System Solution Example

Control multiple functions on machinery by utilizing the open-loop and closed-loop functions of the evc.

Anti-Stall

- Automatically adjust feed rate in order to maintain critical engine RPM.

- Automatically prevent engine stall using reverse to remove the load

- Maintaining optimal feed rate reduces downtime and maintenance costs.

Pump Control

- Maintain constant pressure by controlling the pump with respect to engine RPM

- Add soft shift in order to prevent hard starts and stops

Variable Speed Control

- Control the conveyor speed.

- Add ramps for gradual speed changes to prevent system shock and reduce stress on the mechanical drive components.

Bonus Features
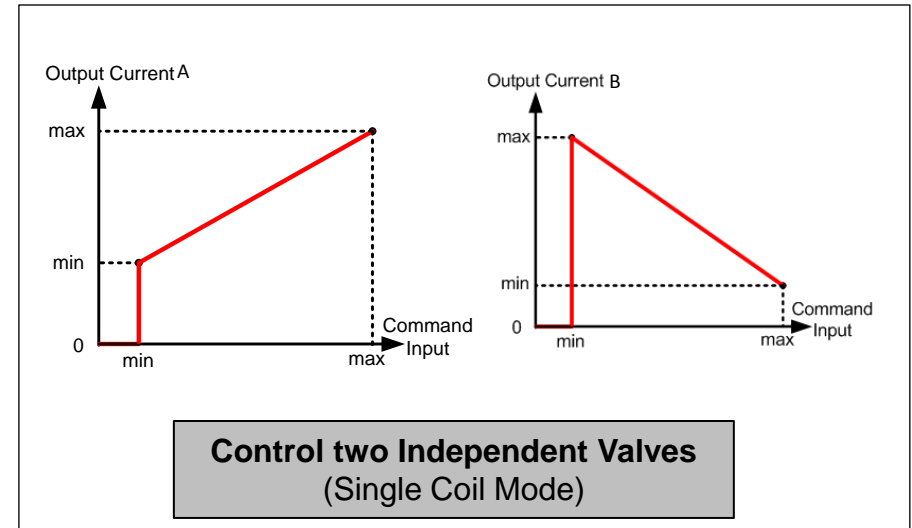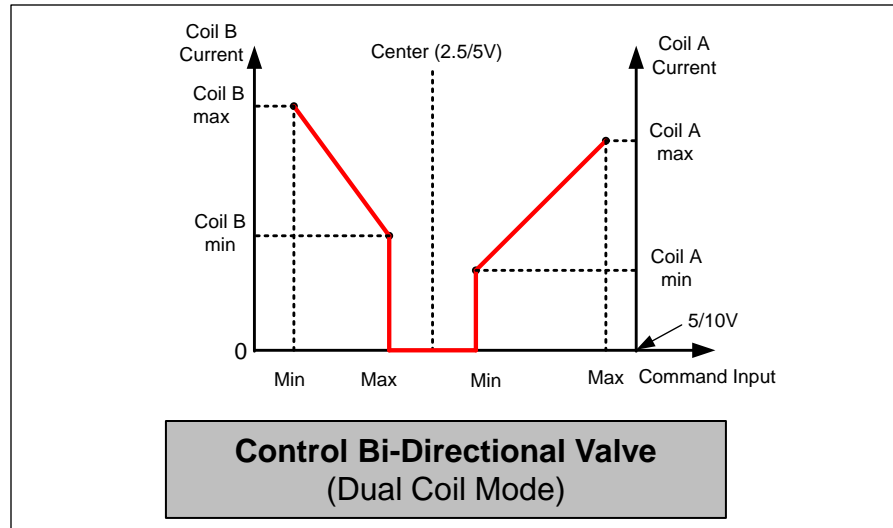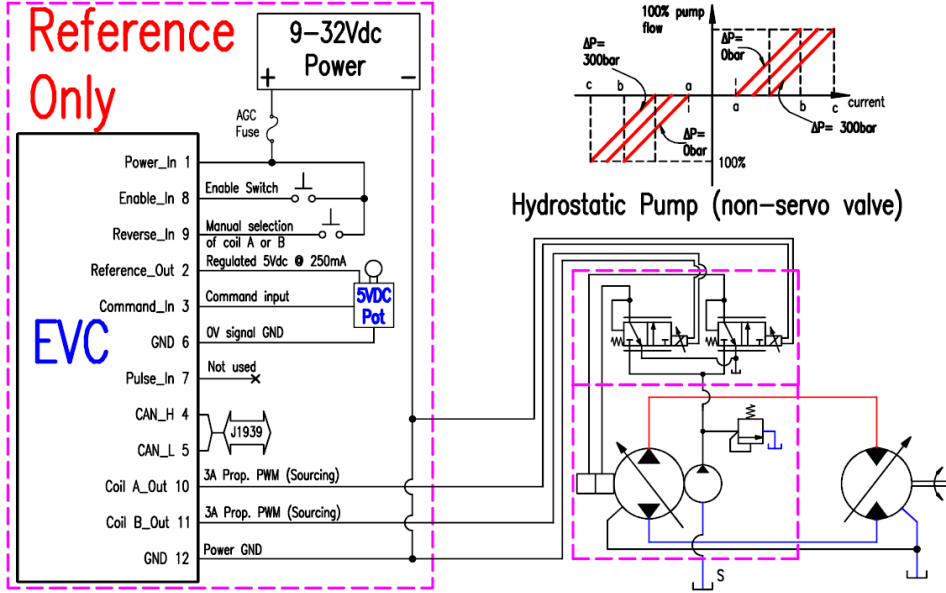
Add a display for increased system intelligence!

