

# Versa-Bale V8

By PSI Waste Equipment Services, Inc.

Versa-Bale V8 SUPPORT [www.versa-bale.net](http://www.versa-bale.net)

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

E-mail: [support@versa-bale.net](mailto:support@versa-bale.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-Bale 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-Bale 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 Z245.5 (Baler Safety), OSHA 29 CFR, Part 1910.147 (Lock out/ Tag out), and the OEM baler operation, maintenance, and installation manual.
- Must be installed by a qualified person.

## Before Installing

- Get familiar with the Versa-Bale 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

- Balers with two stage pumps, additional valves, etc. that may NOT be compatible with our control system. If you are not sure, take a few pics and email us. 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 balers do.
- Make sure your outputs (valve, STARTER, etc.) are 120VAC. This control system is NOT compatible with 24VDC, but we do offer 24VDC systems.

## Operation

With the ram in the fully up position, bale door shut, feed gate closed, press START. Ram will go down. Ram will continue to go down until either: a) [Down Time] times out or b) PRESSURE SWITCH senses pressure for 2 seconds. The ram will then go up until either the a) [Up Time] times out or b) PRESSURE SWITCH senses pressure for 1/2 second, or c) the UP LIMIT is actuated. When the bale gets bigger the ram will eventually shift before [Bale Ready] times out. When this happens, the baler will shut off and the full light will come on. Time to make a bale! Once the bale is made (following the OEM instructions), and you are ready to eject the bale, use the UP button to eject the bale. Reset the system by using the E-STOP button- push and pull to reset.

## Inverters

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

- Wire that relay as you would a STARTER using the brown wire from Q1 2 and white wire from 1.

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.

## Instruction Decal

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

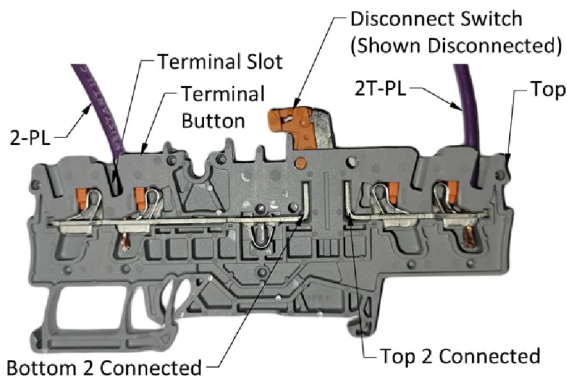
To get to Status Screens and Parameters  
press ESC + ▲. Hold ESC to change a Parameter.  
While scrolling, fully release button 1 Sec between presses.  
ESC + ◀ to START baler | ESC + ▶ to Stop  
Versa-Bale V8 by PSI Waste  
Text SUPPORT to 352-309-1147



## 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.

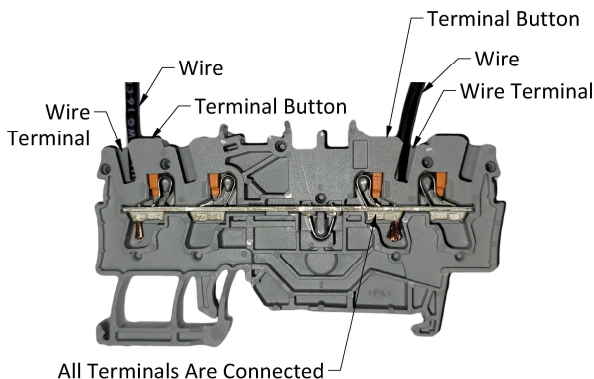
## Terminal Blocks



### 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.

## Message Screens

Message Screens help you understand what the baler is doing and help you trouble-shoot issues. If the baler is not wired according to the diagram provided, these messages may be inaccurate. Please carefully wire the baler 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 probably off. If this message appears and the KEY SWITCH is turned on then check ESTOP and FEED GATE, BALE DOOR, wiring, junction boxes, contact blocks, and all wire connections. 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:

E-STOP is pressed. Check for power on terminals 5 and 7. Check all connections and E-STOP contacts.

If this message shows, a BALE DOOR is open, SWITCH is bad, or there is a bad connection. Check terminal I2.

