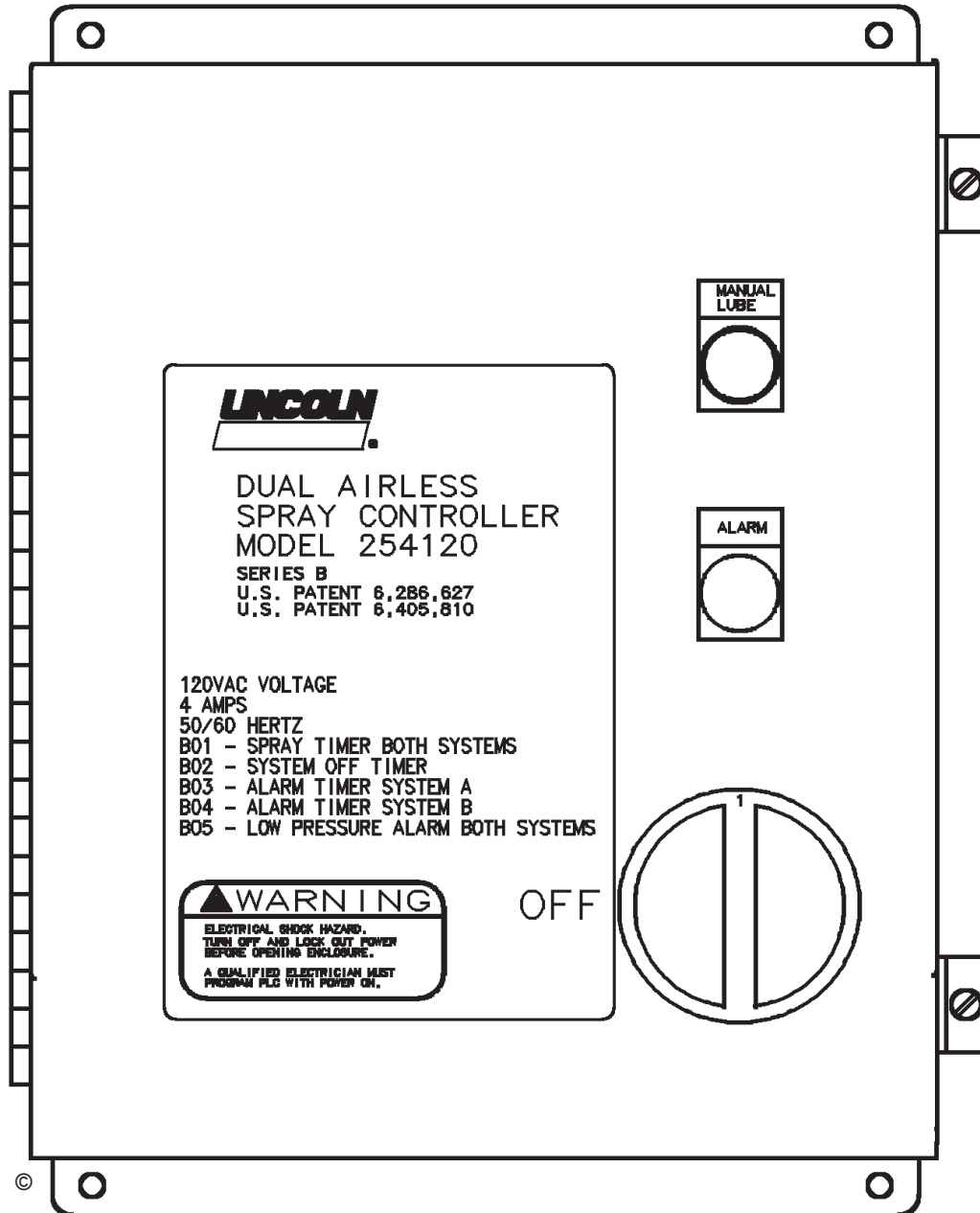


Airless Spray Controller
Model 254120
Series "B"©



© Indicates change

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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.

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 - Dual System 2 Amps at 120 VAC - Single System (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 and the system timer will begin timing out. 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 system timer times out or the manual lube push-button is depressed, both spray solenoids will energize spraying the gear.
4. The spray solenoid will turn off when its spray timer times out and either one of the pressure switches close, indicating low pressure.

