

OPERATING GUIDE

Pulse Controller 100 Series



Installation



Operation



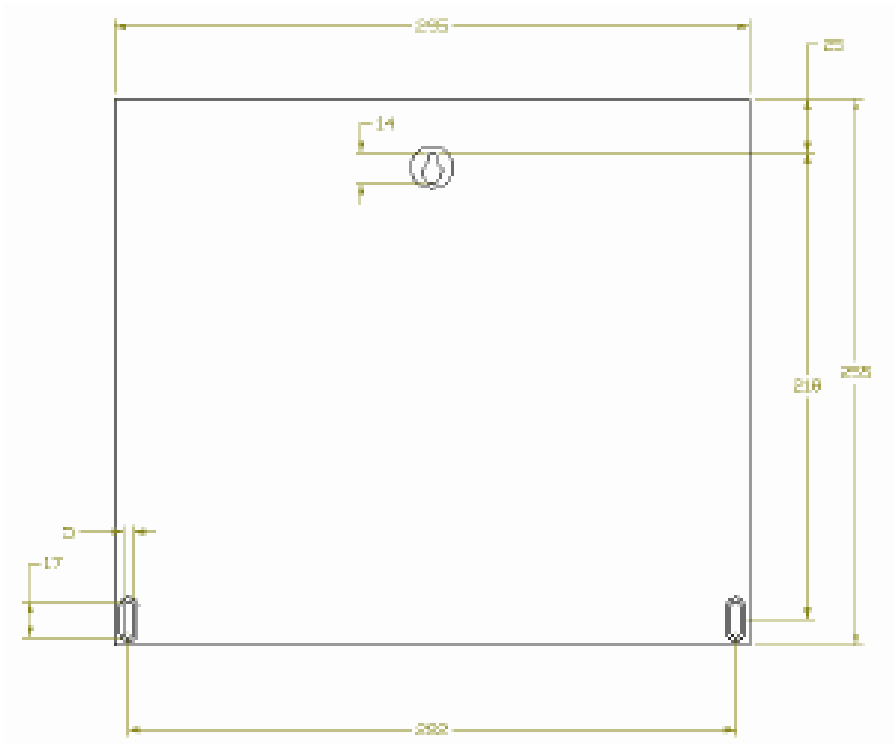
Product Maintenance



INSTALLATION

Mechanical Installation

View of mechanical fastening points on rear of enclosure



- Mount in environments of -10°C to + 50°C
- Do not mount directly to hot surfaces
- Do not expose directly to sunlight
- Protect from infiltrations of water and humidity
- Do not install on vibrating surfaces
- All electrical connections including the wiring associated with the valves should not be in close proximity to wiring for other applications (for example motor cables)
- 3 point mounting

