

Versa-VIP V8

By PSI Waste Equipment Services, Inc.

Versa-VIP V8 SUPPORT www.versa-vip.net

Phone: 352-742-4774 | SMS Support and Parts: 352-309-1147

E-mail: support@versa-vip.net

TEXT 352-309-1147 for the best support in the industry!

For support include any relevant pics of your installation.

Please wire your Versa-VIP system according to the wiring diagram and please keep it neat. We can't support an installation that is not wired to the diagram or is too sloppy to see how it is wired.

Introduction

- The purpose of this manual is to provide the installer and owner with the necessary information to install our Versa-VIP Control system. Refer to equipment manufacturer's manual for additional information.
- PSI Waste shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of the features and options in the use of this product. The installer shall ensure, upon installation, the combination of features and options used are safe and appropriate for the application and operational environment.
- Installer and user shall read and understand ANSI Standard Z245.2 (Compactor Safety), OSHA 29 CFR, Part 1910.147 (Lock out/ Tag out), and the OEM compactor operation, maintenance, and installation manual.
- Must be installed by a qualified person.

Before Installing

- Get familiar with the Versa-VIP system by studying the drawings and documentation included. It will not only save you time, but there are a lot of great features you'll want to use. Refer to it frequently.
- Words in [] are parameters.
- Words in ALL CAPS represent inputs (SWITCHES, etc.) and outputs (MOTOR STARTER, etc.)
- Please leave all documentation inside the control panel. If you need extra copies, you can download them or call us and we'll send you a set, free of charge.

Compatibility (General)

- Compactors with two stage pumps, additional valves, etc. may NOT be compatible with our control system. If you are not sure, take a few pics and email us the pics and any schematics or diagrams you have. We'll steer you in the right direction.
- Prox SWITCHES that use 2 wires may need to actuate a relay to get the input. Call us and we'll help you out.
- Make sure your control panel has a transformer that provides 120V power. Most vertical compactors do.
- Make sure your outputs (valve, STARTER, etc.) are 120VAC. This control system is NOT compatible with 24VDC, but we do offer 24VDC systems.
- Not compatible with transducers. Install a pressure switch instead.

Full

If the compactor gets full it will shut off at mid-point (ram just above the top of the container). This will be reset if the container is emptied, and a container switch is installed. It can also be reset by cycling the E-STOP off then back on. See Make/Model Compatibility section for more information.

Instruction Decal

Our control system PLC has a white decal on it with useful information for quick reference.

ESC + ◀ to START compactor | ESC + ▶ to STOP
Parameters - ▼ then ESC / Program / Set Parameter
From Parameters, press ESC repeatedly back to
Date Screen then wait or ▲ to get to Status Screens
Press ESC + ▲ or ESC + ▼ to scroll screens

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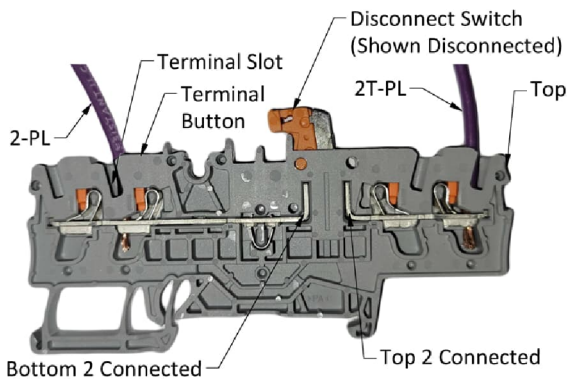
Text SUPPORT to 352-309-1147



Setting Parameters

Press ESC + ▲ or ESC + ▼ to scroll through status screens. The first screen is Parameters. Hold ESC to enter edit mode. Press OK to edit that parameter or use arrows to navigate to another parameter. Change parameter then press OK to save setting. Press ESC to exit edit mode. Use ESC to get out of the parameter or if you change your mind after changing the value but before you save with OK. Pay attention to the h (hours), m (minutes), and s (seconds) at the end of the times. These are generally not changed.

