

5th Edition

# Variable Speed Drive Controller with Eclipse® Operating System (EOS)

**Eclipse®**  
**MCi**

**VSD kits suitable for motors ranging from 0.4 to 2.2 kW**



**ELSEMA**   
GATE & DOOR CONTROLS  
[www.elsema.com](http://www.elsema.com)

**Controller with Eclipse Operating  
System for Variable Speed Drive  
Operated Gates.**

**Setup and Technical Information**

## Important warning and safety instructions

All installations and testing must be done only after reading and understanding all instructions carefully. All wiring should be done only by trained technical personnel. Failing to follow instructions and the safety warnings may result in serious injury and/or damage to property.

Elsema Pty Ltd shall not be liable for any injury, damage, cost, expense or any claim whatsoever to any person or property which may result from improper use or installation of this product.

Risk in the goods purchased shall unless otherwise agreed in written pass to the buyer upon delivery of the goods.

Any figures or estimates given for performance of goods are based upon the company's experience and is what the company obtains on tests. The company will not accept liability for failure to comply with the figures or estimates due to the nature of variable conditions affecting for example Radio Remote Controls.

Elsema Pty Ltd recommends that safety devices such as Photo Electric beam and safety edge sensor are installed on automatic openers.

Please keep this setup instruction for future reference.



Installed by: \_\_\_\_\_

Service date: \_\_\_\_\_

# Index

Features .....	4
Description.....	4
Part Number.....	5
Menu Structure .....	6
Connection Diagram .....	8
Operations Control.....	9
Supply and Motor Inputs .....	10
Inverter Connection.....	11
Limit Switches.....	12
Setup i-Learning Steps.....	13
Menu 1 – Auto Close .....	14
Menu 2 – Pedestrian Access Features .....	15
Menu 3 – Input Functions.....	16
Menu 4 – Photoelectric Beam .....	17
Menu 5 – Relay Output Functions.....	18
Menu 6 – Output Modes .....	20
Menu 7 – Special Features.....	23
Menu 8 – Leaf Delay .....	24
Menu 9 – Motor 1 Obstruction & Overrun Time.....	25
Menu 10 – Motor 2 Overrun Time.....	26
Menu 11 – Stop & Reverse Time .....	26
Menu 12 – i-Learning.....	26
Menu 13 – Password .....	27
Menu 14 – Operational Records.....	27
Menu 15 – Tools.....	28
Menu 16 – VSD Setting .....	29
Accessories.....	30
PentaFOB® Programming Instructions.....	31

# Features

- › Suitable for swing and sliding gates
- › Double or single motor operation
- › Eclipse Operating System (EOS)
- › Slow speed adjustment
- › Large 4-line LCD to indicate controllers status and setup instructions
- › 1-Touch control for easy setup
- › 12 Volt DC Output to power accessories
- › Various inputs, push button, open only, close only, stop, pedestrian and photoelectric beam
- › Adjustable auto close and pedestrian access
- › Adjustable lock and courtesy light outputs
- › Variable photoelectric safety beam functions
- › Auxiliary inputs for fire alarms.
- › Service counters, password protection, holiday mode and many more features

# Description

The MCi Controller has been specifically designed to control Variable Speed Drives (VSD). Elsema's MCi-VSD kit comes with its own Omron VSD for controlling a 3-phase 240 Volt AC motor.

The MCi card only version can also be used to control almost all types of VSD's or even contactors. The relay outputs on the MCi are voltage free contacts, allowing the user to connect it to VSD's Open, Close & Common inputs (Forward, Reverse & Common). It can also be used to operate coils of open and close contactors.

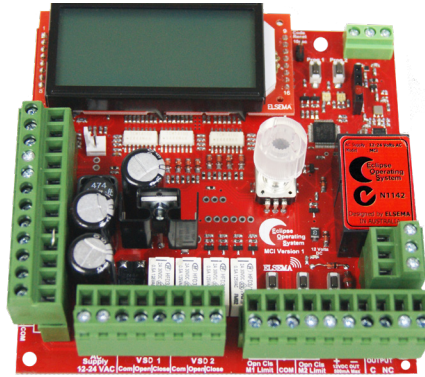
The MCi's Eclipse® Operating System (EOS) automatically does all the confusing and hard to find VSD parameters settings by simply asking the user a few questions. It also gives the user options for more advance settings, where the user can configure each parameter of the VSD. All selections are done in the EOS menu instead of the VSD.

Eclipse® Operating System (EOS) is a user friendly menu driven system that uses the 1-touch button to control, setup and run automatic gates, doors and barriers. It uses a large 4-line LCD screen showing live reading of the motor performance and status of all inputs and outputs.

The MCi is not just the next generation but the "Next Transformation" in the gate and door industry creating an Eclipse over previously developed motor controllers. With its rich functions, consumer friendly price and with the focus during development being ease of use and setup makes this controller the ultimate board to control your motors.

# Part Numbers

<b>MCi</b>	PCB Only		
<b>MCi-VSD04</b>	Suitable for 0.4kW motor	<b>MCi-VSD07</b>	Suitable for 0.75kW motor
<b>MCi-VSD15</b>	Suitable for 1.5kW motor	<b>MCi-VSD22</b>	Suitable for 2.2kW motor