© Indicates change

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 Off Timer - Amount of time between lube cycles. Adjustable from 1 minute to 94 minutes.

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

Adjustable Alarm Timers - Both Alarm timers should be set 5 minutes longer than the adjustable "Off Timer." If a spray cycle doesn't take place within this alarm time setting, the system will go into alarm. A 120 VAC alarm signal is available.

- © 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.
- Disable for System B - If only one spray system is required system B can be disabled to prevent it from going into alarm. A jumper wire is needed between terminals 17 and 18. Nothing can be connected to terminals 9 through 14 (system B connections).

© Alarm

There are two types of alarms.

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

Timer B03 for System A and Timer B04 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 for Systems A and B should be set for 5 minutes longer than the OFF timer setting. Both System A and System B alarm timers must be 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 B05 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
SU	21:37											
Q:	1	2	3	4	5	6	7	8				

Input Status Line (I1 & I2 highlighted indicating pressure switches closed)

Day and Time

Output Status Line with Q5 & 6 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, “System Off” 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 “System Off” timer and “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 five timers that can be viewed thru the window on the PLC. Using the keys on the PLC you can change timers B01, B02, B03, B04 and B05.

B01 - Spray timer for both systems

B02 - Off timer for both systems

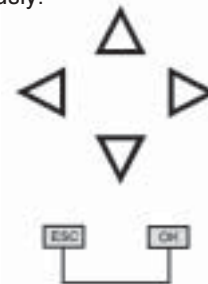
B03 - Alarm timer for system A. Should be set 5 minutes longer than B02.

B04 - Alarm timer for system B. Should be set 5 minutes longer than B02.

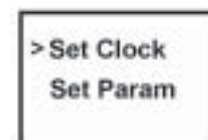
© B05 – Low Pressure Alarm. Should be set to the time required for the system to recharge fully plus about 30 seconds. (Note that in cold weather the time required for the system to recharge may increase dramatically, therefore the Low Pressure Alarm Time will have to be increased to prevent any unnecessary alarms.)

Procedure for Changing Timer Parameters

1. To switch to the parameter mode, press the **ESC** and **OK** keys simultaneously:

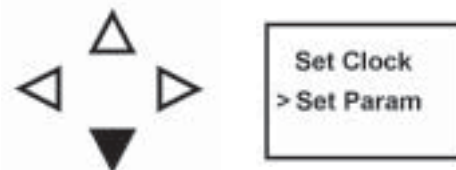


2. The PLC screen will change to the display shown below:



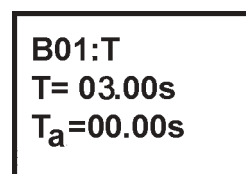
3. Select the “Set Param” option:

- press the down arrow key
- press the **OK** key



4. The PLC will display the timer parameters

- press the up arrow key to view the five timers: B01, B02, B03, B04 and B05©



- ← Spray Timer
- ← Indicates 3 seconds spray time
- ← Indicates accumulated time

© Indicates change

B02:T T= 15:00m T_a=00:00m	← System OFF time ← Indicates 15 minutes OFF time ← Indicates accumulated time
-----------------------------------------------------------------	--------------------------------------------------------------------------------------

B03:T T= 20:00m T_a=00:00m	← Alarm Timer for System "A" ← Indicates 20 minutes before alarm ← Indicates accumulated time
-----------------------------------------------------------------	-----------------------------------------------------------------------------------------------------

B04:T T= 20:00m T_a=00:00m	← Alarm Timer for System "B" ← Indicates 20 minutes before alarm ← Indicates accumulated time
-----------------------------------------------------------------	-----------------------------------------------------------------------------------------------------