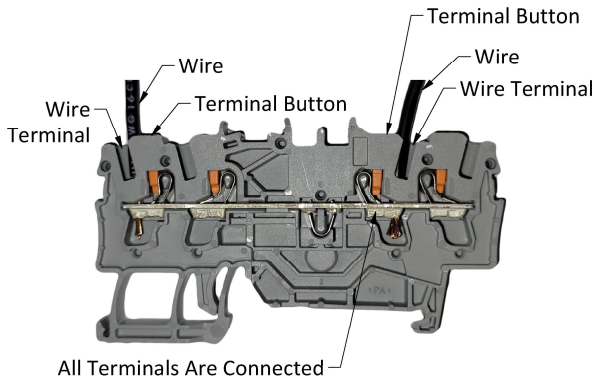
Terminal Blocks



Terminal Block Disconnect

Terminal Block 2T & 2 (first hot terminal block that transformer and PLC hook to) has a switch to disconnect control power to terminal 2 and the rest of the terminals. This is useful if the power disconnect is not nearby. Only use this switch if the panel can be safely worked on with the main power on. Test terminals 2 through 7 to make sure the power is disconnected. The top two terminals are the transformer and PLC so the PLC will stay lit. The message screen will show the KEY SWITCH is turned off.

NOTE: If someone wired the Transformer to a different terminal, this would not work! Never trust the guy before you!



Standard Terminal Block

The standard terminal blocks are connected top to bottom, so all four wire positions are all the same. Push the orange buttons to release the wire slot to insert or remove the wires.

Inverters

If you will be using a contactor or relay to start the inverter:

- Wire that relay as you would a STARTER. Use the brown wire from Q1 2 to energize coil and white wire from 1 for neutral.
- Discard wires labeled overload 97 and 98

If you are not using a separate contactor or relay:

- Remove jumper "Inverter" from Q1 1 to Control Power (I7)
- Put the two control wires coming from the inverter to Q1 1 and Q1 2.
- Discard wires labeled Starter A1, Overload 95, 97, 98.

Message Screens

Message Screens help you understand what the baler is doing and help you trouble-shoot issues. If the compactor is not wired according to the diagram provided, these messages may be inaccurate. Please carefully wire the compactor using our instructions, not your intuition. Tech support will be limited until properly wired.

Screens- Normal Operation

This message appears if I1, I2, I3 are all out at the same time. This would normally indicate the OFF/ON KEY SWITCH is off. If this message appears and the KEY SWITCH is turned on then check ESTOP and FEED DOOR, CONTAINER SWITCH, wiring, junction boxes, contact blocks, and all wire connections. Check the terminal block disconnect (see previous page). This message may also show if the power unit is connected to 208/240V, and the transformer is wired for 480V. Check your voltage at terminals 1 - 2. It should be around 120VAC.

This message will appear if the E-STOP is pressed. Check for power on terminals 3 and 7. Check all connections and E-STOP contacts.

If this message shows, the CONTAINER SWITCH input is off. The container may be out of position, SWITCH may be bad, or there is a bad connection. Push container in, check container switch, check terminals 3 and I2.

If this message shows, the FEED DOOR is open, INTERLOCK is bad, or there is a bad connection. Check terminals 3 and I3.

Once the compactor is running this screen will appear. It shows the status of the MOTOR, direction of travel with remaining time in that direction, and if the PRESSURE SWITCH is on.

Error Screens

There are several error screens. This error shows the motor overload has tripped. Check overload settings, tightness of all power wires, relief and PRESSURE SWITCH settings and check for voltage drop. Reset overload then cycle E-STOP off then back on.

```
Key Switch maybe  
off. If not chec  
connections,  
contacts & term  
2&3. Check for  
Lo volt on trans
```

```
E-Stop seems to  
be pressed.  
Check E-Stop,  
Key Switch,  
wire connections  
terminals 2,3,7.
```

```
Container seems  
to be out of  
position. Check  
container switch  
container posi-  
tion, Term 3,I2
```

```
Feed door looks  
to be open.  
Close feed door,  
check interlock,  
connectors,  
Terminals 3 & I3
```

```
Motor is ON  
Ram is going UP  
Ram will stop  
when ram hits Up  
Limit or Pressur  
PSI Swtch is OFF
```

```
Motor Overload  
is on. Have qua-  
lified person  
reset overload,  
check for issues  
Reset w/ E-Stop.
```

