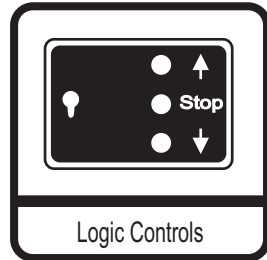


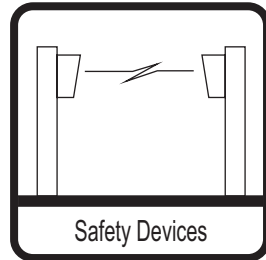
OTHER LIFTMASTER PRODUCTS



Logic Controls



Card Access Control



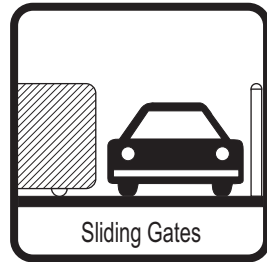
Safety Devices



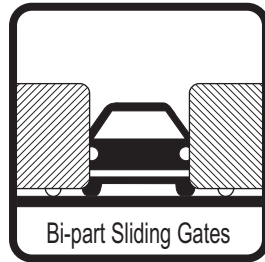
Intercom Systems



Radio Control



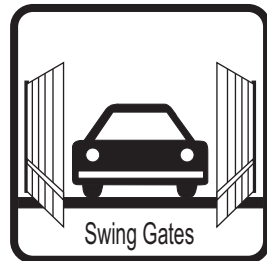
Sliding Gates



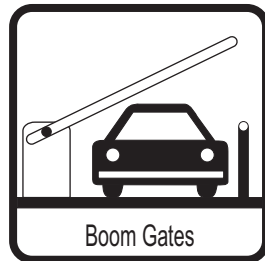
Bi-part Sliding Gates



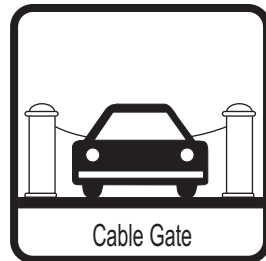
Sectional Doors & Shutters



Swing Gates



Boom Gates



Cable Gate

DOMESTIC • COMMERCIAL • INDUSTRIAL

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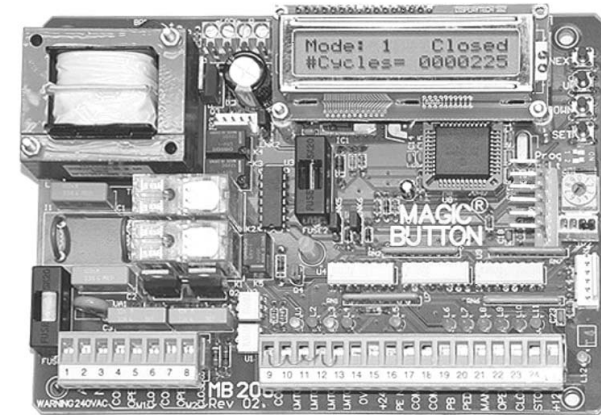
PO BOX 54 ALEXANDRIA NSW 1435 AUSTRALIA

PH: 61 2 9699 9654 FX: 61 2 9699 8443

www.liftmaster.com.au liftmaster@mdi.com.au

As Liftmaster Electronics policy is one of constant improvement, we reserve the right to alter any part of these specifications without notice and without incurring any obligation.

MB206 LOGIC CONTROL



LIFTMASTER

1.0 MB206 MAIN FEATURES

- ▶ LCD display with back-light
- ▶ Micro controller design
- ▶ Rotary switch mode selection
- ▶ End of travel slow down with adjustment
- ▶ Motor force control with adjustment
- ▶ Suitable for single or dual motors with or without limits
- ▶ Back pressure release for electric locks
- ▶ Electric lock or magnet output
- ▶ Leaf delay control
- ▶ Inputs for push button, open, stop, and close
- ▶ Pedestrian access control
- ▶ Stop on opening and closing, or reverse on closing
- ▶ Output to support relays for lights or inverter control
- ▶ Output for indication of board status
- ▶ Backup closing timer
- ▶ 6 pin receiver compatible
- ▶ On board antenna input
- ▶ 24V DC power supply protected by 1 amp fuse
- ▶ 12V DC regulated power supply
- ▶ Optocoupler protection on all inputs
- ▶ LED indicators on all inputs for visual indication on input status
- ▶ Resettable and non-resettable counters

**Please read these instructions
carefully before adjusting the
Liftmaster Magic Button MB206
control board's default parameter
settings**

Note: The availability of some of this control board's features are dependent upon individual applications and motor drive configuration. Qualify feature suitability before use

2.0 IMPORTANT SAFETY INSTRUCTIONS

Please read these important safety rules. Failure to comply with the following safety rules may result in serious personal injury and or property damage.

