COMPREHENSIVE

TECHNICIAN'S COMMISSION MANUAL

Version 5.7.0 +

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This manual is designed for use by trained technicians with a pre-existing basic knowledge of the Auto Ingress Control Board and Digital Mode Pad. For a lower level introduction to the maintenance of this product, please refer to the Auto Ingress Technical Manual V570 which is available on our website.

LS220B, LS300 & LSW-LP/DUAL   MARCH 2017

Type AS5 V 5-2-0: Commission Instructions: Models LS300 + LP & LS220B + LP + ELP & LSW-LP

1. Ensure the automatic door operator is fixed securely. Check that the doors are hung plumb and moves freely to both the fully open and fully closed positions.
2. Check that the floor guide and anti-rise wheels (for sliding units) are not too tight and that they do not impede door travel in any way. Adjust the door height if needed to provide adequate floor clearance (approx 10mm). If fitted, ensure the manual lock engages with ease.
3. Set the mechanical end stops securely and in position to avoid any possible entrapment as per AS5007-2007. Ensure no debris is left inside the track where it might damage the track wheels.
4. Wire up all switches and sensors as per the diagram below and fit off in the positions decided upon by the customer or builder. Refer to the separate switch and sensor cabling manuals for more details. Always make every effort to mount the digital keypad in a location easily accessible by the end user and future technicians to allow a reset to be performed when required and also to assist with fault diagnosis. If this is not practical, please ensure a secondary reset switch is installed in an accessible location so this requirement can still be met (see terminal block CN4 on the diagram below).
5. Set all mode switches to Auto and turn the mains power on. The door should slowly open first. If it closes instead (first ensure the digital mode pad is set to Auto mode, see step 8) then switch mains power off and swap the motor polarity by swapping the cables connected to CN10 terminals 7 and 8. Operate the door several times to ensure all switches and sensors are connected correctly then connect the backup batteries.
6. Adjust the operating settings accessed by pressing the Setup key on the mode pad followed by the 4 digit Master Code (included on the Commission WO). Using the up or down arrow keys, select "Setup: Params" or "Setup: Functns" and then press the enter key to delve into the selected section. Use the arrow keys to cycle through the parameters or functions. Press the Enter key to select or the Exit key to escape. Once a parameter or function has been selected, use the arrow keys to cycle through the various options. Press the Enter key to retain the change or the Exit key to discard. See the attached comprehensive list of parameters and functions for further details on their operation. When all settings have been adjusted as required, press the Exit key until the keypad displays "Saving Changes."
7. To change the operational mode, press the Mode key and enter the local user code (default code 1234). The mode first displayed is the current operational mode. Use the Mode key to cycle through the mode options and when the desired mode is displayed, press the Enter key to confirm the change. Test the door operation in each mode.
8. If the keypad is located in a ceiling cavity or is otherwise inaccessible to the end user, please disable all service warnings and buzzers (see the attached comprehensive list of parameters and functions for further details).
9. Explain the door operation to the customer and have them inspect all work before they sign your report.

Please note that all parameter and function changes should only be carried out by competent and trained personel in order to avoid injuries and accidents. The Commission is to be carried out according to AS5007 and BCA requirements with particular emphasis on the safety and emergency egress requirements.

Brief Summary of Mode Pad Functionality

Modes: Open, Auto, Exit, Lock and Manual. Can also display at times: Safe, Learning and Test.
Setup Local (user code): Alarm Silence for 48 hours, user pass-code change, Managed Lock mode, Time and Date setup, people Counter, Door Registration and Diagnose Faults
Setup Parameters (master code): Open and Close Speeds, Trims and Braking, Dwell Times and more. See attached comprehensive list of parameters and functions for further details.
Setup Functions (master code): Safety Sensor Relay Output, Buzzer and Alarm settings, Service Warning and Interval, Exit and Mode key options, Partial Open options, Lock Type and more. See attached comprehensive list of parameters and functions for further details.
Factory Setup (factory code): Serial Number Adjustment, Master Code Adjustment, Door Type, Factory Reset and more.
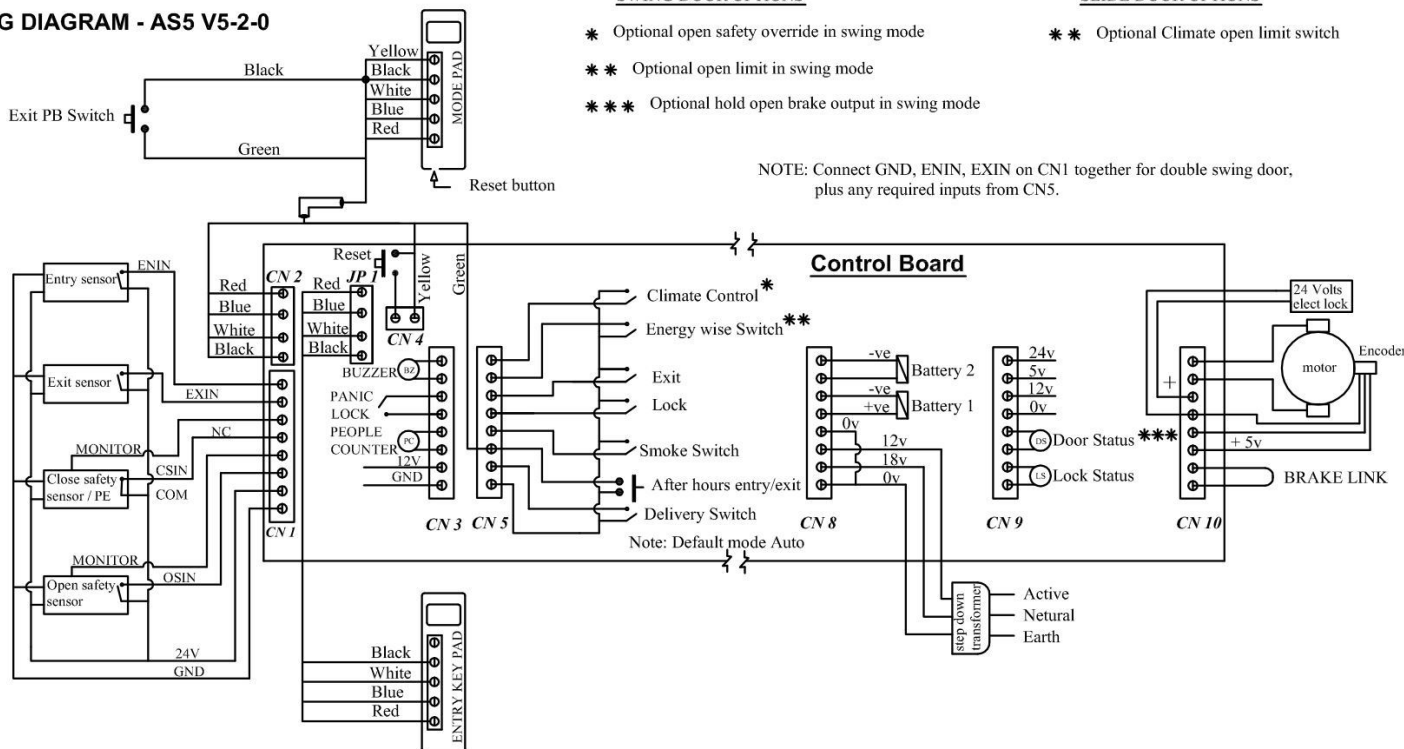**Reset Methods:** 1) Press and hold the number 2 until the screen displays "Confirm Reboot" then press Enter.
2) Press reset button located on the underside of the keypad.
3) Disconnect mains power for 30 seconds and then re-connect it.
Note that if the door was in Locked mode before the reset, it will attempt to close and lock itself before waiting for the mode to be changed or the exit button to be activated which then

WIRING DIAGRAM - AS5 V5-2-0

SWING DOOR OPTIONS
* Optional open safety override in swing mode
** Optional open limit in swing mode
*** Optional hold open brake output in swing mode

SLIDE DOOR OPTIONS
** Optional Climate open limit switch

NOTE: Connect GND, ENIN, EXIN on CN1 together for double swing door, plus any required inputs from CN5.

Note:
1) All control inputs to CN5 from fire alarm or security systems MUST BE VOLTAGE FREE, see related documentation for further details.
2) If a keypad is left disconnected for more then 10 minutes or an incompatible keypad is used, the controller will lock itself in Exit mode until a compatible keypad is connected. This behaviour can be disabled in the Factory Settings.

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Fig 1: Standard Door Opening Behaviour

Fully Closed Position   Open Trim Position   Fully Open Position

Open Speed Region   Slow Open Region
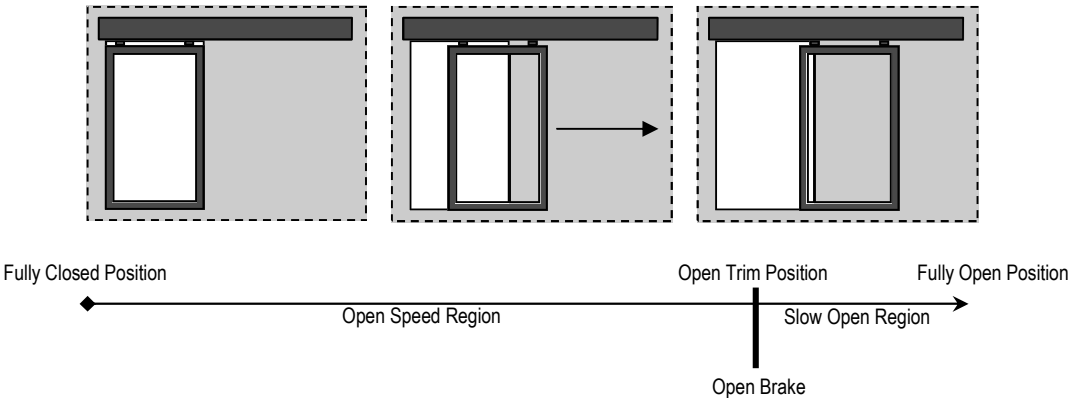
Open Brake

Default Behaviour:

Door will open at full speed (Open Speed) before braking at the "Open Trim" position. The strength of the door brake and the length of time it waits in the "Open Trim" position is controlled by the "Open Brake." Once braking is complete, the door will proceed to slowly open (Slow Open) until it collides with the end stop. The door will wait in the open position for a pre-defined dwell time (set via the mode-dependant "Dwell Auto" and "Dwell Lock") before proceeding to close again.

Fig 2: Standard Door Closing Behaviour

Fully Closed Position   Close Trim Position   Fully Open Position

Slow Close Region   Close Speed Region
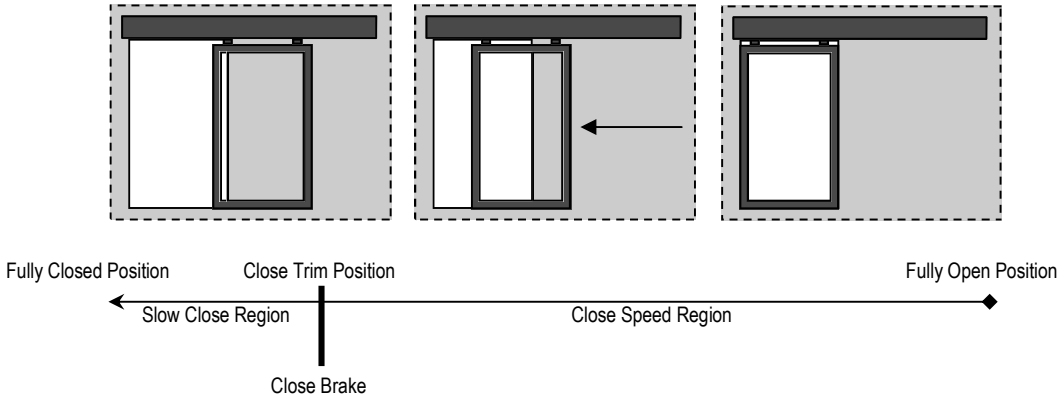
Close Brake

Default Behaviour:

Door will close at full speed (Close Speed) before braking at the "Close Trim" position. The strength of the door brake and the length of time it waits in the "Close Trim" position is controlled by the "Close Brake." Once braking is complete, the door will proceed to slowly close (Slow Close) until it collides with the end stop.

Note:

These speeds can all be adjusted in "Setup: Params" accessed using the "Setup" button on the keypad and entering the Master Code for that particular operator. See next page for further details and more settings.

DOCUMENT NOTES			
Comprehensive Technician's Commission Manual	THINK OF US AUTOMATICALLY **AUTOINGRESS** AUTOMATIC DOORS	TITLE	Digital Keypad Parameter and Function Settings LS220B, LS300 & LSW-LP/DUAL Basic Door Speeds
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Operator Parameters:

The parameters section will allow you to fine tune the behaviour of the operator as it opens and closes the doors. Using this section you are able to adjust all speeds, braking forces, trim distances, dwell times and more. These settings can be found in "Setup: Params" accessed using the "Setup" button on the keypad and entering the Master Code for that particular operator (Default code 5555).

Open Speed "Opn Sped" - Default 400, Range 250 to 1000)
Adjusts the full speed at which the door initially opens.

Close Speed "Cls Sped" - Default 180, Range 50 to 500
Adjusts the full speed at which the door initially closes.

Slow Open "Slo Open" - Default 120, Range 25 to 500
Adjusts the speed at which the door slowly comes up to the fully open position after it has completed it's braking. Also adjusts the speed with which the door opens during Learning mode (after a reset) and Safe mode (after an obstruction).

Slow Close "Slo Clos" - Default 100, Range 25 to 500
Adjusts the speed at which the door slowly comes up to the fully closed position after it has completed it's braking. Also adjusts the speed with which the door closes during Learning mode (after a reset) and Safe mode (after an obstruction).

Open Dwell Lock "DwellLok" - Default 3, Range 0 to 360
Time in seconds that the door remains in the open position, on each cycle, before automatically closing (when the operator is set to Lock and Exit modes).

Open Dwell Auto "DwellAut" - Default 1, Range 0 to 360
Time in seconds that the door remains in the open position, on each cycle, before automatically closing (when the operator is set to Auto mode).

Open Trim "OpenTrim" - Default 18, Range 2 to 30
Adjusts the distance from the fully open position before the door begins to brake.

Close Trim "ClosTrim" - Default 8, Range 2 to 30
Adjusts the distance from the fully closed position before the door begins to brake.

Slow Boost "SlowBoost" - Default 65, Range 10 to 100
When the door is travelling at any of it's slow speeds (Slow Open or Slow Closed) and it detects that the door has stopped moving (the motor's encoder stops counting) the operator will slowly ramp up the corresponding speed to attempt to push past any obstructions that may be present. This setting adjusts how high the operator will ramp up the speed before cutting itself off.

Open Current Limit "OpnILim%" - Default 60, Range 5 to 100
The operator will cut power to the motor and enter Safe mode for two different reasons: Reason A - If the motor's encoder stops counting it assumes that the door has stopped moving, likely due to an obstruction, Reason B - If the motor begins to draw too much current (due to an obstruction or short circuit). This setting adjusts the motor current threshold at which the operator decides to enter Safe mode when opening.

Close Current Limit "ClsILim%" - Default 45, Range 5 to 100
See the setting above for further details. This setting adjusts the motor current threshold at which the operator decides to enter Safe mode when closing.

Open Brake "OpenBrak" - Default 18, Range 0 to 50
Adjusts the strength with which the operator brakes at the Open Trim position. If increased too high, the door will sit in the Open Trim position for a prolonged period of time before opening the rest of the distance.

Close Brake "ClsBrak" - Default 5, Range 0 to 25
Adjusts the strength with which the operator brakes at the Close Trim position. If increased too high, the door will sit in the Close Trim position for a prolonged period of time before closing the rest of the distance.

Open Safety Trim "OsafTrim" - Default 10, Range 10 to 100
Adjusts the distance from the fully open position during which the Open Safety Sensor is disabled.

Close Safety Trim "CsafTrim" - Default 1, Range 0 to 100
Adjusts the distance from the fully closed position during which the Close Safety Sensor is disabled.

Soft Start Trim "SoftSTim" - Default 5, Range 4 to 8
When the door first begins to open, the opening speed is ramped up slowly. This setting adjusts the distance over which the Soft Start ramps up the opening speed.

Reverse Delay "RevDelay" - Default 5, Range 2 to 20
Adjusts the delay before the door begins to reverse direction (for example, when the door is closing and the close safety sensors are triggered).