Other Screens

There are other screens that you can get to using the buttons on the front of the PLC. Press ESC + ▲ at the same time repeatedly, releasing the ▲ for 1 full second, to scroll through the screens. You can scroll back down by pressing ESC + ▼ at the same time. These screens will stay on for 60 secs after the last time you press up or down. To get back to the Welcome screen just scroll all the way down. NOTE: Be sure to press ESC first when going down since ▼ by itself gets you out of the programmed screens. You can hold ESC and click ▲ and ▼ to scroll back and forth. Also, don't rush while cycling through the screens or the PLC will not recognize the press or release of the button.

If you somehow get stuck in the orange screens, press ESC. You'll be on a white screen. Then press ▲ or wait to get back to main screens.

This screen shows which inputs are ON and OFF. I1, I2, and I3 must be on to start a cycle.

Control Power	ON
Can Switch Is	ON
Feed Door Is	ON
Start Input Is	OFF
Mid Limit Is	OFF
Up Limit Is	OFF

This screen shows which inputs and outputs are ON or OFF.

PSI Switch Is	OFF
Motor O.L. Is	OFF
Motor Is	OFF
Down Coil Is	OFF
Up Coil Is	OFF
Light Is	OFF

This screen shows how many hours and cycles the compactor has run since the last time these have been reset. If the PLC loses power for 2-3 weeks these will be reset.

Hours	0
Cycles	0

Compactor Compatibility

Shifting Methods

See chart below for proper parameter setting.

There are 4 modes to choose from. MID-POINT Limit operation typically determines the parameter setting.

For a Marathon VIP with OEM SWITCHES, you would choose to set [MidPtOpenMid] 00:00h (this is the default setting). This is because the MID-POINT LIMIT SWITCH turns off when the ram reaches the mid-point position. Any vertical compactor with this style set up should work well with this setting.

For a Wastequip Vertical Compactor with OEM MID-POINT, you would choose to set [MidPtClosMid] to 00:00h. This is because the MID-POINT LIMIT SWITCH turns on when the ram reaches the mid-point position. Any vertical compactor with this style set up should work well with this setting.

For Marathon 3cy VIP's with Load/Pack switch, you would choose to set [MidPtLoadPak] to 00:00h. You would also set [Auto 0-Y 9-N] to 90:00h.

For other vertical compactors with no MID-POINT limit switch, set [MidPtNone] to 00:00h.

NOTE: Only one of these parameters can be set to 00:00 at a time. The others should be set to 90:00h.

Make Model (Typical)	Parameter Enabled	Ram Stops Up	Ram Shifts from Down to Up on	Ram Stops at Mid-Point
Marathon VIP (Default)	If [MidPtOpenMid] is set for 00.00h	RAM UP LIMIT SWITCH or PRESSURE SWITCH	Timer [Down Time] or PRESSURE SWITCH	When MID-POINT LIMIT opens (turns off)
Wastequip	If [MidPtClosMid] is set for 00.00h	RAM UP LIMIT SWITCH or PRESSURE SWITCH	Timer [Down Time] or PRESSURE SWITCH	When MID-POINT LIMIT closes (turns on)
Marathon with Load/Pak Key	If [MidPtLoadPack] is set for 00.00h	RAM UP LIMIT SWITCH or PRESSURE SWITCH	Timer [Down Time] or PRESSURE SWITCH	No MID-POINT LIMIT SWITCH. Ram Stops Up. Switch to PACK (wired to START/UP). Ram goes down and stops. Switch to LOAD (wired to START/UP). Ram goes back UP and stops. Typically, not Auto Start on door close. Set [Auto 0-Y 9-N] for 90:00h.
PTR Vertical	If [MidPtNone] is set for 00.00h	LIMIT SWITCH or PRESSURE SWITCH	Timer [Down Time] or PRESSURE SWITCH	No MID-POINT LIMIT SWITCH. Press START/UP. Cycles down then all the way back up. Always stops Up.

