MERCURY DISPLACEMENT INDUSTRIES, INC.
Post Office Box 710 - U.S. 12 East - Edwardsburg, Michigan 49112-0710
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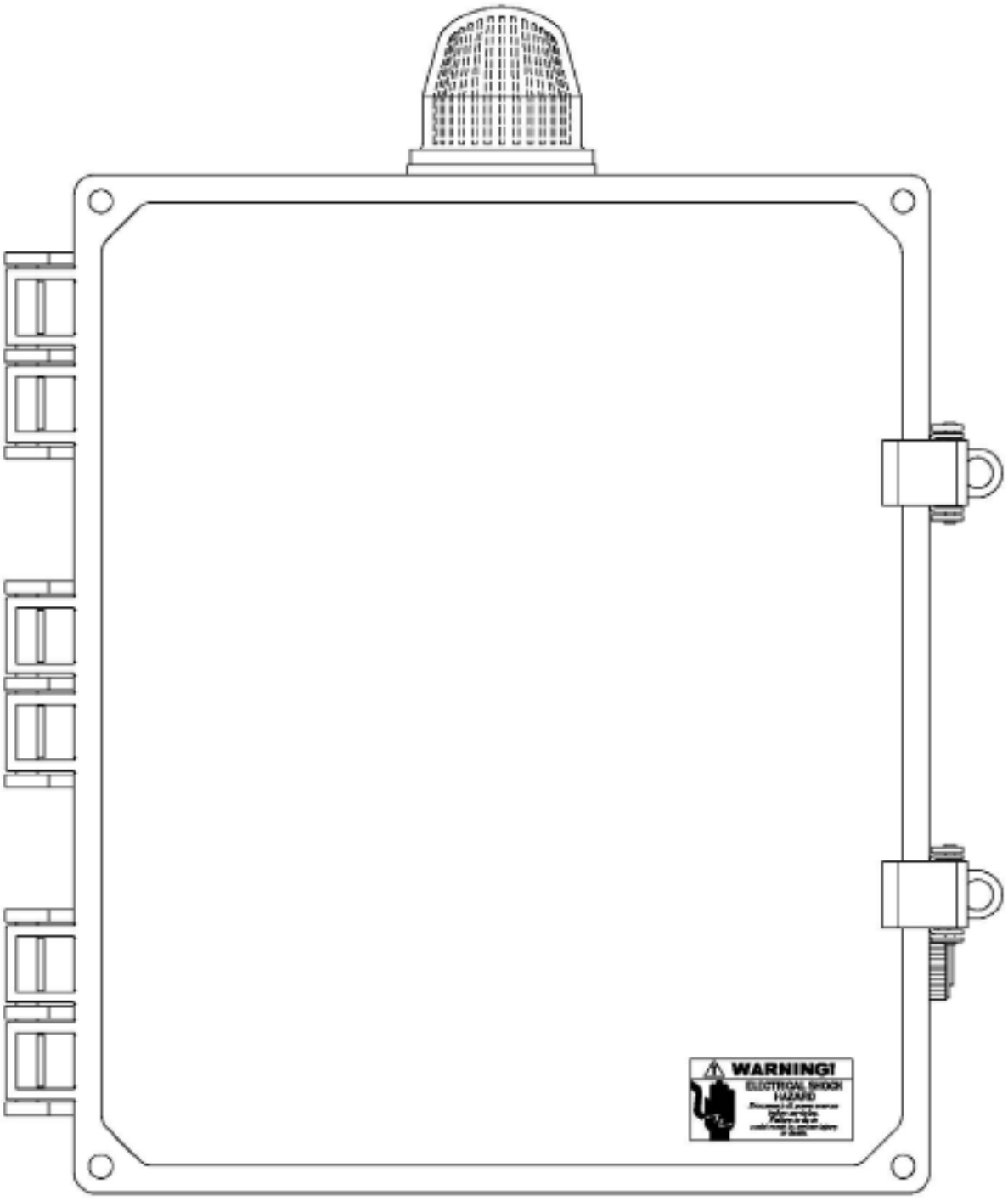
Instructions for 50A807(B) Control Panel