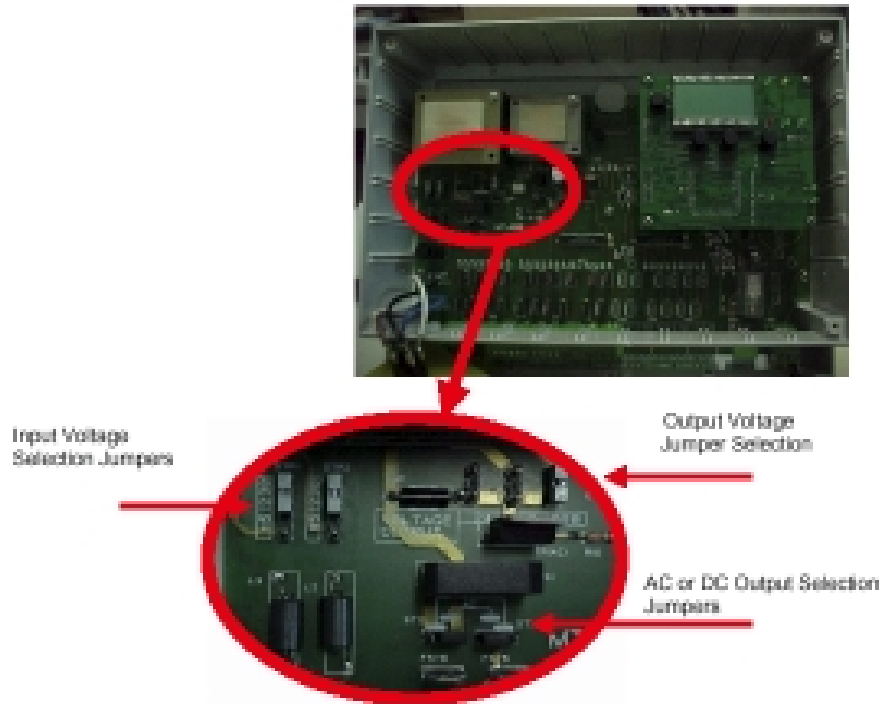


Electrical Installation

Basic Installation

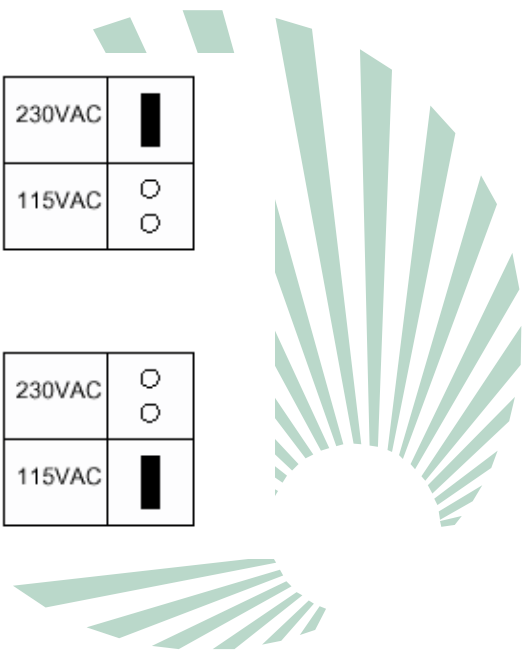
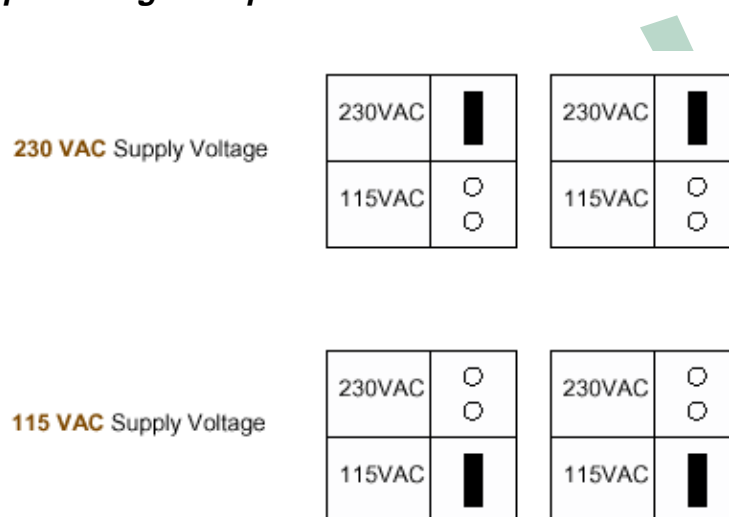
Firstly, the power should be isolated from the unit and have the power switch in the "O" (OFF) position.

Figure 1. Electrical Circuit Board with Jumper Selections Magnified



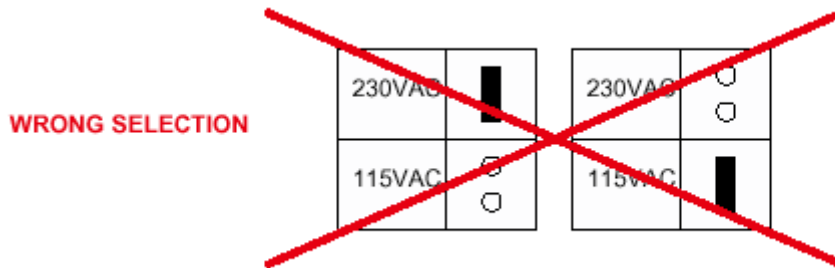
Select the input voltage being supplied to the unit by use of the jumper terminals shown in Figure 2. (Refer to Figure 1 for location on the PCB)

Figure 2. Possible Input Voltage Jumper Selections



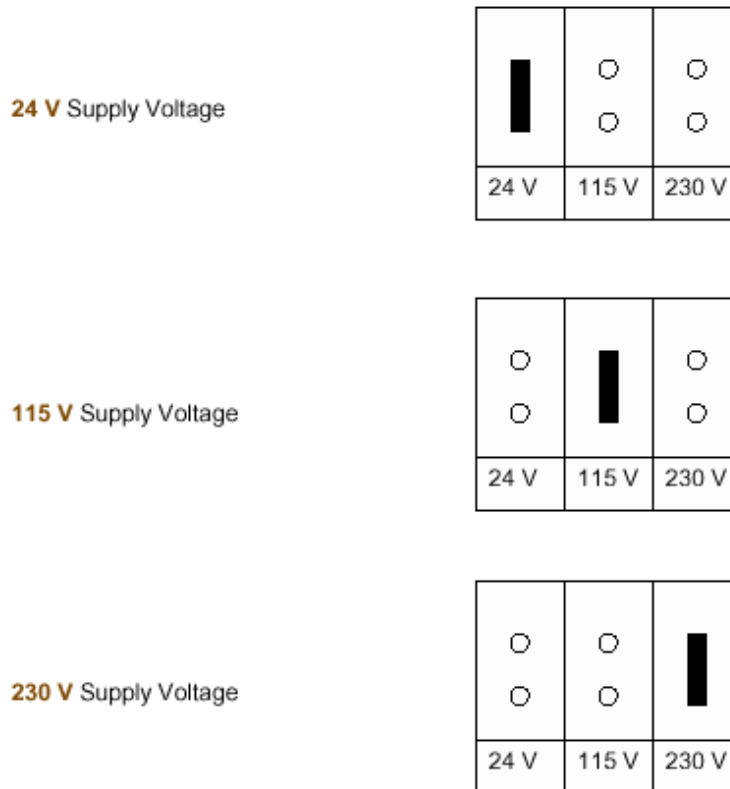
Please note: If changing the Supply Voltage jumpers is necessary, it is of vital importance that BOTH jumpers be changed to the desired input voltage. Refer to Figure 3 for an illustration of an incorrect selection.