Marathon VIP (Default settings)

The following is a list of suggested settings for OEM Marathon VIP compactors. This assumes the unit has a LIMIT SWITCH that is actuated when the ram is in the up position and a LIMIT SWITCH that is open at the mid-point position and actuated if the ram is above or below the mid-point position.

Parameter Name	Suggested Setting	Function
Down Time	Set for the time it takes the ram to go from all the way up to all the way down less about 1/2 second.	Ends the down stroke. This prevents the compactor from hitting pressure on every cycle, decreasing wear and tear on the machine. Once the compacted trash gets above this level, the compactor will shift on a PRESSURE SWITCH.
MidPtOpenMid	00:00h	Shuts the compactor off when the MID-POINT LIMIT SWITCH opens at the end of the cycle.
MidPtClosMid	90:00h	
MidPtLoadPak	90:00h	
MidPtNone	90:00h	
Full Time	60:00h	

Operation

With the ram at the mid-point (level with top of container) position, feed door shut, press START/UP. Ram will go up. Ram will continue to go up until either: a) the PRESSURE SWITCH senses pressure for [SmartShft UP] time or b) RAM UP LIMIT SWITCH is actuated. Once the ram stops the door should now be unlocked. Open then close the door. The compactor will start. The ram will go down until either the a) [Down Time] times out or b) the PRESSURE SWITCH senses pressure for [SmartShft DN] time. The compactor will then shift to go up. The ram will continue to go up until the MID-POINT LIMIT is released and MID-POINT LIMIT input goes off. The ram should stop at the mid-point position just above the top of the container.

If the START/UP button is pressed at any time during the cycle, the ram will move to the full up position.

If the door is opened, E-STOP is pressed, the cycle will stop immediately.

If the ram is in the fully up position and START/UP is pressed, the compactor will do a full cycle, returning to the mid-point position.

NOTE: Installer must ensure the compactor complies with ANSI Z245.21-2013 5.13 prior to allowing the compactor to run automatically. This would include, for example, ensuring the compactor has a latch that cannot be automatically latched (do not use a slam style latch), uses a keyed START/UP switch, and the compactor has a mechanical door interlock that prevents the general public from accessing the charge chamber.

Wastequip

The following is a list of suggested settings for *some* OEM Wastequip vertical compactors with mid-point limit switches that are actuated when the ram returns to the mid-point after shifting from down to up. NOTE: Some Wastequip vertical compactors have 24VDC inputs and some 24VDC outputs! Do your homework before installation. Often, you can change most of the inputs to 120VAC readily, but you'll have to change the transducer out for a PRESSURE SWITCH. Also, some lights may be 24VDC. You may have to swap these out. We may also offer a Versa-VIP version that will work. Send us some pics of the panel and schematic and we'll steer you in the right direction.

Parameter Name	Suggested Setting	Function
Down Time	Set for the time it takes the ram to go from all the way up to all the way down less about 1/2 second.	Ends the down stroke. This prevents the compactor from hitting pressure on every cycle, decreasing wear and tear on the machine. Once the compacted trash gets above this level, the compactor will shift on a PRESSURE SWITCH.
MidPtOpenMid	90:00h	
MidPtClosMid	00:00h	Shuts compactor off when the MID-POINT LIMIT SWITCH closes at the end of the cycle.
MidPtLoadPak	90:00h	
MidPtNone	90:00h	

Operation

With the ram at the mid-point (level with top of container) position, feed door shut, press START/UP. Ram will go up. Ram will continue to go up until the PRESSURE SWITCH senses pressure for [SmartShft UP] time. Once the ram stops the door should now be unlocked. Open then close the door. The compactor will start. The ram will go down until either the a) [Down Time] times out or b) the PRESSURE SWITCH senses pressure for [SmartShft DN] time. The compactor will then shift to go up. The ram will continue to go up until MID-POINT LIMIT is actuated and the MID-POINT LIMIT input comes on. The ram should stop at the mid-point position just above the top of the container.

If the START/UP button is pressed at any time during the cycle, the ram will move to the full up position.

If the door is opened, E-STOP is pressed, the cycle will stop immediately.

If the ram is in the fully up position and START/UP is pressed, the compactor will do a full cycle, returning to the mid-point position.