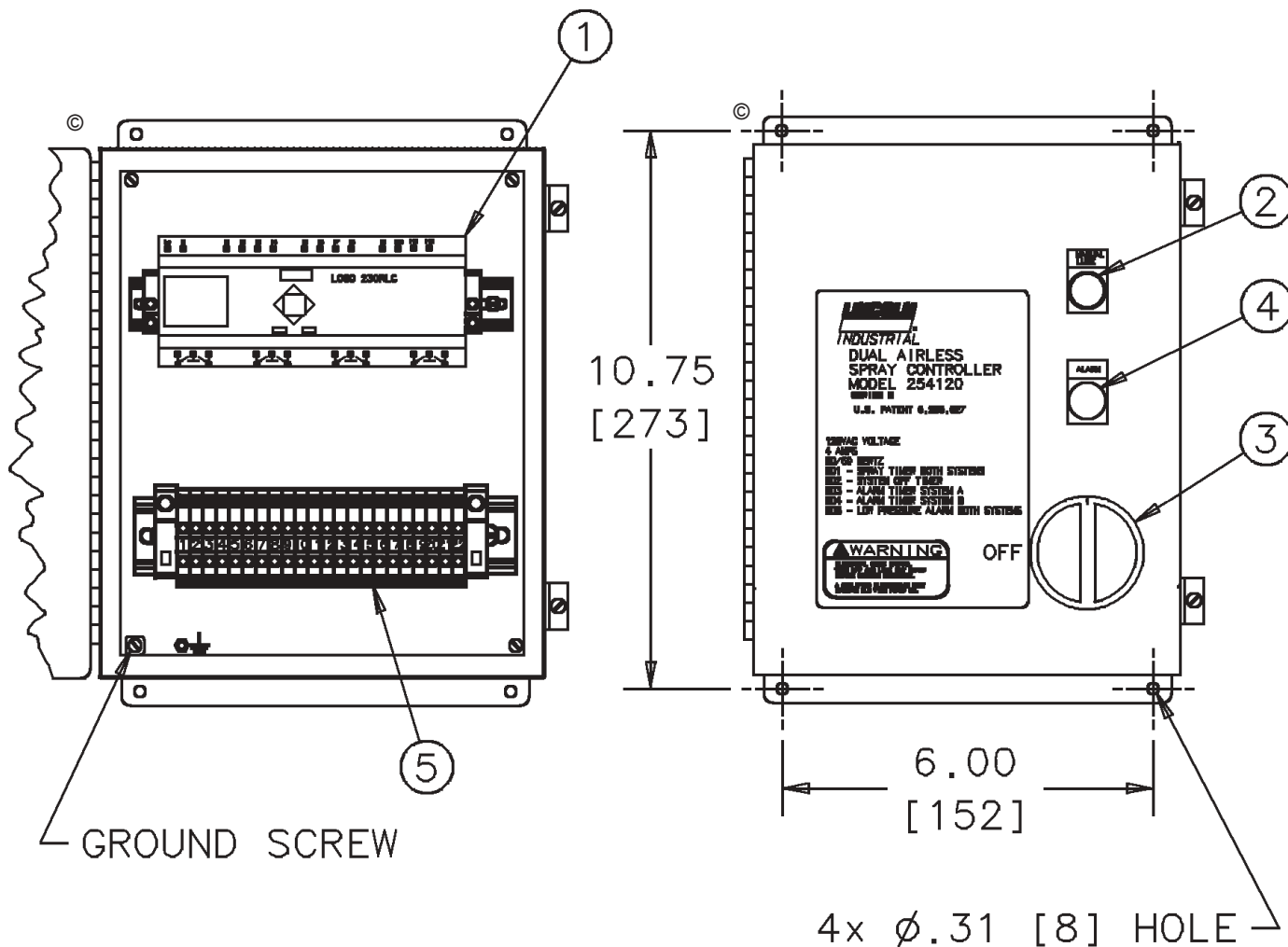
© B05:T T= 01:00m T_a=00:00m	← Low Pressure Alarm Timer ← Indicates 1 minute before alarm ← Indicates accumulated time
-------------------------------------------------------------------	-------------------------------------------------------------------------------------------------