Hold Open "HoldOpen" - Default 10, Range 0 to 30
Adjusts the strength with which the motor holds the door open if the Hold Open function is enabled.

Hold Closed "HoldClsd" - Default 5, Range 1 to 20
Adjusts the strength with which the motor holds the door closed if the Hold Auto or Hold Lock functions are enabled.

Operator Functions:

The Functions section will allow you to adjust a number of special functions built into the controller. These settings can be found in "Setup: Functns" accessed using the "Setup" button on the keypad and entering the Master Code for that particular operator (Default code 5555). You will need to scroll down past "Setup: Params" in order to find the Functions section. Please note that options in **bold** represent the default setting after a factory reset.

Open Safety Sensor Monitor "OpenSafe" - Options On or **Off**
Enables and Disables the Open Safety Sensor Monitor output. WARNING: This function does not currently operate as intended.

Open Safety Relay Input "OpnSfRly" - Options NormClsd or **NormOpen**
Changes the Open Safety Relay Input (CN1 terminal 3) to expect a Normally Closed signal or a Normally Open one.

Close Safety Sensor Monitor "ClosSafe" - Options On or **Off**
Enables and Disables the Close Safety Sensor Monitor output. WARNING: This function does not currently operate as intended.

Close Safety Relay Input "ClsSfRly" - Option **NormClsd** or NormOpen
Changes the Close Safety Relay Input (CN1 terminal 5) to expect a Normally Closed signal or a Normally Open one.

Lock Mode Behaviour during Power Failure "Lock F/S" - Options **OpenClos** or OpenOnly
OpenClos - The operator will continue to function as per normal when mains power fails, relying on battery backups until power returns.
OpenOnly - The operator will open the doors when mains power fails and leave them in the open position until power returns.

Auto Mode Behaviour during Power Failure "Lock F/S" - Options OpenClos or **OpenOnly**
OpenClos - The operator will continue to function as per normal when mains power fails, relying on battery backups until power returns.
OpenOnly - The operator will open the doors when mains power fails and leave them in the open position until power returns.

Push to Go in Auto Mode "P2GoAuto" - Options **On** or Off
Sets whether or not the Push to go function is enabled during Auto mode. The Push to Go functions allows the door to be nudged open. When the operator detects that the door has been nudged open by a user, it engages the motor to drive the door open the rest of the way.

Push to Go in Lock Mode "P2GoAuto" - Options **On** or Off
Sets whether or not the Push to go function is enabled during Lock mode. The Push to Go functions allows the door to be nudged open. When the operator detects that the door has been nudged open by a user, it engages the motor to drive the door open the rest of the way. Be aware that the user will be unable to nudge the door open during Lock mode if an electric lock has been installed.

Service Warning "ServWarn" - Option **On** or Off
Sets whether or not the keypad displays a service warning when the door is overdue for a service. The service interval can be adjusted with the function below.

Service Interval "ServIval" - Options 1 Mth, 3 Mth, 4 mth, **6 Mth** or 12 Mth
Adjusts the interval the operator waits between each service before displaying a "Service Overdue" warning.

Service Overdue Behaviour "ServMode" - Options **WarnOnly** or Warn&Opn
Defines operator behaviour when it detects that it is overdue for a service.
WarnOnly - The keypad will display a warning only and the door will otherwise continue to function normally.
Warn&Opn - The keypad will display a warning and the operator will open itself and remain open until a service can be performed.

Flat Battery Warning Behaviour "BattMode" - Options **WarnOnly** or Warn&Opn
Defines operator behaviour when it detects that the batteries are flat.
WarnOnly - The keypad will display a warning only and the door will otherwise continue to function normally.
Warn&Opn - The keypad will display a warning and the operator will open itself and remain open until the batteries are replaced.

Keypad Warning Buzzer "Buzzer" - Options **Enabled** or Disabled
Enables or disables the keypad's internal buzzer. If enabled, any warning displayed on the keypad will be accompanied by a warning alarm.

Warning Alarm Duration "Alarm Duration" - Options Off, 10 Min, **30 min**, 45 Min, 60 Min or Contin.
Specifies how long the warning alarm will sound for before disabling itself.

Digital Keypad Exit Button "Exit key" - Options **Enabled** or Disabled
Defines whether or not the exit button (key 0) on the digital key pad will allow the door to be opened. When set to disabled, the exit button will prompt for the user passcode before allowing the door to open.

Partial Open in Auto Mode "Clim Auto" - Options Enabled or **Disabled**
If set to enabled and a reed switch has been connected (normally open across CN5 terminals 1 and 7), the door will only open partially (up until it detects the reed switch) when placed in Auto mode.

Partial Open in Lock Mode "Clim Lock" - Options Enabled or **Disabled**
If set to enabled and a reed switch has been connected (normally open across CN5 terminals 1 and 7), the door will only open partially (up until it detects the reed switch) when placed in Lock mode.

THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

SCALE — NOT TO SCALE

DATE — 22/03/17

TITLE
Digital Keypad Parameter and Function Settings
LS220B, LS300 & LSW-LP/DUAL

Operator Functions

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Partial Open in Exit Mode "Clim Exit" - Options Enabled or **Disabled**
If set to enabled and a reed switch has been connected (normally open across CN5 terminals 1 and 7), the door will only open partially (up until it detects the reed switch) when placed in Exit mode.

Partial Open in Open Mode "Clim Open" - Options Enabled or **Disabled**
If set to enabled and a reed switch has been connected (normally open across CN5 terminals 1 and 7), the door will only open partially (up until it detects the reed switch) when placed in Open mode.

Open Stop Mode "StopMode" - Options At Count or **To Stop**
Defines whether the door will open all the way to the end stop (To Stop) or if it will open up until just before the end stop (At Count). WARNING: This function does not always operate as intended.

How to Un-Lock "HowULock" - Options No Pulse or Pulse
No Pulse - When opening the door, the 24V output for the electric lock (CN10 terminals 5 and 6) changes state and remains changed until the door completes it's entire open and close cycle.
Pulse - When opening the door, the 24V output for the electric lock (CN10 terminals 5 and 6) changes state only momentarily and does not wait for the door to complete it's entire open and close cycle.

Electric Lock Type "Lock Type" - Options **F/Safe** or F/Secure
Sets whether the electric lock is Fail Safe (voltage is applied to lock the door) or Fail Secure (voltage is applied to unlock the door). Performs the same function as the Lock Polarity options in the Factory settings. Please use only one of the two functions (Lock polarity or Lock Type), never both.

Latch Resistor "LatResis" - Options **On** or Off
Switches on or off the Latch Resistor. When switched on, this resistor decreases the power of the operator in it's final closing movement resulting in a softer final close. When switched off, the operator will make it's final closing movement with more power; this can assist in closing a door into a latch or pushing it into an end channel.

Back Check Resistor "BChResis" - Options **On** or Off
Switches on or off the Back Check Resistor. Behaves in a similar manner to the Latch Resistor but in the open direction. When enabled, results in a softer final opening motion. When disabled, the operator will push the door open with increased force during it's final motion.

Hold Open "HoldOpen" - Options **Enabled** or Disabled
The Hold Open function will stop the door from being manually pushed closed when it is sitting in the open position. If the operator detects that the door has been moved in the closed direction it will apply a small current to the motor to slowly push the door back open again.

Soft Start Boost "SStBoost" - Options **Enabled** or Disabled
When the door first begins to open, the opening speed is ramped up slowly. The Soft Start Boost adjusts the behaviour of this soft start motion in the case of an obstruction. Usually the ramping of the opening speed will be cut off early if an obstruction is detected. When enabled, the Soft Start Boost allows the soft start to continue ramping up the opening speed until it has reached it's maximum.

Mode Change Passcode "ModePcd?" - Options Required or **Not Reqd.**
Sets whether or not the user will be required to enter their passcode each time they wish to change modes.

Hold Closed in Auto Mode "Hold Auto" - Options Enabled or **Disabled**
When enabled, this function provides a trickle current to the motor to hold the door closed when the operator is in Auto Mode. The magnitude of this current can be adjusted with the corresponding parameter "Hold Closed." This trickle current is disabled when the operator is relying on the backup battery supply.

Hold Closed in Lock Mode "Hold Lock" - Options Enabled or **Disabled**
When enabled, this function provides a trickle current to the motor to hold the door closed when the operator is in Lock Mode. The magnitude of this current can be adjusted with the corresponding parameter "Hold Closed." This trickle current is disabled when the operator is relying on the backup battery supply.

Door Open Warning "OpenWarn" - Options Enabled or **Disabled**
Enables or Disables the Door Open Warning. When enabled, the buzzer output on CN3 (terminals 7 and 8) will activate when the door is open and continue to sound until it closes once more. This can be used to assist the visually impaired.

Door Buzzer Output Operating Modes "DoorBuzzModes" - Options AllModes or **ExitLock**
Sets whether the Buzzer output will be active during All modes or only when the operator is placed in Exit and Lock mode. The Buzzer output provides 12V to power external alarms and is triggered every time the external actuation sensor is triggered.

Buzzer Output Alarm Toggle "DoorBuzzAlarms" - Options **Not Alarm** or On Alarm
Sets whether or not the buzzer output on CN3 (terminals 7 and 8) will activate when the keypad alarm activates (for example when there is a flat battery warning). If set to On Alarm, the buzzer output will activate whenever a warning is displayed on the keypad.

Open Push Button Latch "UnlockPBLatch" - Options **NoLatch** or Latched
When set to NoLatch the open mode input (CN5 terminal 3) will respond to a momentary signal in the standard way and will only open the door momentarily. When set to latched, the same input (CN5 terminal 3) will respond to a momentary signal by opening the door and holding it open until it receives a second momentary signal which will then cause the door to close again (Push to Open and then Push to Close).

Push Closed Before Unlocking "PshUnLok" - Options Enabled or **Disabled**
When enabled, this causes the operator to drive the door closed momentarily before opening, whenever the electric lock is engaged. This can be used to relieve pressure from a strike latch or drop bolt allowing it the time it needs to release before the door opens.

Operator Factory Settings:

The Factory Settings will allow you to setup a controller from factory defaults. These settings can be found in "Setup: Factory" accessed using the "Setup" button on the keypad and entering the Factory Code for that particular operator (Default code 1758). Please note that the Factory Code changes every week. If you do not have a valid Factory Code, please call 1300 138 750 and we will be able to assist. Options in **bold** represent the default setting after a factory reset.

Enter Serial No.
This entry will walk you through the process of updating the operator's Serial Number.

Set Day & Time
This entry will allow you to set the current day and time. This can also be set by the end user at any time using their user code (Default code 1234) to access "Setup: Local"

Reset Registration Timer "Rset Serv Reg Timer"
If the door has not been registered it will begin to display a warning on the keypad for the user after a certain amount of time. This entry, resets that timer.

Change Master Code "Change Master Cd"
This entry will walk you through the process of updating the operator's Master Code.

Select Door Type - Options Swing or **Slider**
Selects the type of operator (swing door or sliding door). This adjusts the behaviour of some outputs and inputs on the control board to suit the respective door type.

Lock Polarity - Options **NormOpen** or NormClsd
Sets whether voltage is applied to <u>lock</u> the door (Fail Safe) or voltage is applied to <u>unlock</u> the door (Fail Secure). Performs the same function as the Lock Type options in the Functions section. Please use only one of the two functions (Lock Polarity or Lock Type), never both.

Select Keypad? - Options **Required** or Not Reqd.
Sets whether or not the operator will require a digital keypad connected to function properly. If set to required and a keypad is not detected, after 10 minutes the operator will lock itself into Exit mode until a keypad is connected.

Select Battery? - Options **Installed** or No battery
Sets whether or not the control board will check for flat batteries. If set to No Battery the control board will not detect for flat batteries and will not warn the customer if the batteries are disconnected.

Register Setup - Options **WarnOnly** or Warn&Open
Sets operator behaviour when the door has yet to be registered.
WarnOnly - The keypad will display a warning only and the door will otherwise continue to function normally.
Warn&Opn - The keypad will display a warning and the operator will open itself and remain open until the operator is registered.

Reset to Defaults
This entry will prompt for confirmation before resetting the control board to factory defaults.

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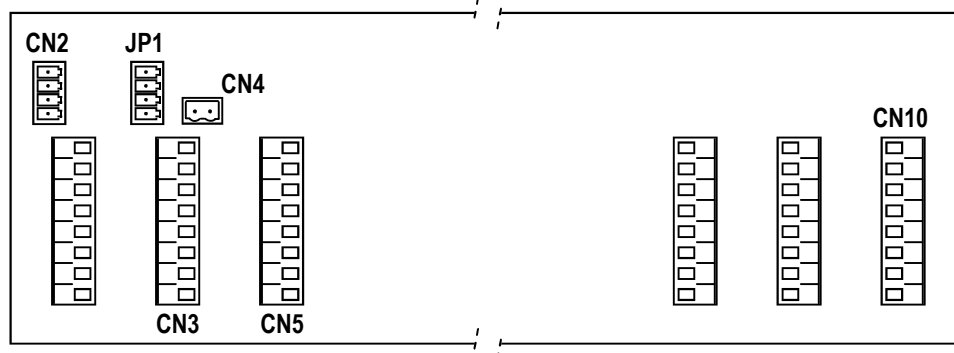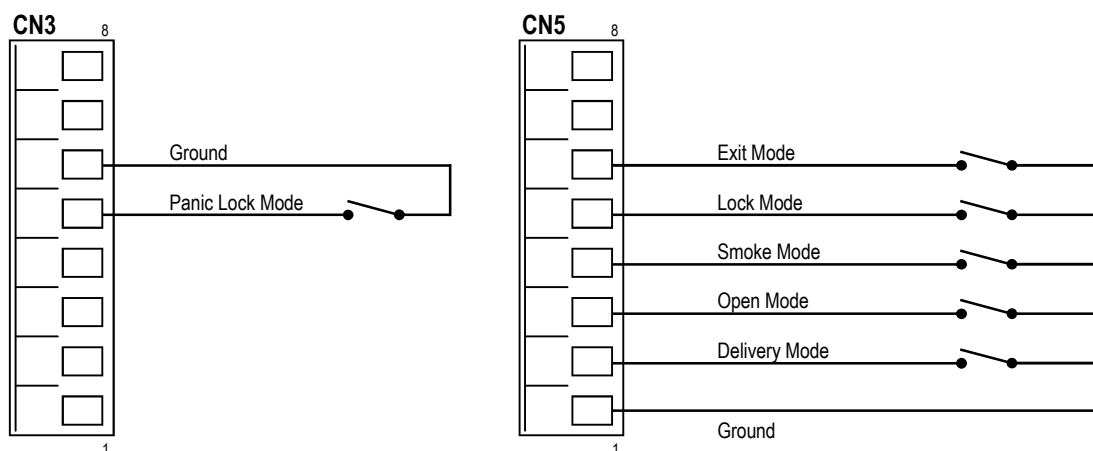## Fig 1: Location of Terminal Blocks on Control Board

Fig 2: Cabling of Operator Mode Inputs

Notes:
- The default mode is AUTO mode; if no other mode is forced, the door will remain in AUTO mode.
- To engage any other mode, the appropriate input must be connected to Ground via a control (push button, key switch, etc).
- As long as the input is connected to Ground, the mode will remain forced.
- If multiple modes are being forced at the same time, the mode with the highest priority is the one which takes control.
- Priority from highest to lowest: OPEN, SMOKE, PANIC LOCK, DELIVERY, LOCK, EXIT, AUTO.
- Both SMOKE mode and PANIC LOCK mode override the digital keypad from holding the door in OPEN mode but they do not override OPEN mode being forced on CN5

Table 1: Summary of Differences Between Operator Modes

Mode	Electric Lock	Internal Sensor	External Sensor	Safety Sensors	Door Resting Position	Door Speeds
Open	Not Engaged	n/a	n/a	Open Safety Only	Fully Open	Standard
Smoke	Not Engaged	Deactivated	Deactivated	Open Safety Only	Closed	Standard
Panic Lock	Engaged (when in closed position)	Deactivated	Deactivated	Deactivated	Closed	Closes at Open Speed
Delivery	Not Engaged	Deactivated	Deactivated	Deactivated	Open Only Slightly	Slow
Lock	Engaged (when in closed position)	Deactivated	Deactivated	Active	Closed	Standard
Exit	Engaged (when in closed position)	Active	Deactivated	Active	Closed	Standard
Auto	Not Engaged	Active	Active	Active	Closed	Standard