2.1 When the MB206 logic control board is used to control gate, door, and barrier gate operating equipment the following factors **MUST** be taken into account:

A) Appropriate safety devices relevant to the particular application must be incorporated into the installation of all moving structures

B) Safety devices need to be regularly checked for the correct operation

C) The gate or door must be able to be freely moved by hand before motorisation

D) Warning signs must be visibly installed on either side of the structure

E) All programming must be undertaken by qualified technicians

F) Any device used to initiate the logic controller must be kept away from children

G) Wind loading on the operated structures will unavoidably alter operation functions

2.2 Do not activate the MB206 logic control board unless the moving structure(s) are in full and clear view and free of objects such as vehicles and people

2.3 The MB206 logic controller must be connected to properly approved earthed 240V power supply

2.4 The main power supply must be disconnected before making any repairs

2.5 Any additional device(s) utilising the MB206 on board DC power supply must not exceed, under load, the total transformer Amp rating

2.6 Water, dust, and insect presence on the MB206 logic control board must be prevented

2.7 Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger

2.8 Liftmaster declines all liability caused by improper use or use other than that for which the automated system was intended

2.9 Do not install the equipment in an explosive atmosphere: the presence of inflammable gas or fumes is a serious danger to safety

2.10 Liftmaster is not responsible for the failure to observe good technique in the design and construction of the structure(s) to be motorised and or any deformation that may occur during use

2.11 If parameter P14 (Back Up Timer) is used the door/gate, once the run time is complete or the limits reached, will **automatically close** when the set value of back up time has expired. This closing will occur **without warning, an appropriate safety device must be installed**

2.12 If parameter P24 and/or P25 is used, then some type of mechanical/electronic clutch must be fitted as the motor will not stop at the end of travel time but will continue to run until the selected additional time has expired. This may result in excessive force on the fixtures and fittings depending on the torque on the motor when installed

2.13 The effectiveness and compatibility of parameter P23 is dependent of the type of motor to be controlled, qualify the suitability of P23 before use

3.0 INSTALLATION GUIDELINES

All electrical works must be carried out by a qualified electrical contractor in accordance with local authority regulations.

Following is a list of installation guidelines:

3.1 Input power supply to the board is 240V 3 wire (Active, Neutral, and Earth). The input supply must have some means of power isolation.

3.2 All wiring conduit and cable gland entries to control box should be via the base only.

3.3 The recommended motor wire size is 1.5mm² stranded . For the control circuits the wire size is 0.5mm² stranded. High and low voltage cabling should not be run in the same conduit.

3.4 If control board is part of an installation where Variable Speed Drive (inverter) is used and the motor is mounted away from the control board, the cable between the inverter and the motor must be a SCREEN type and the screen wire should be earthed at both ends.

The Photo Electric wires must be overall screen data wire 0.5mm² and the screen needs to be connected at one end to earth.

3.5 All control and limit switch inputs must be DRY switch contacts only. Ensure that all devices being used for gate/door activation have dry contact outputs before connecting to control board. If the device has a voltage output, a relay will be required.

4.0 WIRING MOTORS AND ACCESSORIES TO THE CONTROL BOARD

1. Connect motor to control board. If one motor is used connect it to motor 1 terminal and remove M2 limit wires from terminals 12 and 13. If electric lock is used the lock must be mounted on motor 1 gate. Once motors are connected to control board, manually move gate/door to the mid position and engage the motor.

2. Turn power on to control board and activate motor (using push button or programmed remote etc). Motor(s) should move towards open position. If the gate/door moves towards closed position, switch power OFF and reverse open/close motor wires (and open/close limit wires where used). Turn power ON and re-test for correct motor operating direction.

3. Once correct motor direction is established, the board parameters can be modified to suit the installation, and the mode selected.