Parameters:

NOTE: When setting timers, 05:30s means 5 seconds and 30/100 seconds. Possible options:

H: <0-99 hours>:<0-59 minutes>
M: <0-99 minutes>:<0-59 seconds>
S: <0-99 seconds>:<0-99 1/100th seconds>

Off Time: Set the pump "off" time for a standard dose

T: When the float rises, no action will be taken until the "T" delay time expires.
Ta: Display for the elapsed time. It stops counting after reaching the "T" value.
Default setting: T=01:58h (Setting must be configured per field requirements)

On Time: Set the pump "on" time for a standard dose

T: After the above timer completes its count down, the pump will run for "T" Time
Ta: Display for the elapsed time. It stops counting after reaching the "T" value.
Default setting: T=02:00m (Setting must be configured per field requirements)

OVR Off: Set the pump "off" time for an emergency override dose

T: When the float rises, no action will be taken until the "T" delay time expires.
Ta: Display for the elapsed time. It stops counting after reaching the "T" value.
Default setting: T=59:00m (Setting must be configured per field requirements)

OVR On: Set the pump "on" time for an emergency override dose

T: After the above timer completes its count down, the pump will run for "T" Time
Ta: Display for the elapsed time. It stops counting after reaching the "T" value.
Default setting: T=02:00m (Setting must be configured per field requirements)

MinOCycl: Controls how many cycles will be run on the "Override Timer" settings

On: Setting should not be changed
Off: Sets the required count
Cnt: Displays the current count
Stv: Start value after the counter is reset – setting should not be changed
Default setting: On=1, Off=3 STV=0 (Setting must be configured per field requirements)

HLADLY: Controls the delay before activating a high-water alarm

T: Delay alarming for "T" Time
Ta: Display for the elapsed time.
Default setting: T=00:005m

SFV-DLY: Controls the delay before opening the spin filter

T: Delay opening the valve for "T" Time
Ta: Display for the elapsed time.
Default setting: T=00:10m (Setting must be configured per field requirements)

Parameters (Continued):

SFV-ON: On-start, repeat cycle timer controls cycling of the spin filter valve

TH: Set the "on" time for the valve
TL: Set the "off" time for the valve
Ta: Display for the elapsed time.
Default setting: TH=10:00s TL=02:00h (Setting must be configured per field requirements)

FV-CYCLE: Controls how many pump cycles are required before triggering the flush valve

On: Sets the number of required pump cycles
Off: setting should not be changed, leave it at 0
Cnt: Displays the current count
Stv: Start value after the counter is reset – setting should not be changed
Default setting: On=6, Off=0, STV=0 (Setting must be configured per field requirements)

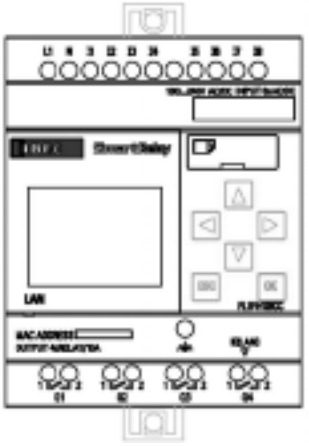
FV-ON: Set the "on" duration for the flush valve

T: Set the "on" time for the valve
Ta: Display for the elapsed time.
Default setting: T=01:30m (Setting must be configured per field requirements)

Quick Guide

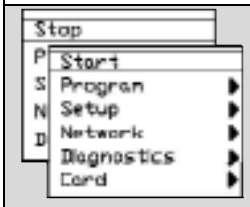
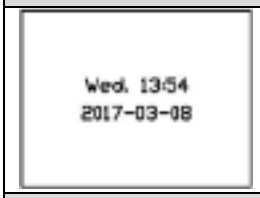
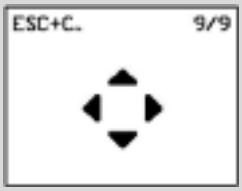
FL1 Series Smart Relay / Programmable Timer