If this message shows, a FEED GATE is open, INTERLOCK is bad, or there is a bad connection. Check terminal I3.

Once the baler 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.

This screen shows the UP button is pressed, or water is causing a false input, or the UP button has a normally closed contact or there is a wiring error.

### Error Screens

There are several error screens. This error shows the FEED GATE MUST BE OPENED. Other errors are "Baler is full or jammed", "Baler ran too long", "Pressure switch was on too long", "Photo eye was on too long". See error section for more information. Once the error is cleared, the STOP BUTTON must be pushed and released to reset the PLC.

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

```
E-Stop seems to  
be pushed, Pull  
E-Stop out,  
check wire conn-  
ections, contact  
terminals 3,7,I1
```

```
Bale door seems  
to be open.  
Close bale door,  
Check door switc  
and connections  
and terminal 2
```

```
Feed gate looks  
to be open.  
Close Feed gate,  
check interlock  
and connectors.  
Terminals 3, I3.
```

```
Motor ON  
Down      03:33s  
           00:00  
Ram up May Stop  
on Ram Up Limit  
PSI Switch isOFF
```

```
UP button is on.  
If this is error  
check for water,  
bad wiring, bad  
contact, or N.C.  
contact.
```

```
The feed gate  
must be opened  
then closed  
between cycles.  
Please open then  
close feed gate.
```

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 the 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
Bale Door is ON
Feed Gate is ON
Start is      OFF
Up is        OFF
Ram Gate is  OFF
```

This screen shows which outputs are ON and OFF. It shows a clean view of output status and Full status.

```
PSI Switch is OFF
Ram Up Limit OFF
Motor is      OFF
Down Coil is OFF
Up Coil is   OFF
Light is     OFF
```

This screen shows the set values of basic parameters. These values can be changed in this screen by holding down the ESC button for a few seconds. Once in EDIT mode (black box highlights one of the parameters) the screen will remain active. When ready to exit the screen, press ESC again.

```
Down Time 14:50s
Up Time   11:00s
Bale Ready 11:00s
LimitDelay 00:00s
RunTooLong 02:00m
```

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