Figure 3. Incorrect Selection of Supply Voltage Jumpers



Select the output voltage required by use of the jumper terminals shown in Figure 4. (Refer to Figure 1 for location on the PCB)

Figure 4. Possible Output Voltage Jumper Selections



Choose whether the output is to be either AC or DC. (See Figure 4 for selections and refer to Figure 1 for location on the PCB)

IMPORTANT NOTE: NEVER select 230V Output as DC!

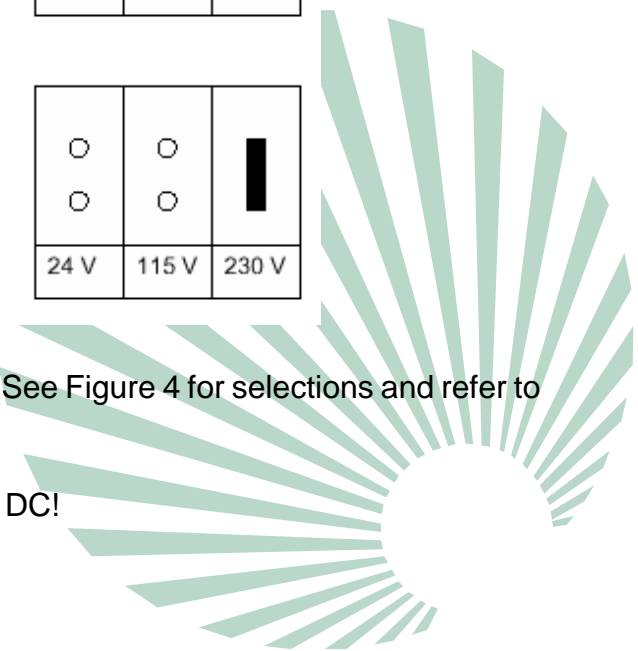
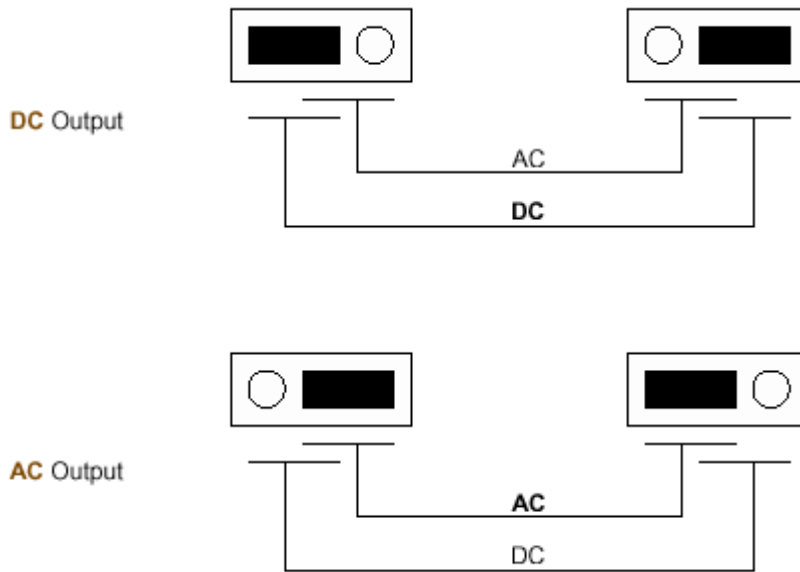
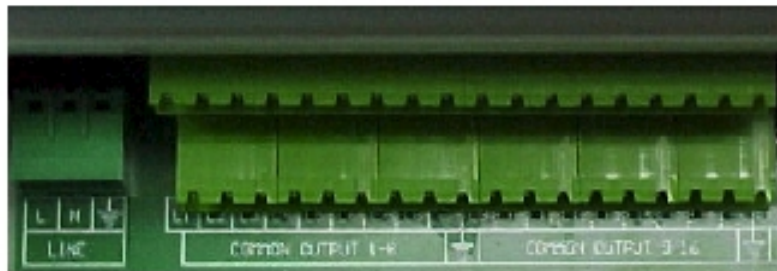


Figure 5. Possible AC / DC Voltage Output Jumper Selections



Connect the valves to the terminals shown in Figure 6 with the line power for the solenoids being supplied from the top screw terminals and the common connection being from the bottom row of screw terminals.