Button	Function
△	Select previous menu item or screen, in setting editor mode scroll from 0 to 9
▽	Select next menu item or screen, in setting editor mode scroll from 9 to 0
◁	Select previous start menu screen or select previous digit while in setting editor mode. Press repeatedly to back the cursor from one line to the previous line
▷	Select next start menu screen or select previous digit while in setting editor mode. Press repeatedly to advance the cursor from one line to the next line
ESC	Cancel changes or exit current screen when not in setting editor mode
OK	Accept changes, enter setting editor, or enter screen for selected menu item



Start Screens:

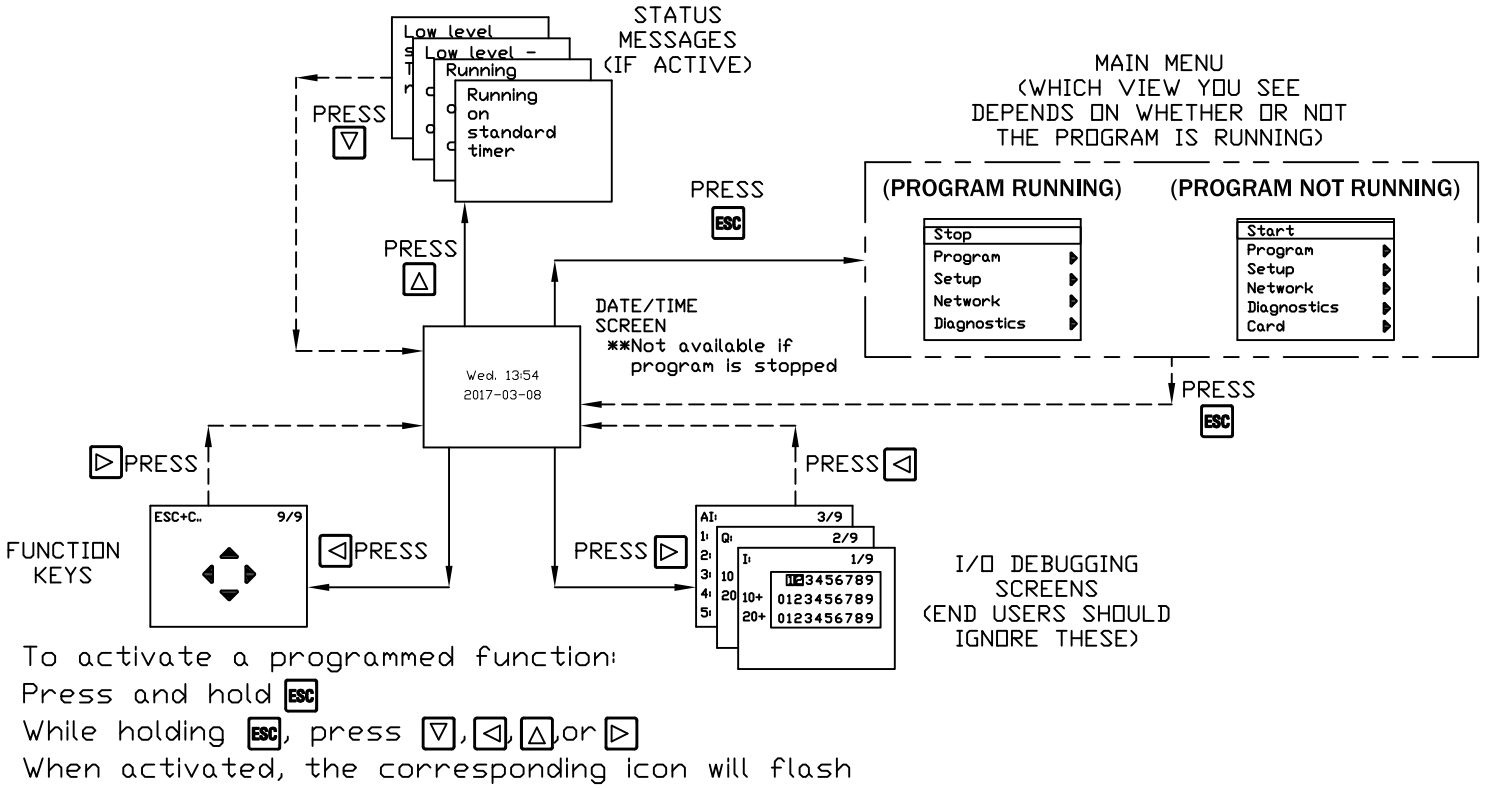
Upon starting the program, pressing directional keys will toggle through screens similar to the following. See “Navigating PLC menus"