MCI



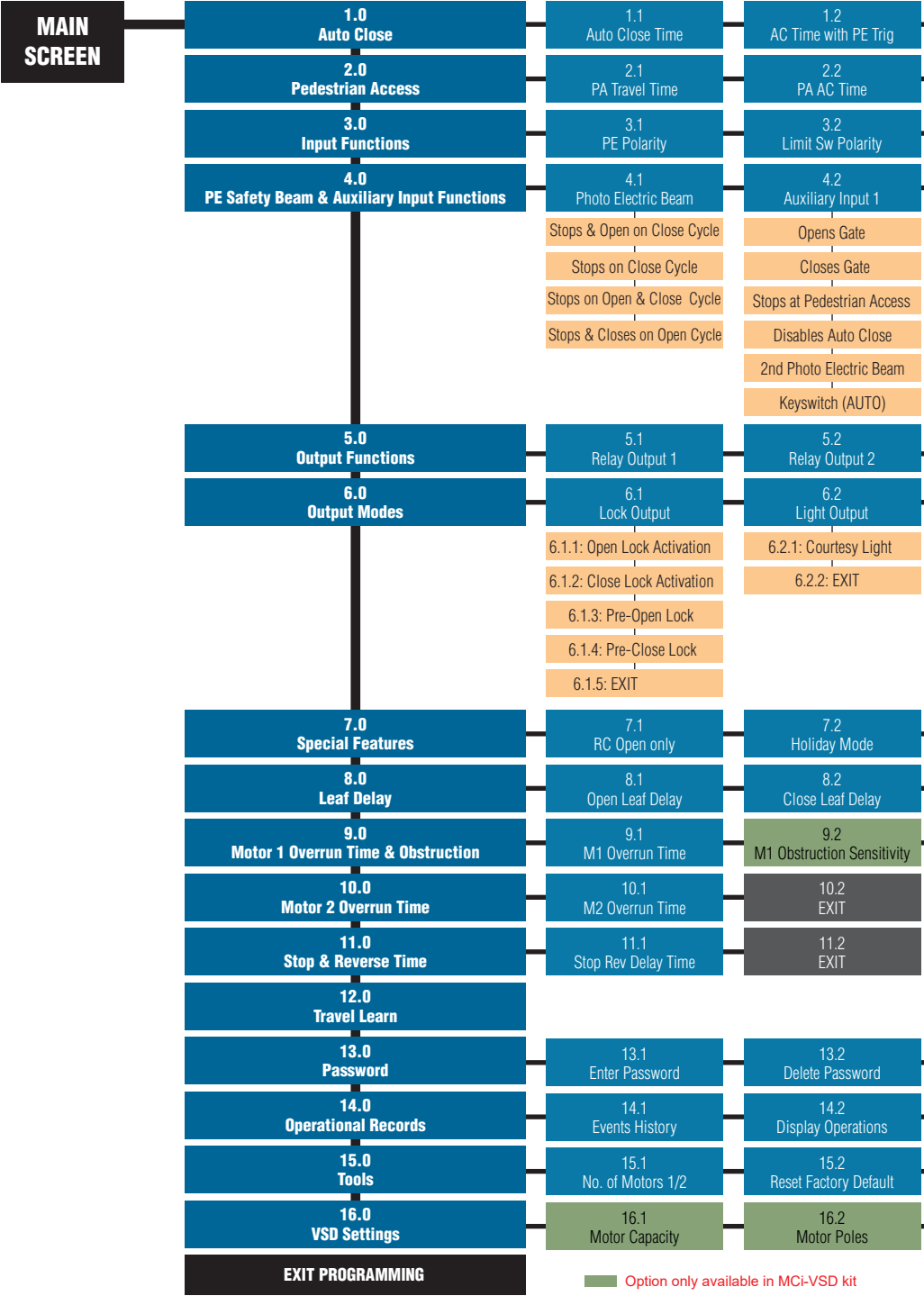
MCI-VSD04

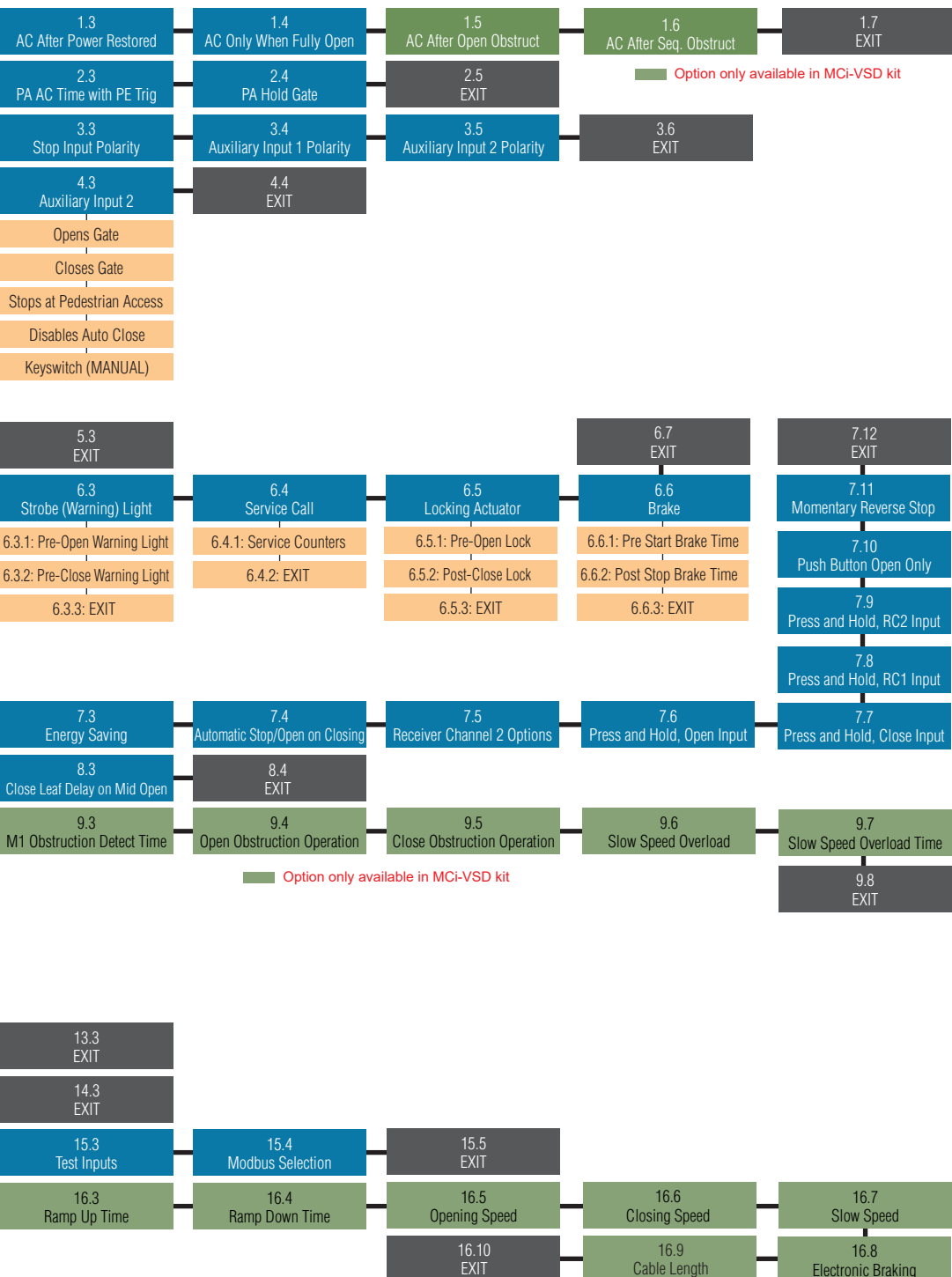


External controls can be installed on request

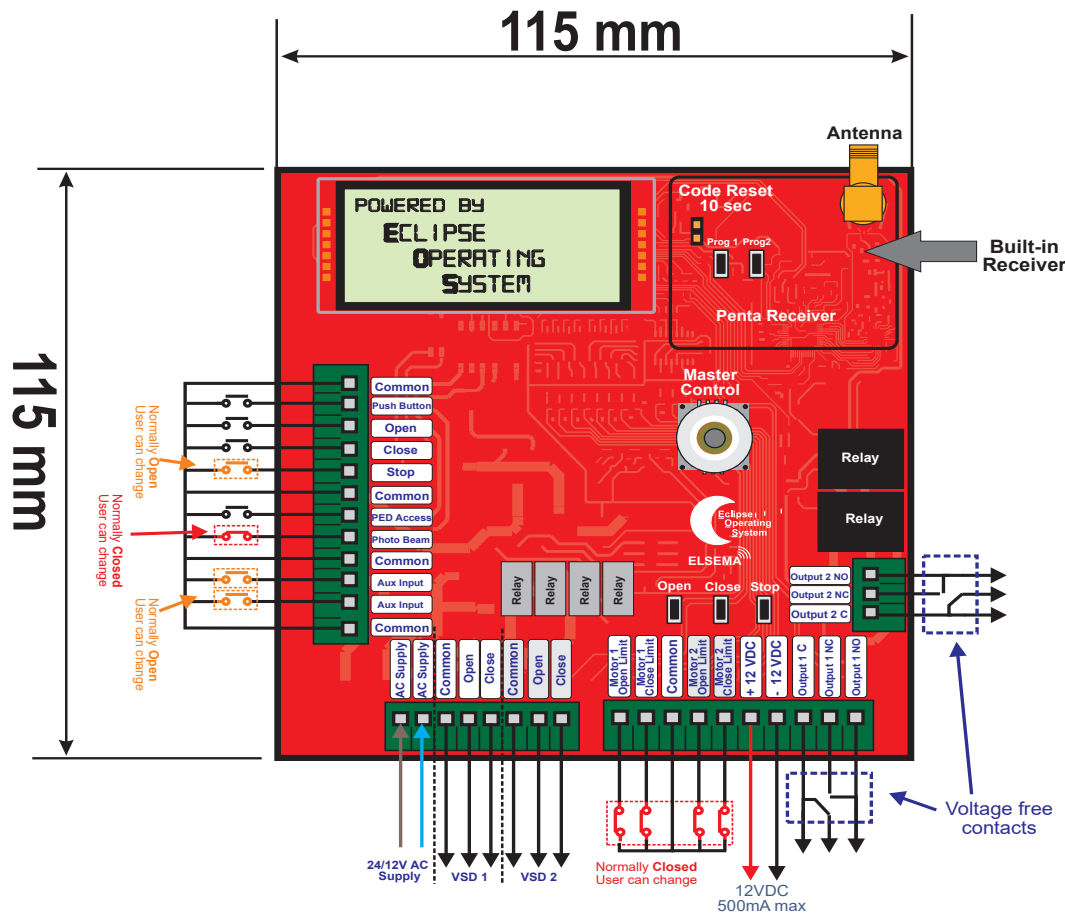
# Menu Structure

Press Master Control for 2 seconds to enter the menu





# MCi Connection Diagram





<b>Common</b>	Common terminal for any of the inputs, including push button, open only, close only, stop and pedestrian access.
<b>Push Button</b>	Used to connect an external push button to operate the gate or door. Normally open input.
<b>Open Only</b>	Used to connect an external push button to open the gate or door. With this input gate or door can not be closed. Holding this input will prevent closing. Normally Open input.
<b>Close Only</b>	Used to connect an external push button to close the gate or door. With this input gate or door can not be opened. Holding this input will prevent opening. Factory Default Normally Open.
<b>Stop</b>	Used to connect an external push button to stop the gate or door. Holding this input will prevent the gate or door from opening or closing. Normally Open input.
<b>Common</b>	Common terminal for any of the inputs, including push button, open only, close only, stop and pedestrian access.
<b>Pedestrian Access</b>	Used to connect an external push button to open gate or door partially for pedestrian access. Normally Open input.
<b>Photo Electric Beam</b>	Used to connect a photo electric beam. Factory Default is Normally Closed input. User can change to Normally Open.