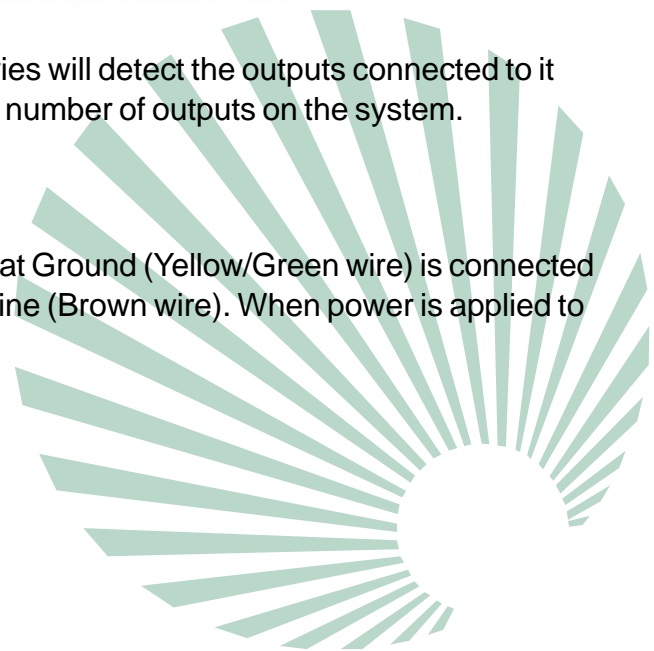
Figure 6. Output Terminals for Solenoids



Please note that the Goyen Pulse Controller 100 Series will detect the outputs connected to it and as a result, there is no need (or facility) to set the number of outputs on the system.

Ensure that the unit is still switched off.

Now connect the input power to the unit, observing that Ground (Yellow/Green wire) is connected properly, followed by Neutral (Blue wire) and finally Line (Brown wire). When power is applied to the unit, turn the unit on ("I" Position).



Additional Wiring Features

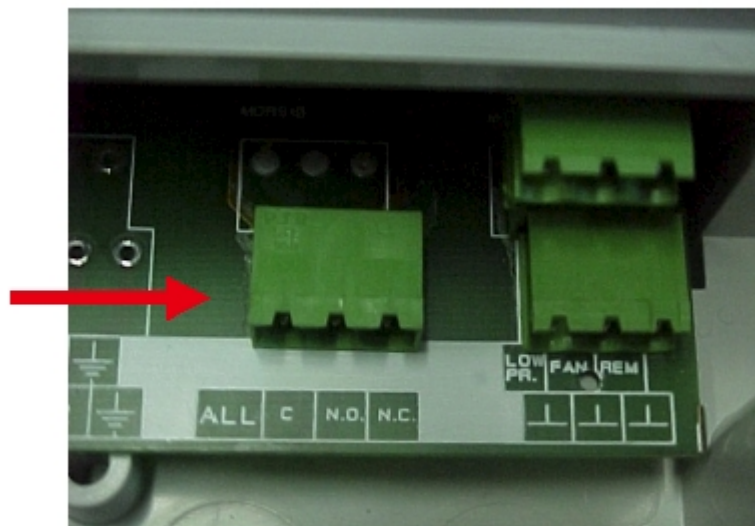
This section explains the wiring of the following features of the Goyen Pulse Controller 100 Series.

- A. Coil Failure Remote Alarm Monitoring
- B. Fan Contacts
- C. Remote Contacts
- D. Low Pressure Contacts

PLEASE NOTE: the alarm contact on the PCB is a 'Dry' contact with relay output (otherwise known as a 'Clean' contact). It requires voltage to be applied to it in order for it to function.

IT IS NOT INTERNALLY POWERED

A: COIL FAILURE REMOTE ALARM MONITORING



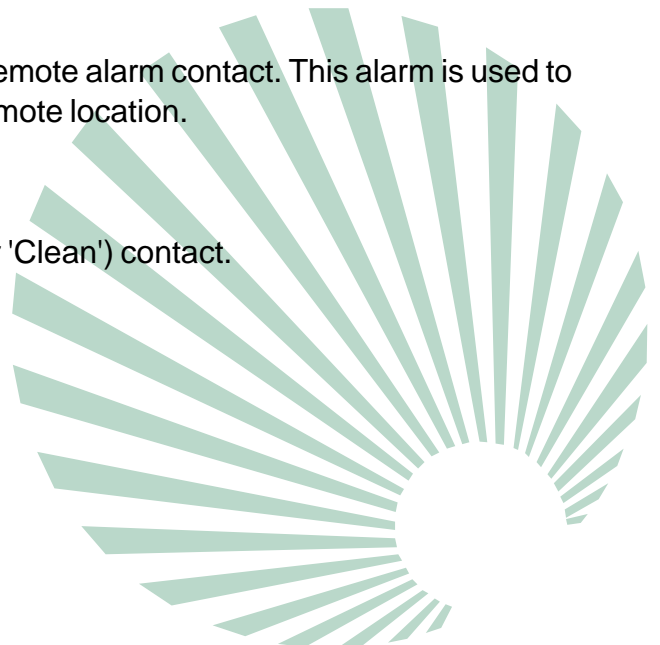
The arrow indicates the terminal connection for the remote alarm contact. This alarm is used to indicate any of the following two properties from a remote location.

■ Coil Failure

It is necessary to power this contact as it is a 'Dry' (or 'Clean') contact.