NOTE: Installer must ensure the compactor complies with ANSI Z245.21-2013 5.13 prior to allowing the compactor to run automatically. This would include, for example, ensuring the compactor has a latch that cannot be automatically latched (do not use a slam style latch), uses a keyed START/UP switch, and the compactor has a mechanical door interlock that prevents the general public from accessing the charge chamber.

Marathon Load/Pack style VIP's Without MID-POINT LIMIT SWITCH

The following is a list of suggested settings for OEM Marathon VIP's with a Load/Pack switch and no MID-POINT LIMIT SWITCH. You'll wire up both contacts of the Load/Pack switch as START/UP.

Parameter Name	Suggested Setting	Function
Down Time	Set for the time it takes the ram to go from all the way up to all the way down less about 1/2 second.	Ends the down stroke. This prevents the compactor from hitting pressure on every cycle, decreasing wear and tear on the machine. Once the compacted trash gets above this level, the compactor will shift on a PRESSURE SWITCH.
MidPtOpenMid	90:00h	
MidPtClosMid	90:00h	
MidPtLoadPak	00:00h	Causes the compactor to operate similar to Marathon OEM Load/Pak style VIP compactors. From Ram Up position, press START/UP. Ram goes down and shuts off. Press START/UP. Ram goes up and shuts off.
MidPtNone	90:00h	
Full Time	Set for the time it takes to get from ram up to mid-point.	If the PRESSURE SWITCH turns on for [Full PS Dely] before this timer times out the compactor will shut down and the FULL LIGHT will turn on.
Auto 0-Y 9-N	90:00h	Disables Auto Start on door close. Untouchables do not typically start on door close.

Operation

With the ram at the fully up position, move switch to the Pack position. Ram will go down until a) [Down Time] times out or b) the PRESSURE SWITCH senses pressure for [SmartShft DN] time. Move the switch to the Load position. The ram will go up until the ram actuates the RAM UP LIMIT. Door will unlock.

If the START/UP button is pressed at any time during the cycle, the ram will move to the full up position.

If the door is opened, E-STOP is pressed, the cycle will stop immediately. Start the compactor to continue.

Vertical Compactors Without MID-POINT LIMIT SWITCH

The following is a list of suggested settings for Vertical Compactors Without MID-POINT LIMIT SWITCH. With these settings the compactor will make a full cycle and stop in the ram up position.

Parameter Name	Suggested Setting	Function
Down Time	Set for the time it takes the ram to go from all the way up to all the way down less about 1/2 second.	Ends the down stroke. This prevents the compactor from hitting pressure on every cycle, decreasing wear and tear on the machine. Once the compacted trash gets above this level, the compactor will shift on a PRESSURE SWITCH.
MidPtOpenMid	90:00h	
MidPtClosMid	90:00h	
MidPtLoadPak	90:00h	
MidPtNone	00:00h	Causes the compactor to do a full cycle stopping in the fully up position.
Full Time	Set for the time it takes to get from ram up to mid-point.	If the PRESSURE SWITCH turns on for [Full PS Dely] before this timer times out the compactor will shut down and the FULL LIGHT will turn on.
Auto 0-Y 9-N	90:00h	Disables Auto Start on door close.

Operation

With the ram at the fully up position, the door should now be unlocked. Press START/UP. The compactor will start, and the ram will go down until either the a) [Down Time] times out or b) PRESSURE SWITCH senses pressure for [SmartShft DN] time. The compactor will then shift to go up. The ram will continue to go up until the PRESSURE SWITCH senses pressure for [SmartShft UP] time. The ram will stop in the fully up position.

If the START/UP button is pressed at any time during the cycle, the ram will move to the full up position.

If the door is opened, E-STOP is pressed, the cycle will stop immediately. Start the compactor to continue.