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

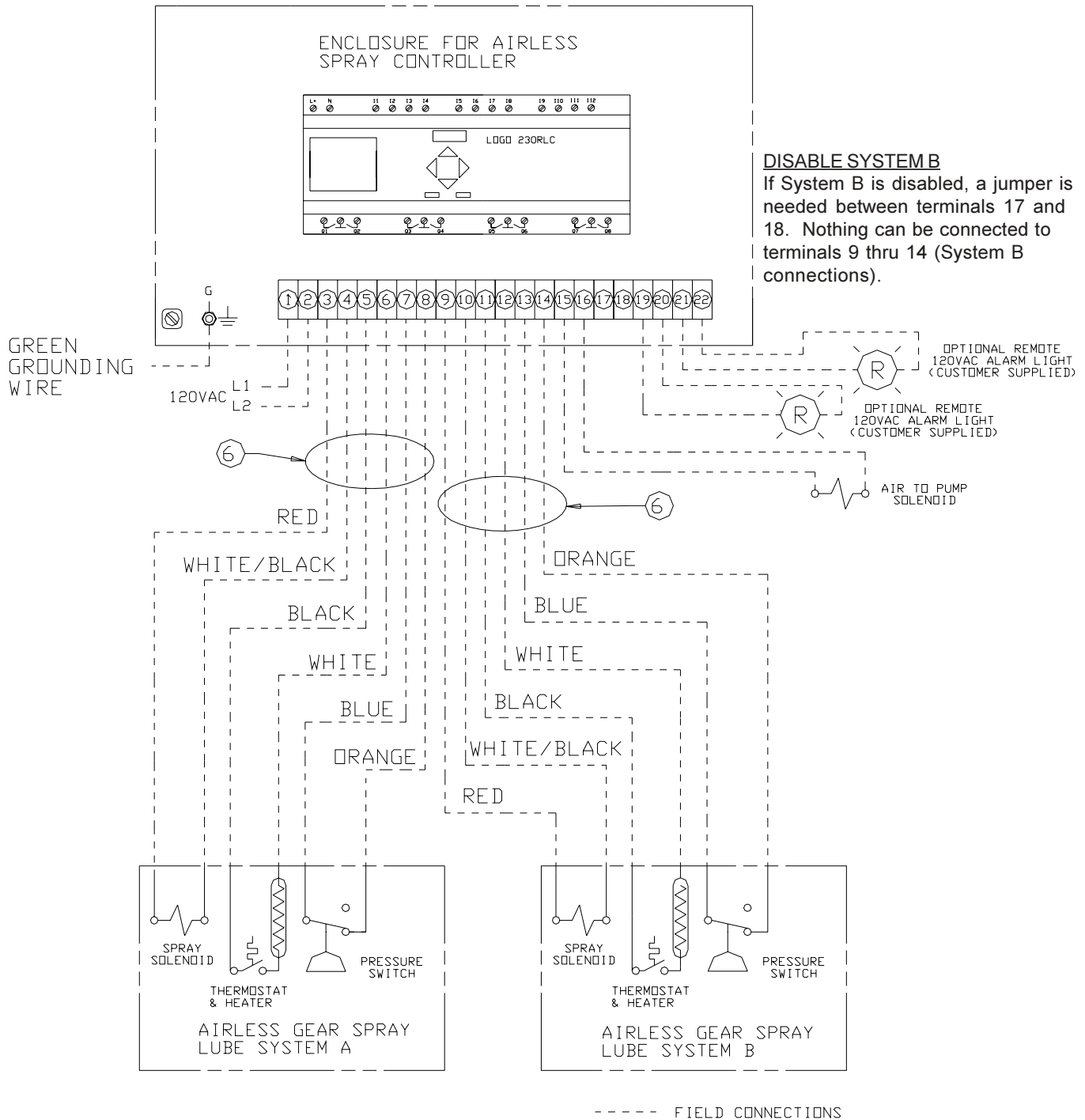
- a) press the **OK** key.
- b) using the **◀** or **▶** select the value to change.
- c) using the **▲** or **▼** change the value.
- d) when you have the desired value, press the **OK** key to accept the new value.
- e) press the **ESC** key until the original screen appears.