<b>Common</b>	Common terminal for any of the inputs, including push button, open only, close only, stop and pedestrian access.
<b>Auxiliary Input 1</b>	User selectable to open, close, pedestrian open, disable auto-close or keyswitch. Factory Default Normally Open.
<b>Auxiliary Input 2</b>	User selectable to open, close, pedestrian open, disable auto-close or keyswitch. Factory Default Normally Open.
<b>Common</b>	Common terminal for any of the inputs, including push button, open only, close only, stop and pedestrian access.

<b>12-24 Volts AC Supply</b>	Supply connection for the MCi card only.
<b>VSD 1</b>	Voltage free contacts. Connect to open, close and common terminal of the VSD. Contactor's can also be switched with these outputs. See wiring diagram.
<b>VSD 2</b>	Voltage free contacts. Connect to open, close and common terminal of the VSD. Contactor's can also be switched with these outputs. See wiring diagram

<b>Motor 1 Limit Switch</b>	If limit switches are used connect them to this terminal. Factory Default Normally Closed.
<b>Common</b>	Common terminal for any of the inputs, including push button, open only, close only, stop and pedestrian access.
<b>Motor 2 Limit Switch</b>	If limit switches are used connect them to this terminal. Factory Default Normally Closed.
<b>DC Output</b>	12VDC / 500mA. Use to supply accessories.
<b>Output 1</b>	Voltage free contacts for Lock, Light, Courtesy light or Service call.