There are three contacts, one labeled

- C = Common
- N.O = Normally Open
- N.C = Normally Closed

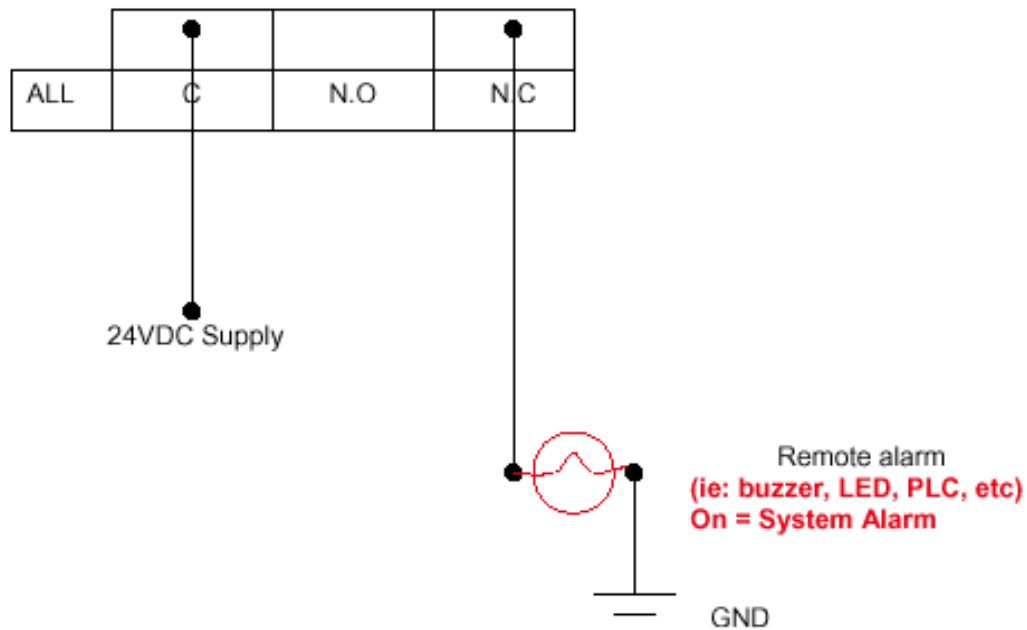


A 24VDC supply is required to be connected to the Common (C) terminal in any of the three alternative ways to wire this contact.

Choice 1 – Example set up

If you wish for a light or buzzer (in a remote location) to illuminate or activate when an alarm occurs, connect the second wire to the Normally Closed (N.C) terminal as shown in Figure 7.

Figure 7. Remote Alarm Configuration 1

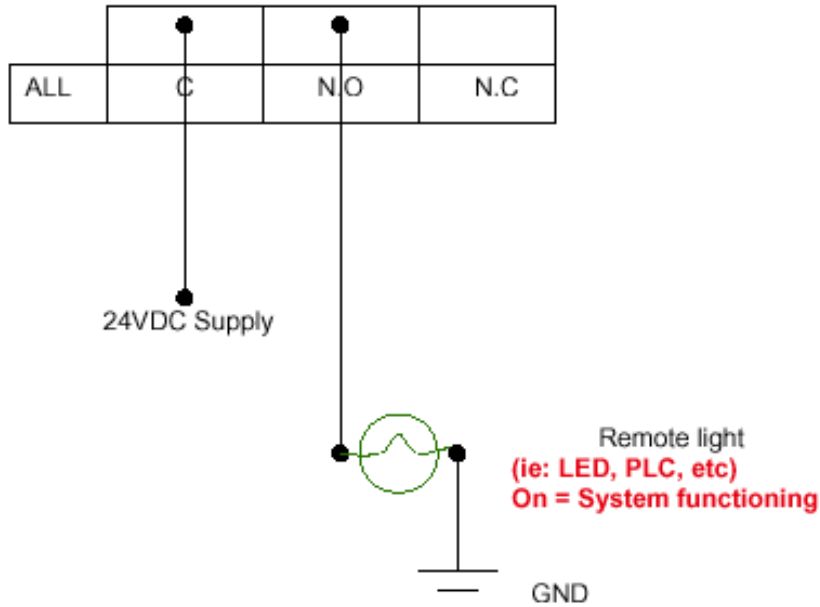


Choice 2. - Example set up

If you wish for a light (in a remote location) to illuminate at all times, and for the light to extinguish when an alarm occurs, connect the second wire to the Normally Closed (N.O) terminal as shown in Figure 8.