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Fig 3: Connection of Standard Four Position Key Switch

CN5
8

Red
Black
Yellow
Green

Four Core Cable

Yellow
Black
Red
Green

5 4
6   3
7   2
8 1

LOCK
AUTO
EXIT
OPEN

1

Note: Link between terminals 7 & 4
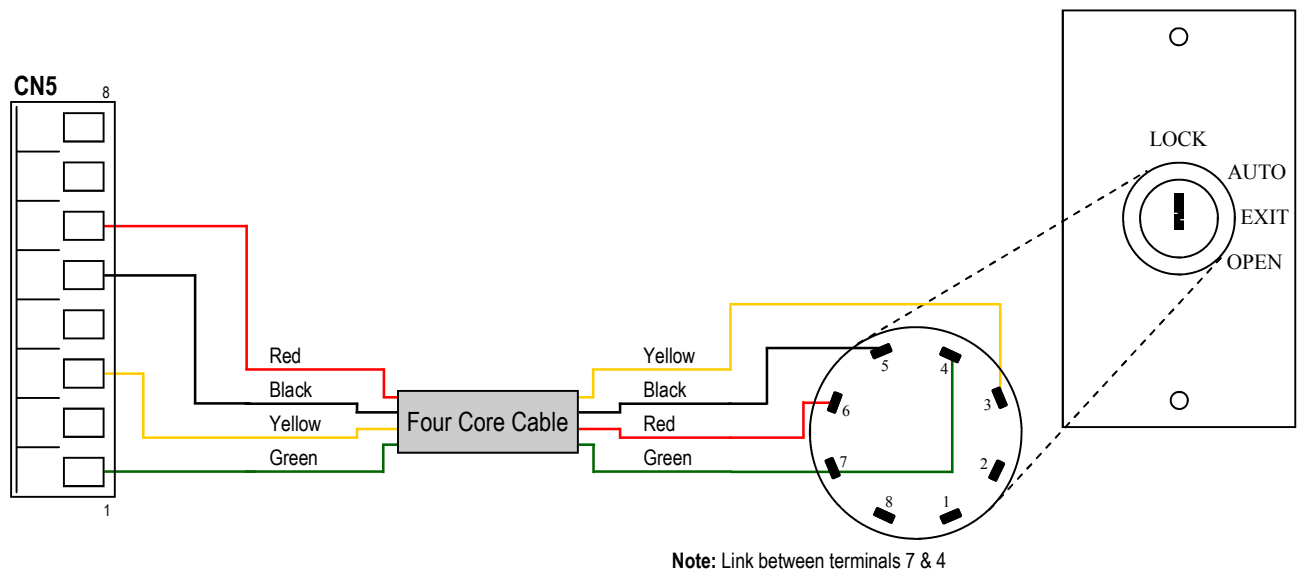
Fig 4: Connection of Lock-it-Well Four Position Key Switch (Master Key Capable)

CN5
8

Red
Black
Yellow
Green

Four Core Cable

Red   Terminal 7
Black   Terminal 3
Yellow   Terminal 1
Green   Terminal 2

Auto   Exit

Open   Lock

1

THINK OF US AUTOMATICALLY
AUTOINGRESS
AUTOMATIC DOORS

SCALE NOT TO SCALE

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TITLE
Control Switch Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

Mode Switches

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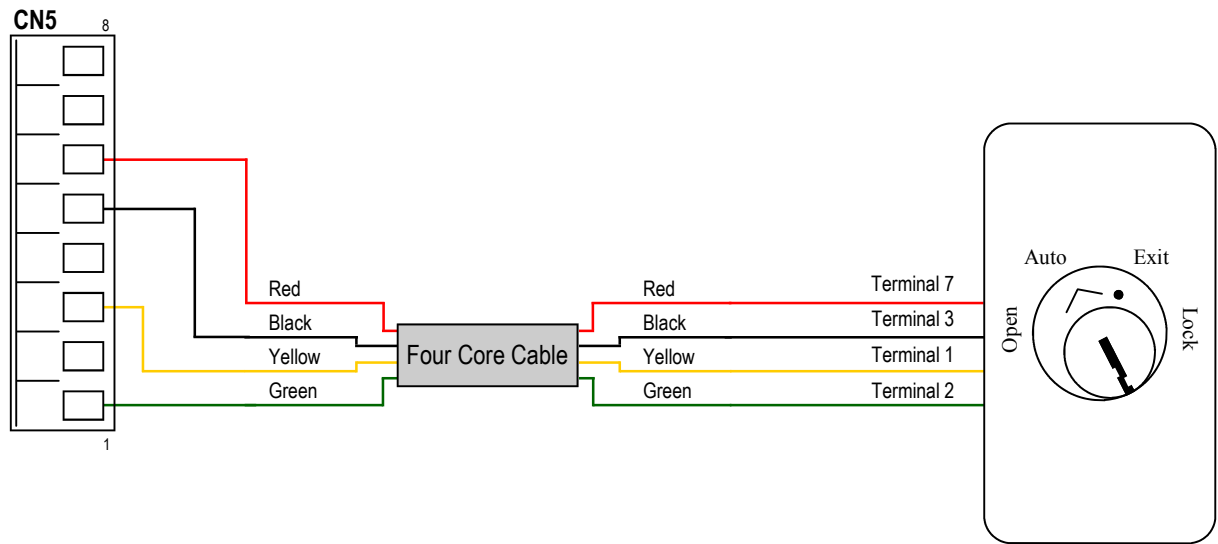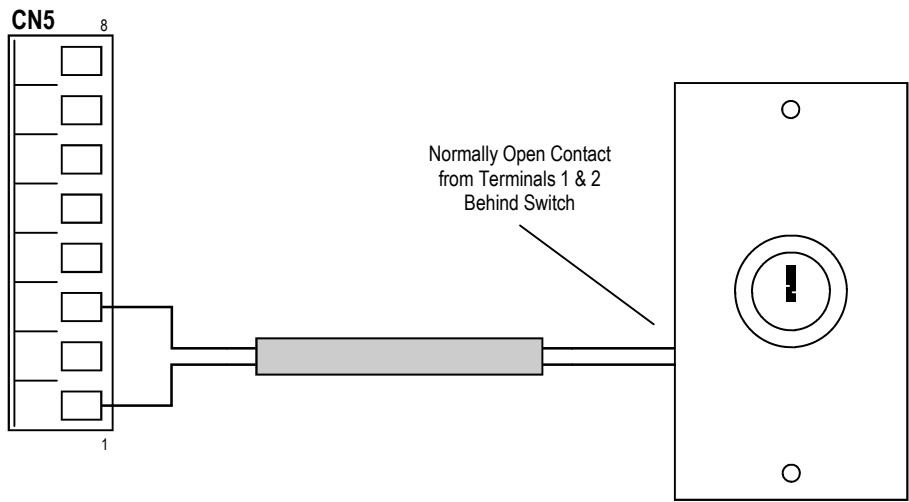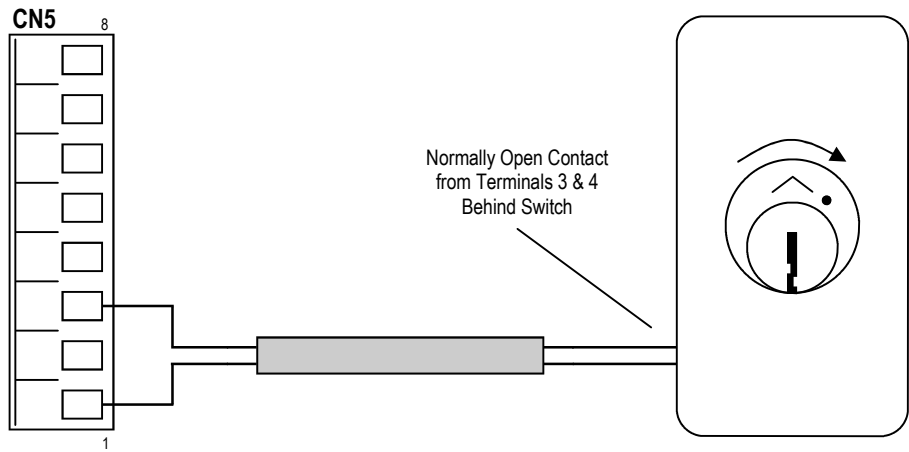
Fig 5: Connection of Standard Three Position Key Switch

CN5 8

Unused
Red
Black
Yellow
Green

Four Core Cable

Unused
Red
Black
Yellow
Green

3 4
2 5
1 6
8 7

AUTO
LOCK   OPEN

Note: Link between terminals 1 & 4
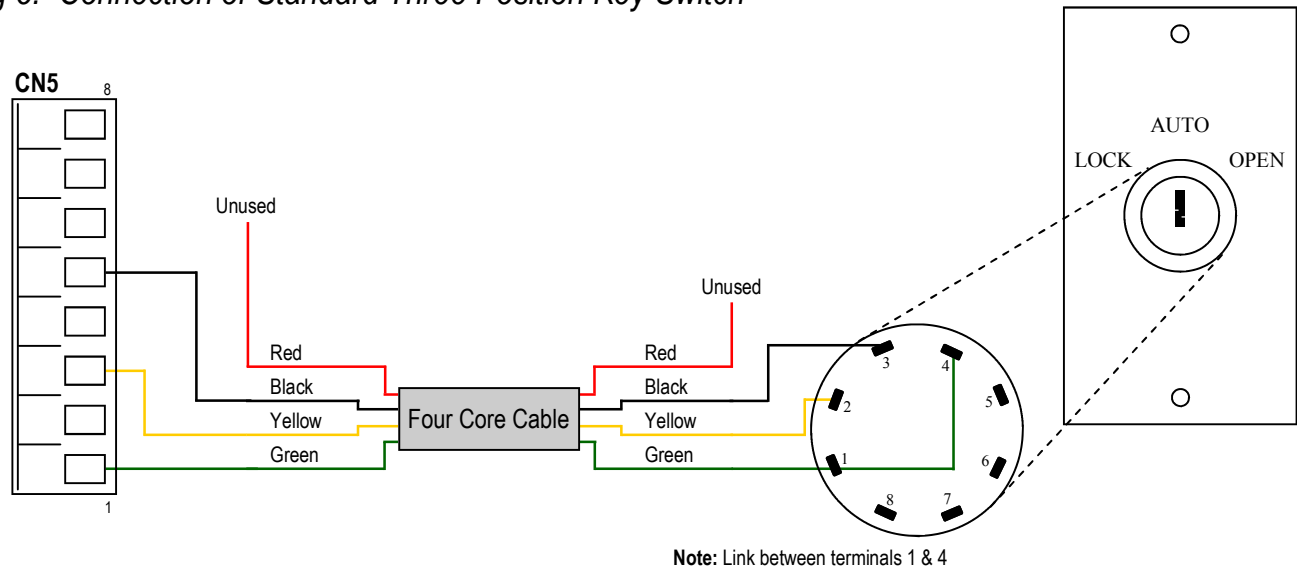
Fig 6: Connection of Standard Four Position Knob Mode Switch

CN5 8

Red
Black
Yellow
Green

Four Core Cable

Red   Terminal 4
Black   Terminal 3
Yellow   Terminal 1
Green   Terminal A

Lock
Exit
Auto
Open
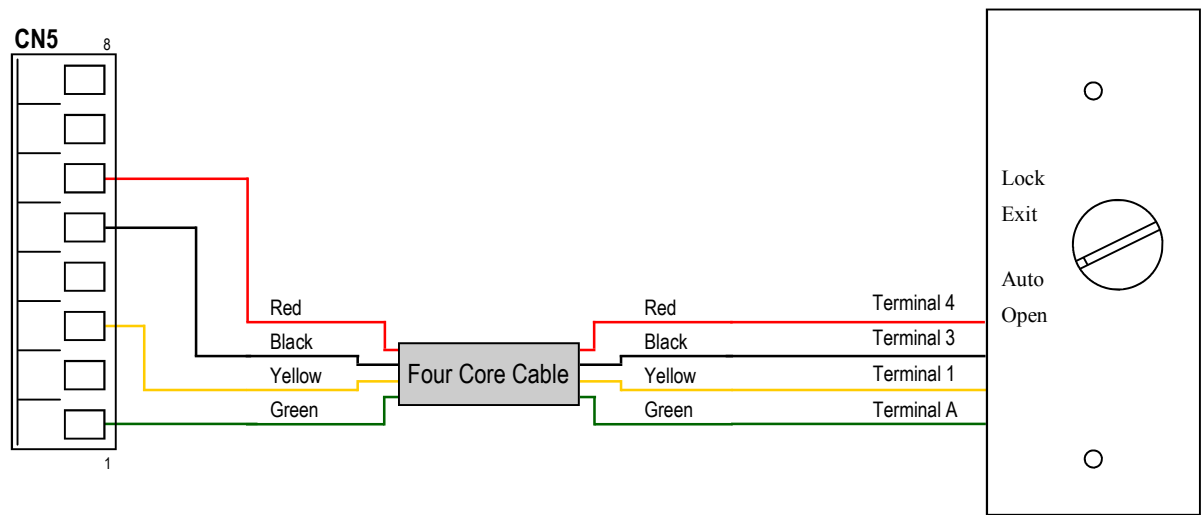
Fig 7: Connection of Standard Three Position Knob Mode Switch

CN5 8

Unused
Red
Black
Yellow
Green

Four Core Cable

Unused
Red
Black   Terminal 3
Yellow   Terminal 1
Green   Terminal A

Lock
Auto
Open

THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

TITLE

Control Switch Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

Mode Switches

SCALE	NOT TO SCALE	
DATE	23/02/17	DRG. NO.
		lsl-as5-switch-mode-page3/3

Fig 1: Connection of Standard Entry Key Switch

CN5

8

Normally Open Contact
from Terminals 1 & 2
Behind Switch

1

Fig 2: Connection of Lock-it-Well Entry Key Switch (Master Key Capable)

CN5

8

Normally Open Contact
from Terminals 3 & 4
Behind Switch

1

THINK OF US AUTOMATICALLY

AUTOINGRESS

AUTOMATIC DOORS

TITLE

Control Switch Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

Entry Key Switches

SCALE   NOT TO SCALE

DATE   16/02/17

DRG. NO.   lsl-as5-switch-sk2&mk2-page1/1

Fig 1: Connection of <u>Exit</u> Push Button

CN5 8

Normally Open Contact
from Terminals 3 & 4
Behind Switch

PRESS

TO

OPEN

1
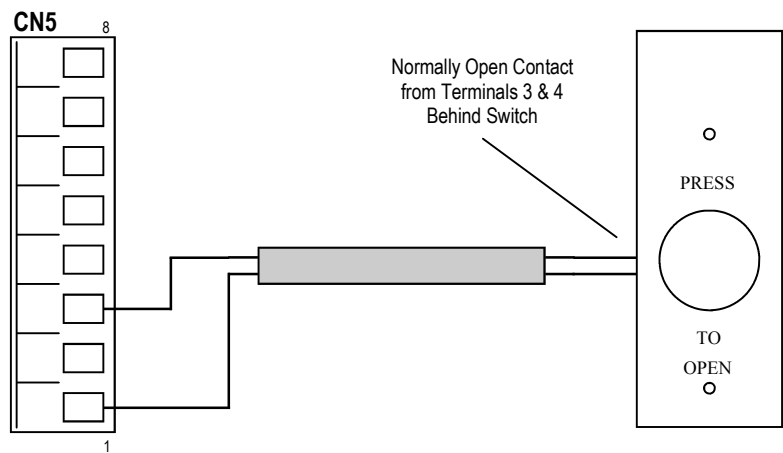
Fig 2: Connection of Exit Push Button with Digital Mode Pad