<b>Output 2</b>	Voltage free contacts for Lock, Light, Courtesy light or Service call.
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# Electrical Wiring - Supply, Motors and Inputs

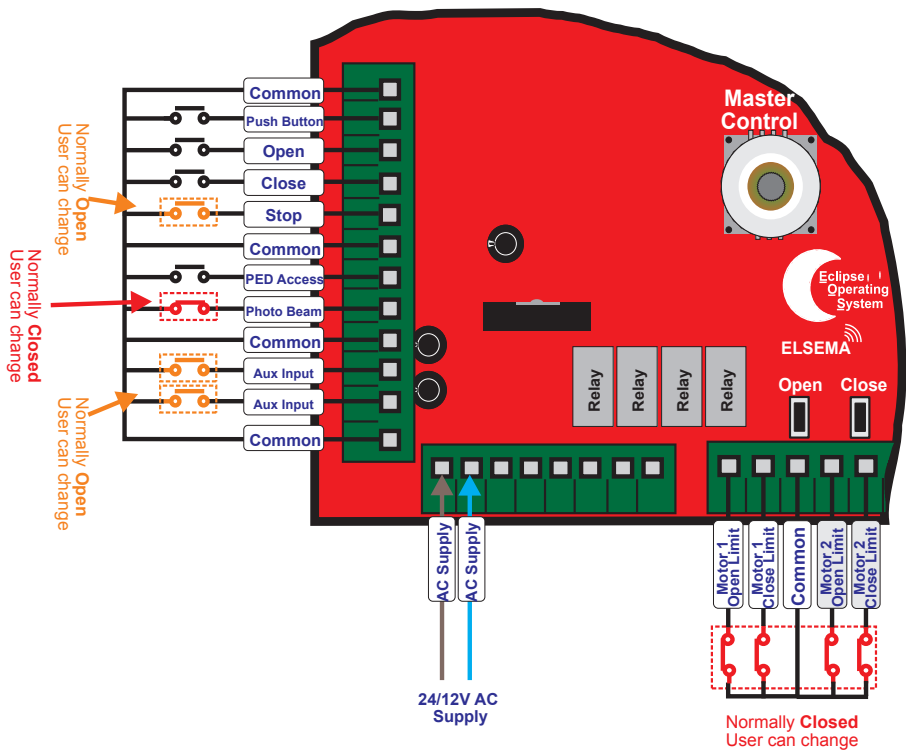


Always switch off power before doing any wiring.

Make sure that all the wiring is completed and that the motor is connected to the control card.

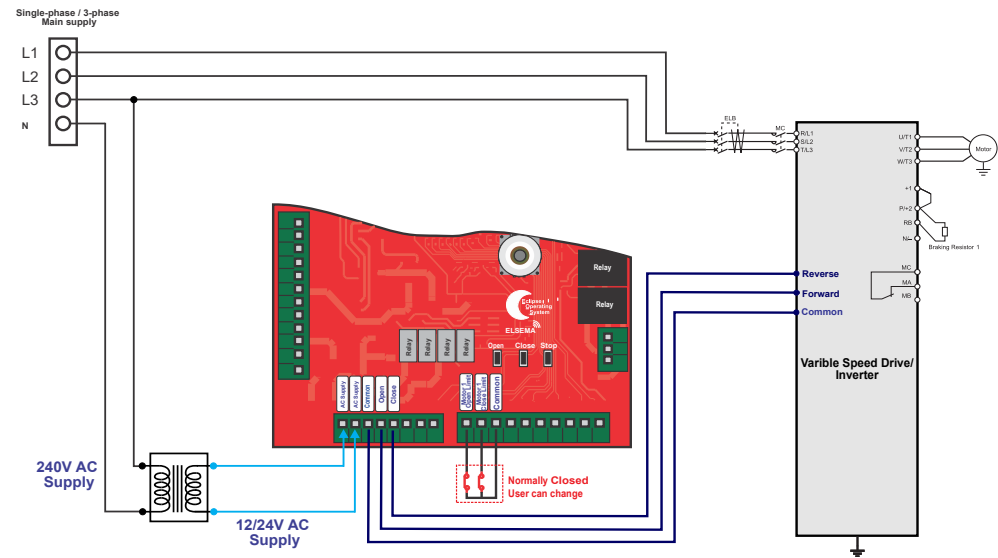
**Recommended wire strip length should be 12mm for all connections to the plug in terminal blocks.**

The diagram below shows the supply, motors, and inputs available and the factory default setting for each input.



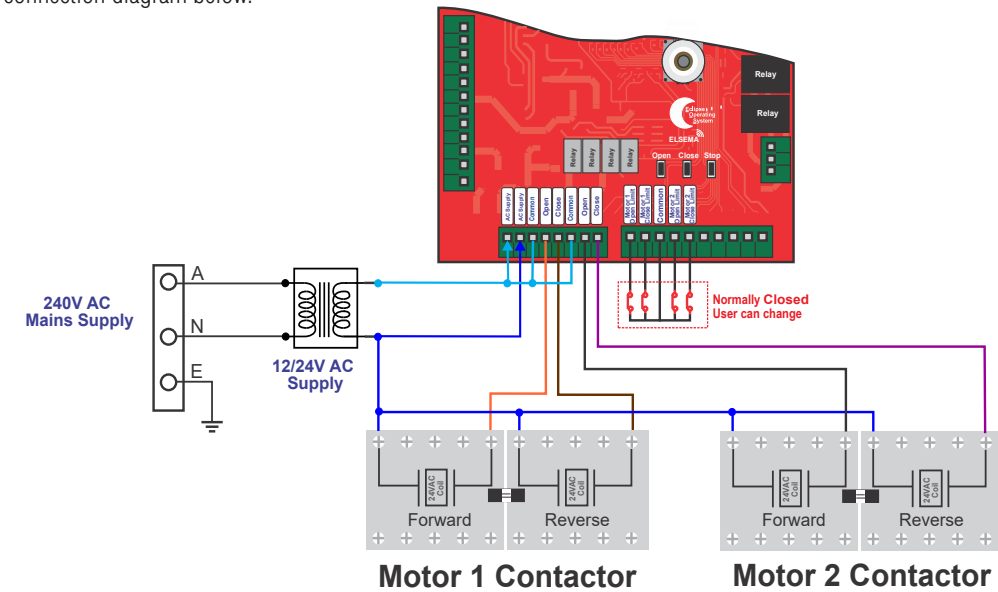
# Inverter Output

The **Voltage Free** outputs are connected to a VSD as shown in the diagram. If 2 VSD's are used, use the VSD 2 output to connect to the second VSD.



# Connecting Contactors

**Voltage Free** outputs for motor 1 and motor 2 can also be used to control low voltage contactors. See connection diagram below.