Screen		Menu item	Function
	Main Menu	Stop / Start	Start or stop program execution. If you see “Start” as the first option, you must run the program by selecting it and pressing “OK”
		Program	Set timers and other parameters or view program name
		Setup	Set relay options such as start screen and adjust internal clock
		Card	When the program is stopped, you may use this item to load programs from the SD card to the PLC.
	Date And Time	If the screen is flashing, this indicates that the clock is not set. Setting the clock is ONLY required if your panel is programmed to execute special functions according to the date or time. Standard repeat cycle or delay timers do not require this to be set. Time is displayed in military, 24-hour style.	
	Function Keys	If your PLC is programmed to utilize these keys, Press and hold “ESC”, then press a directional key. The corresponding icon will flash indicating that it has been triggered. These are commonly programed to reset cycle counters and ETMs.	
	Status Message Screens	Many PLC panels include screens to show panel activity. The specific status messages you may see vary greatly in both quantity and detail as required by the requested features. Some messages may be programmed to only display during certain events to minimize the number of screens you have to toggle through as well. These screens are simply for viewing data and do not allow you to change a setting or parameter.	

Navigating PLC menus:

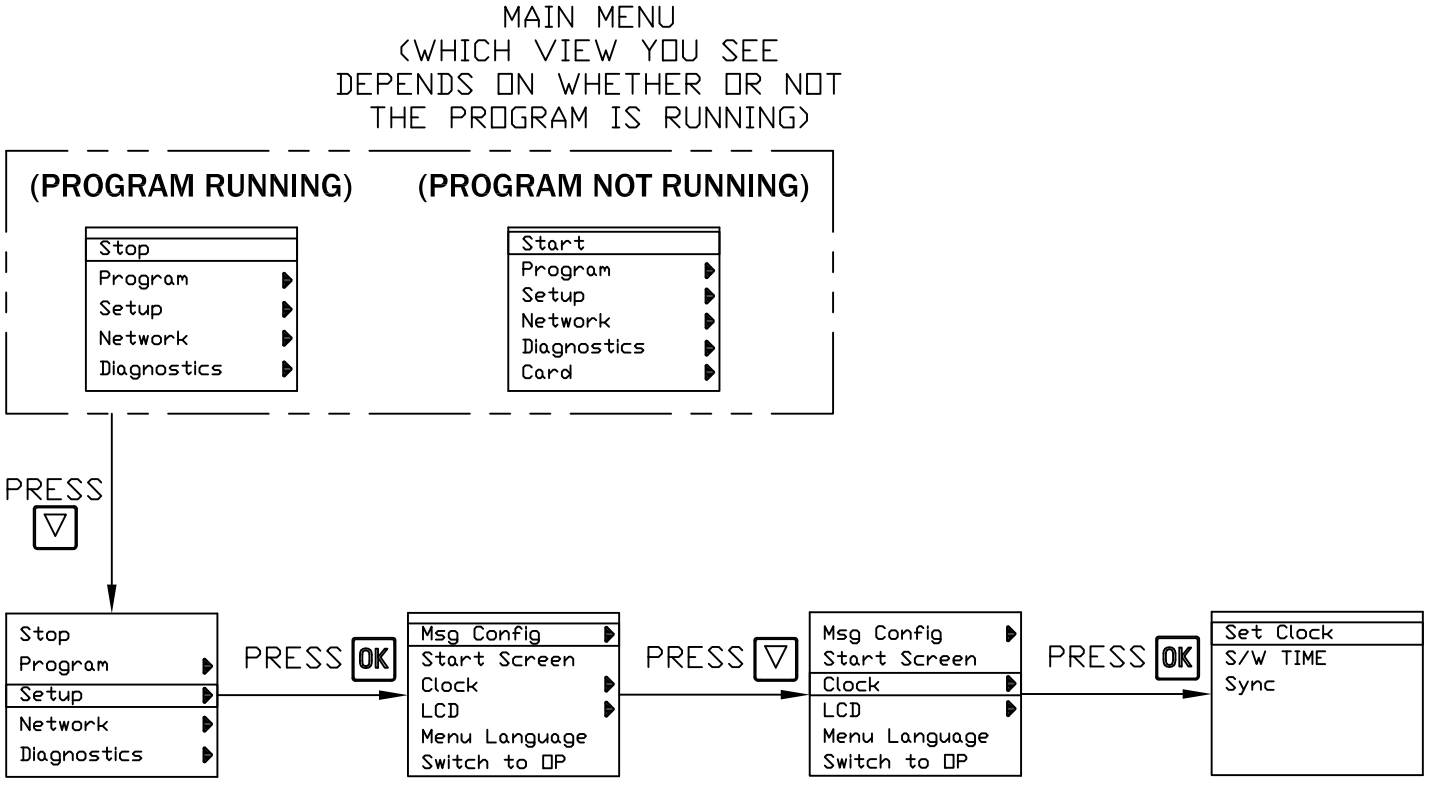
Refer to the menu flowchart for assistance in navigating to the “main menu”. From there, you can access functions that allow you to change the date and time or other PLC settings.

If a message screen is active, first use the up or down keys to find the “date/time” screen. Now you can press “**ESC**” to display the main menu. From here, press the down arrow key to select “**program**” then “**set parameter**”