CN2   **CN4**

CN5 8

Yellow
Black
Brown
Orange
Red
Green

Six Core Cable

Yellow
Red
Orange
Brown
Black
Green

PRESS

TO

OPEN

Normally Open Contact
from Terminals 3 & 4
Behind Switch

1
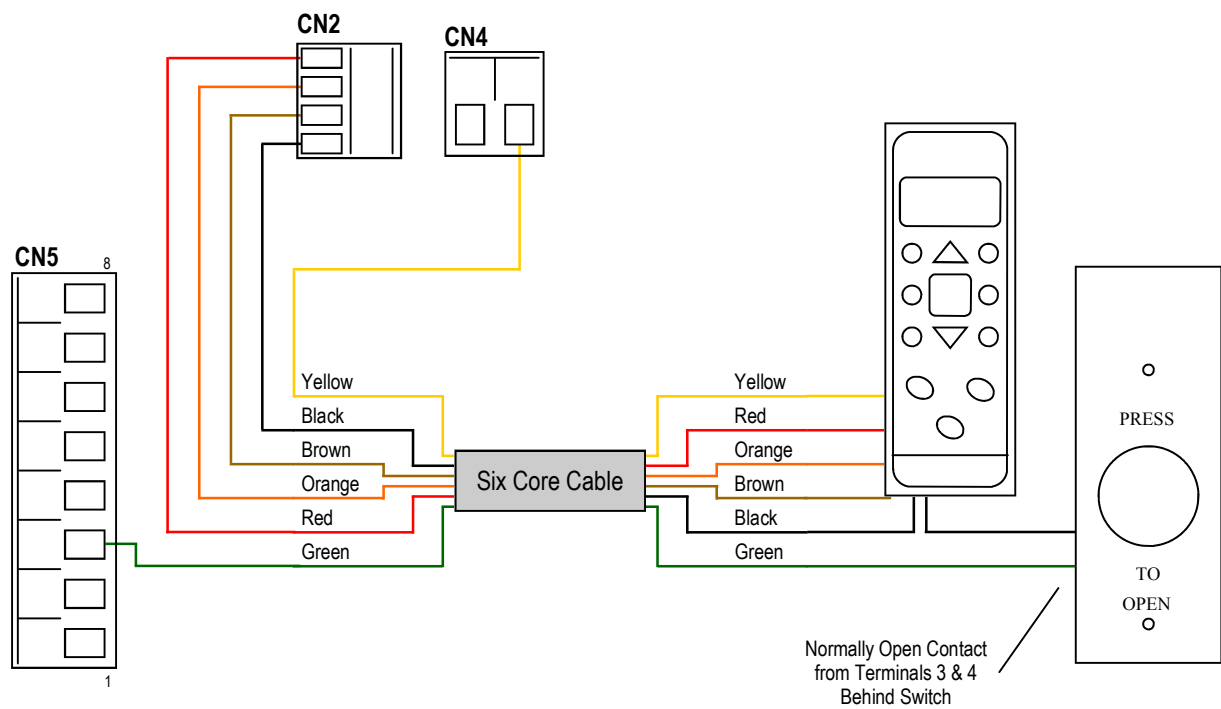
Fig 3: Connection of _Entry_ Push Button

CN1

8

Normally Open Contact
from Terminals 3 & 4
Behind Switch

PRESS

TO

OPEN

1
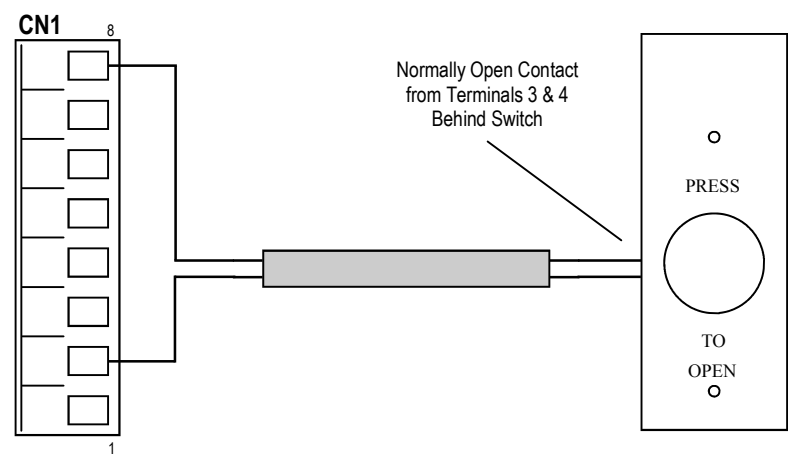
Fig 4: Connection of _External_ Digital Mode Pad

JP1

Black
Brown
Orange
Red
Yellow
Green

Unused

Six Core Cable

Yellow
Red
Orange
Brown
Black
Green

Unused

THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

TITLE

Control Switch Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

Push Button & Mode Pad

SCALE   NOT TO SCALE

DATE   17/02/17

DRG. NO.   lsl-as5-switch-pb&mp-page2/2
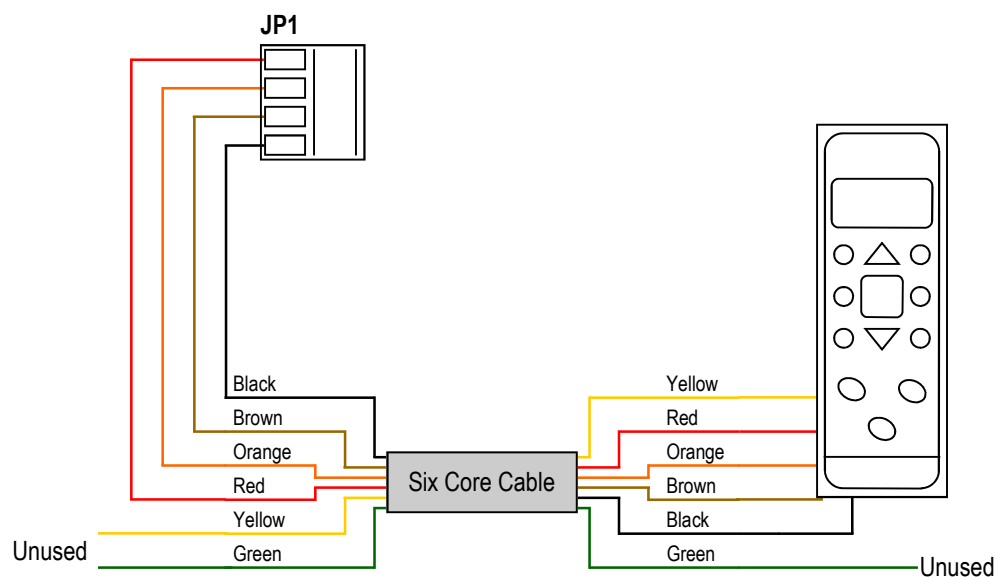
Fig 1: Connection of Reed Switch to Facilitate Partial Open Mode

CN5 8

Note: Contacts must be normally open and close only when the magnet aligns with the switch.

NO   NC   COM

Switch: Attach to operator such that magnet aligns with the switch when the door is positioned in the desired partial open position.

△

Magnet: Attach to hanger bar such that it travels within 5mm of switch when the door is positioned in the desired partial open position.

1

Fig 2: Connection of control Switch to Enable and Disable Partial Open Mode

CN5 8

Normally Open Contacts

1
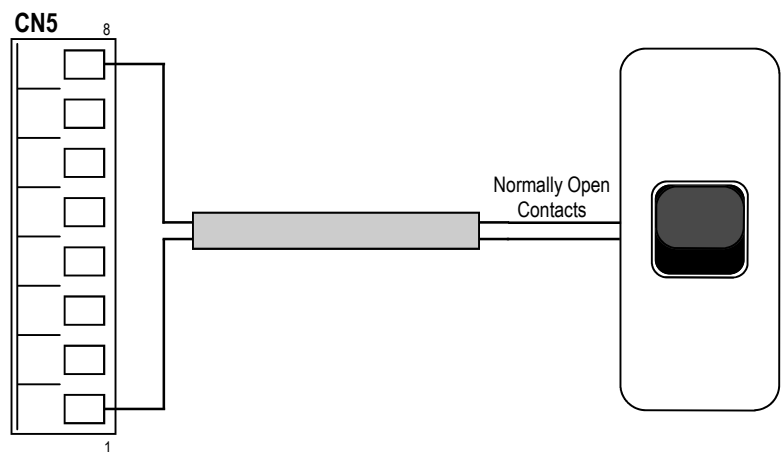
Notes:
- PARTIAL OPEN mode modifies the behaviour of the door when opening in all other modes.
- When placed in PARTIAL OPEN mode, instead of opening fully, the door will only open up until it detects the reed switch.
- PARTIAL OPEN mode will not function unless a reed switch is connected as depicted above.
- The reed switch must be connected before running the learning cycle in order for the controller to register it's position.
- PARTIAL OPEN mode can be enabled/ disabled with an external switch as shown above. Alternatively, it can be switched on and off by the user in SETUP: LOCAL on the digital mode pad. It can also be permanently set to enabled for certain modes through SETUP: FUNCTIONS (e.g. always open partially when operator is placed in EXIT mode).

THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

SCALE · NOT TO SCALE

DATE · 23/02/17

TITLE

Control Switch Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

Partial Open Mode

DRG. NO. · lsl-as5-switch-popen-page1/1

Fig 1: Caltex Panic Lockdown System Cabling

Red LED Light to indicate when the electric lock is

Rocker Switch used to enable PANIC LOCK mode

Push Button used to pulse the door momentarily open

Normally Open

Normally Open

Orange
Brown
Black
Red
Green
Yellow

Six Core Cable

Black
Red
Green
Yellow
Orange
Brown

CN3 8

CN5 8

8 CN10

1

1

1
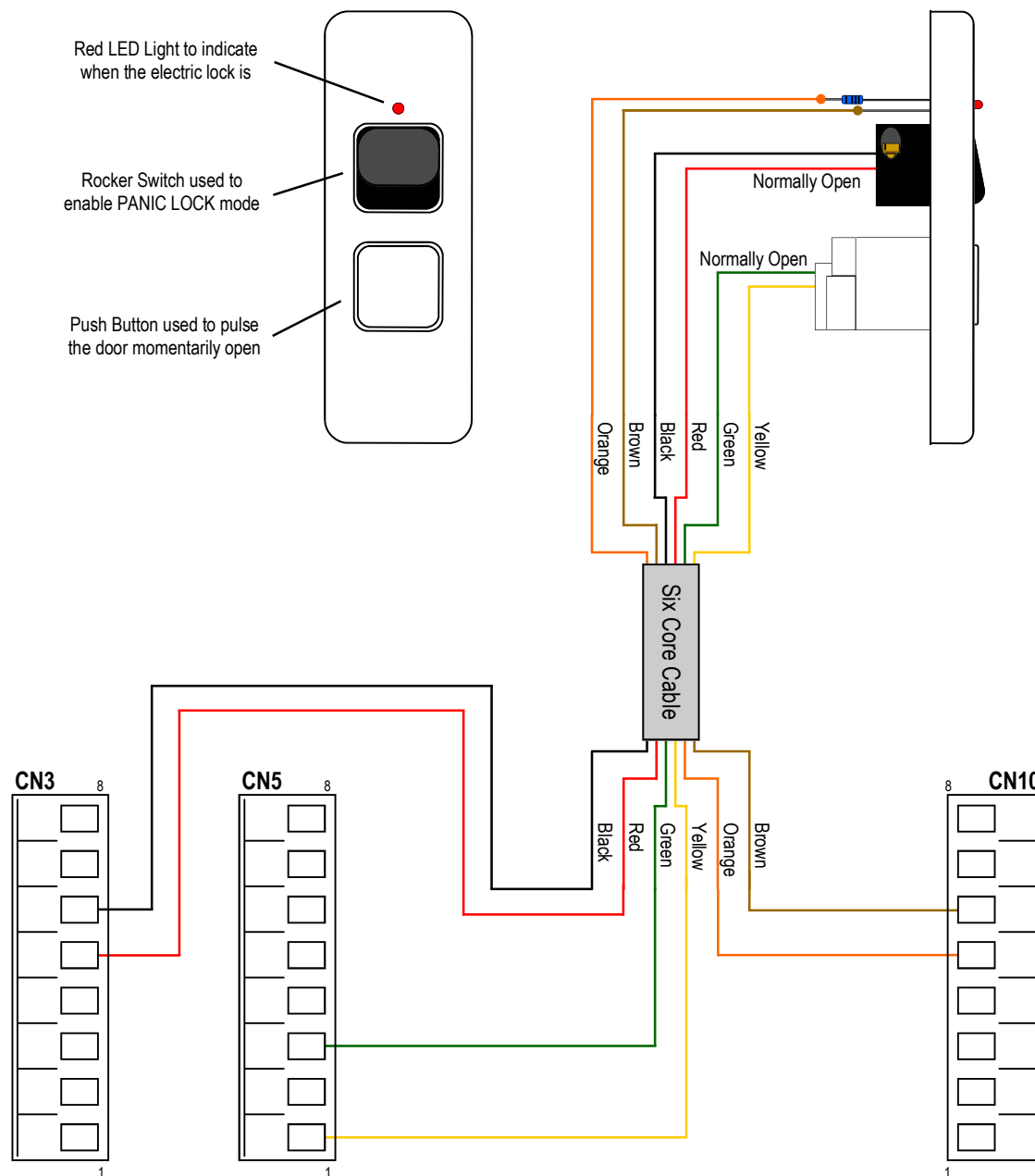
Notes:
- The connections made on CN10 for the indicator light will share the terminal with the cables from the electric lock.
- The indicator light will only come on when the electric lock is engaged (when the door is in LOCK mode and fully closed).
- If the indicator light seems to be non-functioning, try swapping the ORANGE and BROWN cables around as the polarity of the LED may have become mixed up

Fig 1: Internal Cabling of Lockdown System Receiver

To LED Indicator Light

Receiver

Relay

+12V DC
-12V DC
NC
COMM
NO

+12V DC
-12V DC
NC_1
$COMM_1$
NO_1
NC_2
$COMM_2$
NO_2

12V DC Supply from Control Board *

Voltage Free, Normally Open Contacts used to Engage LOCK Mode **
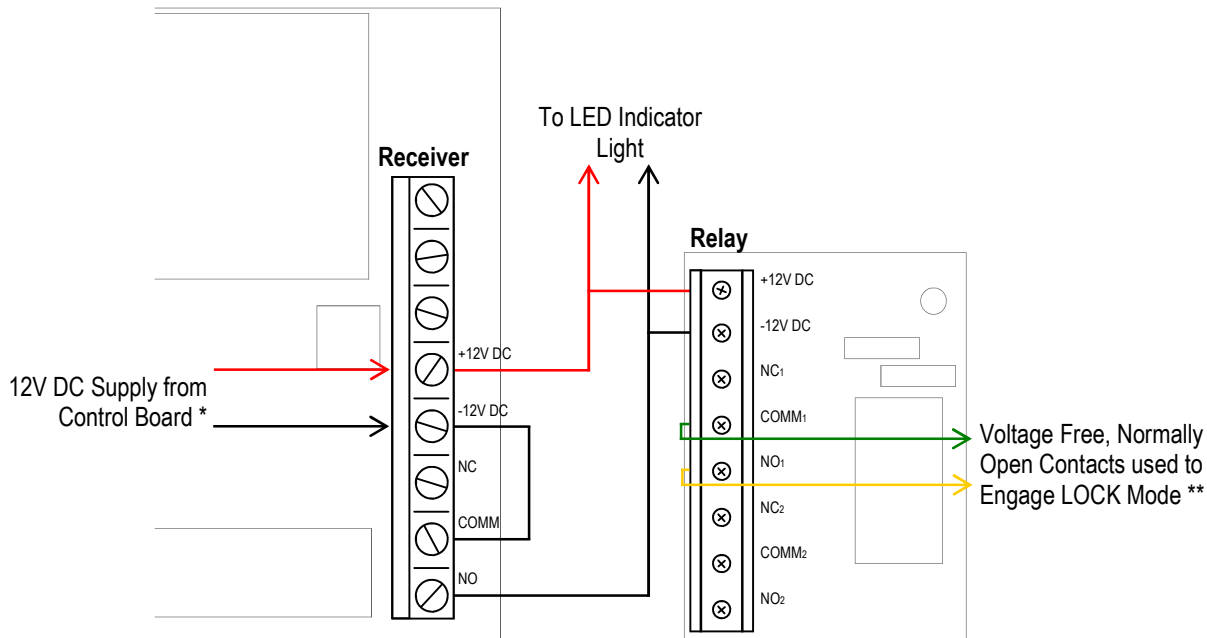
* On an Auto Ingress AS5 Control Board, this supply can be taken from CN3 Terminals 1 (GND) & 2 (12VDC).
For other control boards please refer to the relevant documentation.
** On an Auto Ingress AS5 Control Board, these must be connected to CN5 Terminals 1 (COMMON) & 5 (LOCK).
For other control boards please refer to the relevant documentation.