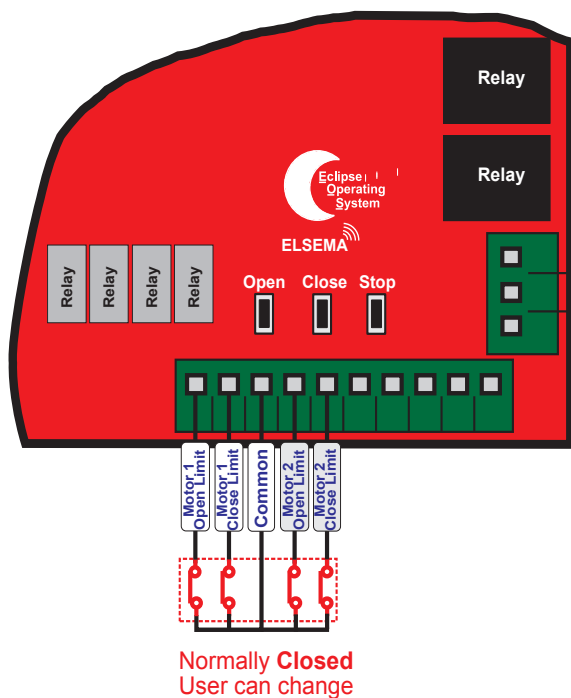


## Limit Switches

Limit switches must be connected to the MCi control card to determine the end of travel. Limit switch inputs are Normally Closed (NC) by factory default but it can be changed to Normally Open (NO) if required.

Limit switches can be used in 2 different configurations on the MCi-VSD version.

1. Limit switch initiates ramp down and the gate stops as per ramp down time set in the VSD.
2. Limit switch initiates slow speed and the gate stops on slow speed overload after hitting the end stoppers.



## Setup i-Learning Steps:

1. The i-Learning setup can always be interrupted with the stop button or by pressing the Master Control knob.
3. Enter Menu 12 to start i-Learning or new control cards will automatically prompt you to do the i-Learning.
4. Look at the LCD and follow the instructions displayed.
5. Buzzer will indicate learning was successful. If there was no buzzer check all electrical wiring including the power supply then go back to step 1.
6. If you hear the buzzer after the i-Learn, the gate or door is ready for use.

# Menu 1 – Auto Close

Auto Close is a feature that automatically closes the gate after a preset time has counted down to zero. The control card has a normal Auto Close and several special Auto Close features each one having its own countdown timers.

Elsema Pty Ltd recommends a Photoelectric Beam to be connected to the control card when any of the Auto Close options are used.

If the Stop input is activated Auto Close is disabled for that cycle only.

Auto Close timer will not count down if the Push Button, Open or Photoelectric Beam input is held active.

Menu No.	Auto Close Features	Factory Default	Adjustable
1.1	Normal Auto Close	Off	1 - 600 seconds
1.2	Auto Close with Photoelectric Trigger	Off	1 - 60 seconds
1.3	Auto Close after Power Restored	Off	1 - 60 seconds
1.4	Auto Close Only when Fully Opened	Off	Off / On
1.5	Auto Close after an Open Obstruction	Off	1 - 60 seconds
1.6	Normal Auto Close on Sequential Obstructions	3	Min = Off, Max = 5
1.7	Exit		

## 1.1 Normal Auto Close

**The highlighted options are only available in MCI-VSD kit**

The gate will close after this timer has counted down to zero.

## 1.2 Auto Close with Photoelectric Trigger

This Auto Close starts counting down as soon as the Photoelectric Beam has been cleared after a trigger even if the gate is not fully open. If there is no Photoelectric Beam trigger the gate will not Auto Close.

## 1.3 Auto Close after Power Restored

If the gate is open in any position and then there is a power failure, when power is reconnected the gate will close with this timer.

## 1.4 Auto Close Only when Fully Opened

The auto close timer will not time out unless the gates are fully opened.

## 1.5 Auto Close after an Open Obstruction

If the gate opens and hits an obstruction, normally the gate will stop and remain in this position. If this feature is enabled an obstruction will start the timer count down and at zero, will close the gate.

## 1.6 Normal Auto Close on Sequential Obstructions

If the normal Auto Close is set and during closing there is an obstruction, the gate will stop and reopen. This setting sets the amount of times the gate will try to Auto Close. After trying for the set limit the gate will remain open.

## Menu 2 – Pedestrian Access

There are several types of Pedestrian access modes. Pedestrian access opens the gate for a short time to allow someone to walk through the gate but does not allow a vehicle access.

Elsema Pty Ltd recommends a Photoelectric Beam to be connected to the control card when any of the Auto Close options are used.

Menu No.	Pedestrian Access Features	Factory Default	Adjustable
2.1	Pedestrian Access Travel Time	5 seconds	3 - 20 seconds
2.2	Pedestrian Access Auto Close Time	Off	1 - 60 seconds
2.3	Pedestrian Access Auto Close Time with PE trigger	Off	1 - 60 seconds
2.4	Pedestrian Access with Hold Gate	Off	Off / On
2.5	Exit		

### 2.1 Pedestrian Access Travel Time

This sets the time the gate opens when a pedestrian access input is activated.

### 2.2 Pedestrian Access Auto Close Time

This sets the countdown timer for automatically closing the gate when a pedestrian access input is activated.

### 2.3 Pedestrian Access Auto Close Time with PE Trigger

This Auto Close starts counting down as soon as the Photoelectric Beam has been cleared after a trigger, when the gate is in the Pedestrian Access position. If there is no Photoelectric Beam trigger the gate will remain in Pedestrian Access position.

### 2.4 Pedestrian Access with Hold Gate

If the pedestrian access hold gate is ON and the Pedestrian access input is permanently activated the gate will remain open in the pedestrian access position. Open input, Close input, Push Button input and remote controls are disabled. Used in Fire Exit applications.

# Menu 3 – Input Functions

This allows you to change the polarity of photoelectric beam, limit switch inputs, Stop Input and Auxiliary Input.

Menu No.	Input Functions	Factory Default	Adjustable
3.1	Photoelectric Beam Polarity	Normally Closed	Normally Closed / Normally Open
3.2	Limit Switch Polarity	Normally Closed	Normally Closed / Normally Open
3.3	Stop Input Polarity	Normally Open	Normally Closed / Normally Open
3.4	Auxiliary Input 1	Normally Open	Normally Closed / Normally Open /
3.5	Auxiliary Input 2	Normally Open	Normally Closed / Normally Open /
3.6	Exit		

# Menu 4 – Photoelectric Beam & Auxiliary Input

The Photoelectric Beam or sensor is a safety device which is placed across the gate and when the beam is obstructed it stops a moving gate. The operation after the gate stops can be selected in this menu.

