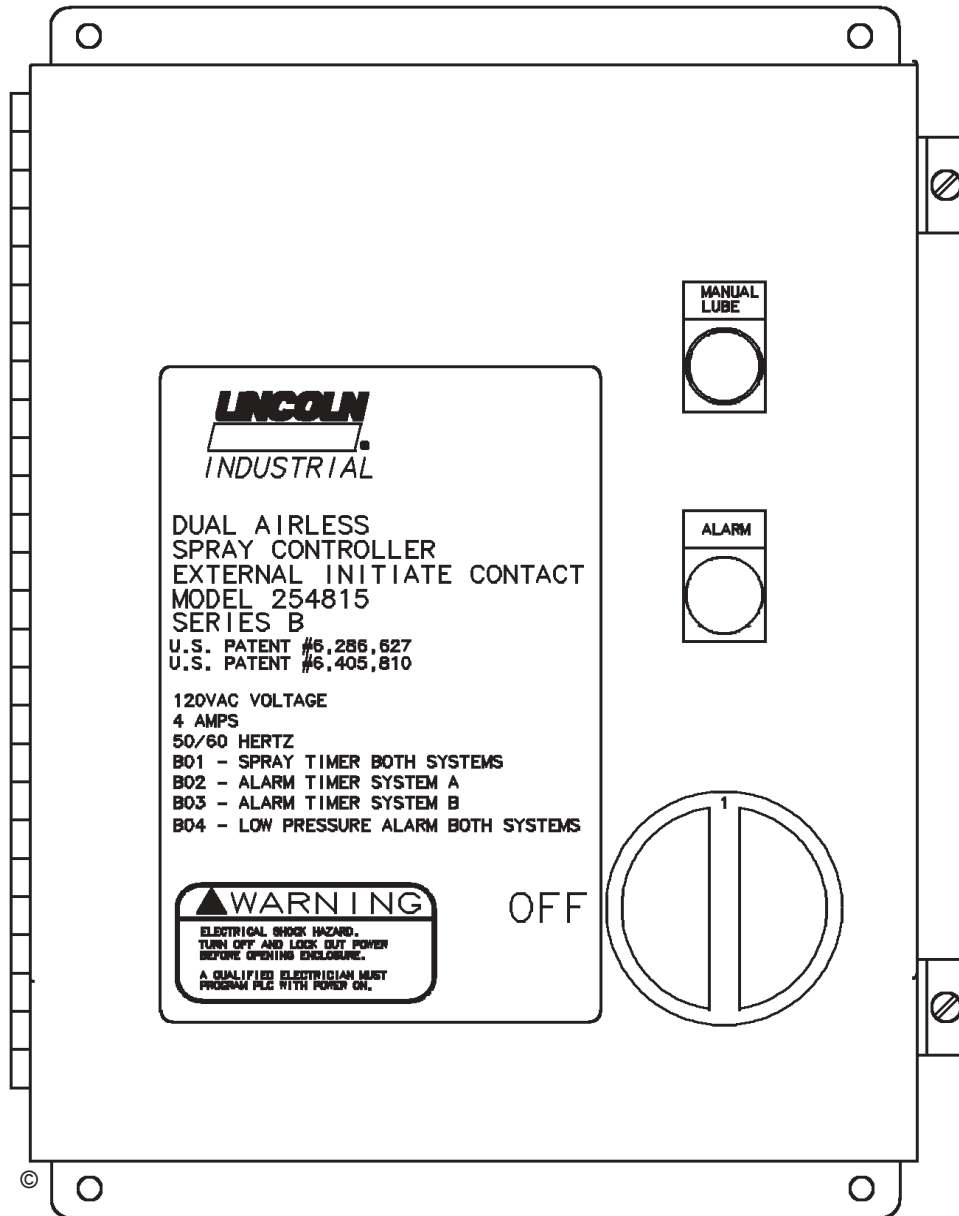


**Airless Spray Controller  
External Initiate Contact  
Model 254815  
Series "B"©**



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### WARNING

Electrical shock hazard. Turn off and lock out power before opening enclosure.