Fig 2: Lockdown Receiver Setup

Set Button/ Tamper Switch

Pulse / Toggle
Operate / Learn
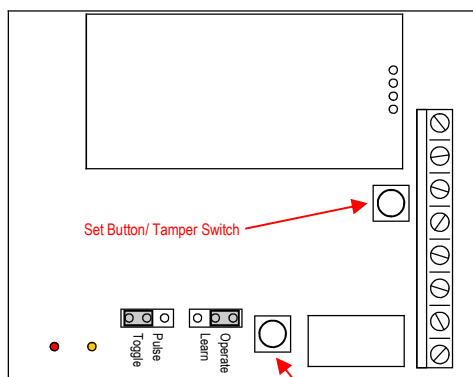
CAUTION: This is the 'Delete' button. Avoid Pressing.

Notes:
- During normal operation the two jumpers must be set to 'Toggle' and 'Operate'
- The red indicator light will come on whenever the system is in lockdown and will go off when the system has been released from lockdown

Instructions to Sync a Remote Transmitter with the Receiver
- With the unit powered up, move the jumper from 'Operate' to 'Learn'
- Press the 'Set' button (has a spring attached) until the red indicator light continues to flash
- Activate the Remote Transmitter,
    the red indicator light should now stop flashing and remain solid
- Move the jumper back from 'Learn to 'Operate'

THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

SCALE — NOT TO SCALE

DATE — 08/02/17

TITLE — Control Switch Cabling Manual LS220B, LS300 & LSW-LP/DUAL

DHS Panic Lockdown System with Indicator Light

DRG. NO. — lsl-as5-switch-dhs-page1/1

Fig 1: Connection of Standard Four Position Key Switch to DORMA Operators

LOCK
AUTO
EXIT
OPEN

Lock Mode Input —— 1
Exit Mode Input —— 2
Common —— 3 · · · 6
Open Mode Input —— 4
Auto Mode Input —— 5
7
8
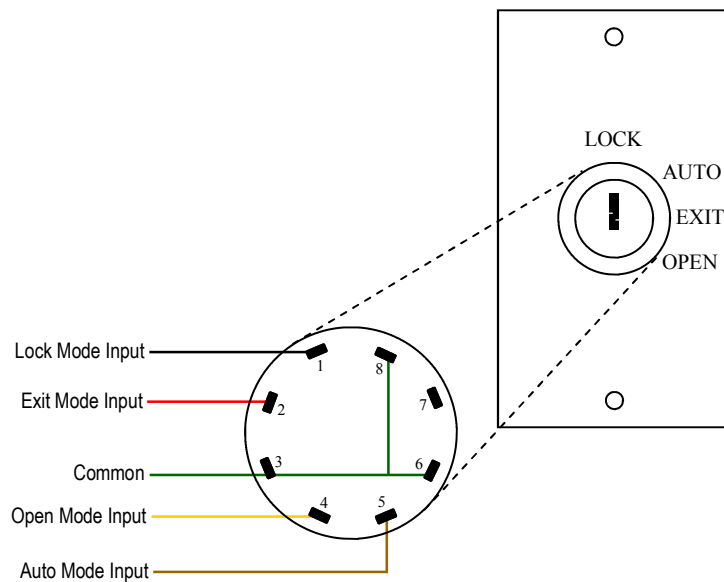
Note: Link between terminals 8, 6 & 3

THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

SCALE   NOT TO SCALE

DATE   24/02/17

TITLE

Control Switch Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

Mode Switches on DORMA Doors

DRG. NO. lsl-as5-switch-dormamode-page1/1

External Switch Plate

Entry Key

Note: Standard key switch can be swapped for a Lock-It-Well switch. In this case, use terminal 4 for N/O, terminal 1 for N/C and connect terminals 2 & 3 together as COM

N/C

COM

N/O

Note: All colours are representative only and will NOT correspond to actual cables used.

Occupied

Vacant

Push to Open

COM   N/O
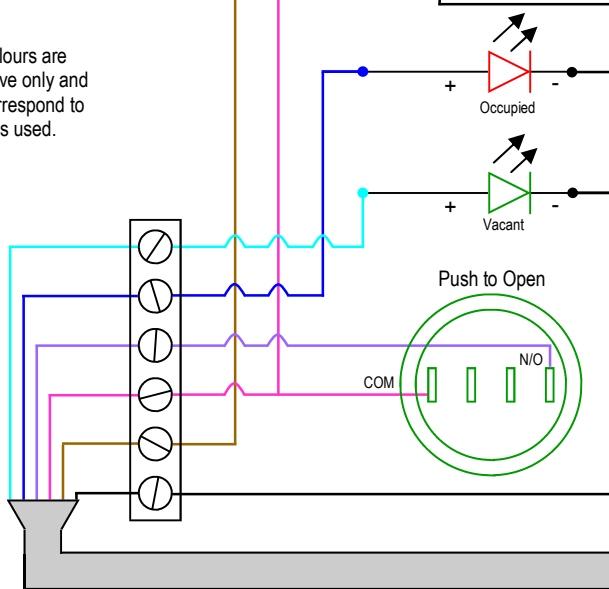
Note: Push to Open can be replaced with MLAK switch. In this case use terminals 3 and 4

CN3   8

CN5   8
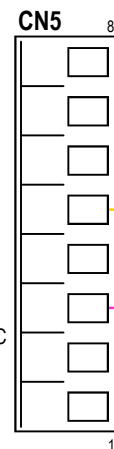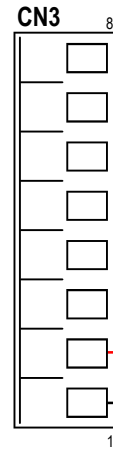
Note: Reed switch should be aligned when the door is fully closed.

LOCK

OPEN

12VDC

GND

1   1

COM

N/C

N/O

Auto Door Controller

Internal Switch Plate
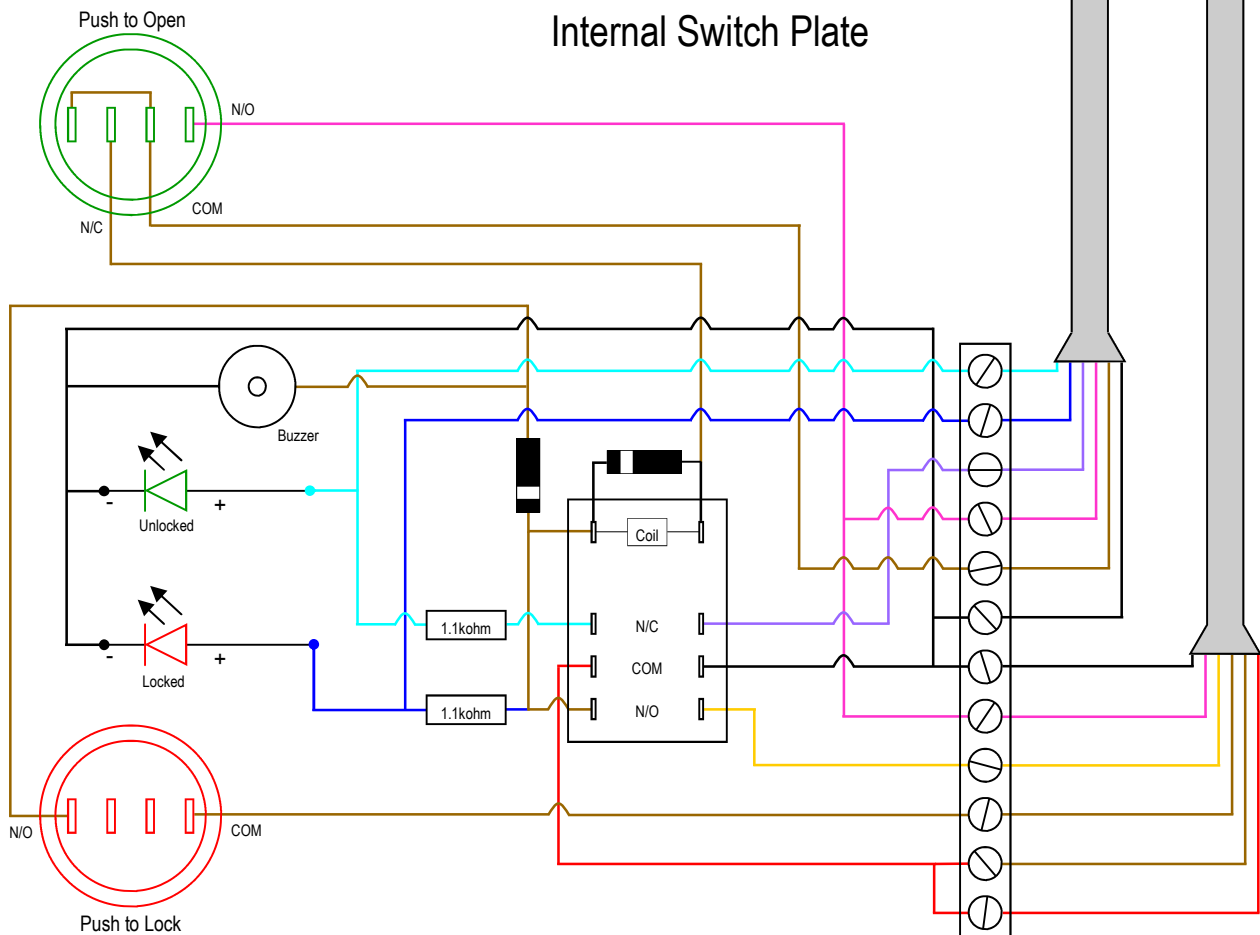
Push to Open

N/O

N/C   COM

Buzzer

Unlocked

Locked

1.1kohm

1.1kohm

Coil

N/C

COM

N/O

N/O   COM

Push to Lock

Fig 1: Zensafe Sensor Outputs

Supplied Cable

Black — Normally Closed
White — Common
Yellow — Normally Open

Motion Sensor Output Relay

Grey — Normally Closed
Pink — Common
Purple — Normally Open

Presence Sensor Output Relay

Brown
Green

Input Supply Voltage
12V - 24V AC or 12V - 30V DC
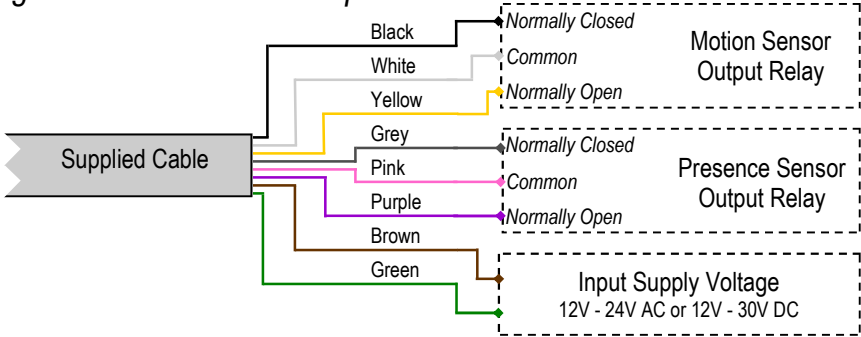
Fig 2: One Zensafe Sensor (Internal Only)

CN1 8

Unused

Black
Purple
White
Grey
Pink
Yellow
Brown
Green

Internal Zensafe

1
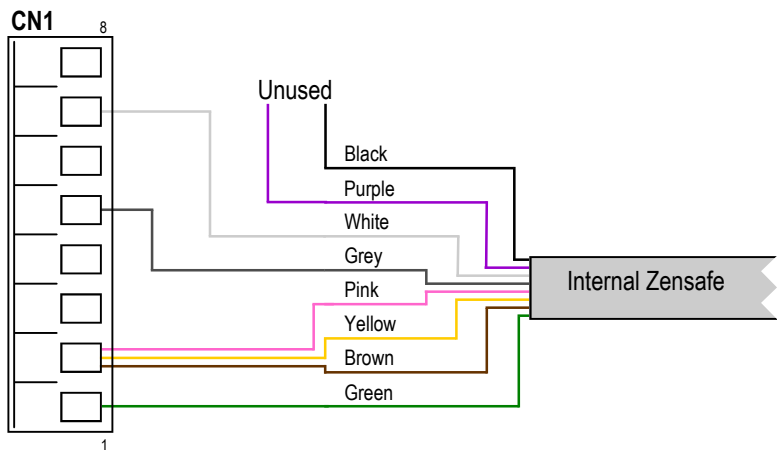
Fig 3: Two Zensafe Sensors (External & Internal)

CN1 8

Unused

External Zensafe

Black
Purple
White
Grey
Yellow
Brown
Green
Pink

Unused

Internal Zensafe

Black
Purple
White
Grey
Yellow
Brown
Green
Pink

1

Terminal Block CN1 Details

Terminal 8 - Entry Sensor Input:
- Triggers door to open in AUTO mode only.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal.

Terminal 7 - Exit Sensor input:
- Triggers door to open in AUTO and EXIT modes only.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal.

Terminal 5 - Close Safety Input:
- Triggers door to re-open in ANY mode *but* only if the door is not yet in the fully closed position (excludes MANAGED LOCK mode).
- Normally <u>closed</u> input, triggered when 24V is removed from this terminal (this is only the default state; it can be switched to 'normally open' in 'Setup: Functions').

Terminal 3 - Open Safety Input:
- When set to 'SLIDE' mode, this input triggers the door to open in ANY mode.
- When set to 'SWING' mode, this input triggers the motor to halt the door if it is opening in ANY mode.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal (this is only the default state; it can be switched to 'normally closed' in 'Setup: Functions').

Terminal 2 - 24V DC Output:
- Provides 24VDC for use powering sensors and peripheral devices.

Terminal 1 - GND Output:
- Ground from which the above 24V is measured.
- This is common to the GND found on all other Terminal Blocks.

Note: With the control board right-side up, the fuses will be located on the RHS of the board and CN1 will be the left most terminal block on the LHS of the board. All diagrams display CN1 in it's default arrangement. If the control board is mounted upside down, the terminals will be reversed top to bottom.

Fig 1: Eagle 6+ Sensor Outputs

Supplied Cable

White — Common
Yellow — Normally Open

Motion Sensor Output Relay

Brown
Green

Input Supply Voltage
12V - 24V AC or 12V - 30V DC

Fig 2: One Eagle 6+ Sensor (Internal Only)

CN1   8

White
Yellow
Brown
Green

Internal Eagle 6+

1

Fig 3: Two Eagle 6+ Sensors (Internal & External)

CN1   8

External Eagle 6+

White
Yellow
Brown
Green

Internal Eagle 6+

White
Yellow
Brown
Green

1

Terminal Block CN1 Details

Terminal 8 - Entry Sensor Input:
- Triggers door to open in AUTO mode only.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal.

Terminal 7 - Exit Sensor input:
- Triggers door to open in AUTO and EXIT modes only.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal.

Terminal 5 - Close Safety Input:
- Triggers door to re-open in ANY mode *but* only if the door is not yet in the fully closed position (excludes MANAGED LOCK mode).
- Normally <u>closed</u> input, triggered when 24V is removed from this terminal (this is only the default state; it can be switched to 'normally open' in 'Setup: Functions').

Terminal 3 - Open Safety Input:
- When set to 'SLIDE' mode, this input triggers the door to open in ANY mode.
- When set to 'SWING' mode, this input triggers the motor to halt the door if it is opening in ANY mode.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal (this is only the default state; it can be switched to 'normally closed' in 'Setup: Functions').

Terminal 2 - 24V DC Output:
- Provides 24VDC for use powering sensors and peripheral devices.

Terminal 1 - GND Output:
- Ground from which the above 24V is measured.
- This is common to the GND found on all other Terminal Blocks.