Elsema sells several different types of photoelectric beams. We stock Retro-Reflective and Through Beam photoelectric beams.



**PE1500**  
(Polarised Retro-Reflective Type)



**PE24**  
(Through-Beam type)



Elsema Pty Ltd recommends a Photoelectric Beam to be connected to the control card when any of the Auto Close options are used.

Menu No.	Photoelectric Beam Feature	Factory Default	Adjustable
4.1	Photoelectric Beam	PE Beam stops and opens gate on close cycle	PE Beam stops and opens gate on close cycle ----- PE Beam stops gate on close cycle ----- PE Beam stops gate on open & close cycle ----- PE Beam stops and closes gate on open cycle
4.2	Auxiliary Input 1	Disabled	Opens gate ----- Closes gate ----- Stops at Pedestrian Access ----- Disables Auto Close ----- 2nd Photoelectric Beam* ----- Keyswitch (Auto)
4.3	Auxiliary Input 2	Disabled	Opens gate ----- Closes gate ----- Stops at Pedestrian Access ----- Disables Auto Close ----- Keyswitch (Manual)
4.4	Exit		

\* 2nd Photoelectric beam can be configured to perform in the same way as Menu 4.1

# Menu 5 – Relay Output Functions

The control card has two relay outputs, Output 1 and Output 2. The user can change the function of these outputs to lock courtesy light, service call, strobe (Warning) light indicator, locking actuator, gate open (gate not fully closed) indicator or brake.

Output 1 is a voltage free relay output with common, normally open and normally closed contacts. Factory default is lock release function.

Output 2 is a voltage free relay output with common, normally open and normally closed contacts. Factory default is courtesy light function.

Menu No.	Relay Output Function	Factory Default	Adjustable
5.1	Relay Output 1	Lock	Lock ----- Courtesy Light ----- Service Call ----- Strobe (Warning) Light ----- Locking Actuator ----- Gate open ----- Brake
5.2	Relay Output 2	Courtesy Light	Lock ----- Courtesy Light ----- Service Call ----- Strobe (Warning) Light ----- Gate Open ----- Brake
5.3	Exit		

## Lock Output

This output is used to power an electrical lock. The factory default for the lock is on output 1. Output 1 is a voltage-free relay contact with common, normally open and normally closed contacts. Having it voltage-free allows you to connect either 12VDC/AC, 24VDC/AC or 240VAC to the common. The normally open contact drives the lock.

## Courtesy Light

This output is used to power a courtesy light. The factory default for the courtesy light is on output 2. Output 2 is a voltage-free relay contact with common, normally open and normally closed contacts. Having it voltage-free allows you to connect either 12VDC/AC, 24VDC/AC or 240VAC supply to the common. The normally open contact drives the light.

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## Service Call Output

Either output 1 or output 2 can be changed to service call indicator. This will trigger the output when the software service counter is reached. Used to alert installers or owners when the gate is to be serviced. Use Elsema's GSM Receiver allows installers or owners to get a phone call and SMS message when the service is due.

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## Strobe (Warning) Light when Opening or Closing

The relay output is activated whenever the gates are operating. The factory default is Off. Either output 1 or output 2 can be changed to strobe (Warning) light. Both relay outputs are voltage-free contacts. Having it voltage-free allows you to connect either 12VDC/AC, 24VDC/AC or 240VAC supply to the common to power the strobe light. Then the normally open contact drives the light.

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## Locking Actuator

Locking actuator mode uses both relay output 1 and relay output 2. The 2 outputs are used to change the polarity of the locking actuator to lock and unlock during opening and closing cycle. During pre-open relay output 1 is "On" and during post-close relay output 2 is "On". Pre-open and post-close times are adjustable.

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## Gate Open

The relay output is activated whenever the gate is not fully closed. The factory default is Off. Either output 1 or output 2 can be changed to gate open.

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## Brake

This output is used to power a brake. Either output 1 or output 2 can be changed to brake. Both relay outputs are voltage-free contacts. Having it voltage-free allows you to connect either 12VDC/AC, 24VDC/AC or 240VAC to the common. The normally open contact drives the brake.

# Menu 6 – Relay Output Modes

## Menu 6.1 – Lock Output Modes

The relay output in the lock mode can be configured in different ways.

Menu No.	Lock Modes	Factory Default	Adjustable
6.1.1	Open Lock Activation	2 seconds	1 – 30 seconds or hold
6.1.2	Close Lock Activation	Off	1 – 30 seconds or hold
6.1.3	Open Pre-Lock Activation	Off	1 – 30 seconds
6.1.4	Close Pre-Lock Activation	Off	1 – 30 seconds
6.1.5	Exit		

### 6.1.1 Open Lock Activation

This sets the time the output is activated. Factory default is 2 seconds. Setting it to Hold means the output is activated for the total travel time in the open direction.

### 6.1.2 Close Lock Activation

This sets the time the output is activated. Factory default is off. Setting it to Hold means the output is activated for the total travel time in the close direction.

### 6.1.3 Open Pre-Lock Activation

This sets the time the output is activated before the gate starts in the open direction. Factory default is Off.

### 6.1.4 Close Pre-Lock Activation

This sets the time the output is activated before the gate starts in the close direction. Factory default is Off.

## Menu 6.2 – Courtesy Light Output Mode

The relay output in the courtesy mode can be adjusted from 30 seconds to 5 minutes. This sets the time the courtesy light is activated. Factory default is 1 minute.

Menu No.	Courtesy Light Mode	Factory Default	Adjustable
6.2.1	Courtesy Light Activation	1 minute	30 seconds to 5 minutes
6.2.2	Exit		

# Menu 6.3 – Strobe (Warning) Light Output Mode

The relay output in the strobe (Warning) light stays “On” while the gate is moving. This output can also be configured to come “On” before the gate starts to move.

Menu No.	Strobe (Warning) Light Mode	Factory Default	Adjustable
6.3.1	Pre-Open Strobe (Warning) Light Activation	Off	1 – 30 seconds
6.3.2	Pre-Close Strobe (Warning) Light Activation	Off	1 – 30 seconds
6.3.3	Exit		

## 6.3.1 Pre-Open Strobe Light Activation

This sets the time the strobe light is activated before the gate operates in the open direction. Factory default is Off.

## 6.3.2 Pre-Close Strobe Light Activation

This sets the time the strobe light is activated before the gate operates in the close direction. Factory default is Off.