### WARNING

When changing timer values in the PLC the enclosure door is open with power on.  
This must be done by a qualified electrician.

## Specifications

Input Voltage.....	120 VAC 50/60 HZ
Current Consumption.....	4 Amps at 120 VAC (Less alarm load)
Enclosure Rating.....	NEMA 12 Rating
Controller Ambient Temperature Range.....	32°F (0°C) to 131°F (55°C)
Net Weight.....	9 lbs (4 Kg)

## Description of Operation

- © 1. The air to pump solenoid will turn on when one or both pressure switches are closed, indicating low pressure, and both spray solenoids are de-energized. The Low Pressure Alarm Timer will begin to time out.
- © 2. The pump will turn on and build pressure in both lube supply lines. When both pressure switches open, indicating high pressure, the pump will turn off, the green ready light will turn on. If the pressure switches do not open before the Low Pressure Alarm Timer times out, the pump will turn off and an alarm will be indicated.
- 3. When the external initiate contact that is connected to terminals 17 and 18 closes, both solenoids will energize spraying the gear.
- 4. The spray solenoid will turn off when the spray timer times out and either one of the pressure switches close, indicating low pressure.

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5. When both spray solenoids turn off and one or both of the pressure switches close, the cycle repeats itself.

- © 6. If the alarm for System A or B times out indicating a failure of either or both systems to spray, causing them to spray by clearing a clogged tip or refilling a reservoir will reset the alarm timers.

The Low Pressure Alarm can only be reset by turning the system power off and back on.

## Features

Disconnect on door - Removes power from controller and both lube systems "A" & "B".

Manual Lube Push-button on door - Depressing push-button will initiate a lube cycle (ready light must be on).

Ready Light on door - Indicates that both systems are fully charged and manual lube can be depressed.

Alarm Light on Door - If the alarm timer for system A or system B times out the alarm light on door will turn on. See section on alarms.

Prespray cycle - When power is turned on, the controller will wait two minutes and then initiate a spray cycle. The two minute wait will allow the heater to warm the lubricant. The pump must build pressure within two minutes to open the pressure switches before a prespray cycle can take place.

Adjustable Alarm Timers - Both alarm timers should be set long enough to allow a spray event to take place. A spray event consists of spraying the lubricant and then the closing of the pressure switch. The closing of the pressure switch will reset the alarm timer. The alarm timers are activated by the closing of the External Initiate contact, the manual lube pushbutton located of the enclosure door or the prespray cycle. If a spray cycle doesn't take place within this alarm setting, the system will go into alarm. A 120VAC alarm signal is available.

Adjustable Spray Timer - Amount of time that spray solenoids are energized. Adjustable from 1 second to 99 seconds.

- © Adjustable Low Pressure Alarm - Set to a time setting that is long enough for the system to recharge plus a safety factor of about 30 seconds. (Note that in cold weather the time required for the system to recharge may increase dramatically, therefore the Low Pressure Alarm Time will have to be increased to prevent any unnecessary alarms.) When the Low Pressure Alarm Timer times out, the output for the pump solenoid will be turned off and the system will indicate an alarm condition. This timer will turn off the pump if a hose breaks, pump fails, low air pressure or lubricant reservoir is empty.

External Initiate Contact - The closing of this switch will initiate a spray event. This is a dry contact (no voltage) wired to terminals 17 and 18. The closing of this switch will also start the alarm timers B02 and B03.

## © Alarm

There are two types of alarms.

### 1. General failure of one or both systems to spray.

Timer B02 for System A and Timer B03 for System B track this type of alarm. The closing of the system pressure switch will reset the alarm timer preventing it from timing out.

The alarm timers are set long enough to allow a spray event to take place. A spray event consists of spraying the lubricant and then the closing of the pressure switch. Both alarm timers are set to the same value.

## 2. Low Pressure Alarm

This alarm indicates a failure of the system to build pressure. The Low Pressure Alarm timer B04 should be set to the time required for the system to recharge plus a safety factor of about 30 seconds. To reset this type of alarm power must be turned off and then back on. (Note that in cold weather the time required for the system to recharge may increase dramatically, therefore the Low Pressure Alarm Time will have to be increased to prevent any unnecessary alarms.)