5.0 STATUS INDICATORS L1 - L12

L1 - Motor one open limit input status: normally ON, OFF when open limit activated

L2 - Motor one close limit input status: normally ON, OFF when close limit activated

L3 - Motor two open limit input status: normally ON, OFF when open limit activated

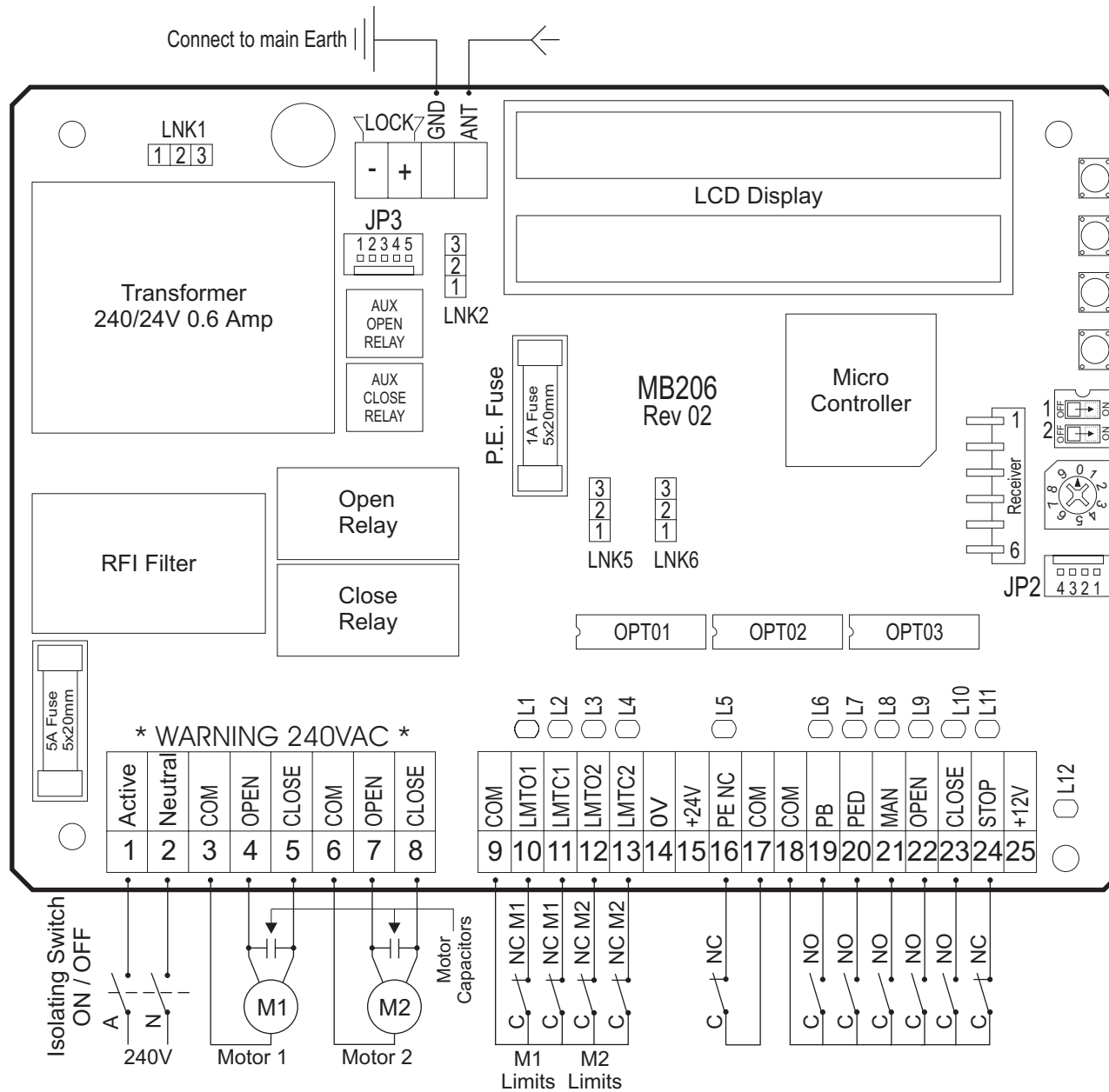
L4 - Motor two close limit input status: normally ON, OFF when close limit activated