```
Rst Cycle      1
Rst Bales      0
All Time:
Hours          0
Cycles         1
Bales          0
```

Errors/ Status

Error Parameter Default	Common Causes	Possible Solution
Bale Ready	Baler is Full Baler is Jammed Pressure switch faulty [Bale Ready] timer set too high	Make Bale and reset with E-Stop Remove Jam and reset with E-Stop Check wiring, adjust or replace Lower setting. See Bale Ready page 5.
OpenCloseGat	The gate must be opened and closed between cycles. FEED GATE interlock is bypassed FEED GATE interlock is out of adjustment FEED GATE interlock is bad	Open then close feed gate Un-bypass feed gate Adjust Replace
RunTooLong	[RunTooLong] is set too low  Other multiple causes	Correct timer setting. Timer settings should be at least twice as long as [Down Time] setting. Check for proper operation, pressure and timer settings.

Maintenance Timer (V8.4 and later)

Parameter Name	Parameter Default	Function	Notes
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.

Basic Timers

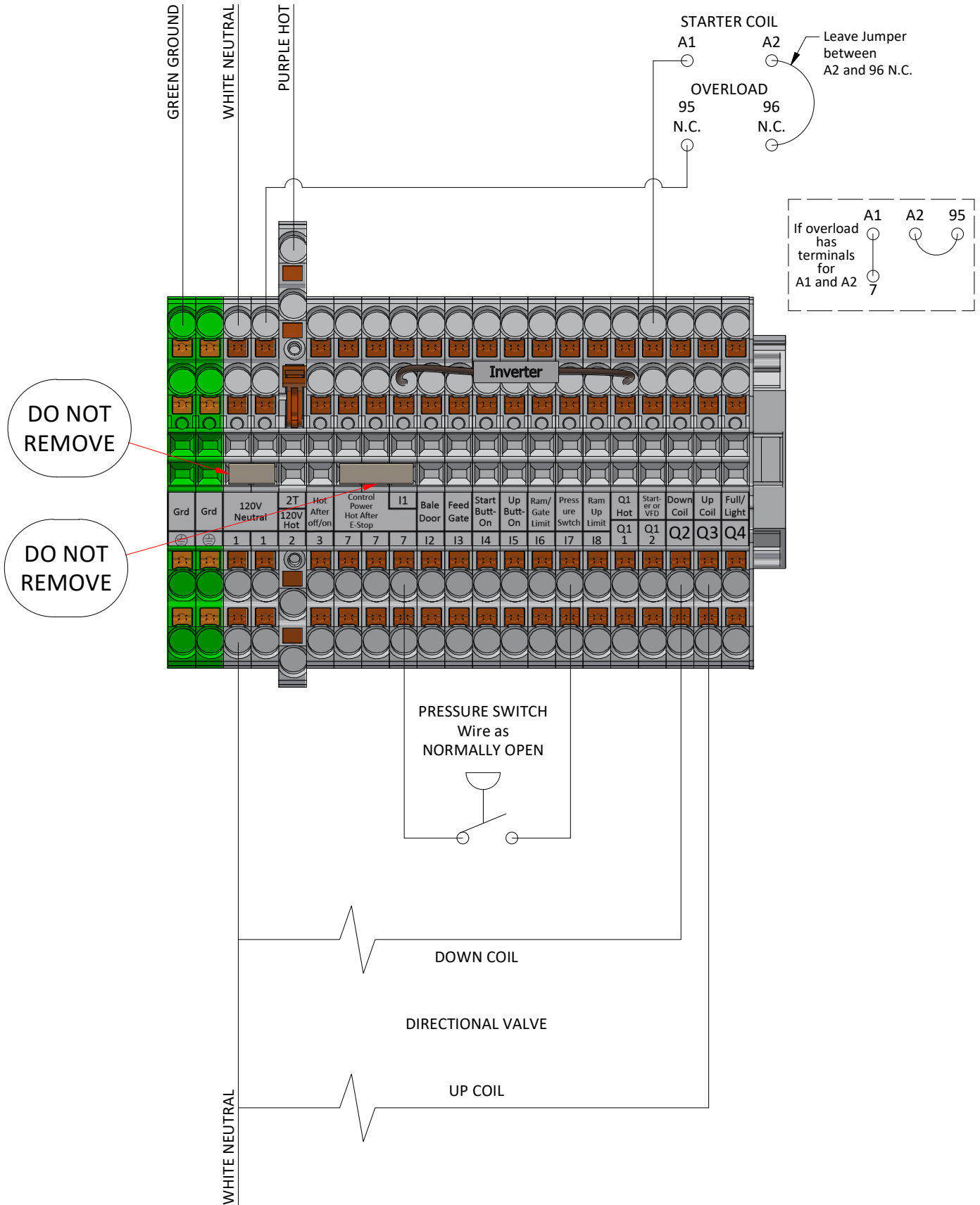
Parameter Name	Parameter Default	Function	Notes
Down Time	60:00s	Ends down stroke. Set for the time it takes the ram to go from all the way up to all the way down less about 1/2 second or so.	This prevents the baler from hitting pressure on every cycle, decreasing wear and tear on the machine. Once the bale gets above this level, the baler will shift on a pressure delay.
Up Time	60:00s	Ends up stroke.	If you are using a RAM UP LIMIT, leave the default parameter or set longer that up stroke.
