



1-Pump 9-Station Controller

Reference Manual (PN:882.00247.00) for
Complete Operation and Installation Instructions
(Available online at www.sterlco.com)

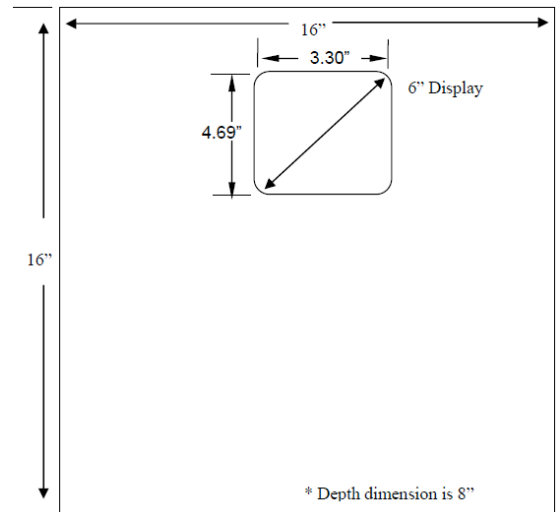
Safety Concerns



Quickstart Installation Checklist

(Refer to main manual for complete installation instructions).

1. Mount the panel on a flat, vertical area. It should be a visible area that gives your operator access to the control.
2. Refer to local electric codes, the schematic, connection diagrams, and the serial tag for wiring considerations
3. Hardwire the input power at 110/1/50-60 VAC or 230V/1/50-60 VAC, depending on the specifications, which are located on the serial tag.



Unit Operation (Refer to controller manual for complete operating instructions).

Start Up

1. Push the **ON/OFF** disconnect switch to the **ON** position.
2. The Title screen will appear (*figure 1*). Press the **F6** key to enter the Main Menu screen (*Figure 2*). The Main Menu screen will provide access to turn the system ON/OFF (**F1**), view the status of the system (**F2**), set station features (**F4**), set pump features (**F5**), and set system features (**F6**).
3. When using the controller to set values in the following screens follow these steps. First, press the **Set Key**. Second, use the **Arrow Keys** to select the field that is to be changed. Third, use the numeric keypad to enter the desired numbers into the selected field. Lastly, press the green **ENT Key** to enter those values or the red ESC Key to return the values back to their original setting.

Values entered into all fields must be set into the controller using the ENT key before moving on to the next field or the data will be lost

4. To access the System Status screen (*figure 3*) press the **F2** key. **OFFLINE** indicates the station is disabled or not installed and that the pump is disabled. **READY** indicates the station is in normal idle condition, and the pump is idle and off. For a complete list of station and pump statuses refer to page 18 of the manual.
5. Press **F6** to return to the main menu. Press **F4** to access the first (of three) Station set up screens (*figure 4*). **Convey Time** is the time (in seconds 1-999) the vacuum valve remains open to draw material in (For a volume-fill station, the valve closes when material covers the station's

volume-fill proximity sensor or this time elapses, whichever comes first). **Last Convey** shows the duration of the most recent convey, and **Unload Time** is the time (in seconds 1-999) material drains from the station into its receiver.

6. Press **F3** to access the second Station Setup screen (*figure 5*). **Purge Time** is the time allowed (in seconds 1-999) for material to be cleaned out, **Purge F2** disables/enables purge cycle, **CL Loop F4** enables/disables the closed loop feature.
7. Press **F3** to move on to the third Station Setup Screen (*figure 6*). **No CNVY F2** enables/disables the no convey alarm, **No Conveys** is the number of unsuccessful conveys that will occur before the alarm sounds (0-99), and **SP CNVY F4** turns special convey feature on/off.
8. Press **F6** to return to the main menu. Press **F5** to access the initial (of 3) Pump Setup screens (*Figure 7*). **FC ENABLE F2** enables/disables filter cleaning feature, **FC TYPE F5** toggles between blowback and implosion cleaning, and **CNVYS/CLEAN** sets the number of conveys between filter cleanings (1-99)
9. Press **F3** to access the second Pump Setup Screen (*Figure 8*). **CLEAN PULSES** sets the number of blowback/implosion pulses during filter cleaning (1-99), **ON PULSE** sets amount of time blowback/implosion will remain on during filter cleaning (0.1-99.99 seconds), and **OFF PULSE** sets the time between blowback/implosion pulses during filter cleaning (0.1-99.99 seconds).



