

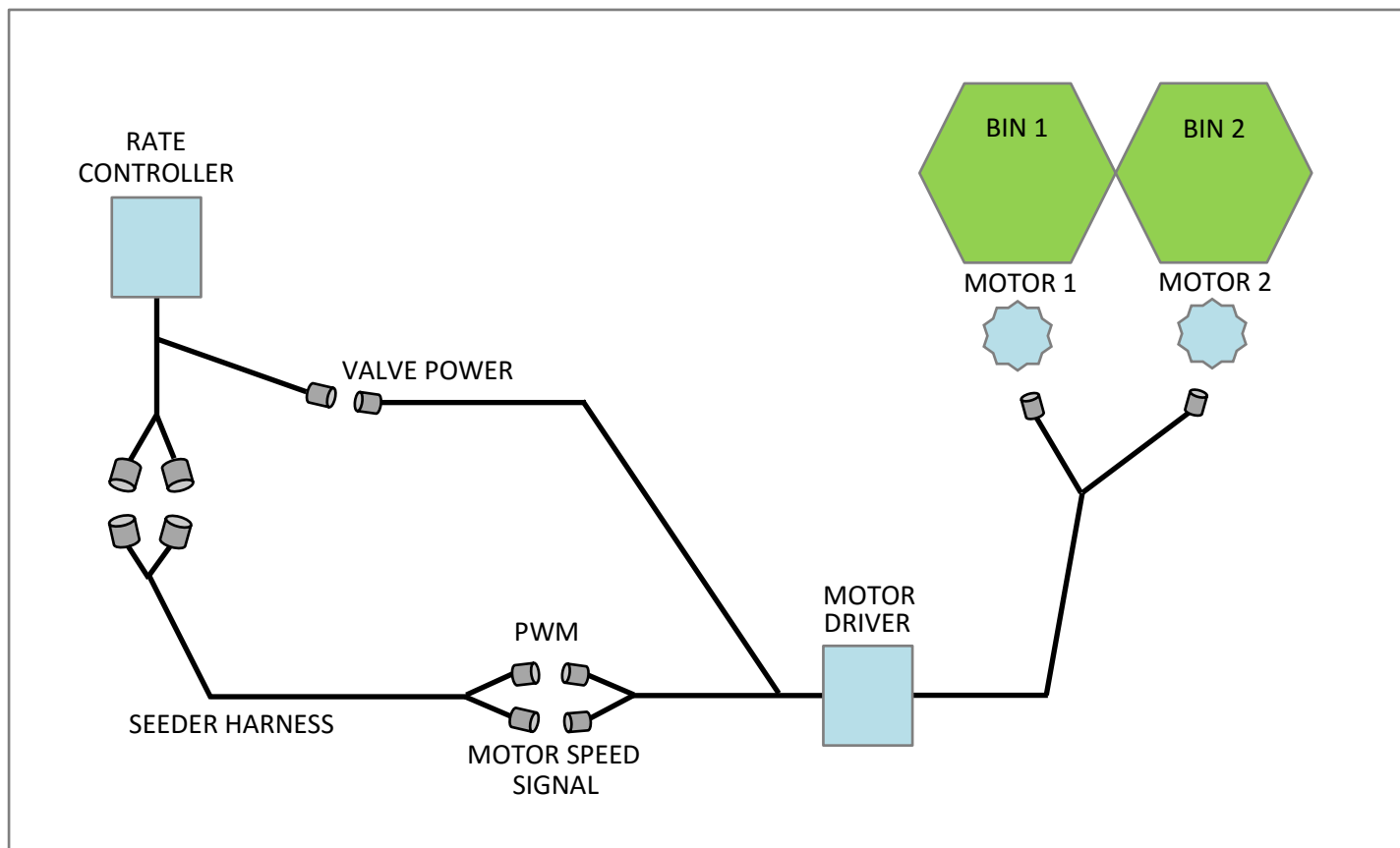
## ELECTRIC DRIVE KIT SUMMARY

### PWM CLOSE TO ELECTRIC MOTOR DRIVES

#### COMPONENTS

- Motor Driver Unit
- Motor Driver Wiring Harness

#### BASIC LAYOUT



#### DESCRIPTION

This kit is used to control 12volt dc electric motor metering units.

A rate controller with PWM CLOSE outputs is required.

Standard configuration requires Positive Switched PWM from the rate controller (PNP drivers).

#### MOTOR DRIVER

The Motor Driver acts as a large relay.

Valve Power comes from the large 2pin Molex connector, near the passive terminator.

The PWM for each bin is used to control the speed of each motor.

Driver unit includes:

- Internal fuses for each motor 30amp automotive
- SSR output rating per motor 100volt 100amp dc
- Inductive load protection
- Thermal derate

All brands, product names, company names, trademarks referred to herein, are the property of their respective trademark holders. Use of them does not imply any affiliation with, or endorsement by them.

VALVE POWER – A ROTTEN LITTLE TRAP

Valve Power is separate from ECU power. All bins will fail if Valve Power or Ground is faulty, BUT THE RATE CONTROLLER WILL STILL BE WORKING ON THE SCREEN. Good Valve Power and Ground (under all conditions) is essential for electric drives.

- Valve Power and Ground must be tested under load
- A multimeter in a 'no load' situation does not prove that the power is good
- A test light is waste of time
- The Valve Power supply must be appropriately fused at the tractor

MOTOR SPEED SENSORS

Some motors are equipped with internal speed sensors. These may be used to provide feedback to the rate controller.

ERRATIC PRODUCT RATES

Meter sensors monitor the speed of the product delivery. These sensors must provide a high number of pulses per second. For machines with slow turning shafts (low rates like Canola/Clovers/Grass Seeds etc), they must be equipped with high resolution encoders, or high pulse tone wheels (or moved to high speed shaft).

CORROSION

It's recommended to regularly apply a corrosion protectant to the connectors (electrical silicone spray / water dispersant / dielectric grease etc). Contact cleaner will clean the pins but it will not prevent corrosion. Filling the rear of the connector with silicone sealant can trap moisture and cause premature failure.

VALVE POWER CONNECTOR

PIN 1: Valve Ground  
PIN 2: Valve Power 12v

PWM CONNECTORS

PIN A: Not used  
PIN B: PWM

SENSOR CONNECTORS

PIN A: Signal to Controller  
PIN B: Ground  
PIN C: 12v sensor power

