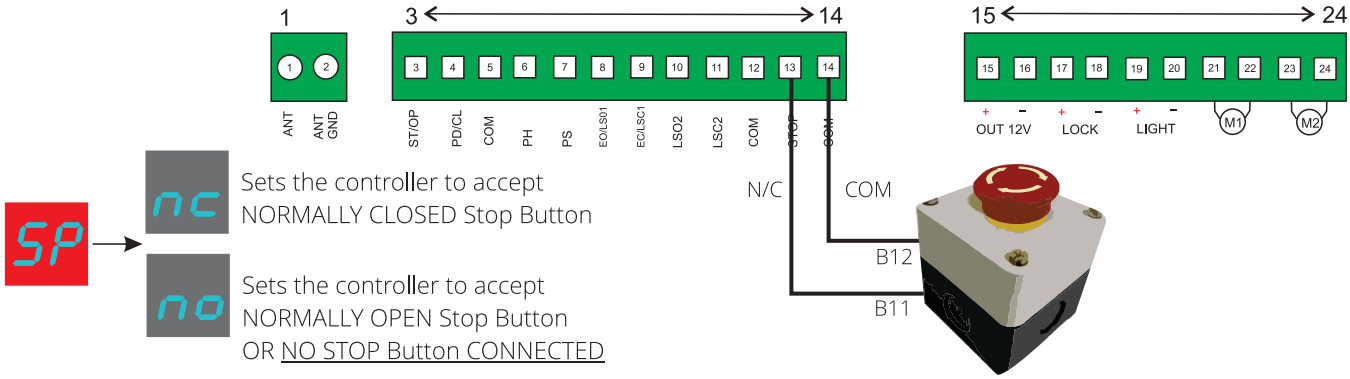
Using Logic Mode “Standard” or “Standard with Automatic Closing Timer”

For Double Gate operation connect to terminal 3 ST/OP

For Single/Pedestrian Gate Operation (Double Gate Systems Only) connect to terminal 4 PD/CL

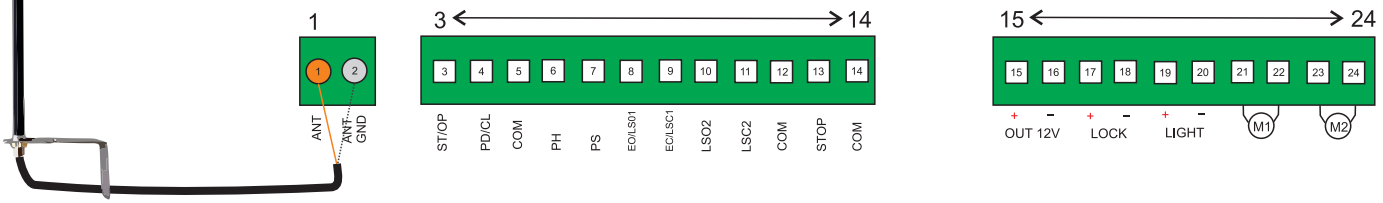
Emergency Stop Button

An emergency stop button is used typically if the system is in a manned operation such as a security office or gate house OR such applications where an internal door is automated.



Amplify Booster Antenna

The Amplifiy Booster Antenna will assist with remote signal in a case where the signal has been blocked by the fencing or the gate. The antenna should be installed as high as possible allowing it to be visually seen over the fence line.



Remote Enrollment number	Users Name/Employee ID	Feature
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		
16		
17		
18		
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Warranty Terms and Conditions

The product is warranted for a period of twelve months (one year) from the date of purchase, unless expressly specified as extended warranty (extension to the warranty period). The product is to be installed for its intended purpose and for normal use as outlined within the installation manual, the product warranty is exclusively for defects in manufacturing and manufacturing workmanship. It does not cover out of guidelines use, natural or other disasters, abnormal weather conditions, damage incurred in shipping or handling, damage caused by disaster such as fire, flood, wind, earthquake, lightning, excessive voltage, mechanical shock, water damage, damage caused by unauthorized attachment, alterations, modifications, or foreign objects, damage caused by peripherals (unless such peripherals were supplied by Automation Systems Australia), defects caused by failure to provide a suitable installation environment for the products, damage caused by usage of the products for purpose other than those for which it was designed, damage from improper maintenance, damage arising out of any other abuse, mishandling, and improper application of the products.

At is discretion Automation Systems Australia will require the item determined by the support staff to be returned to base in it original unmodified condition for a warranty inspection if within the warranty period. A return authorization “RA” number will be provided to be enclosed with the product in question. The warranty will not cover freight fees to base, customs fees or any labour costs at the installation site but will cover repair or replacement of the product as seen fit. Automation Systems Australia will cover the freight of the returned item to the original address if deemed as a warranty repair or replacement item. Any warranty repairs or replacements continue to carry through the remaining warranty period and do not extend or restart the period.

Under no circumstances shall Automation Systems Australia be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property.

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose). And of all other obligations or purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

Automation Systems Australia will at its option repair or replace out-of-warranty products at a determined cost which are returned to its base according to the following conditions. Anyone returning goods to Automation Systems Australia must first obtain an authorization number. Automation Systems Australia will not accept any shipment whatsoever for which prior authorization has not been obtained. Products which Automation Systems Australia determines to be repairable will be repaired and returned. A set fee which Automation Systems Australia has been predetermined and which may be revised from time to time will be charged for each unit repaired. Products which Automation Systems Australia determines not repairable will be replaced by the nearest equivalent product available at that time. The current market price for the replacement product will be charged for each replacement unit.