Bale Ready	25:00s	Shuts baler off when bale is complete.	Typically, the time it takes for the ram to get to the top of the door + 2 seconds. Decrease time for bigger bale.
LimitDelay	00:00s	Delays end of cycle	Used for Marathon Balers that open gate at the end of the cycle. Some users prefer to use a limit switch. In this case set for 02:00s
RunTooLong	Default 02:00m	Shuts baler down if it runs too long.	Reset with E-stop, key switch, or main power.

Other Timers

Parameter Name	Parameter Default	Function	Notes
SmrtShftDn	02:00s	Delays pressure switch shifting	This allows full compaction of cardboard without extensive deadheading. If you are having power issues this can be lowered to as low as 00.50 (1/2 second) to reduce deadhead time.
SmrtShftUp	00:25s	Delays pressure switch shifting after up stroke.	This timer prevents pressure switch from shutting baler off
TimeDelayDown	00:25s	Delays shift of down solenoid at beginning of cycle.	Requires tandem center valve (typical for most balers). Allows motor to start under a no-load condition.
TimeDelayUp	00:25s	Delays shift of up solenoid at bottom of stroke	Requires tandem center valve (typical for most balers). Prevents hard shifting.
BaleDr9Y-0N	90:00h	Bypasses BALE DOOR (do not bypass BALE DOOR with jumper)	For Marathon balers that combine the BALE DOOR and FEED GATE interlocks. Set to 00:00 to bypass BALE DOOR.