Note: *With the control board right-side up, the fuses will be located on the RHS of the board and CN1 will be the left most terminal block on the LHS of the board. All diagrams display CN1 in it's default arrangement. If the control board is mounted upside down, the terminals will be reversed top to bottom.*

Fig 1: IXIO-DT1 Sensor Outputs

White — Common — **Motion Sensor Output Relay**
Yellow — Normally Open**
Grey — Common — **Presence Sensor Output Relay**
Pink — Normally Closed**
Brown — Green — **Input Supply Voltage** 12V - 24V AC or 12V - 30V DC
Red —
Blue — **Test Output**

Supplied Cable

** These are the default operating modes and can be adjusted programmatically
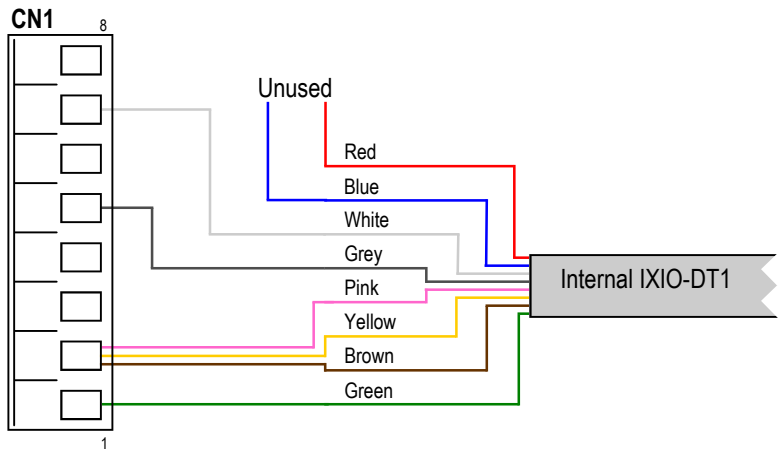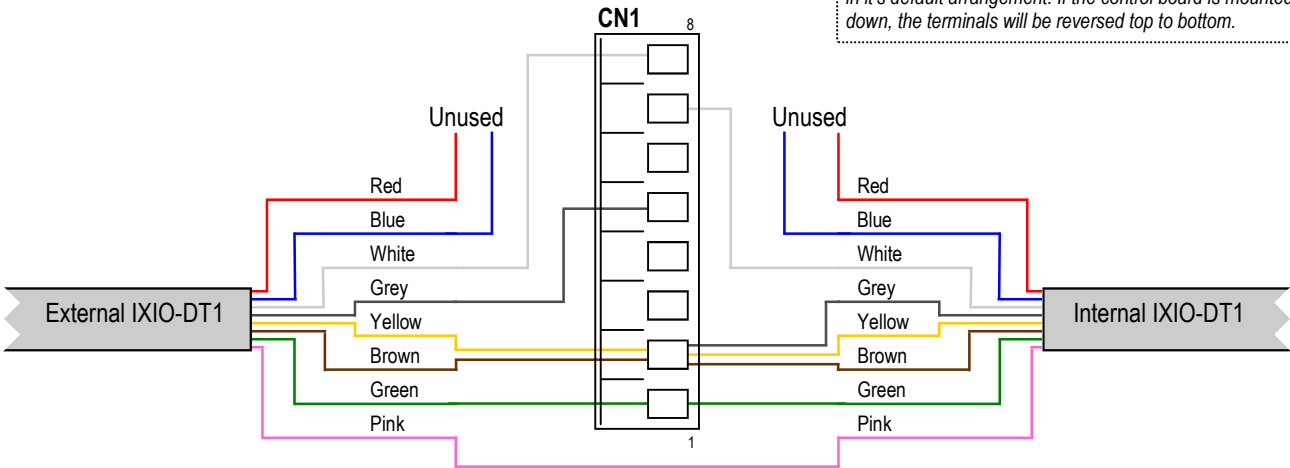
Fig 2: One IXIO-DT1 Sensor (Internal Only)

CN1 8

Unused
Red
Blue
White
Grey
Pink
Yellow
Brown
Green

Internal IXIO-DT1

1

Fig 3: Two IXIO-DT1 Sensors (External & Internal)

CN1 8

Unused
Red
Blue
White
Grey
Yellow
Brown
Green
Pink

External IXIO-DT1

Unused
Red
Blue
White
Grey
Yellow
Brown
Green
Pink

Internal IXIO-DT1

1

Terminal Block CN1 Details

Terminal 8 - Entry Sensor Input:
- Triggers door to open in AUTO mode only.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal.

Terminal 7 - Exit Sensor input:
- Triggers door to open in AUTO and EXIT modes only.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal.

Terminal 5 - Close Safety Input:
- Triggers door to re-open in ANY mode *but* only if the door is not yet in the fully closed position (excludes MANAGED LOCK mode).
- Normally <u>closed</u> input, triggered when 24V is removed from this terminal (this is only the default state; it can be switched to 'normally open' in 'Setup: Functions').

Terminal 3 - Open Safety Input:
- When set to 'SLIDE' mode, this input triggers the door to open in ANY mode.
- When set to 'SWING' mode, this input triggers the motor to halt the door if it is opening in ANY mode.
- Normally <u>open</u> input, triggered when 24V is applied to this terminal (this is only the default state; it can be switched to 'normally closed' in 'Setup: Functions').

Terminal 2 - 24V DC Output:
- Provides 24VDC for use powering sensors and peripheral devices.

Terminal 1 - GND Output:
- Ground from which the above 24V is measured.
- This is common to the GND found on all other Terminal Blocks.

Note: With the control board right-side up, the fuses will be located on the RHS of the board and CN1 will be the left most terminal block on the LHS of the board. All diagrams display CN1 in it's default arrangement. If the control board is mounted upside down, the terminals will be reversed top to bottom.

THINK OF US AUTOMATICALLY

AUTOINGRESS AUTOMATIC DOORS

SCALE — NOT TO SCALE

DATE — 01/02/17

TITLE — Sensor Cabling Manual LS220B, LS300 & LSW-LP/DUAL

IXIO-DT1 Dual Motion & Presence Sensor

DRG. NO. — as5-sen-ixio-page1/1

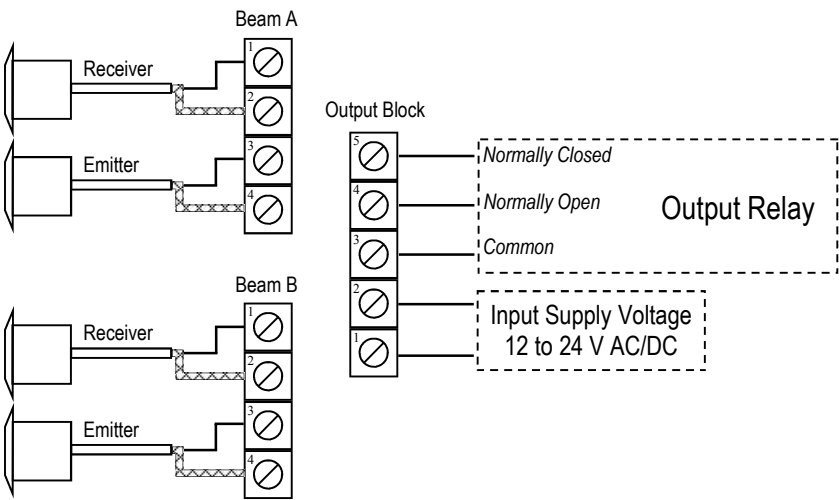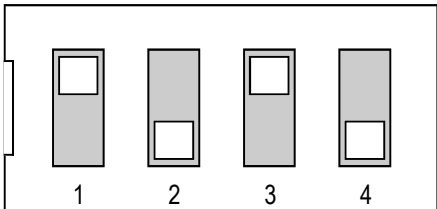## Fig 1: Photoelectric Beam Control Box Outputs

Beam A

Receiver

Emitter

1
2
3
4

Output Block

5
4
3
2
1

Normally Closed

Normally Open   Output Relay

Common

Input Supply Voltage
12 to 24 V AC/DC

Beam B

Receiver

Emitter

1
2
3
4

Fig 2: Photoelectric Beam Default Dip Switch Configuration

1   2   3   4

Dip Switch 1: Switch to the 'down' position to disable Beam B (enter 'single beam' mode)

Dip Switch 2: Switch to the 'up' position to reverse all output (NC becomes NO and vice versa)

Terminal Block CN1 Details

Terminal 8 - Entry Sensor Input:
- Triggers door to open in AUTO mode only.
- Normally open input, triggered when 24V is applied to this terminal.

Terminal 7 - Exit Sensor input:
- Triggers door to open in AUTO and EXIT modes only.
- Normally open input, triggered when 24V is applied to this terminal.

Terminal 5 - Close Safety Input:
- Triggers door to re-open in ANY mode *but* only if the door is not yet in the fully closed position (excludes MANAGED LOCK mode).
- Normally closed input, triggered when 24V is removed from this terminal (this is only the default state; it can be switched to 'normally open' in 'Setup: Functions').

Terminal 3 - Open Safety Input:
- When set to 'SLIDE' mode, this input triggers the door to open in ANY mode.
- When set to 'SWING' mode, this input triggers the motor to halt the door if it is opening in ANY mode.
- Normally open input, triggered when 24V is applied to this terminal (this is only the default state; it can be switched to 'normally closed' in 'Setup: Functions').

Terminal 2 - 24V DC Output:
- Provides 24VDC for use powering sensors and peripheral devices.

Terminal 1 - GND Output:
- Ground from which the above 24V is measured.
- This is common to the GND found on all other Terminal Blocks.

Note: With the control board right-side up, the fuses will be located on the RHS of the board and CN1 will be the left most terminal block on the LHS of the board. All diagrams display CN1 in it's default arrangement. If the control board is mounted upside down, the terminals will be reversed top to bottom.

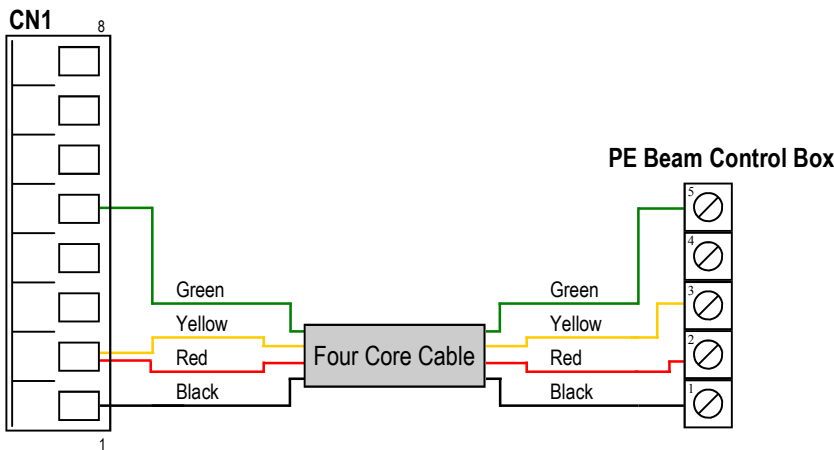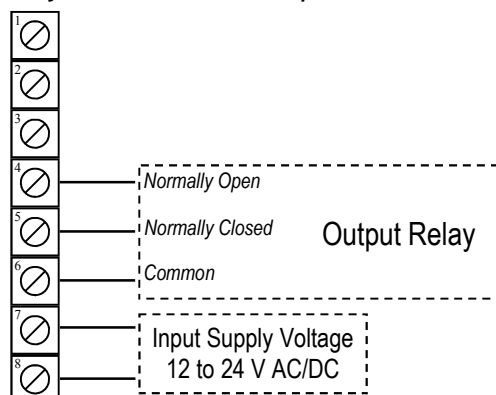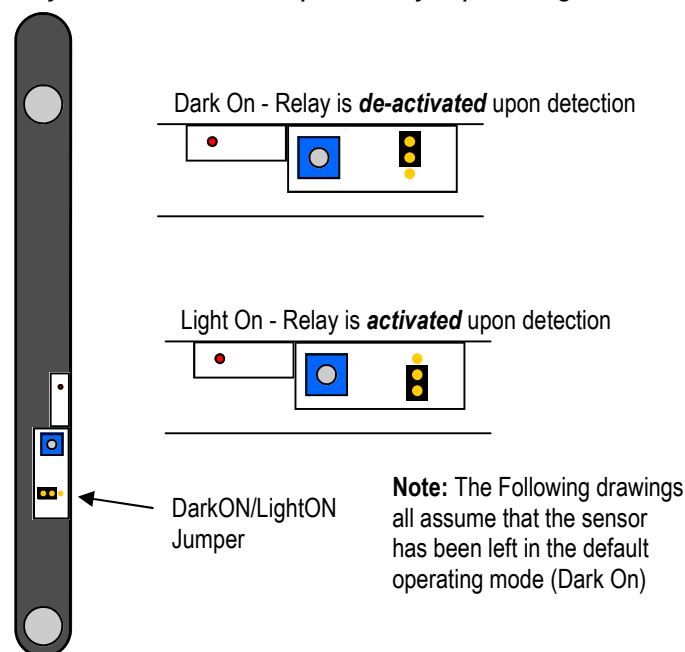## Fig 3: Two Pair of Photoelectric Beams (Close Safety)

CN1   8

PE Beam Control Box

5
4
3
2
1

Green   Green
Yellow   Yellow
Red   Four Core Cable   Red
Black   Black

1

THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

TITLE
Sensor Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

Photoelectric Safety Beam Sensor

SCALE   NOT TO SCALE

DATE   27/01/17

DRG. NO.   lsl-as5-sen-pebeam-page1/1

Fig 1: Eyetech Sensor Outputs

Normally Open
Normally Closed — Output Relay
Common

Input Supply Voltage
12 to 24 V AC/DC

Fig 2: Eyetech Sensor Output Relay Operating Modes

Dark On - Relay is *de-activated* upon detection

Light On - Relay is *activated* upon detection

DarkON/LightON Jumper

Note: The Following drawings all assume that the sensor has been left in the default operating mode (Dark On)

Terminal Block CN1 Details

Terminal 8 - Entry Sensor Input:
- Triggers door to open in AUTO mode only.
- Normally open input, triggered when 24V is applied to this terminal.

Terminal 7 - Exit Sensor input:
- Triggers door to open in AUTO and EXIT modes only.
- Normally open input, triggered when 24V is applied to this terminal.

Terminal 5 - Close Safety Input:
- Triggers door to re-open in ANY mode *but* only if the door is not yet in the fully closed position (excludes MANAGED LOCK mode).
- Normally closed input, triggered when 24V is removed from this terminal (this is only the default state; it can be switched to 'normally open' in 'Setup: Functions').

Terminal 3 - Open Safety Input:
- When set to 'SLIDE' mode, this input triggers the door to open in ANY mode.
- When set to 'SWING' mode, this input triggers the motor to halt the door if it is opening in ANY mode.
- Normally open input, triggered when 24V is applied to this terminal (this is only the default state; it can be switched to 'normally closed' in 'Setup: Functions').
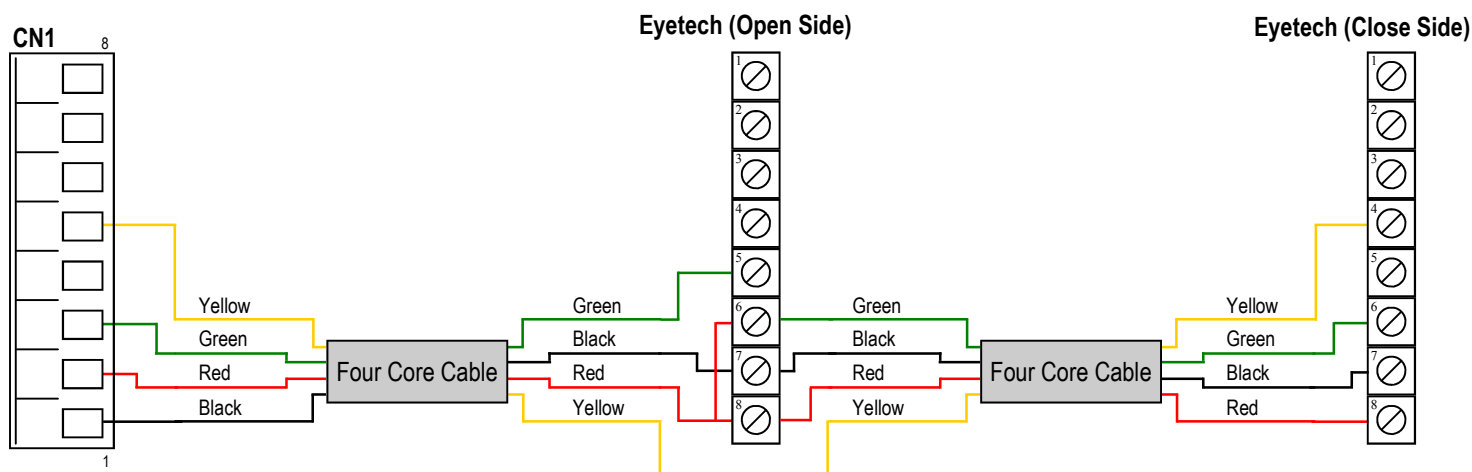
Terminal 2 - 24V DC Output:
- Provides 24VDC for use powering sensors and peripheral devices.