- Select operational profiles.

- Display engine and system diagnostic information.

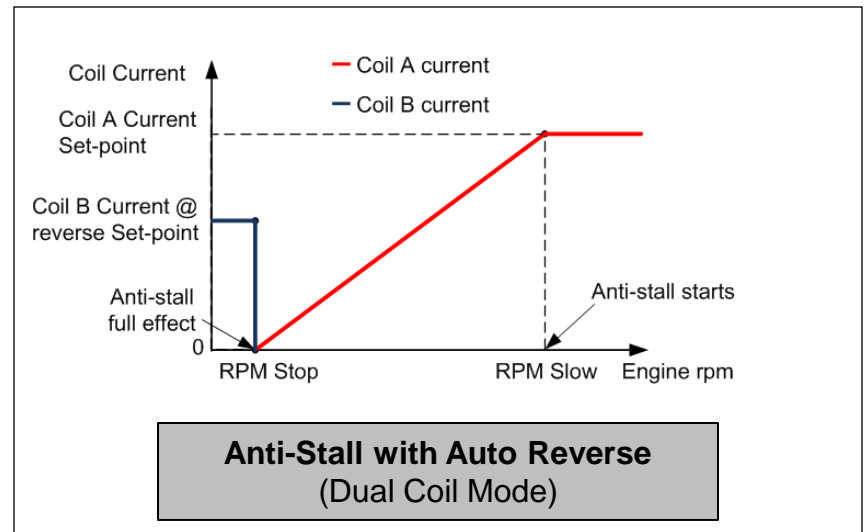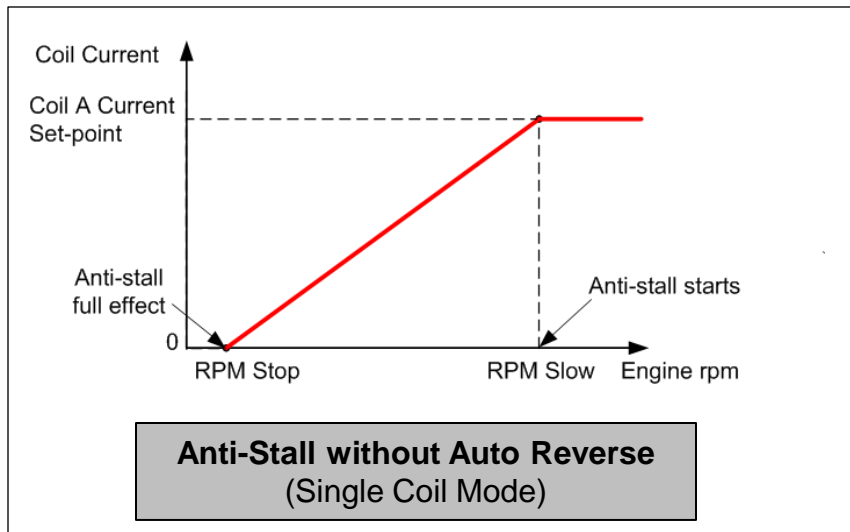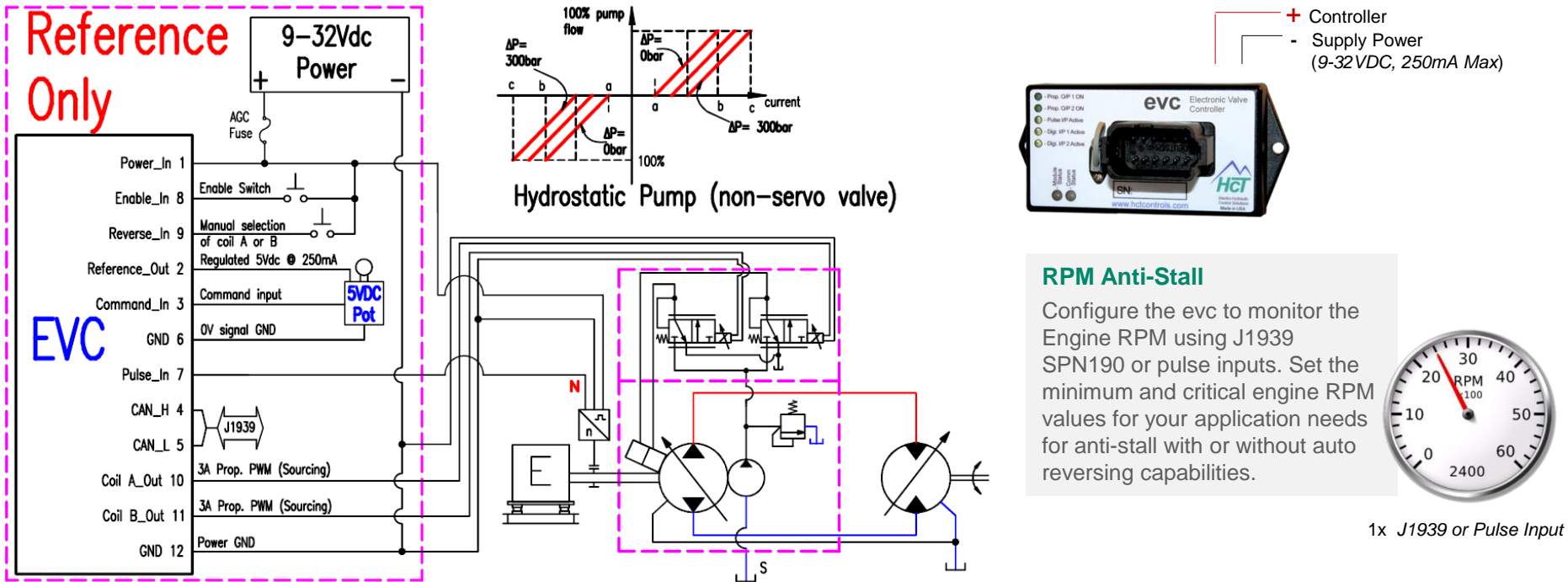*Each of these configurations only requires a different data file.

Application 1 – Single and Dual Valve Driver

Configure the controller for single and dual coil open-loop proportional valve control for piston and hydrostatic pumps.

Hydrostatic Pump (non-servo valve)

Control Bi-Directional Valve
(Dual Coil Mode)

**Control two Independent Valves**
(Single Coil Mode)

Application 2 – Anti-Stall (single and dual coil mode)

Control a drilling implement while automatically adjusting the drill speed and direction in order to maintain critical engine RPM.

RPM Anti-Stall

Configure the evc to monitor the Engine RPM using J1939 SPN190 or pulse inputs. Set the minimum and critical engine RPM values for your application needs for anti-stall with or without auto reversing capabilities.

1x *J1939 or Pulse Input*

Anti-Stall without Auto Reverse
(Single Coil Mode)

Anti-Stall with Auto Reverse
(Dual Coil Mode)

Application 3 – Closed-Loop Speed/Pressure Control

Control a hydrostatic pump/valve in order to maintain constant machine output.