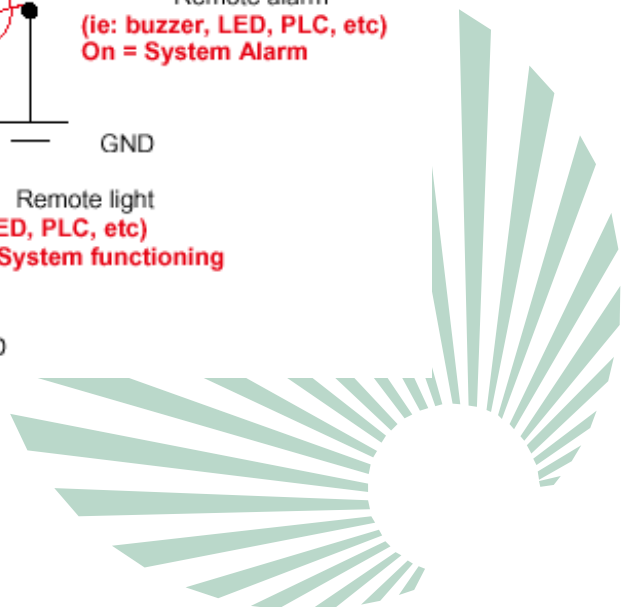
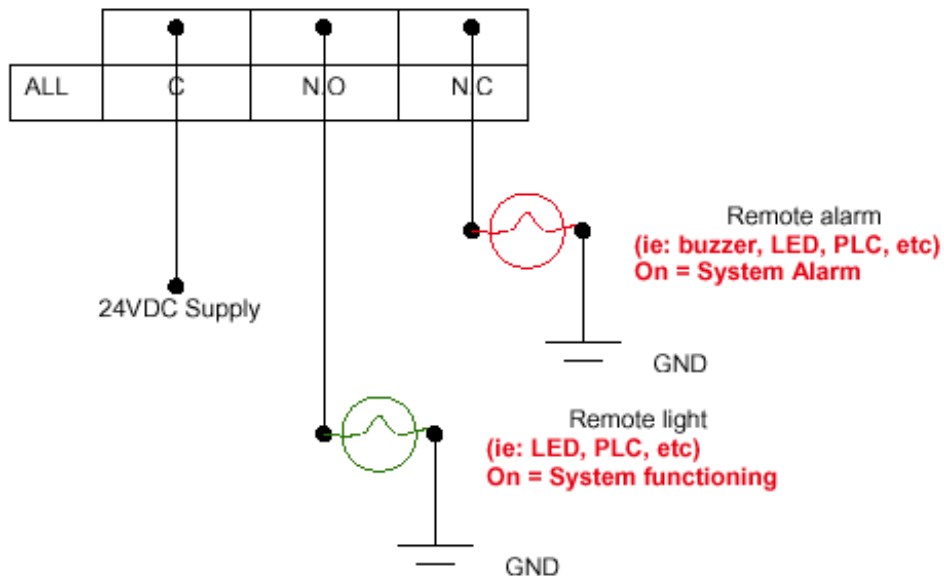
Figure 8. Remote Alarm Configuration 2



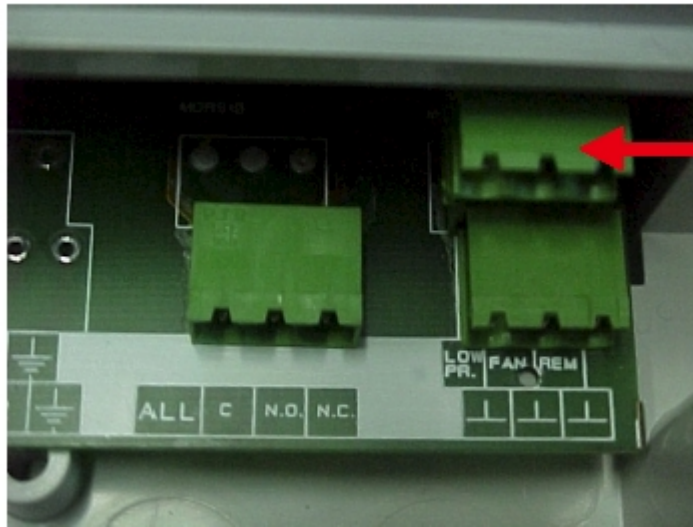
Choice 3. - Example set up

If you wish for a light (in a remote location) to illuminate at all times, and for the light to extinguish when an alarm occurs and an alarm light or buzzer to sound when an alarm occurs, connect the wires as shown in Figure 9.

Figure 9. Remote Alarm Configuration 3



B: FAN CONTACTS

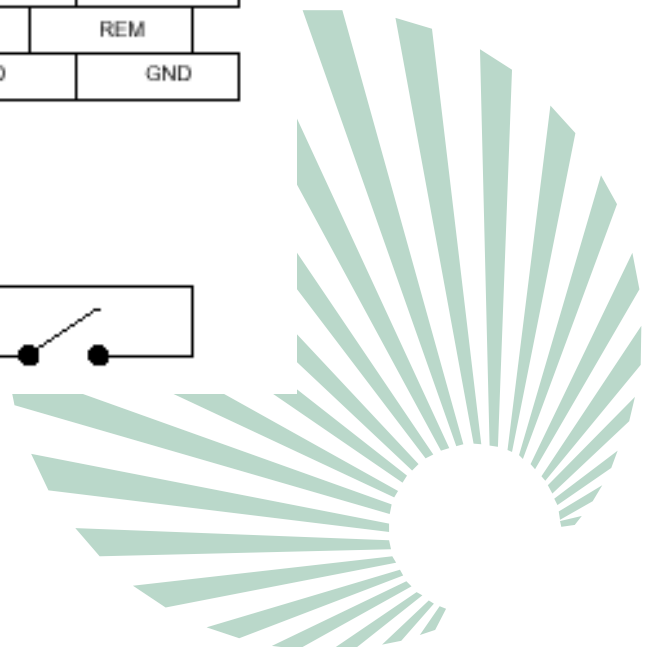
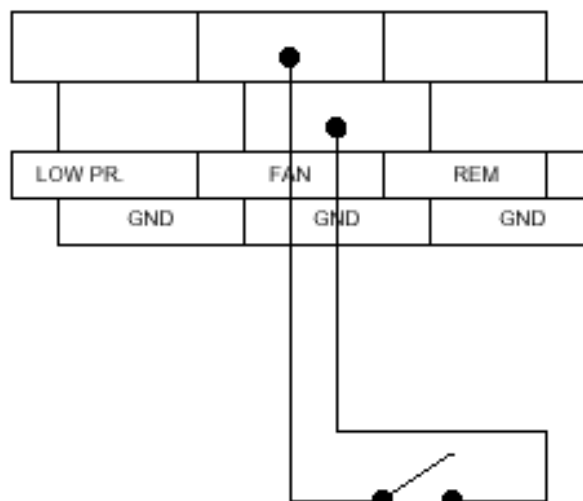