Terminal 1 - GND Output:
- Ground from which the above 24V is measured.
- This is common to the GND found on all other Terminal Blocks.

Note: With the control board right-side up, the fuses will be located on the RHS of the board and CN1 will be the left most terminal block on the LHS of the board. All diagrams display CN1 in it's default arrangement. If the control board is mounted upside down, the terminals will be reversed top to bottom.

Fig 3: Two Eyetech Sensors (Open Safety & Close Safety)

CN1

Eyetech (Open Side)

Eyetech (Close Side)

Yellow — Green — Red — Black

Four Core Cable

Green — Black — Red — Yellow

Green — Black — Red — Yellow

Four Core Cable

Yellow — Green — Black — Red

THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

TITLE
Sensor Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

Eye-Tech Safety Sensor

SCALE — NOT TO SCALE

DATE — 25/01/17

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LSW-LP-DUAL Settings Adjustment

When installing Eyetech sensors on a Double Swing Door setup, it is easiest to first change the "Close Safety" input from it's default state of expecting a "Normally Closed" signal to instead expect a "Normally Open" signal. This greatly simplifies the cable configuration and allows only four core cable to be used throughout the setup instead of requiring six core.

This setting can be adjusted using the following steps:
- Press the SETUP button and enter the MASTER CODE specific to that operator
    "Setup: Params." will be displayed
- Scroll down using the 8 button until "Setup: Functns" is displayed
- Press the ENTER button to enter into Setup: Functions
    "Functns: Open Safe" will be displayed
- Scroll down using the 8 button until "Functns: ClsSfRly" is displayed
- Press the ENTER button to enter into "Functns: ClsSfRly"
- Use the 8 button to scroll until "ClsSfRly NormOpen" is displayed
- Press the ENTER button to confirm the setting
- Press the EXIT button twice to save the changes
    "Saving Changes" will be displayed

Fig 4a: Four Eyetech Sensors on a Double Swing Door (Two per Door Panel)
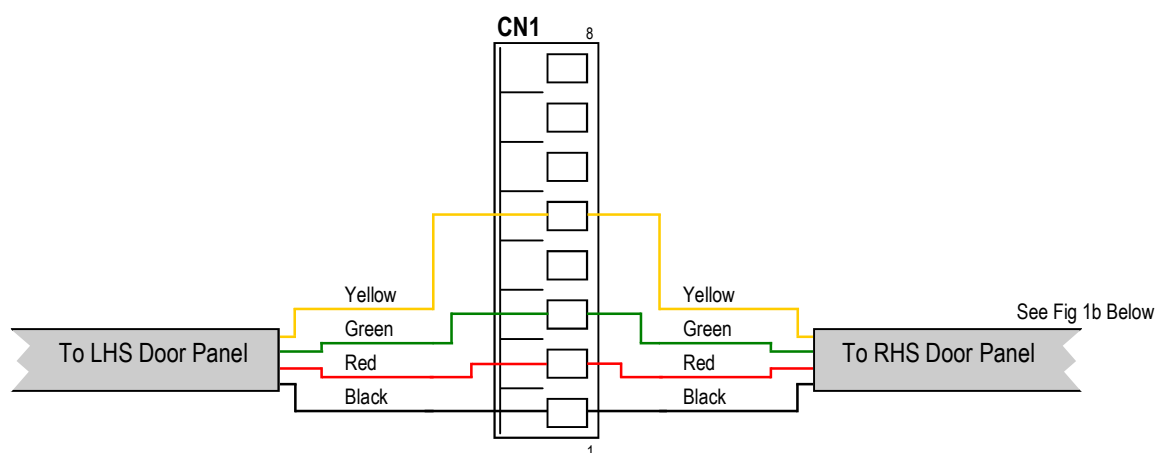
Fig 4b: Two Eyetech Sensors (Open Safety & Close Safety) on a Double Swing Door Panel
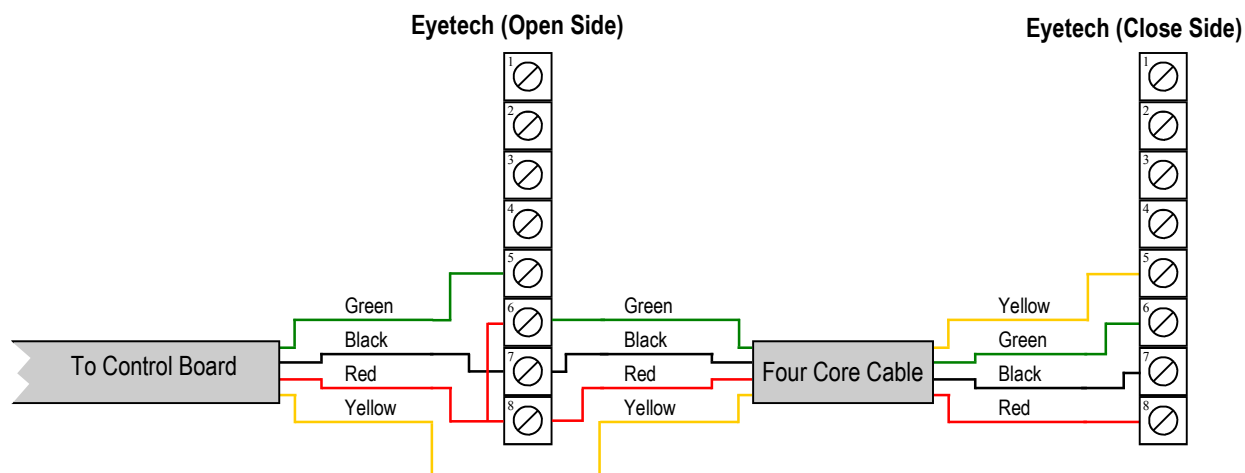
THINK OF US AUTOMATICALLY

AUTOINGRESS
AUTOMATIC DOORS

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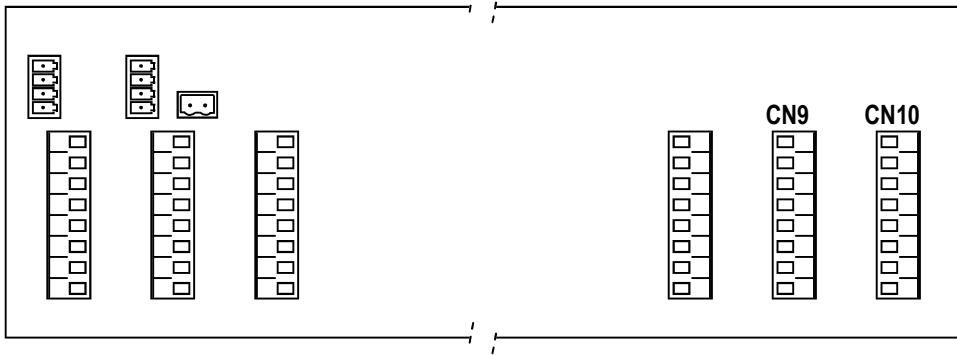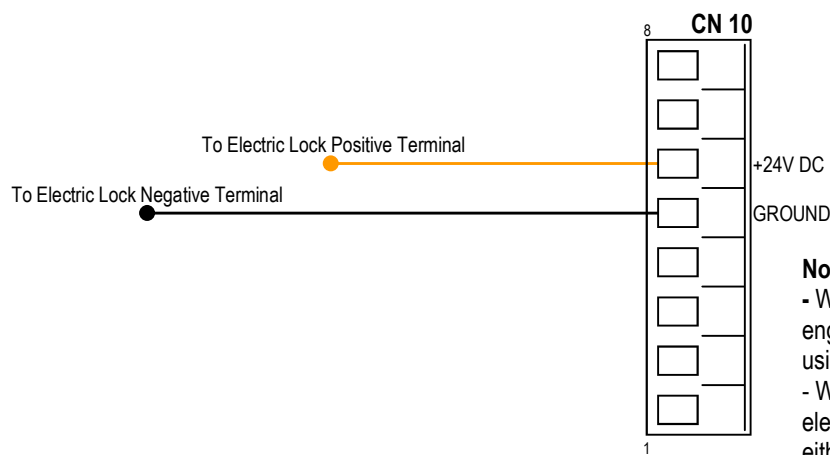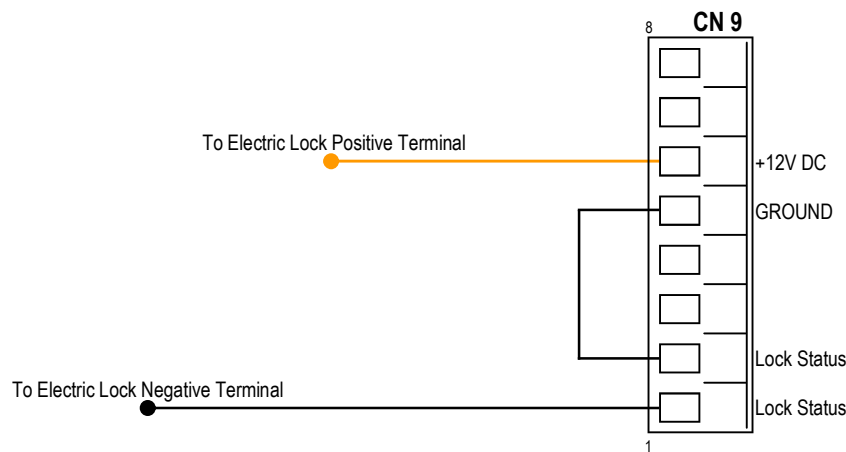## Fig 1: Location of Terminal Blocks on Control Board

CN9   CN10

Fig 2: Lock Output for 24V DC Electric Locks

CN 10

8

To Electric Lock Positive Terminal

To Electric Lock Negative Terminal

+24V DC

GROUND

1

Note:
- With the default settings, this output will provide voltage to engage the electric lock. This behaviour can be changed using the Lock Type function in Setup: Functions.
- With the default settings, the controller will engage the electric lock only when the door is fully closed and placed in either Lock, Exit or Panic Lock mode. This behaviour can be changed using the HowULock function in Setup: Functions.

Fig 3: Lock Output for 12V DC Electric Locks

CN 9

8

To Electric Lock Positive Terminal

+12V DC

GROUND

Lock Status

To Electric Lock Negative Terminal

Lock Status

1

Note: The pair of Lock Status outputs are normally open and will close whenever the electric lock is engaged. As the state of lock status depends entirely on the state of the lock output (see diagram above) it's behaviour is adjusted using the same functions.

Fig 1: Correct Cabling of YD38 Fail Secure Solenoid Lock

YD38 Lock
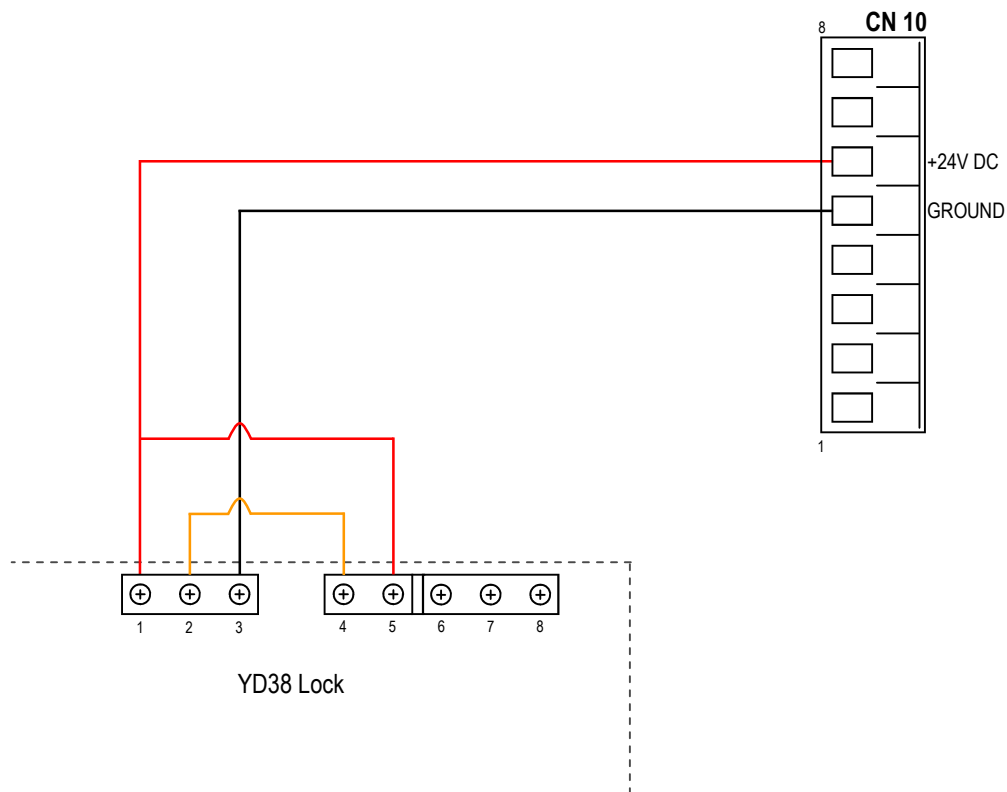
Note:
- Must first change "Lock Type" function to F/Secure (accessible in Setup: Functions using the Master Code) which changes the control board to provide voltage to unlock (instead of the default behaviour of applying voltage to lock).

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Electric Lock Cabling Manual
LS220B, LS300 & LSW-LP/DUAL

YD38 Fail Secure Solenoid Lock

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Fig 1: Speed and Setting Adjustments on Control Board

Opening Direction

Left — Right

No — Yes

Auto Close?

Open Speed

Slow Open Distance

Close Speed

Slow Close Distance

Test Button

Power Indicator Light

Slow Speed

Open Dwell Time

Min — Max
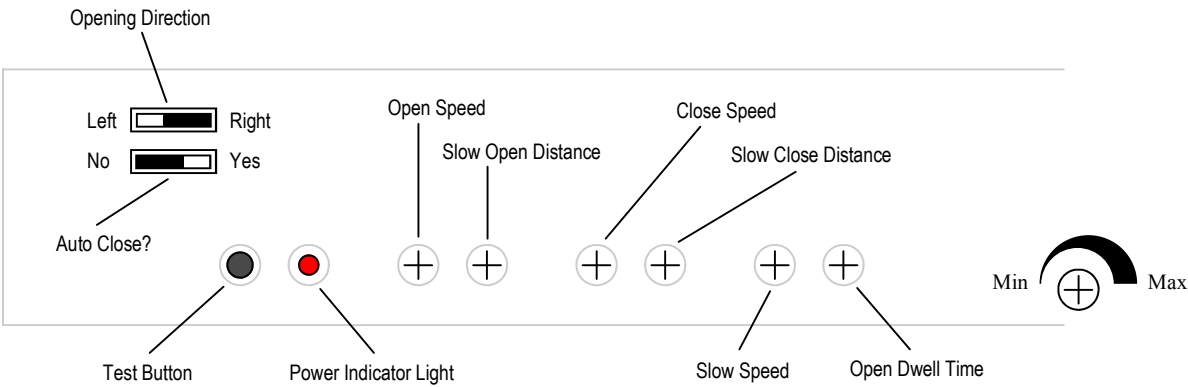
Fig 2: Main Connections from Control Board to Control Devices

1 — Safety Sensor NC Input
2 — Access Control NO Input
3 — Battery Board IN
4 — Access Control COM
5 — Battery Board OUT
6 — GND
7 — GND
8 — +12V DC
9 — GND
10
11

12 — GND
13 — Half Open
14 — Open
15 — Locked
16 — +5V DC

+24V DC Battery Input

+12V DC Output for Electric Lock
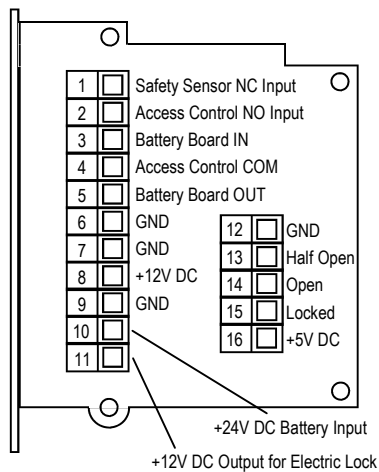
Safety Sensors
- Must create a normally closed connection between terminals 1 and GND
- When connection between 1 and GND is broken, the door will refuse to close until the connection is re-made
- If the door is already closed and this connection is broken, the door will continue to remain closed