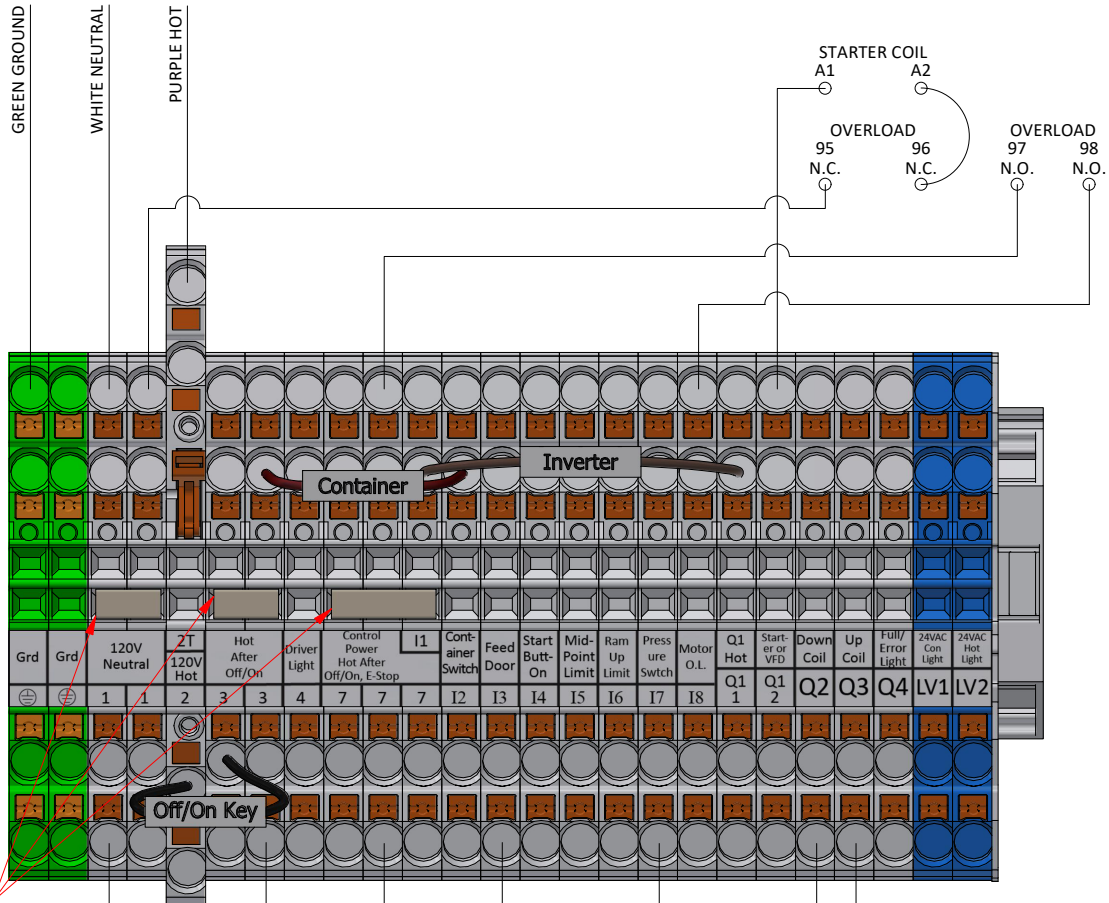
Available Parameters

The following chart is a list of available parameters to customize the operation of your Versa-VIP control system to work with your vertical compactor.