- The arrow indicates the terminal connections for the Fan

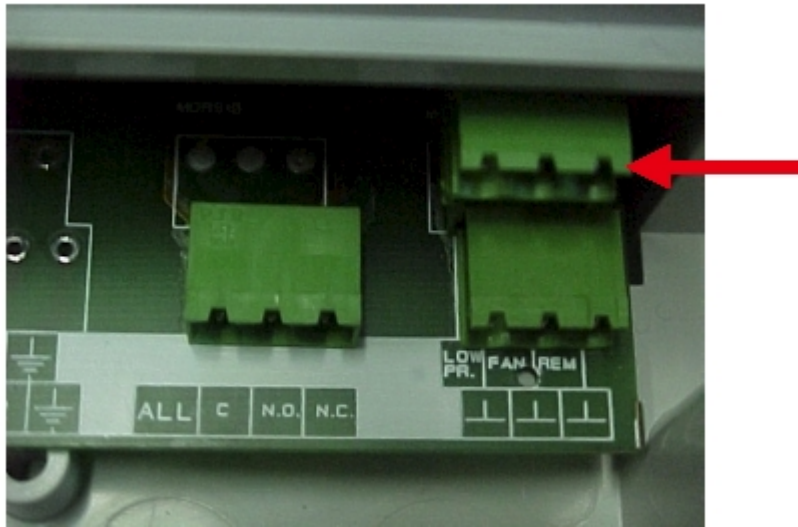
It is not necessary to power this contact. If the Fan terminal is connected to ground, the unit will begin the After Cleaning Cycle. This terminal can be connected to a switch as shown in Figure 10.

When the switch is closed the Fan LED on the front panel of the controller will flash as the unit performs the number of After Cleaning Cycles chosen by the user. When the After Cleaning Cycle is complete the LED will remain constantly ON until the switch is opened. The LED then extinguishes until it is closed again.

Figure 10. Fan Contacts



C: REMOTE CONTACTS

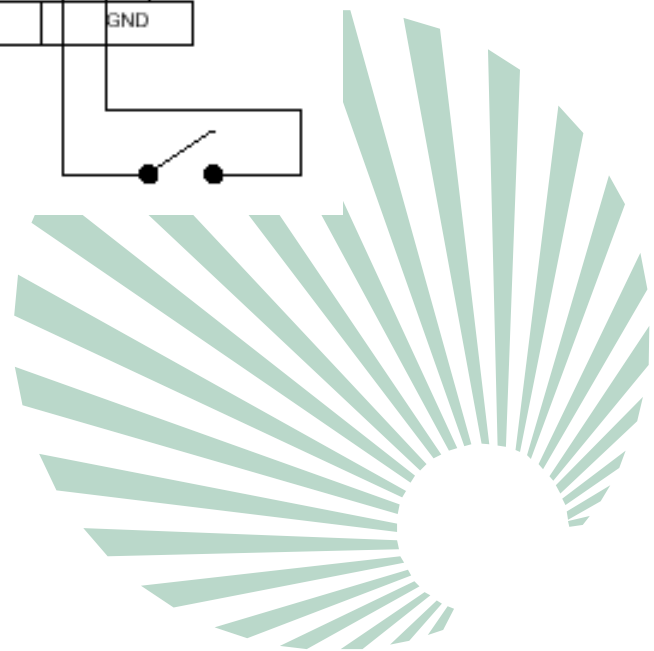
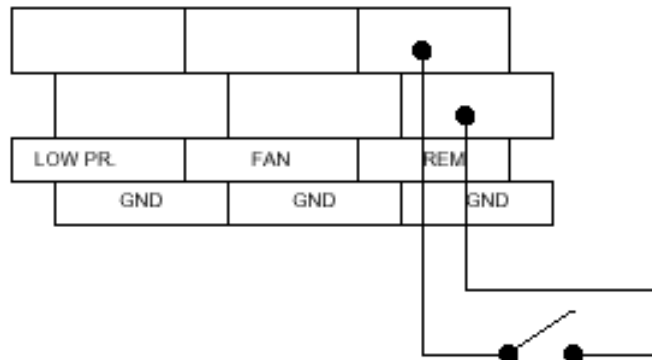