### Alarm Light and External Signaling

The controller has an alarm light on the enclosure door and a choice of two 120 VAC alarm signals for external signaling.

The alarm light located on the enclosure door will signal an alarm as follows:

System A: The alarm light will flash once, pause then will repeat the sequence.

System B: The alarm light will flash twice, pause and then repeat the sequence.

Both systems in fault: The alarm light will stay on.

Low Pressure Alarm: The alarm light on the enclosure door will stay on and the low pressure can be confirmed by viewing the display on the front of the programmable controller where output Q7 will be highlighted (with Q5 and Q6) and the pump output will be turned off as shown below.

I: 1 2 3 4 5 6 7 8 9 10 11 12	Input Status Line (I1 & I2 highlighted indicating pressure switches closed)
SU 21:37	Day and Time
Q: 1 2 3 4 5 6 7 8	Output Status Line with Q5 6 & 7 highlighted (turned On)

Two 120 VAC remote alarm signals are available. The alarm signal available at terminals 19 and 20 will signal the same as the light on the door. The 120 VAC signal at terminals 21 and 22 will provide a steady signal for any fault on System A, B or both.

## Changing the Parameters for the “Spray” timer and the “Alarm” timers.

Changing the parameter for a timer only changes the time assigned to that timer. The time for the “Spray” timer is in seconds, the time for the “Alarm” timers is in minutes. When in the parameter mode, you cannot change or alter the program stored in the PLC. Changing the program can only be done in the programming mode.

Listed below are the four timers that can be viewed thru the window on the PLC. Using the keys on the PLC you can change timers B01, B02, B03 and B04.

B01 - Spray timer for both systems

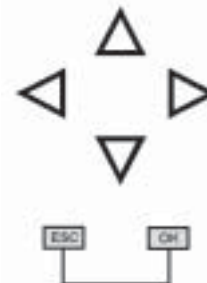
B02 - Alarm timer for system A.

B03 - Alarm timer for system B.

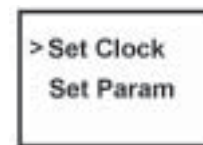
© B04 – Low Pressure Alarm. Should be set to the time required for the system to recharge fully plus about 30 seconds. (Note that in cold weather the time required for the system to recharge may increase dramatically, therefore the Low Pressure Alarm Time will have to be increased to prevent any unnecessary alarms.)

## Procedure for Changing Timer Parameters

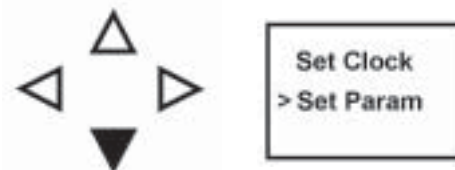
- To switch to the parameter mode, press the ESC and OK keys simultaneously:



- The PLC screen will change to the display shown below:



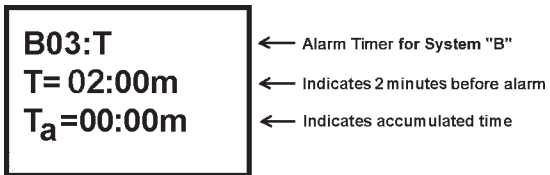
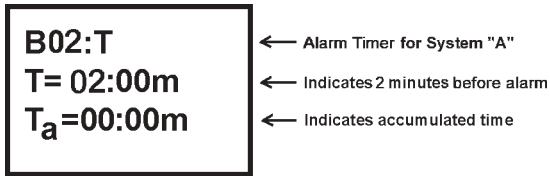
- Select the “Set Param” option:
  - press the down arrow key
  - press the OK key



- The PLC will display the timer parameters
  - press the up arrow key to view the three timers: B01, B02 and B03.

