



60 Amp PWM Electric Motor Driver Instructions

PWM Motor Driver (EMD) Module 60 AMP MAXIMUM

The Motor Driver Module (EMD) replaces the servo valve. System flow is controlled by regulating the pump speed via a PWM signal to the EMD.

NOTE: This unit will ONLY work with PWM (Pulse Width Modulated) Control drives. Set the PWM frequency of your controller to 150 Hz.

MODULE INSTALLATION

NOTE: The mounting surface must be cleaned so it is free from dirt, moisture and oil residues. Failure to clean the mounting surface may result in the EMD working loose.

Remove the GREEN backing from the Dual-Lock™ fasteners on the bottom of the EMD unit. Position the EMD where wiring will work the best. Extension cables are available. Firmly press the EMD into place. Secure the EMD to the equipment using plastic cable ties to prevent the EMD from coming into contact with moving parts if the Dual-Lock™ fasteners should work loose. If desired, the EMD can be fastened with screws, using the holes in the mounting flanges.

ELECTRICAL INSTALLATION

This section explains how to hook-up your EMD to a 12-volt power connection, and how to connect your EMD to your controller harness.

The EMD **MUST** be connected to a 12-volt DC negative ground electrical system.

POWER BATTERY CONNECTION

NOTE: Be sure to route cables away from sharp edges, areas of high heat and moving parts. Secure all cables firmly with plastic cable ties.

Locate the power cable, P/N 18332 and route to the battery. In routing cable avoid areas where the cable may be subjected to abrasion or excessive heat. Attach the BLUE wire to ground. Be sure there is a good metal-to-metal contact. Connect the ORANGE (+12 VDC) to the positive battery terminal.

Connect the power to the EMD by plugging a 3-pin M/P 630 Tower on the power cable into the 3-pin M/P Shroud on the EMD module.

SIGNAL AND MOTOR CONNECTIONS

NOTE: Be sure to route cables away from sharp edges, areas of high heat and moving parts. Secure all cables firmly with plastic cable ties.

Locate the PWM drive cable P/N 13200. Connect the 2-pin M/P tower to the 2-pin M/P shroud on the EMD module. Connect the other end of the cable to the mating connector on the controller harness using Adapter Cable P/N 17539 if required.

Locate the motor cable P/N 18101. Plug the 3-pin MP630 shroud into the 3-pin MP630 tower on the EMD module. A mating connector is supplied to connect to the motor, or the connector on the pump cable can be removed and wire-to-wire connection can be made. Insure that the pump is running in the correct direction. If not, simply reverse the wires from the pump to the pump cable.

See Next Page for Applicable Diagram.

FUNCTION OF CONTROL SIGNAL STATUS LEDS

- Green LED lights when servo signal is present and increasing
- Red LED lights when servo signal is present and decreasing

FUNCTIONS OF SYSTEM STATUS LED

See table below for System Status code explanations.

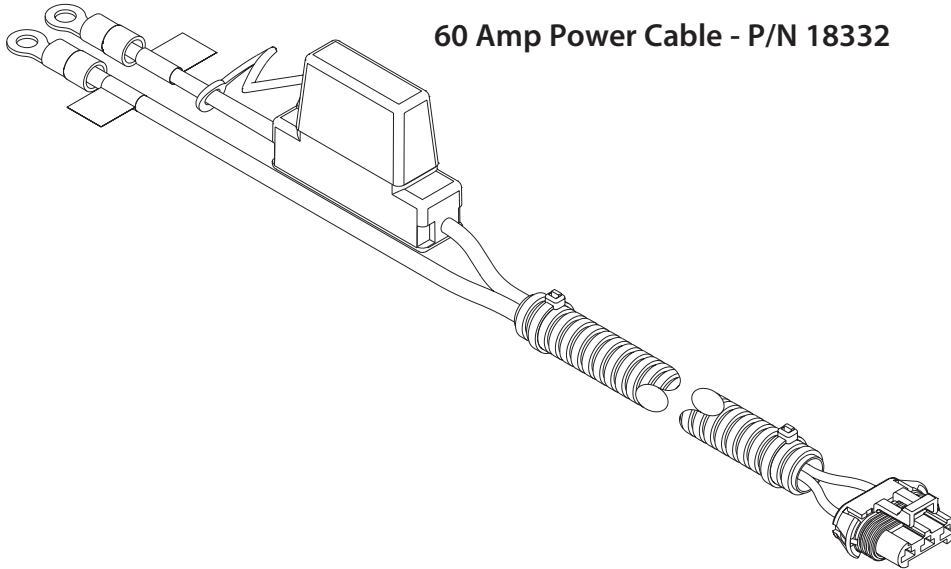
STATUS INDICATOR LIGHTS		
Light on steady		Unit is turned on and operating normally
Steady Flashing		Unit in HOLD. Check Run/Hold jumper or remote switch for correct operation.
1 Flash/pause		Open circuit detected. Check motor connections for open.
2 Flash/pause		Output short circuit detected. Check motor wiring.
3 Flash/pause		Over-current condition. Check total load.
4 Flash/Pause		Input Power fault. Check input power wiring.
5 Flash/pause		Input frequency out of range. (PWM models only)

NOTE: Cycle power with the controller ON/OFF switch to clear a fault code



PWM Motor Driver (EMD) Module Diagram

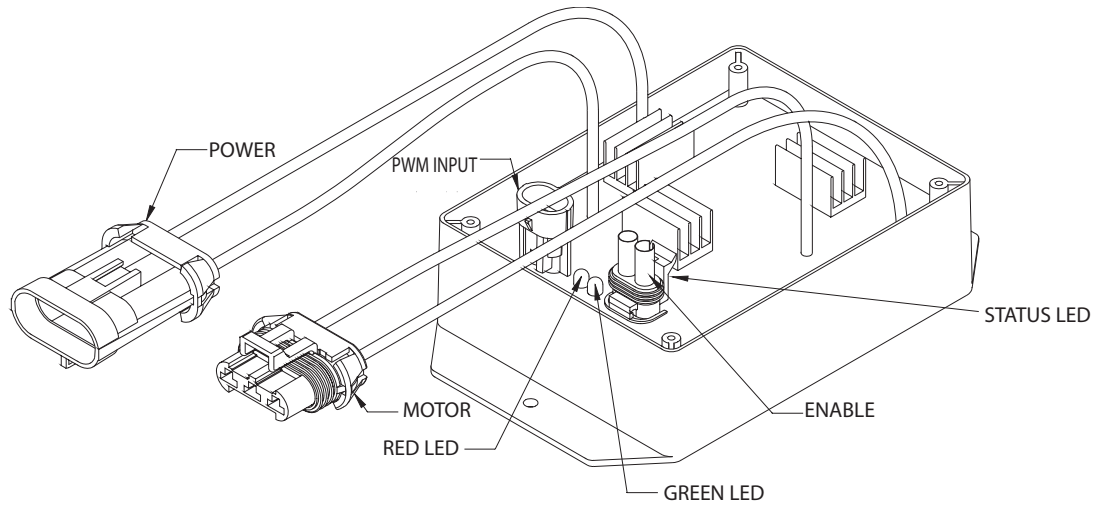
60 AMP MAXIMUM



60 Amp Power Cable - P/N 18332

WARNING: Do NOT connect the motor leads to the battery or power supply.
Non-warranty damage will result if the motor leads are connected to the battery or power supply.

MATING MOTOR CONNECTOR
HOUSING (1) P/N 13063
SEALS (2) P/N 13068
TERMINALS (2) P/N 13067
TPA (1) p/N 13065
PLUG (1) P/N 14547



3 PIN M/P 630 SHROUD