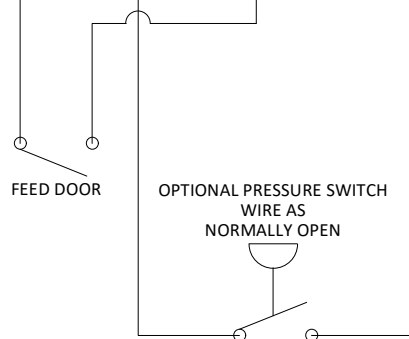
Parameter Name	Default Settings	Function	Notes
Down Time	60:00s	Ends the down stroke. Set for the time it takes the ram to go from all the way up to all the way down less about 1/2 second or so.	This prevents the compactor from hitting pressure on every cycle, decreasing wear and tear on the machine. Once the compacted trash gets above this level, the compactor will shift on a PRESSURE SWITCH.
MidPtOpenMid	00:00s	Shuts compactor off when the MID-POINT LIMIT SWITCH opens at the end of the cycle.	Set for 00:00h for Marathon style VIPs that have the ram up and MID-POINT LIMIT SWITCHES. Otherwise set for 90:00h.
MidPtClosMid	90:00s	Shuts compactor off when the MID-POINT LIMIT SWITCH closes at the end of the cycle.	Set for 00:00h for Wastequip style vertical compactors that only have the MID-POINT LIMIT SWITCH. Otherwise set for 90:00h
MidPtNone	90:00s	Makes the compactor do a full cycle starting from the ram up position and ending at the ram up position.	Set for 00:00h for compactor that do not have a MID-POINT LIMIT SWITCH, like some Marathon Untouchables. Otherwise set for 90.00.
Full Time	60:00s	On machines without MID-POINT LIMIT SWITCHES, set for the time from ram up to mid-point. This timer must be set lower than the time it takes for the ram to reach the bottom of the stroke, or it will not shift on pressure.	On machines with MID-POINT LIMIT SWITCHES, set for 60:00s.
RunTooLong	60:00s	Shuts compactor down if it [RunTooLong] times out.	Default time should work fine. Must be at least a few seconds longer than the time it takes for the ram to go from all the way up to all the way down.
SmrtShft Up	00:10s	Delays PRESSURE SWITCH shifting from up to down. Prevents unintended activation of input.	Do not set higher than 00:10 on compactors with very high relief settings (e.g., Marathon VIP)
SmrtShft Dn	00:10s	Delays PRESSURE SWITCH shifting after up stroke. Prevents unintended activation of input.	Do not set higher than 00:10 on compactors with very high relief settings (e.g., Marathon VIP)
TimeDelayUp1	00:00s	Delays shift of up solenoid at beginning of cycle	Set for 00:00 on compactors with single coil valves (e.g., Marathon VIP)
TimeDelayUp2	00:00s	Delays shift of up solenoid at bottom of stroke	Set for 00:00 on compactors with single coil valves (e.g., Marathon VIP)
TimeDelay Dn	00:00s	Delays shift of down solenoid at beginning of cycle.	Do not set higher than 00:00 on compactors with single coil valves (e.g., Marathon VIP)
Auto 0-Y 9-N	00:00h	Enables or disables Auto Start on door close.	Installer is responsible for proper application. Make sure the site is safe for Auto Start prior to enabling. Follow ANSI Standards.
Full PS Dely	00:10s	Delays the PRESSURE SWITCH signal to prevent false signals of fullness.	Do not set higher than 00:10 on compactors with very high relief settings (e.g. Marathon VIP)
Cycles Maint	900000	Notifies user the compactor needs to be PM'd and counter needs reset. Causes Q4 to blink rapidly and message to show on screen.	Message is: Compactor is Ready to Start. ***Maintenance Required!!!*** Call Your Service Company. To reset the timer, hold ESC + ▼ for 5 seconds.

INSTALL DIAGRAM

When removing the wires from the transformer and starter, cut the wires leaving them attached to the terminals. This will make it easy to identify where the new wires go during the install. Connect new wires from Versa-VIP to each component as previously connected. Versa-VIP does not use auxiliary contacts on the starter. These wires can be removed. ** See schematic for notes.