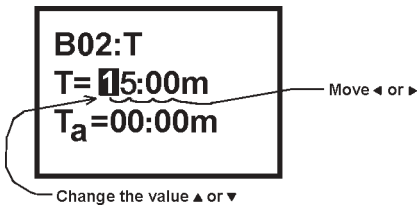
B01:T	← Spray Timer
T= 03.00s	← Indicates 3 seconds spray time
T <sub>a</sub> =00.00s	← Indicates accumulated time

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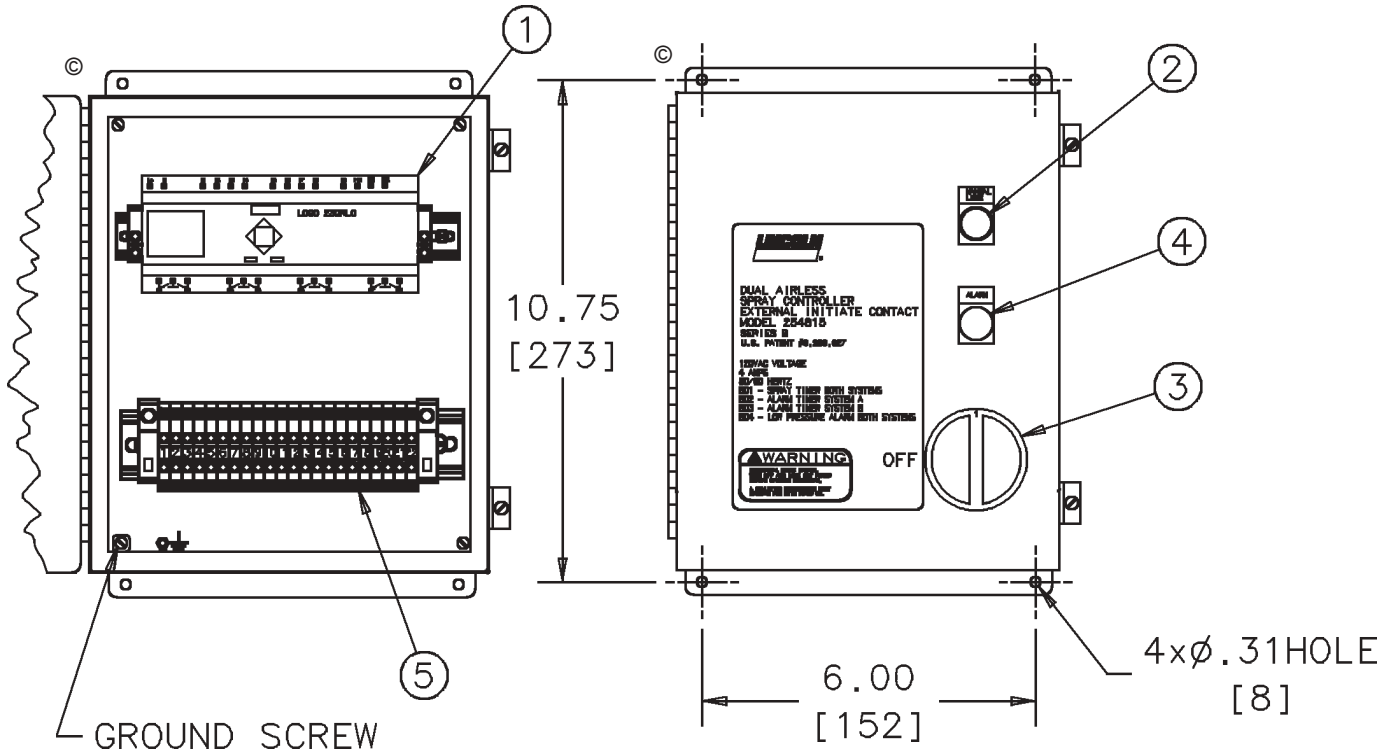


5. To change a time parameter it must be displayed on the screen.

- a) press the **OK** key.
- b) using the **◀ or ▶** select the value to change.
- c) using the **▲ or ▼** change the value.
- d) when you have the desired value, press the **OK** key to accept the new value.
- e) press the **ESC** key until the original screen appears.