Access Control, Emergency Exit Push Button and Emergency Fire Systems
- Must all be connected across terminals 2 and 4 in a normally open configuration
- When terminals 2 and 4 are connected, the door opens and remains open so long as the connection is held
- This input will override all other modes

Open Mode, Half Open Mode and Locked Mode
- When connected to GND, each input forces the respective mode
- When multiple modes are forced, the one with the highest priority takes control
- When no modes are forced the door enters it's lowest priority mode (Auto mode)
- Mode priority is ranked from highest to lowest as follows: Locked, Open, Half Open and Auto
- Note that Open mode has a lower priority than Locked mode and as such, this input will not function if the door is placed into Locked mode
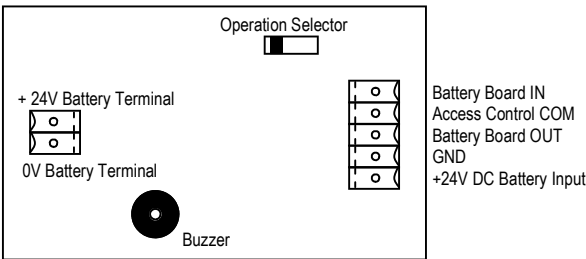
Fig 3: Actuation Sensor Connections

Supply Voltage to Power Sensors — +24VDC
— GND

Normally Open Input — Sensor
— Sensor
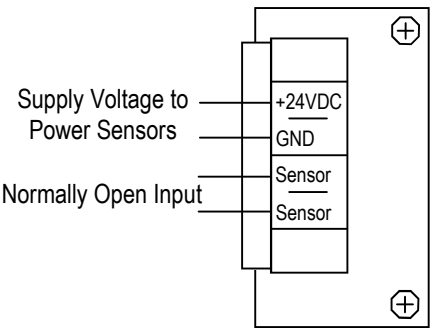
Note
- Internal and External Sensors should both be cabled into the same input
- When the operator is placed in Auto mode and this input is closed, the doors will open

Fig 4: Connections from Battery Level Monitor Board

Operation Selector

+ 24V Battery Terminal

0V Battery Terminal

Buzzer

Battery Board IN
Access Control COM
Battery Board OUT
GND
+24V DC Battery Input

Operation Selector
- When switched to the left, the door continues to operate as per normal when the power fails
- When switched to the right, the door opens up fully before shutting down completely each time the power fails

Note
- If the battery is flat or disconnected, this board will cause the operator to cease working completely and the buzzer will sound until the battery is replaced or disconnected
- To bypass the battery board completely, place a loop between terminals 3 and 5 on the main control board (Battery Board IN and Battery Board OUT)
- To bypass the battery (but keep the Battery Level Monitor Board connected), place a loop on the Battery Level Monitor Board between +24V Battery Terminal Input and +24V DC Battery Input

***** ALL CONNECTIONS MUST BE <u>NORMALLY OPEN</u> AND <u>VOLTAGE FREE</u> *****

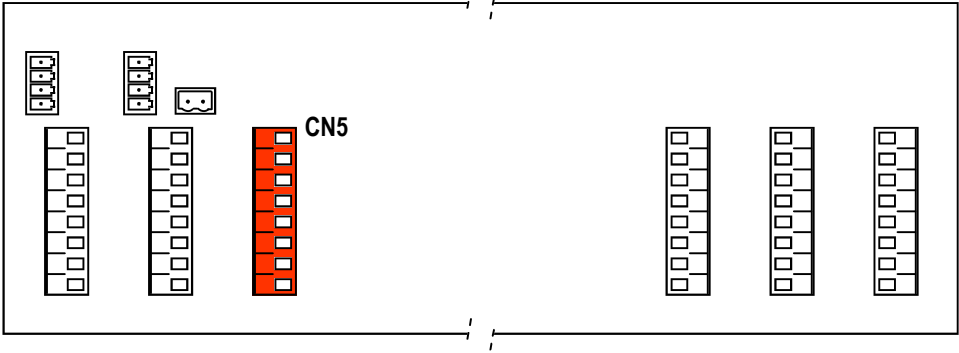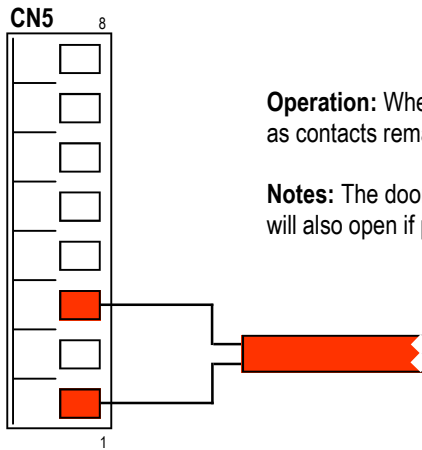*Fig 1: Location of Terminal Block CN5 on Control Board*

CN5

Fig 2: Fire Alarm Connection Diagram

CN5 8

1

Operation: When contacts are closed, the door will open and remain open so long as contacts remain closed.

Notes: The door will open in all modes including when the door is locked. The door will also open if power has failed, assuming the backup battery is still functioning.

Fig 3: Smoke Alarm Connection Diagram

CN5 8

1
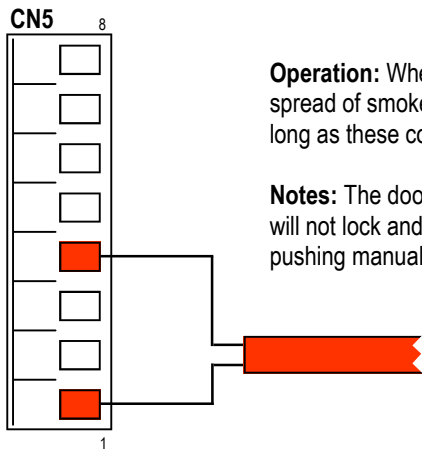
Operation: When contacts are closed, the door will close in order to prevent the spread of smoke from one area to another. It will remain in this 'Smoke' mode so long as these contacts remain closed.

Notes: The door will ignore all sensors and safety beams while closing. The door will not lock and can be opened with the emergency egress push button or by pushing manually. After being opened, the door will attempt to close again.

***** ALL CONNECTIONS MUST BE <u>NORMALLY OPEN</u> AND <u>VOLTAGE FREE</u> *****

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Fig 4: Location of Terminal Blocks CN5 and CN9 on Control Board
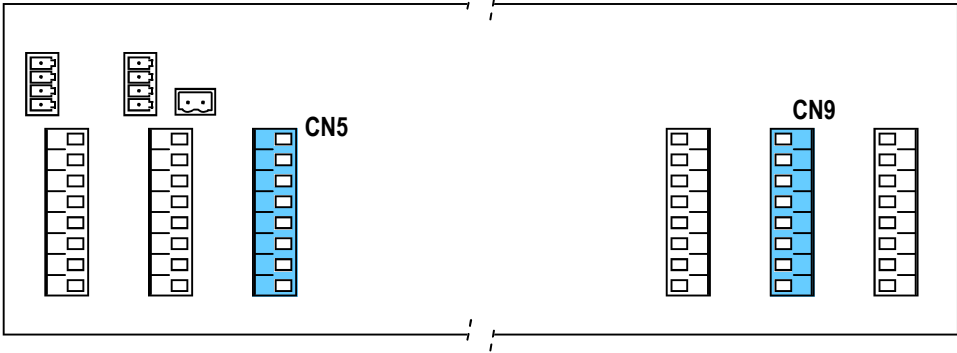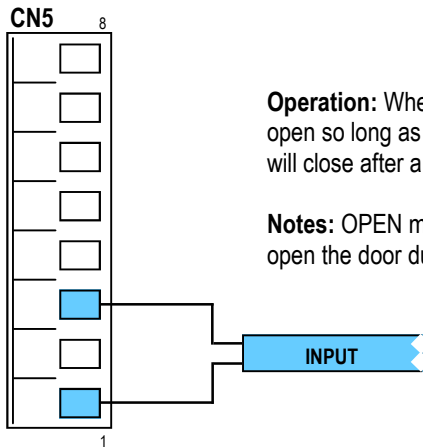
CN5

CN9

Fig 5: Open Mode Control Input Connection Diagram

CN5   8

INPUT

Operation: When contacts are closed, the door will enter OPEN mode and remain open so long as the contacts remain closed. Once the contacts are released, the door will close after a short delay.

Notes: OPEN mode overrides all other modes including locked. OPEN mode will also open the door during a power failure, assuming the backup battery is still functioning.

1

Fig 6: Lock Mode Control Input Connection Diagram

CN5   8
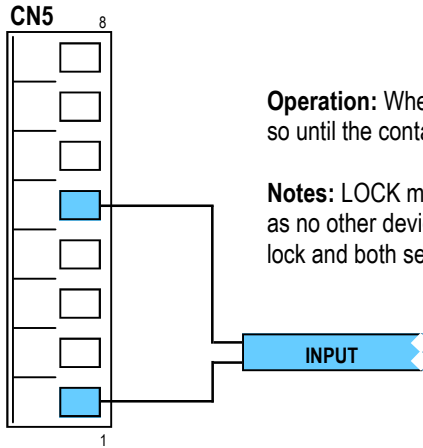
Operation: When contacts are closed, the door will enter LOCK mode and remain so until the contacts are released.
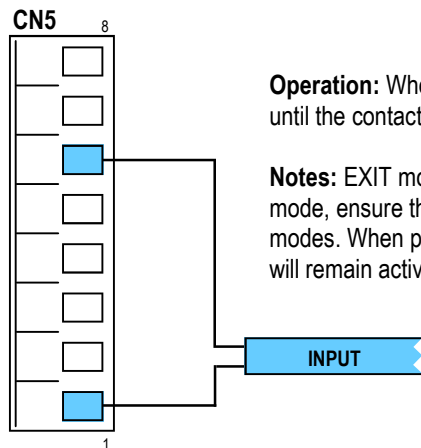
Notes: LOCK mode overrides every other mode except for OPEN mode. So long as no other devices are holding the door in OPEN mode, the door will close and lock and both sensors will be disabled.

INPUT

1

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Fig 7: Exit Mode Control Input Connection Diagram

CN5

Operation: When contacts are closed, the door will enter EXIT mode and remain so until the contacts are released.

Notes: EXIT mode will only override AUTO mode and nothing else. To enter EXIT mode, ensure that there are no other devices holding the door in the LOCKED or OPEN modes. When placed in EXIT mode, the door will close and lock but the internal sensor will remain active allowing people to exit automatically.
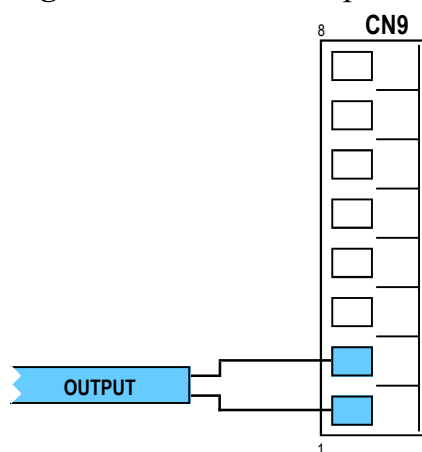
INPUT

Fig 8: Open Status Output Connection Diagram

CN9
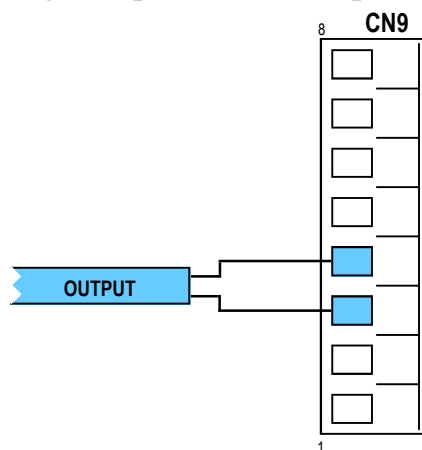
Operation: Set of voltage free contacts which close when the door is sitting in the <u>closed</u> position.

Notes: On automatic swing doors, these contacts behave differently and will only close when the door is in the fully <u>open</u> position.

OUTPUT

Fig 9: Lock Status Output Connection Diagram

CN9

Operation: Set of voltage free contacts which close when the electric lock is engaged.

Notes: This does not detect LOCK mode. It detects the status of the electric lock itself. As such, these contacts can also be closed in EXIT mode. The electric lock must be disengaged in order for the door to open and as such these contacts will open every time the door opens.

OUTPUT

***** *ALL INPUTS MUST BE <u>NORMALLY OPEN</u> AND <u>VOLTAGE FREE</u>* *****

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Programming controllers during maintenance

A. Check if Serial No. is entered correctly. Serial No. is unique to each door.
    1) Check if the Serial No. on door sticker is the same as Serial No. on keypad.
        a. If different, please enter the correct Serial No. and its Master Code.
        b. Ring the Service Dept. on toll free number 1300 138 750 if assistance is required.
    2) If keypad displays "Serial No. not available".
        a. Please upload the correct Serial No and Master Code to keypad using the default factory code of 1758.
        b. Ring the Service Dept. on toll free number 1300 138 750 if assistance is required.

B. Check if Service Warning is permanently turned off. Applies to any door on contract.
    1) To remove Service Warning permanently.
        a. Press Setup.
        b. Enter the master code provided (if not provided, ring 1300 138 750).
        c. Scroll down to Setup: Functions and hit enter.
        d. Scroll down to Function Serv Warn and hit enter.
        e. Turn Service Warning off by pressing number 2 and hit enter.
        f. Keep pressing the Exit button to save changes.

C. Check if Service Interval if set to suit. Service Interval is stated in WO. Applies to any door on contract.
    1) To set the Service Interval.
        a. Press Setup.
        b. Enter the master code provided (if not provided, ring 1300 138 750).
        c. Scroll down to Setup Functions and hit enter.
        d. Scroll down to Function Serv Ival and hit enter.
        e. Set to correct service interval (information will be provided on Work Order).

D. Check if Registration is completed. Applies to doors on contract.
    1) To register the doors.
        a. Press Setup.
        b. Enter the local user code provided (if not provided, please request from customer, default is 1234).
        c. Scroll down to Register Door Now and hit enter.
        d. Enter the Registration Code (ring 1300 138 750 for registration code).

E. Check if Service Timer is set to next Service Date.
    1) To reset the Service Timer.
        a. Press Setup.
        b. Enter the master code provided (if not provided, ring 1300 138 750).
        c. Scroll down to Reset Service Timer and hit enter twice.
        d. Keep pressing exit until it says "Saving changes". Screen should say Saving Changes.

F. Check that the internal clock is set to the correct time and date.
    1) To check the date and time.
        a. Before pressing any buttons wait until the keypad display cycles to the time and date.
    2) To set the time and date.
        a. Press Setup.
        b. Enter the local user pass code provided (if not provided, please request from customer, default is 1234).
        c. Scroll down to Set Day & Time and hit enter.
        d. Follow the prompts to set the current day and time, using the enter button to proceed through each step.

F. Check the Maintenance Record Sticker has been marked and that the Log Book is present and completed on each service.

NOTES:

NOTES:
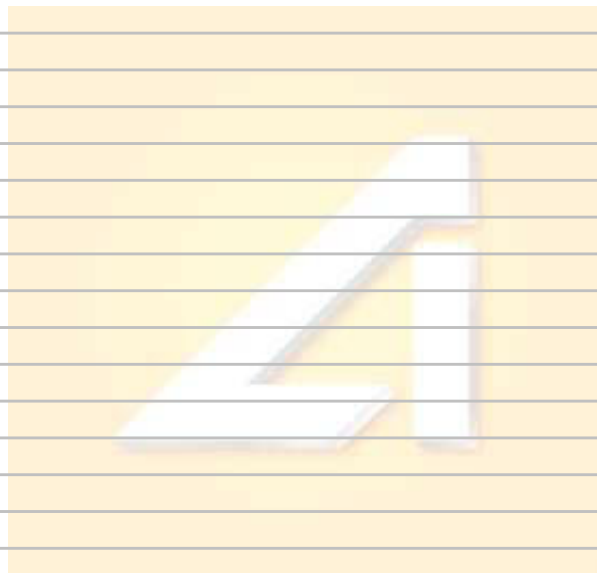
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