L5 - Safety input indicator: indicates if safety input obstructed, MUST be OFF for board operation

L6 to L11 - ON indicators for inputs PB, PED, MAN, OPEN, CLOSE or STOP

L12 - Board status indicator: indicator OFF when the board is idle and the motor(s) is in the CLOSED position. Once PB, PED, MAN (hold open input) or OPEN input made, then indicator remains ON until the cycle CLOSE-OPEN-CLOSE is complete either by limit(s) or when the close travel time setting is expired

L12 - If JP2 input used then indicator permanently ON



- ← NEXT: Move to the next parameter
- ← UP: Increase the parameter value
- ← DOWN: Decrease the parameter value
- ← SET: Save the parameter value
- ← Program Switch: Enables programming
- ← Back-light Switch: Activates LED display back-light
- ← Mode Selection: 1. Pulse open / pulse close
2. Pulse open / auto. close
3. Pulse open / P.E. close
4. Counting mode

Note on Fuses: before changing the fuse(s), identify the cause of the fault, rectify, and then check board functionality including slow down speeds.

Note: +12V power supply is 100mA

MB206 CONTROL BOARD
FOR 3-WIRE 240V 5A MOTORS

LIFTMASTER ELECTRONICS PTY LTD
Phone: (02) 9699 9654 Fax: (02) 9699 8443

MB206 - 0506 - REV.02

6.0 MB206 MODE SELECTIONS

A '0' to '9' rotary switch is used to select the operating mode. See below for list of modes:

MODE 1 DOMESTIC POSITION 1

Gate/door opens on impulse, and closes off a 2nd impulse. While opening a pulse will stop the gate/door from fully opening. The next pulse will close the gate/door. When used, if Photo Electrics are interrupted while closing or a pulse is applied, the gate/door will re-open and a second pulse is required for the gate/door to re-close.

MODE 2 AUTO CLOSE POSITION 2

Photo Electrics are mandatory for this mode. Gate/door opens on impulse and closes automatically after preset time (P3). While closing, if the PE is interrupted or a pulse is applied, the gate/door will re-open fully and re-close after the preset time (P3) expires and PE's are cleared.

MODE 3 PHOTO ELECTRIC CLOSE POSITION 3

Gate/door opens on impulse, and closes only after the PE is broken and cleared. While closing, if the PE is interrupted, the gate/door will re-open fully and close after preset time (P3).

MODE 4 COUNTING MODE POSITION 4

The number of pulses on the Push Button are counted, and gate/door will only close when the Photo Electrics are activated the same number of times as the pulses on the Push Button. Note: If 2 photo electrics are used this mode is not possible.

7.0 HOW TO MODIFY THE PARAMETERS

Please note that the board parameters can only be modified while the board is inactive (LED 12 is off) and the door/gate is in the closed position. Factory supplied board is preset to default settings and must be site adjusted.

1. Turn switch No.1 (program switch) ON. To turn the display back-light on, turn switch No.2 ON
2. Display will show the first parameter, P1
3. To change the parameter value press UP or DOWN buttons
4. To save the value, press the SET button
5. To modify the next parameter, press NEXT
6. To exit programming, turn switch No.1 OFF

The following is a list of parameter values that can be modified. 'P' = parameter, 'M' = motor, 'Def' = default, 'Now' = saved parameter value.

DISPLAY ON LCD	COMMENT	RANGE	MY SETTINGS
P1 = M1 Travel Time Def: 5 Now: 5.0s	Set motor 1 travel time	0 – 99 secs	
P2 = M2 Travel Time Def: 5 Now: 5.0s	Set motor 2 travel time	0 – 99 secs	
P3 = Auto Cis Delay Def: 1 Now: 1.0s	Set hold open time delay before closing	0 – 99 secs	
P4 = M1 Close Delay Def: 1 Now: 1.0s	Motor 1 closing leaf delay	0 – 10 secs	