B02:T T= 15:00m T_a=00:00m	Move ◀ or ▶
© B02:T T= 15:00m T_a=00:00m	Change the value ▲ or ▼

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

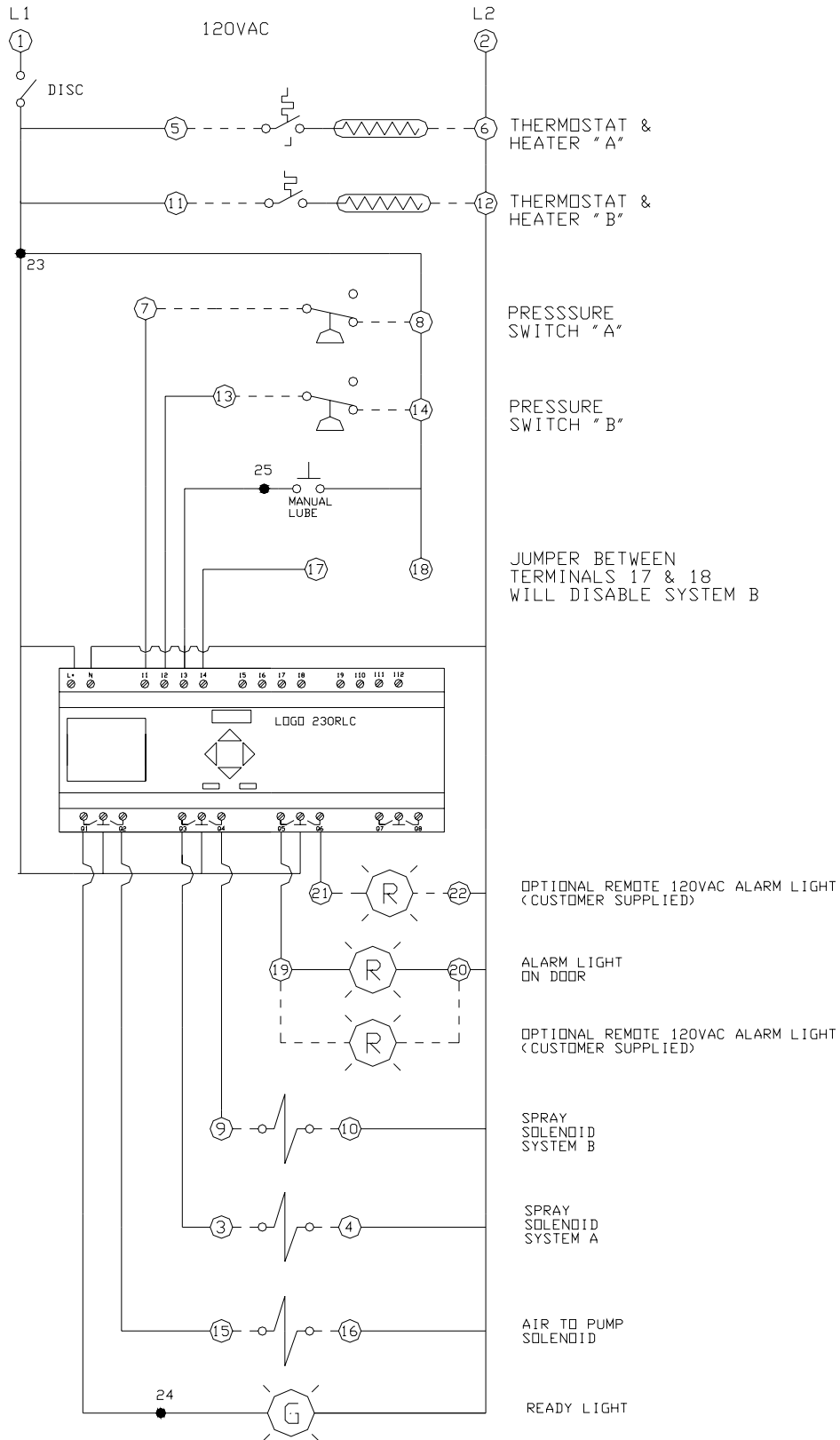


Service Parts			
Item	Part No.	Quan	Description
1	256235	1	PLC w/Program
2	256232	1	Green Ready Light/Manual Lube Push Button
3	256233	1	Disconnect Switch
4	256234	1	Red Alarm Light
5	256238	1	Terminal Block
6	256241	1	Cable Assembly (not shown, sold separately) ©



DISABLE SYSTEM B
If System B is disabled, a jumper is needed between terminals 17 and 18. Nothing can be connected to terminals 9 thru 14 (System B connections).

Field Wiring Diagram



Ladder Diagram



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