DO NOT REMOVE



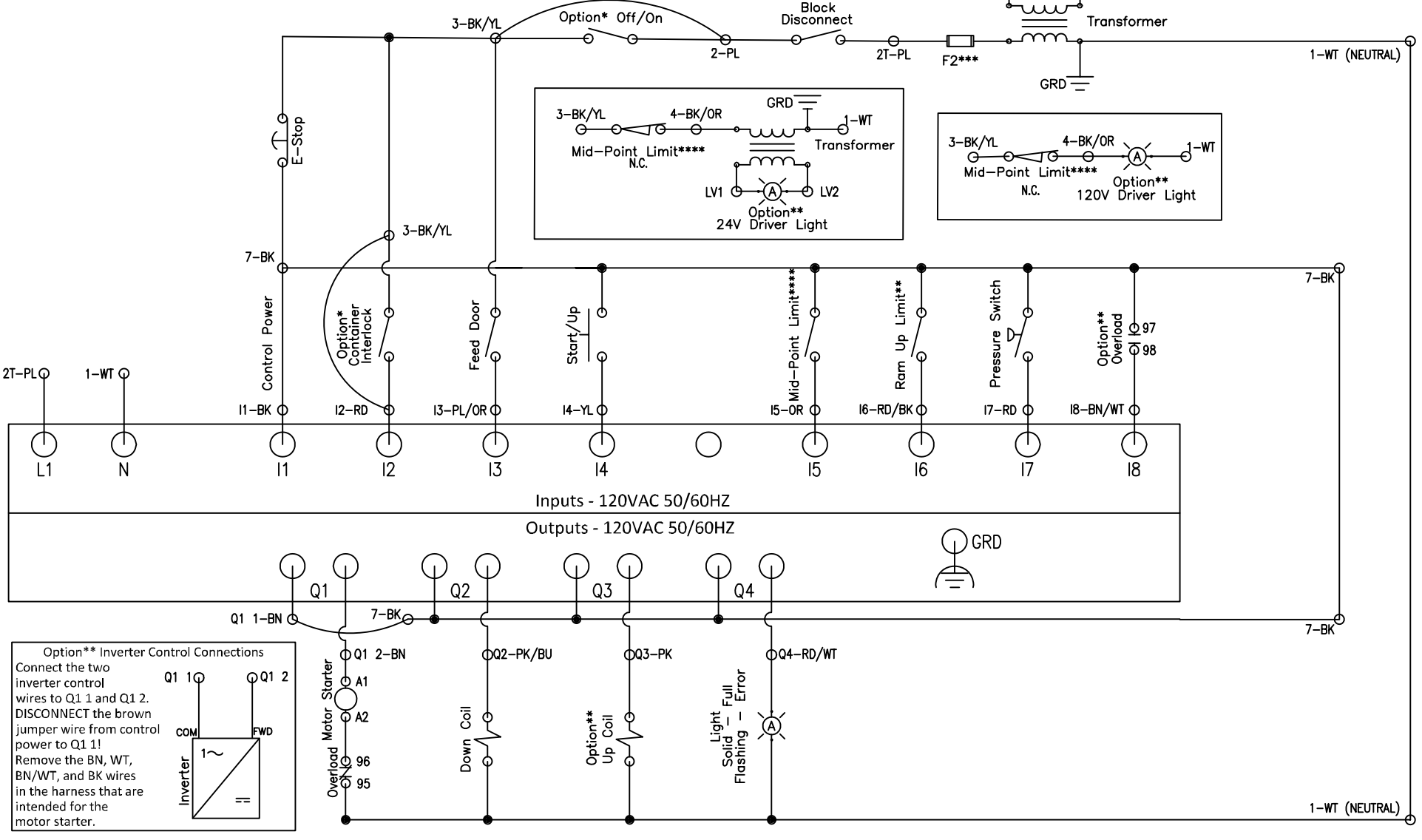
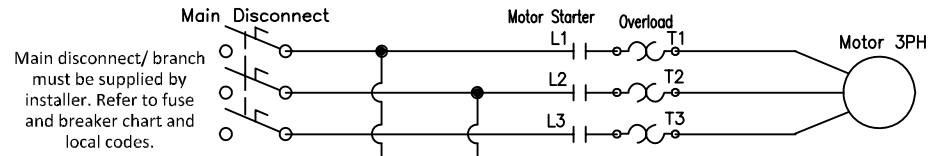
OPTIONAL UP COIL**

DIRECTIONAL VALVE
IF YOU ONLY HAVE ONE COIL,
DISREGARD THE OTHER CONNECTION.

DOWN COIL

WHITE NEUTRAL

*	Indicates optional components. If option is installed, remove the corresponding jumper from the center jumper rail.
**	Indicates optional components. Omit connections if not installed.
***	CAUTION: To reduce the risk of fire, replace only with UL listed fuses of the same type and rating.
****	Indicates multiple options. See compatibility section of manual for settings of various options.
Field Wiring:	Use copper wire only



Color Code:
 GR - Green | WT - White | PL - Purple | BK - Black | BN - Brown
 PK - Pink | BU - Blue | YL - Yellow | OR - Orange | RD - Red

Title: Versa-VIP v8, Standard
DWG #: VV801

Date: 8/16/23
Drawn: CB