P5 = M1 Open Delay Def: 0 Now: 0.0s	Motor 1 opening leaf delay	0 – 4 secs
P6 = M2 Open Delay Def: 2 Now: 2.0s	Motor 2 opening leaf delay	0 – 4 secs
P7 = M1 Force Adj Def: 50% Now: 50%	Adjust motor 1 force	30 – 100 %
P8 = M2 Force Adj Def: 50% Now: 50%	Adjust motor 2 force	30 – 100 %
P9 = M1 Slow Down Def: 0 Now: 0.0s	Motor 1 slow down prior to stopping	0 – 10 secs
P10 = M2 Slow Down Def: 0 Now: 0.0s	Motor 2 slow down prior to stopping	0 – 10 secs
P11 = M1 Soft Start Def: 0 Now: 0.0s	Motor 1 soft start	0 – 5 secs
P12 = M2 Soft Start Def: 0 Now: 0.0s	Motor 2 soft start	0 – 5 secs
P13 = Lock Shunt Def: No Now: No	Motor 1 to run forward from closed 1.5 secs before opening	No – Yes
P14 = Back Up Timer Def: 0 Now: 0.0s	Mode 3 only. Close door/gate if back out occurs & close PE/loop not triggered. WARNING: must use safety devices	0 – 65 secs
P15 = PE Stop On Open Def: No Now: No	Motor stops when PE/Loop triggered if motor opening. Next motor direction mode dependent	No – Yes
P16 = PE Reverse Def: Yes Now: Yes	Motor reverses when PE/Loop triggered if motor closing. Next motor direction mode dependent. If set to No motor stops when PE/Loop triggered. Next motor direction mode dependent	No – Yes
P17 = PED Travel Def: 5 Now: 5.0s	Motor one only. Set pedestrian mode travel time	0 – 99 secs
P18 = PED Auto Close Def: No Now: No	Set pedestrian mode to automatic close	NO - YES. Refer Parameter 3

P19 = Lock Pulse Def: 3 Now: 3.0s	Set lock pulse duration	0 – 4 secs
P20 = Lock On Cls Def: No Now: No	If set to YES the lock will activate on the start of closing cycle	No – Yes
P21 = Lock/Magnet Def: Lok Now: Lok	The lock relay can be configured to control lock (power normally off) or magnet (power normally on)	Lock - Magnet
P22 = Pwr Fail Close Def: No Now: No	Set to YES gate/door will close automatically after power failure restored. Set to No gate/door will require a pulse to activate	No – Yes
P23 = Slow Speed Def: Med Now: Med	Parameter P8 and P9 dependent. Slow = 60 %, torque, Med = 70 % torque, Fast = 80 % torque. Adjust to suit site conditions and motors	Slow, Med, Fast
P24 = ExtraOpnTime Def: 2 Now: 2.0s	Add additional open time to P1 and P2 to compensate for wind loading or mechanical loading	0 – 10 secs
P25 = ExtraClsTime Def: 2 Now: 2.0s	Add additional close time to P1 and P2 to compensate for wind loading or mechanical loading	0 – 10 secs
P26 = Total Cycles #Cycles = 0000000	Non resettable cycle counter	Cycle = one complete open to close
P27 = Resettable Cycl #Cycles = 0000000	Resettable cycle counter	
P28 = Reset Cycles Def: No Now: No	Reset parameter P27	
P29 = Auto Set Up Def: No Now: No	Automatically set the travel time for motor one and motor two: 1. Establish correct motor direction; 2. Disengage motors from gearbox and move gate/door to fully closed position; 3. Engage motor(s); 4a. Motor(s) with limits: Select Yes - gate/door automatically travels to open limit and parameters P1 & P2 now reflect this travel time; 4b. Motor(s) without limits: Program hand transmitter button 1 to motor 1 & button 2 to motor 2. Select Yes - gate/door automatically travels to open stop. Stop travel time as required by PB1 and PB2 & parameters P1 & P2 now reflect this travel time.	
P30 = Reset Default Def: No Now: No	Reset all parameters P1 to P29 to the default values (excluding P26)	
P31 = Software Rev Revision 2.1	Software version	

8.0 JP3 OUTPUT OPTIONS

Please note all JP3 options require a plug

OPTION 1

Link 2	Link 5	Link 6
1 + 2	1 + 2	1 + 2

In option 1, JP3 output is compatible with all previous IK series boards. JP3 can be used to start a timer (for example - on garden lights) or a relay kit could be plugged into it and used to control warning lights.