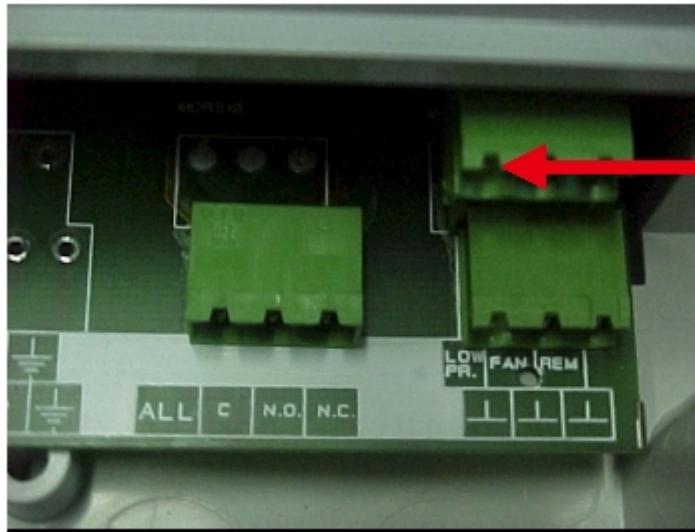
- The arrow indicates the terminal connections for the Remote Contacts

It is not necessary to power this contact. If the Remote terminal is connected to ground, the unit will begin to operate. This terminal can be connected to a switch as shown in Figure 11.

When the switch is closed the Delta-P LED on the front panel of the controller will illuminate as the unit operates. When the switch is opened, the unit will cease to function and the Delta-P LED will extinguish.

Figure 11. Remote Contacts



D: LOW (HEADER) PRESSURE LED

Connecting the Low Pressure terminal to ground will cause the unit to indicate Low (Header) Pressure and the unit will suspend operation until the header pressure increases. This requires external logic to determine the Low Pressure at which the controller should cease operation. This logic then closes the contact and the controller will flash the "Low Pressure" LED and pause the operation of the controller.



OPERATION

Electrical Pulse times

- Pulse Time (0 .00 - 9.99 sec; recommended 0.1 to 0.5 sec)
- Pause Time (1 - 999 sec)
- Pause in After Cleaning Cycle (1 - 99 sec)
- After Cleaning Cycle (0 - 99 Times)

User Operation

The LCD panel has a maximum of 4 characters. The first of these corresponds to one of the following.

1 Pulse Time (0.01 - 9.99 sec)

This is the time that the electrical signal is ON

2 Pause Time (1 - 999 sec)

This is the time that the system pauses between activation of the solenoids

3 Pause In After Cleaning Cycle (1 - 99 sec)

This is the time that the system pauses between activation of the solenoids when the system is performing the After Cleaning Cycle.

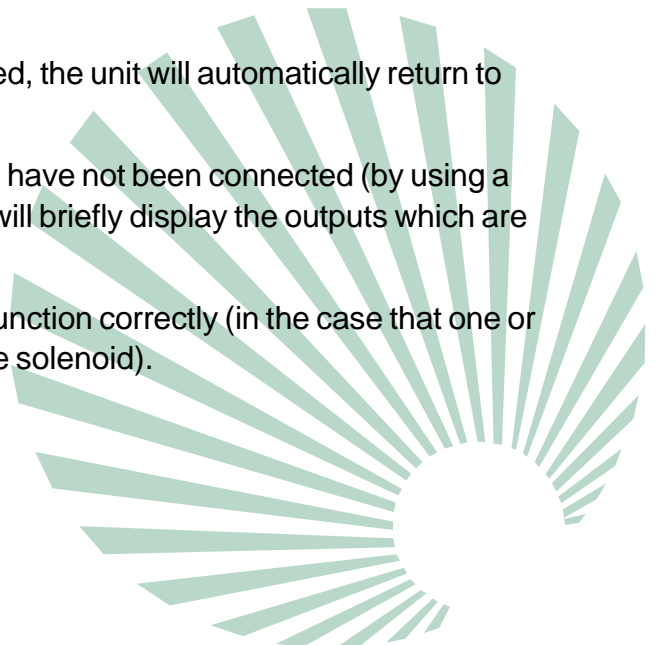
4 After Cleaning Cycle (1 - 99 times)

The number specified here will determine the number of After Cleaning Cycles performed when the dP of the system falls to 0.1kPa (i.e. the fan is switched off).

E Run

Notes:

- during programming, after two minutes has elapsed, the unit will automatically return to E (run mode)
- the system will automatically ignore outputs which have not been connected (by using a load search). During operating cycle, the system will briefly display the outputs which are not connected.
- During the first cycle, check that all of the outlets function correctly (in the case that one or more do not operate, check the connections to the solenoid).



PRODUCT MAINTENANCE

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- Do not mount directly to hot surfaces
- Do not expose directly to sunlight
- Protect from infiltrations of water and humidity
- Do not install on vibrating surfaces
- All electrical connections including the wiring associated with the valves should not be in close proximity to wiring for other applications (for example from motor cables)