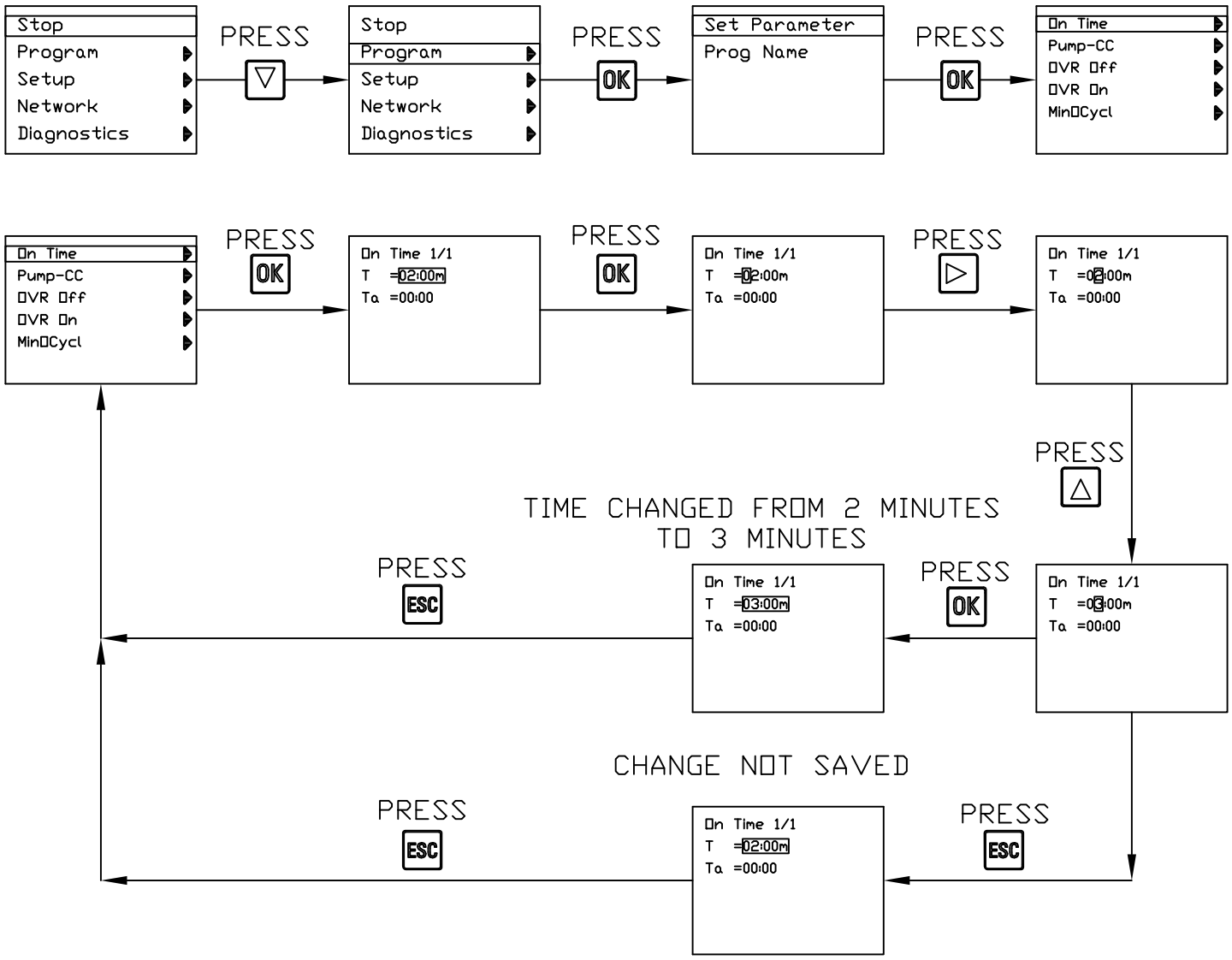
Setting the clock:

Typically, the panel will operate just fine without setting the clock. However, some panels feature specific timers that *do* operate based on the date and current time. When setting the clock, note that 00:00 = 12PM, 13:00 = 1PM. Continue pressing the right arrow key to set the date. Press " " when finished or " **S** " to cancel.



Setting a timer:

Follow the example for changing panel parameters.