□ 1	← NO AUX open relay	— Pin1 output is ON during opening cycle
□ 2	← NO AUX close relay	— Pin2 output is ON during closing cycle
□ 3	← +12V	— Pin3 is +12V can be used to supply accessory max, 100mA
□ 4	← Common AUX relay	— Pin4 is 0V output
□ 5	← Board status output	— Pin5 is the board status output, ON when the board is active

* Option 1 is the default setting on the MB206

OPTION 2

Link 2	Link 5	Link 6
2 + 3	1 + 2	1 + 2

In option 2 JP3 output can be used to control Variable Speed Drive (inverter). The output is a DRY contact and it can be used to send an open and close signal to any inverter.

□ 1	← NO AUX open relay	— Pin1 output is ON during opening cycle
□ 2	← NO AUX close relay	— Pin2 output is ON during closing cycle
□ 3	← +12V	— Pin3 is +12V can be used to supply accessory max, 100mA
□ 4	← Common AUX relay	— Pin4 is DRY output
□ 5	← Board status output	— Pin5 is the board status output, ON when the board is active

* Option 2 is used to configure JP3 output Pin1, Pin2, and Pin3 to dry contact output

OPTION 3

Link 2	Link 5	Link 6
2 + 3	2 + 3	2 + 3

In option 3 JP3 output can be used to monitor the door/boom gate open and close position. The output is DRY contact and it can be used to send a signal to any monitoring system to indicate the open and close position.

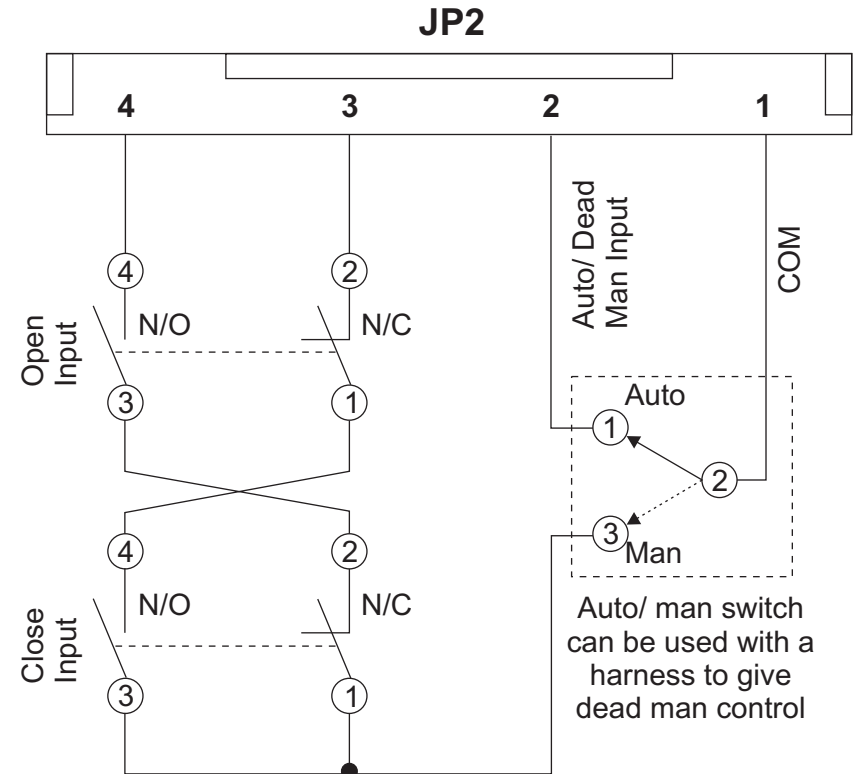
□ 1	← NO AUX open relay	— Pin1 output is ON when door/boom gate reaches open limit switch
□ 2	← NO AUX close relay	— Pin2 output is ON when door/boom gate reaches close limit switch
□ 3	← +12V	— Pin3 is +12V can be used to supply accessory max, 100mA
□ 4	← Common AUX relay	— Pin4 is DRY output
□ 5	← Board status output	— Pin5 is the board status output, ON when the board is active

* Option 3 Jp3 output is used to monitor the door/boom gate open and close position

9.0 JP2 INPUT OPTION

The JP2 input option is used to change the mode of operation from automatic control to **Dead Man** push button control.

A plug and harness is required for dead man input control (optional extra). The board is supplied with a link on JP2 for automatic control.



10.0 LOCK AND MAGNET OUTPUT

Link 1

1 + 2	NC output for 24V magnet
2 + 3	NO output for 12V lock

} Refer to function P21