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# Menu 6.4 – Service Call Output Mode

This sets the number of complete cycles (Open and Close) required before the built-in buzzer is activated. Also the control card outputs can be configured to be activated if the number of cycles is completed. When “Service Call Due” message shows up on the LCD a service call is required. After service has been done, follow the messages on the LCD.

Menu No.	Service Call Mode	Factory Default	Adjustable
6.4.1	Service Counter	Off	Min: 2000 to Max: 50,000
6.4.2	Exit		

# Menu 6.5 – Locking Actuator Output Mode

The time for which relay output 1 turns “On” before the gate starts to open and the time for which relay 2 turns “On” after the gate is fully closed can be adjusted as below:

Menu No.	Locking Actuator	Factory Default	Adjustable
6.5.1	Pre-Open Lock Activation	Off	1 – 30 seconds
6.5.2	Post-Close Lock Activation	Off	1 – 30 seconds
6.5.3	Exit		

## 6.5.1 Pre-Open Locking Actuator Activation

This sets the time relay 1 is activated before the gate operates in the open direction. Factory default is Off.

## 6.5.2 Post-Close Locking Actuator Activation

This sets the time relay 2 is activated after the gate is fully closed. Factory default is Off.

---

# Menu 6.6 – Brake Output Mode

The relay output in the lock mode can be configured in different ways.

Menu No.	Locking Actuator	Factory Default	Adjustable
6.6.1	Pre Start Brake Time	1 Second	0 – 60 seconds
6.6.2	Post Stop Brake Time	1 Second	0 – 60 seconds
6.6.3	Exit		

## 6.6.1 Pre-Start Brake Time

This sets the time relay is activated before the motor starts to run.

## 6.6.2 Post-Stop Brake Time

This sets the time relay is activated after the motor has stopped.

# Menu 7 – Special Features

The control card has many special features that can all be customised to your specific application.

Menu No.	Special Features	Factory Default	Adjustable
7.1	Remote Control Open Only	Off	Off/On
7.2	Holiday Mode	Off	Off/On
7.3	Energy Saving Mode	Off	Off/On
7.4	Automatic Stop/Open on Closing	On	Off/On
7.5	Receiver Channel 2 Options	Off	Off / Light / Pedestrian Access / Close
7.6	Press and Hold for Open Input	Off	Off/On
7.7	Press and Hold for Close Input	Off	Off/On
7.8	Press and Hold for Receiver Ch1 Input	Off	Off/On
7.9	Press and Hold for Receiver Ch2 Input	Off	Off/On
7.10	Push Button Open Only	Off	Off/On
7.11	Momentary Reverse on Stop Input	Off	Off/On
7.12	Exit		

## 7.1 Remote Control Open Only

By default the remote control allows the user to open and close the gates. This mode disables closing for the remote controls. Usually the Auto Close is used to close the gate.

## 7.2 Holiday Mode

This feature disables all the remote controls.

## 7.3 Energy Saving Mode

This puts the control card to very low standby current while still maintaining normal functions and operations.

## 7.4 Automatic Stop & Open on Closing

By default if the gate is closing and a Push Button or remote control is activated it will automatically stop and open the gate. When this feature is disabled then the gate will stop on an activation of the Push Button or remote control.

## 7.5 Receiver Channel 2 Options

The built-in receivers 2nd channel can be programmed to control a courtesy light, pedestrian access or close only function.

## 7.6 & 7.7 Press and Hold for Open and Close Inputs

If this feature is ON, the user must continuously press the open or close input for the gate to open or close. The gate will stop as soon as the input is released.

## 7.8 & 7.9 Press and Hold for Remote Channel 1 (Open) and Channel 2 (Close)

The remote channel 1 & 2 buttons will need to be programmed to receiver channel 1 & 2. The user must continuously press the remote button for the gate to open or close. The gate will stop as soon as the button is released.

### 7.10 Push Button Open Only

If this feature is ON, Push Button input will only Open the gate. In public access areas user should only be able to open the gate and not worry about closing it. Usually the Auto Close is used to close the gate. This mode disables closing for the Push Button input.

### 7.11 Momentary Reverse on Stop Input

When this feature is ON and if stop input is activated, both gates will stop and reverse for 1 sec.

---

## Menu 8 – Leaf Delay

Leaf delay is used when one gate leaf will close in an overlapping position to the first closed leaf. The control card has separate leaf delay for the open and close directions.

When the control card is used with a single motor the leaf delay mode is disabled.

Menu No.	Leaf Delay	Factory Default	Adjustable
8.1	Open Leaf Delay	3 seconds	Off - 25 seconds
8.2	Close Leaf Delay	3 seconds	Off - 25 seconds
8.3	Close Leaf Delay on Mid Stop	Enabled	Enabled / Disable
8.4	Exit		

### 8.1 Open Leaf Delay

Motor 1 will start opening first. After leaf delay time has expired motor 2 will start opening.

### 8.2 Close Leaf Delay

Motor 2 will start closing first. After leaf delay time has expired motor 1 will start closing.

### 8.3 Close Leaf Delay on Mid Stop

By default motor 1 will always have delay when closing even if the gate is not fully open. When disabled both motor 1 and motor 2 will start closing at the same time except when fully open.



# Menu 9 – Motor 1 Obstruction and Overrun Time

This sets the force and the overrun time for motor 1.

Menu No.	Motor 1 Obstruction Sensitivity and Overrun Time	Factory Default	Adjustable
9.1	Motor 1 Overrun Time	20 seconds	Off - 30 seconds
9.2	Motor 1 Obstruction Sensitivity	Off	1 - 10 or Off
9.3	Motor 1 Obstruction Detect Time	5	1 to 10
9.4	Opening Direction : Gate Movement after Obstruction	Stop	Stop / Reverse for 2 sec / Reverse Fully
9.5	Closing Direction : Gate Movement after Obstruction	Reverse for 2 seconds	Stop / Reverse for 2 sec / Reverse Fully
9.6	Slow Speed Overload	120%	105% to 150%
9.7	Slow Speed Overload Time	5	1 to 10
9.8	Exit		

The highlighted options are only available in MCI-VSD kit

## 9.1 Motor 1 Overrun Time

This sets the overrun time for motor 1.

## 9.2 and 9.3 Motor 1 Obstruction Sensitivity and Detect Time

This sets the time and sensitivity after which, the motor will sense and obstruction.

## 9.4 Opening Direction: Gate Movement after Obstruction

After an obstruction has occurred the gate will either stop, reverse for 2 seconds or reverse fully.