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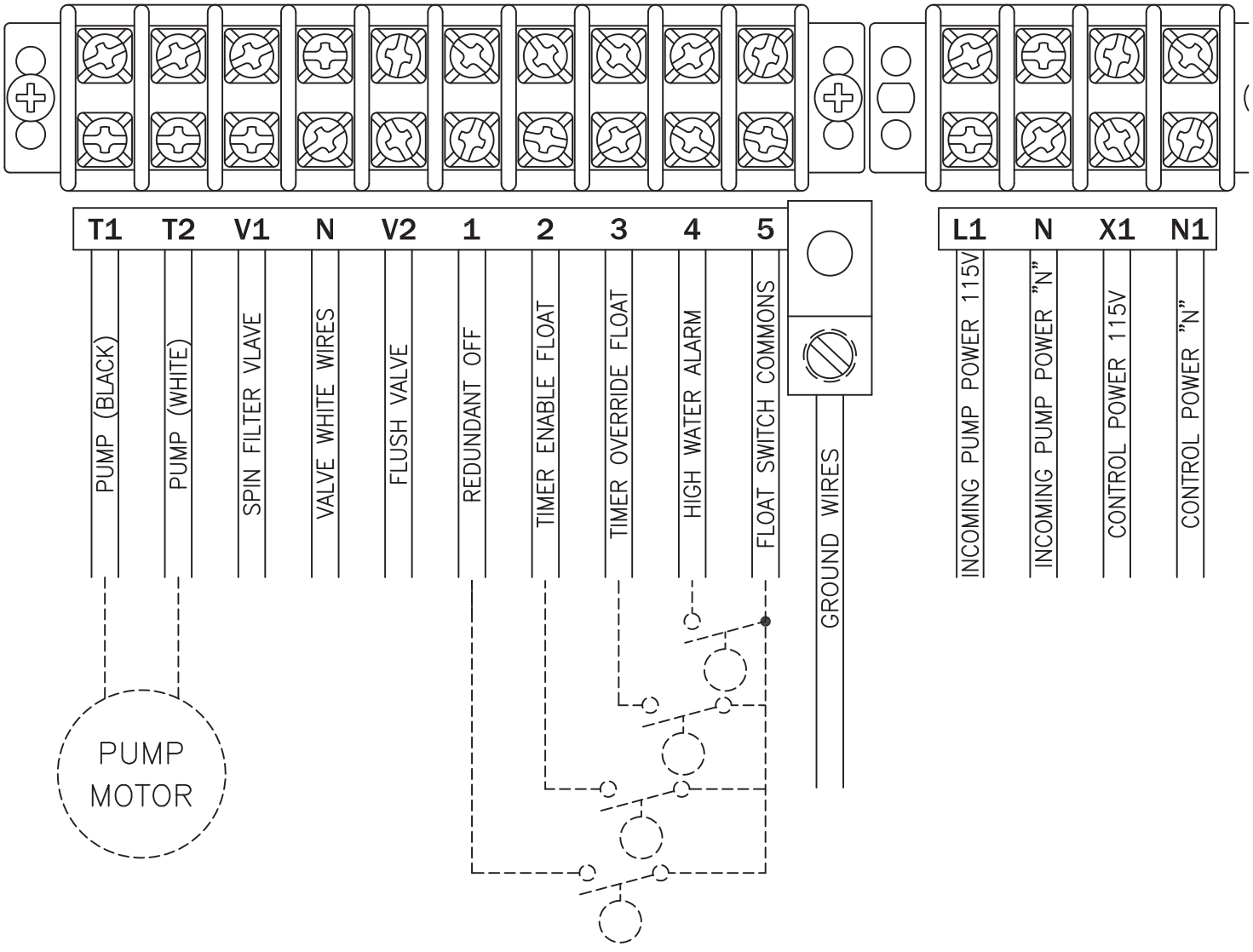