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10. Press **F3** to access the third pump screen (*figure 9*). **RAMP UP TIME** sets the delay (in seconds 1-99) from when pump starts till conveying starts, **RAMP DN TIME** sets the delay (in seconds 1-99) when the pump stops till the next time the pump starts again, **IDLE TIME** is the delay (in seconds 1-999) from when pump last conveyed material till pump stops.
11. Press **F6** to return to the Main Menu. Press **F6** again to access the initial (of 3) System Setup screens (*figure 10*). **INSTALLED HOPPERS** is total number of hoppers, **HI VAC DEBOUNCE** is the minimum time (in seconds 0.1-9.9) for a High Vacuum Signal to occur before being recognized by the system, and **HI VAC DELAY** is the time (in seconds 2.0-9.9) before a High Vacuum alarm will occur.
12. Press **F3** to access the second System Setup screen (*Figure 11*). Here the operator can set the Debounce settings which is the minimum time (in seconds 0.5-2.0) before the demand signal is recognized by the system.
13. Press **F3** to move on to the third Systems Setup Screen (*Figure 12*). Set the length (in minutes 01-50) before an alarm will reactivate while in an alarm condition. Press **F5** to return to the initial Systems Setups Screen and **F6** to the Main Menu.
14. Press **F1** to start the conveying system. The controller will display "F1 SYS ON" in the upper left corner of the Main Menu Screen. To stop conveying press **F1** again when in the Main Menu or Status Screen. "F1 SYS OFF" will be displayed on the controller

Figure 1

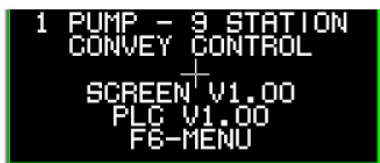


Figure 2

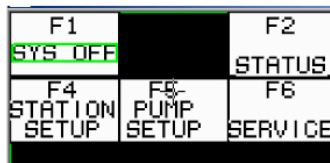


Figure 3

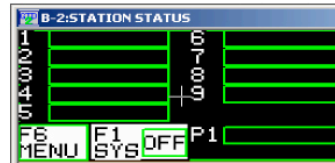


Figure 4



Figure 5



Figure 6



Figure 7



Figure 8

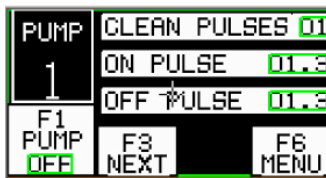


Figure 9

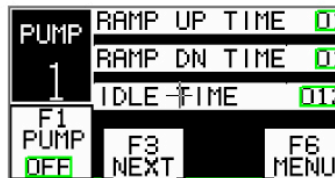


Figure 10



Figure 11

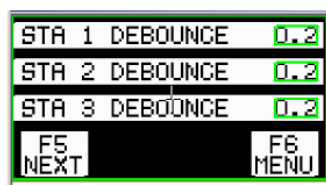


Figure 12





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Troubleshooting - Quick Guide

Problem	Possible cause	Solution
The control panel doesn't light up	The control panel is not turned on	Turn on the control panel
	The external disconnect (recommended) in the dedicated circuit is open (off)	Close the switch (on)
	Fuse/circuit breaker in the power drop is blown/tripped	Replace/reset
	Control power switch is broken	Replace
A pump package doesn't run, even though it is on-line and its indicator is lit.	The motor overload has tripped	Reset the overload and check the motor for the proper amp draw on the tag
	Main fuse in power drop or optional fused disconnect has blown	Replace the fuse
	Motor contact is faulty	Repair or replace as required
A vacuum receiver is being by-passed in the loading cycle	The vacuum receiver is off-line	Use the controller to put the vacuum receiver on-line
	The convey time for the vacuum receiver is set to zero	Use the controller to enter a longer convey time
	The field-installed station bypass switch is simulating a Bin Full condition	Normal operation. Set the switch so the vacuum receiver is back in the loading sequence
	The field-installed station bypass switch is bad or mis-wired	Repair, replace, or re-wire
	The vacuum receiver was assigned to the wrong pump during setup	Repeat the setup procedure
Vacuum receivers are overfilling	Conveying times are too long (Time Fill Mode only)	Time the vacuum receiver (s) during loading, and set the conveying times to a few seconds less
	Maximum conveying times are too long, and the PLC does not recognize the Vacuum Receiver Full Proximity Switch(es)	Check proximity sensors for proper operation and proper wiring to the PLC. Repair as needed. Reset the conveying times to a reasonable value, and adjust as needed.



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Spare Parts

COMMON PARTS		QUANTITY REQUIRED
728.01024.00	SW,DISC,ABB,40A,600V,NFU,UL508 20HP MAX	1
A0569870	RELAY,SPDT,15A,24VDC	2
A0540997	FUSE,250V,GL,TD, 1.00A 1/4 X 1-1/4 BUSSMANN MDL-1	1
A0542210	FUSE,250V,GL,TD, 5.00A 1/4 X 1-1/4	1
A0544790	FUSE,250V,GL,TD, 8.00A BUSSMANN MDL-8	1
A0542203	FUSE,250V,GL,TD, 2.00A BUSSMANN MDL-2	1
A0542207	FUSE,250V,GL,TD, 3.00A 1/4 X 1-1/4 BUSSMANN MDL-3	1
725.00885.00	FUSE,SLO-BLO,250V,1.5AMP BUSSMANN MDL-1-1/2	2

DRAWINGS		
A0572856	DWG,SCC1/9,ELEC SCHEM	
A0571629	DWG,SCC1/9,ENCL LYT	