## 9.5 Closing Direction: Gate Movement after Obstruction

After an obstruction has occurred the gate will either stop, reverse for 2 seconds or reverse fully.

## 9.6 and 9.7 Slow Speed Overload and Detect Time

This will stop the motors when the current reaches the set value in slow speed.

# Menu 10 – Motor 2 Force and Overrun Time

This sets the overrun time for motor 2.

Menu No.	Motor 2 Overrun Time	Factory Default	Adjustable
10.1	Motor 2 Overrun Time	20 seconds	Off - 30 seconds
10.2	Exit		

## 10.1 Motor 2 Overrun Time

This sets the overrun time for motor 2.

---

# Menu 11 – Stop and Reverse Delay Time

Menu No.	Stop and reverse Delay Time	Factory Default	Adjustable
11.1	Reverse Delay Time	1 second	0.5 - 2.5 seconds
11.2	Exit		

## 11.1 Stop and Reverse Delay Time

This sets the time after which the gate will reverse after it's interrupted during it's opening or closing cycle.

---

# Menu 12 – i-Learning

This feature allows you to do the intelligent travel learning of the gates. Follow the messages on the LCD to complete the learning.

# Menu 13 – Password

This will allow the user to enter a password to prevent unauthorised users from entering the control card settings. User must remember the password. The only way to reset a lost password is to send the control card back to Elsema.

To delete a password select Menu 13.2 and press Master Control.

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# Menu 14 – Operational Records

This is for information only.

Menu No.	Operational Records
14.1	Event History, up to 100 events are recorded in the memory
14.2	Displays Gates Operations
14.3	Exit

## 14.1 Event History

The event history will store last 100 events. The following events are recorded into the memory: Power On, All input activations, Successful opening, Successful closing, Auto close, i-Learning and Factory Reset. Obstruction detection is only recorded on MCi-VSD kit.

## 14.2 Displays Gates Operations

This displays the number of open cycles, close cycles and pedestrian cycles.

# Menu 15 – Tools

Menu No.	Tools
15.1	Number of Motors, Single or Double Gate System
15.2	Resets Controller to Factory Settings
15.3	Test Inputs
15.4	Exit

## 15.1 Number of Motors

This allows you to manually set the control card to a single motor or a double motor.

## 15.2 Resets Controller

Reset all settings to factory default. Also removes password.

## 15.3 Test Inputs

This allows you to test all the external devices connected to the controllers inputs. UPPERCASE means input is activated and lowercase means input is deactivated.

# Menu 16 – VSD Setting

Menu No.	Tools	Factory Default	Adjustable
16.1	Motor Capacity	0.2 kW	0.2, 0.4, 0.75, 1.5, 2.2 kW
16.2	Number of Motor Poles	2	2 / 4 / 6 Poles
16.3	Ramp Up Time	2 seconds	1.2 - 5 seconds
16.4	Ramp Down Time	2 seconds	0.8 - 5 seconds
16.5	Opening Speed	50 Hz	30 - 60 Hz
16.6	Closing Speed	50 Hz	30 - 60 Hz
16.7	Slow Speed	15 Hz	6 - 20 Hz
16.8	Electronic Braking	STOP & PE input	Off ----- All Mid Travel Stops ----- STOP & PE input
16.9	Exit		

## 16.1 Motors Capacity

This allows you to select the size of the motor used.

**The highlighted options are only available in MCI-VSD kit**

## 16.2 Number of Motor Poles

Motors can be 2, 4, or 6 poles. Check your motor for number of poles.

## 16.3 & 16.4 Ramp Up and Ramp Down Time

The ramp up time is the time it takes for the motor to reach full speed from rest.

The ramp down time is the time it takes for the motor to stop from full speed.

## 16.5 & 16.6 Opening and Closing Speed

This sets the speed at which the gate will travel. If the gate is travelling too fast reduce this value.

## 16.7 Slow Speed

This sets the speed at which the gate will travel in the slow speed region. If the gate is travelling too slow increase this value.

## 16.8 Electronic Braking

This will stop the gate instantly when an input is triggered ignoring the ramp down time.

## Keyring Remotes

The latest PentaFOB® keyring remotes ensure your gates or doors are secure. Visit [www.elsema.com](http://www.elsema.com) for more details.

### PentaFOB® Remotes



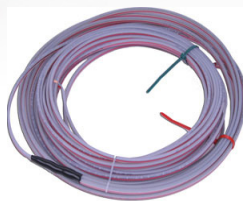
## PentaFOB® Programmer

Add, edit and delete PentaFOB® remotes from the receiver's memory. The receiver can also be password protected from unauthorised access.



PentaFOB® Programmer

## Pre-made Inductive Loops & Loop Detectors



Inductive Loop



Loop Detectors

## Wireless Bump Strip



Safety Bump Strip

## Booster for PentaFOB® remotes

Penta Repeater can increase the operating range of the keyring remotes to up to 500 metres.



Repeater/ booster for PentaFOB® remotes

## Flashing Lights

Elsema has several flashing lights to act as a warning when the gate or doors is in operation.



Flashing Lights

# PentaFOB® Programming Instructions

**Coding the PentaFOB® remotes and receivers can be done in 2 different ways.**

1. Using the Receiver
2. Using another Remote Control

## **Coding using the Receiver**

1. Press and hold the program button on the receiver
2. Press the remote button for 2 seconds, receiver LED will flash and then turn Green
3. Release the button on the receiver and the remote
4. Press remote control button to test the receiver output

## **Coding using another Remote Control** (you should be near the receiver for this procedure)

1. Open the case of a remote control that is already programmed and press and release the program button on the back of the board (The receiver enters learning mode)
2. Press the button of the remote in step 1 which activates the receiver
3. Press the button on the new remote which needs to be programmed for 2 seconds
4. Press the program button again of the remote in step 1 (The receiver exits learning mode)
5. Press the new remote control button to test the receiver output

## **Deleting Receivers Memory**

Short the Code Reset pins on the receiver for 10 seconds. **This will delete all the remotes from the receiver's memory.**

## **PentaFOB® Programmer**

This programmer allows you to add and delete certain remotes from the receiver memory. This is used when a remote control is lost or a tenant moves from the premises and the owner wants to prevent un-authorised access.

## **PentaFOB® Backup Chips**

This chip is used to backup or restore the contents of a receiver. When there are 100's of remotes programmed to a receiver the installer normally backups the receiver memory in case the receiver is damaged.