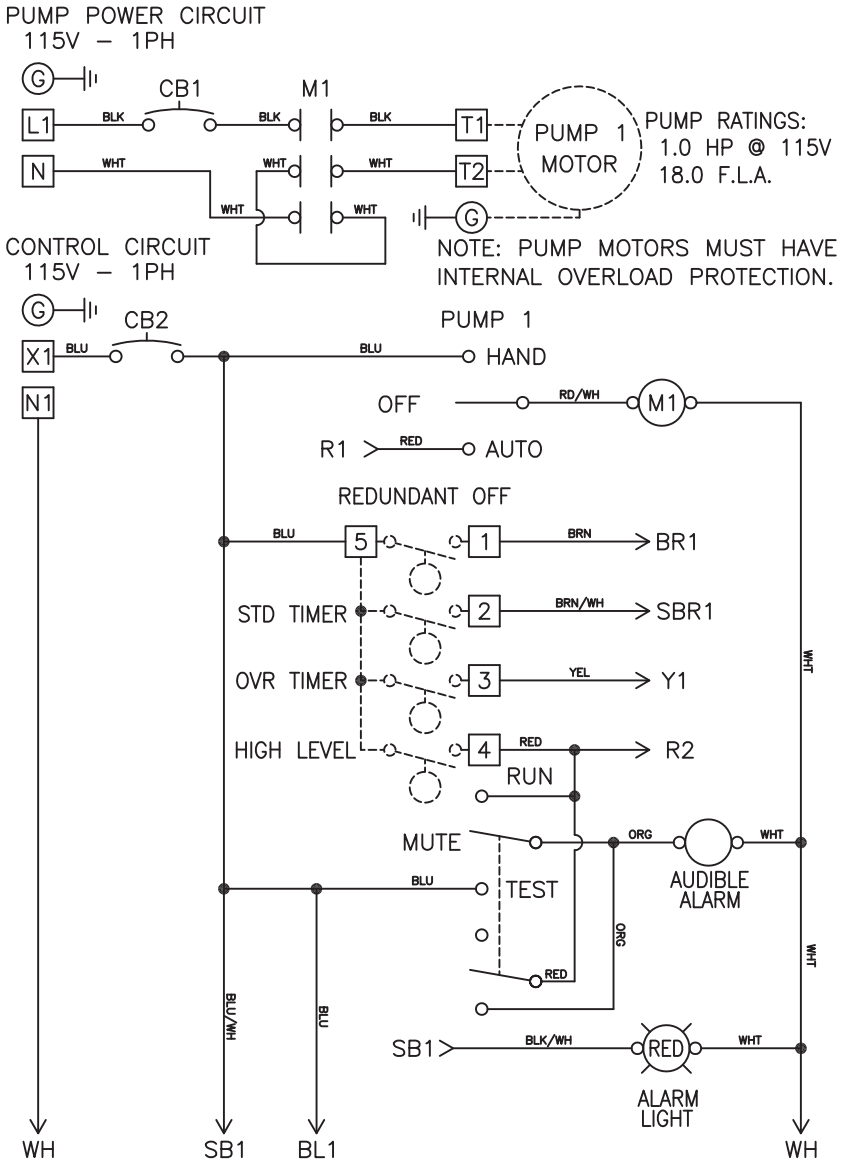
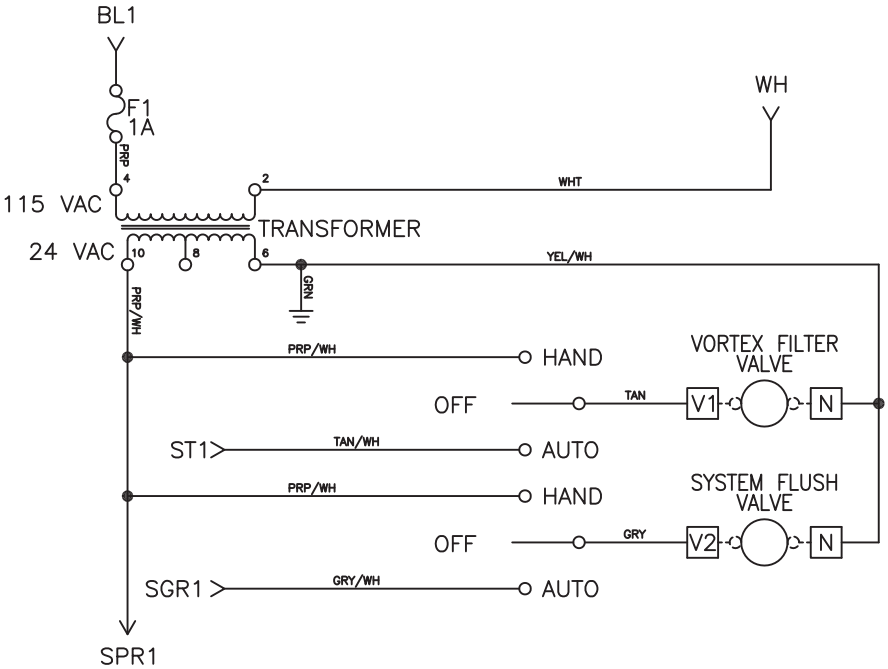
TIGHTENING TORQUE FOR TERMINAL BLOCK IS 9 in–lbs.

CONNECTION DIAGRAM
PUMP, VALVES & FLOAT SWITCHES







SCHEMATIC DIAGRAM SHOWING CONNECTIONS TO PLC