Set-Point RPM
(Single Output)
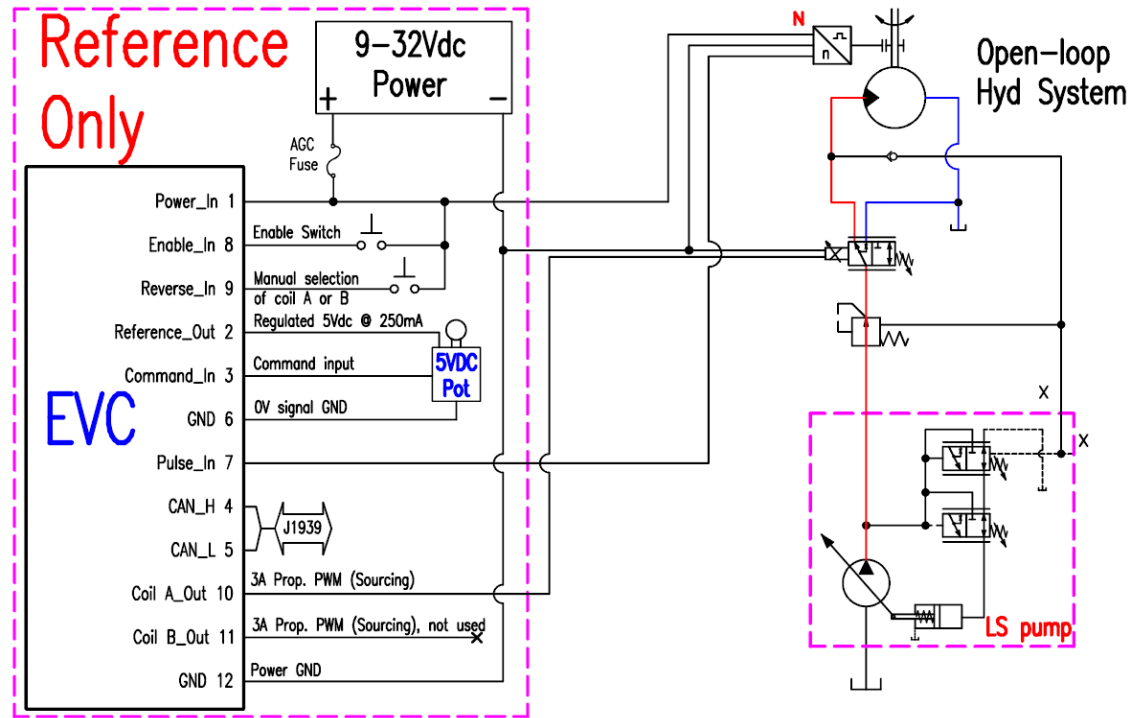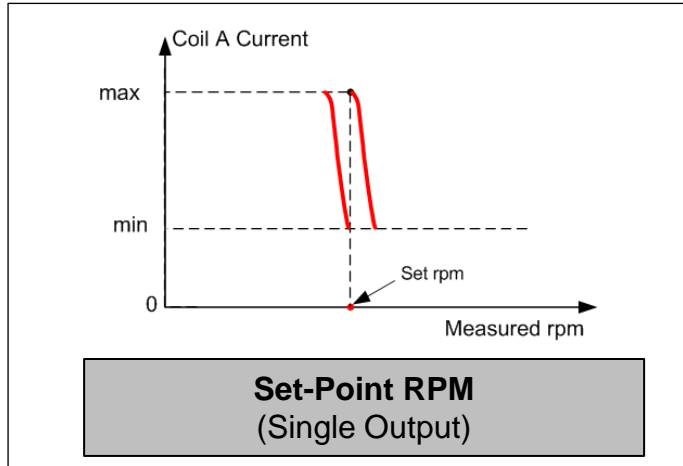
Constant Flow Control

- Reduce or increase the proportional valve flow in order to maintain constant motor speed.

- As the measured pump speed increases beyond the motor RPM set-point, the proportional valve will reduce the output in order to slow down the motor until it reaches the set-point.

- As the measured pump speed decreases below the motor RPM set-point, the proportional valve will increase the output in order to increase the motor speed until it reaches the set-point.