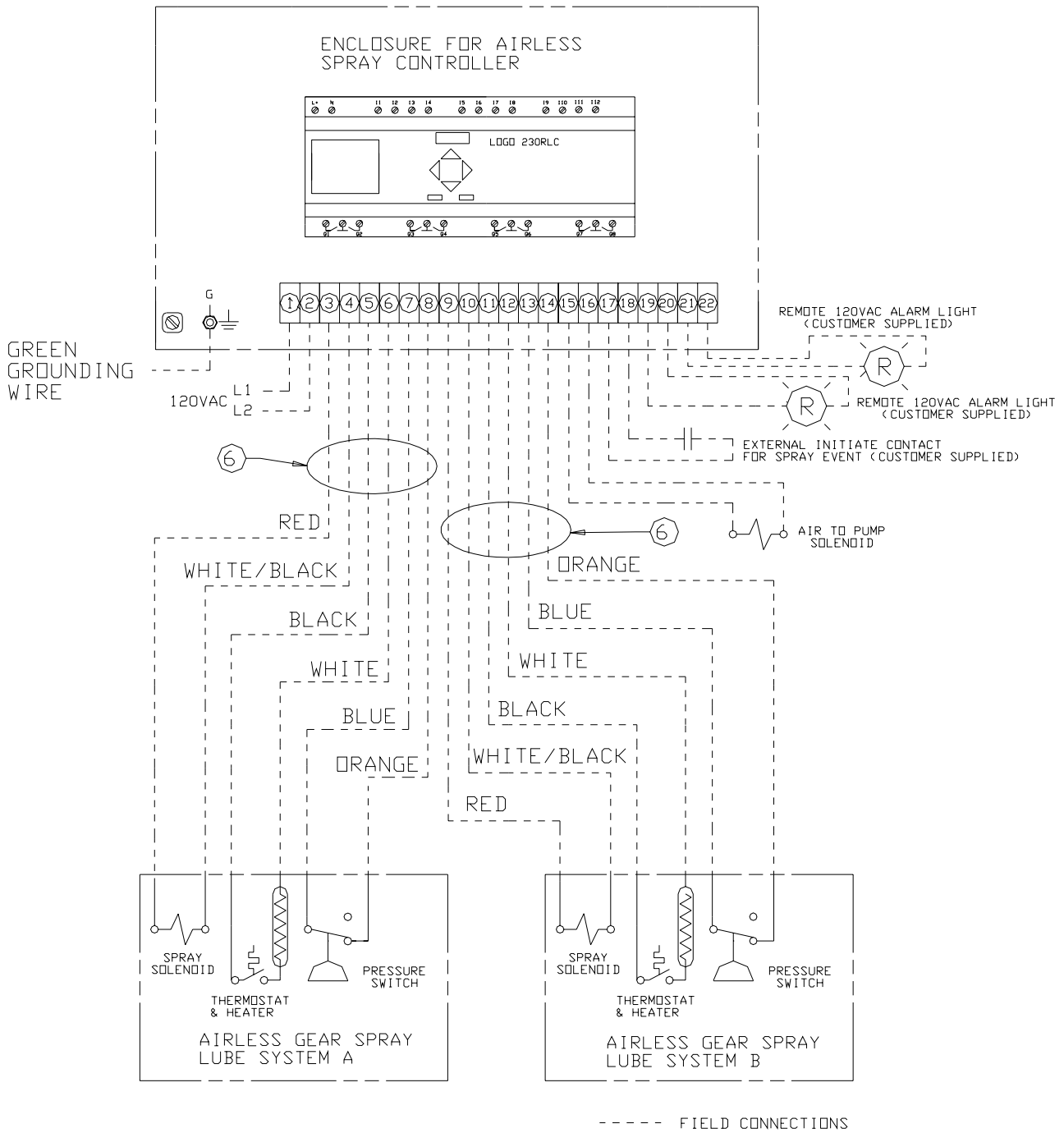
6. Pressing the **ESC** key will return you to the original screen.