OpenCloseGat	05:00s	Once the baler runs this long, it will not start another cycle until the gate is opened and closed.	Prevents the operator from bypassing the interlock. If this feature is not compatible with the way you are planning to use the baler (conveyor fed) you can bypass the feature by setting the time to 99.59h. This parameter is hidden to prevent tampering. Call for support.

# INSTALL DIAGRAM

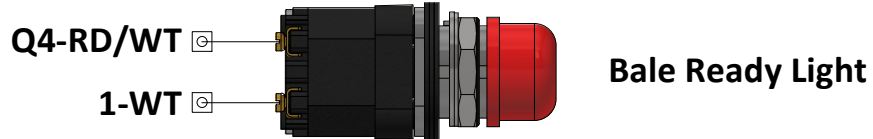
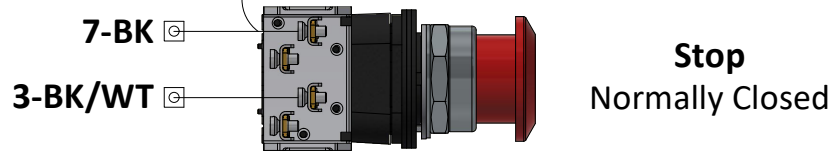
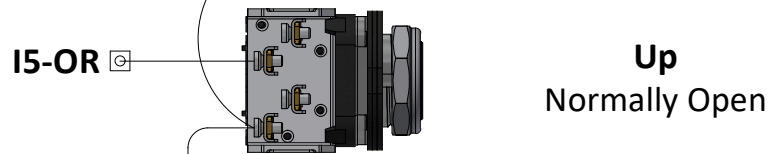
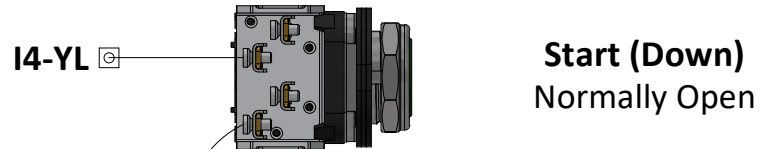
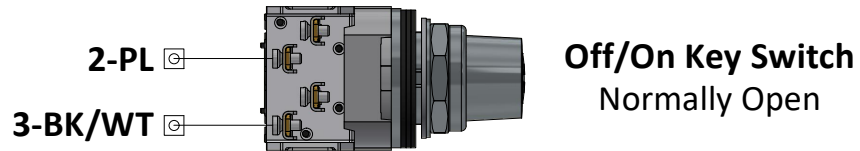
When removing the wires from the transformer and starter, cut the wires leaving them attached to the terminals. This will make it easy to identify where the new wires go during the install. Connect new wires from Versa-Bale to each component as previously connected. Versa-Bale does not use auxiliary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



# Typical Baler Controls Wiring

Check schematic for more options.

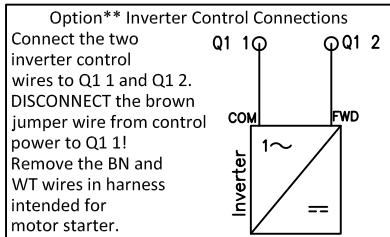
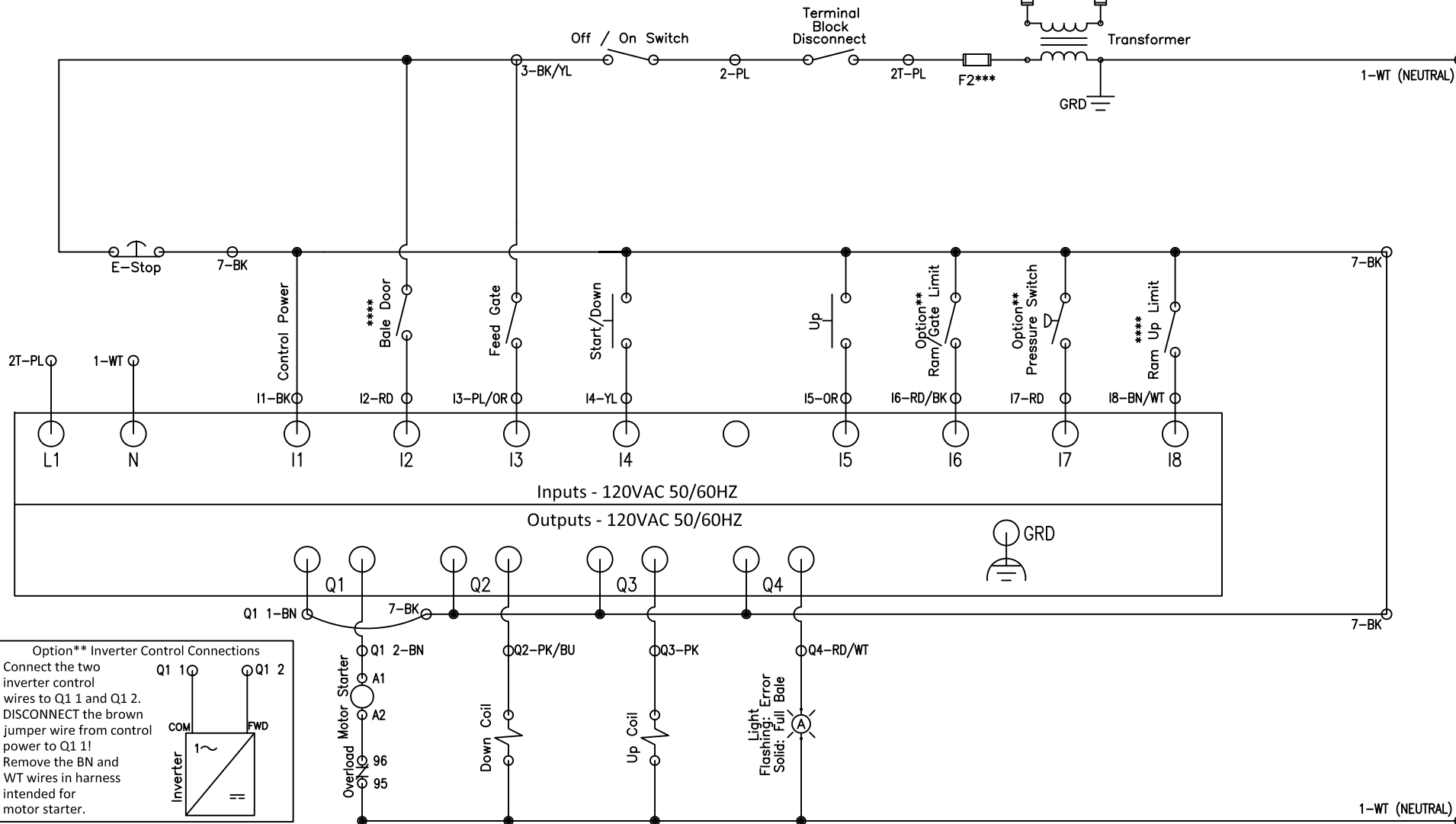
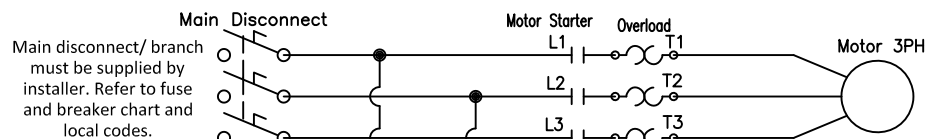
## Off/On, Start(Down), Up, Stop



\*\* 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.  
 \*\*\*\* For Marathon Balers that have Feed Gate and Bale Door interlocks combined, wire interlock as Feed Gate. Omit Bale Door, Ram Up Limit and Ram/Gate Limit connections. Set Parameter [BaleDr 9Y-0N] to 00:00.

Field Wiring: Use copper wire only.

Scan for Support



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

Title: Versa-Bale v8

Date: 4/13/23

DWG #: VB801

Drawn: CB