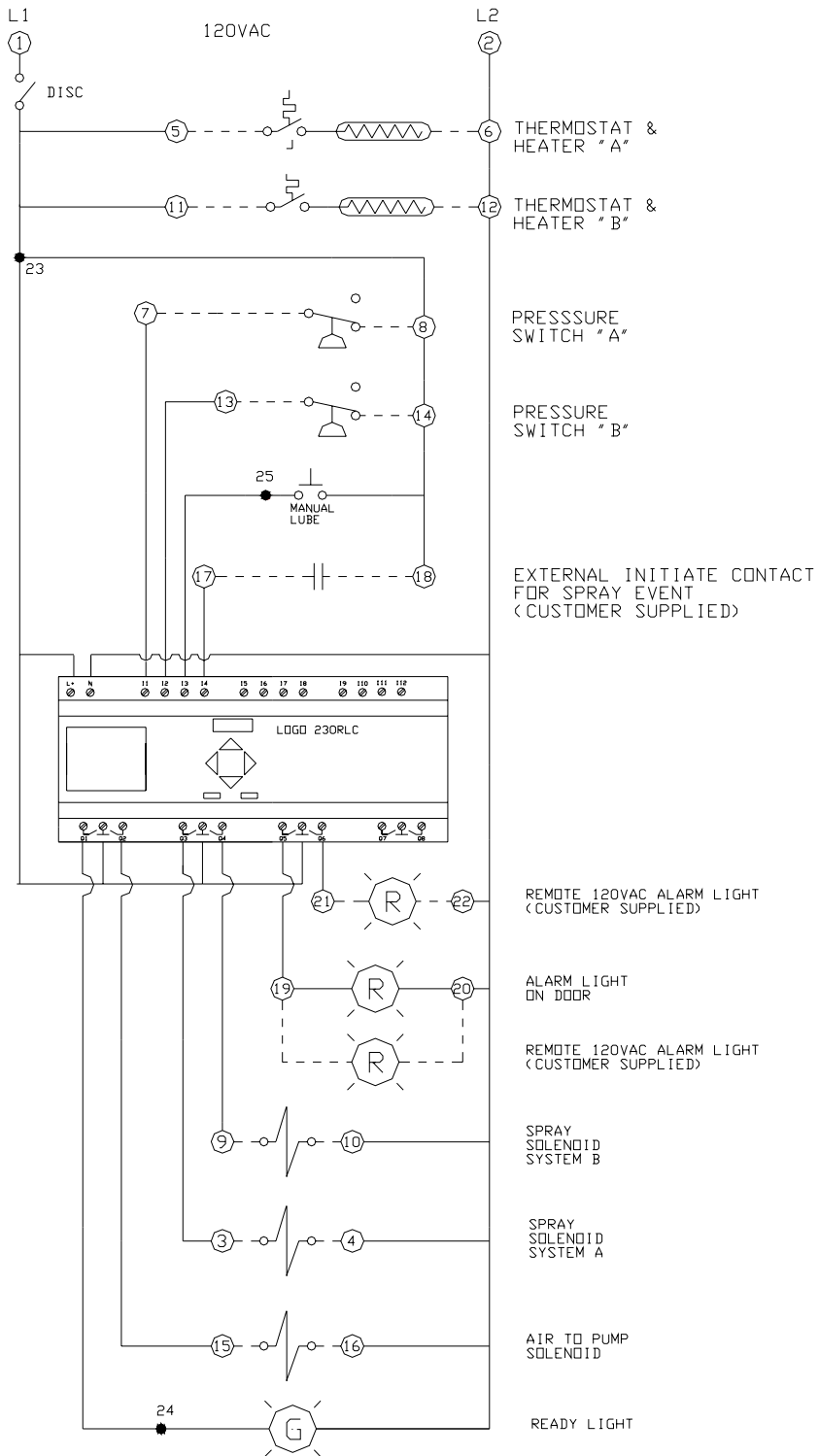
### Service Parts

Item	Part No.	Quan	Description
1	256236	1	PLC w/Program
2	256232	1	Green Ready Light/Manual Lube Push Button
3	256233	1	Disconnect Switch
4	256234	1	Red Alarm Light
5	256238	1	Terminal Block
6	256241	1	Cable Assembly (not shown, sold separately) ©

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**Field Wiring Diagram**



**Ladder Diagram**



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