MICRO-TRAK®
INNOVATIVE FROM THE GROUND UP

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60 Amp PWM Electric Motor Driver with Enable Feature

The 60 Amp Electric Motor Driver Module (EMD) regulates system flow by controlling 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.
The EMD must be connected to a 12-volt DC electrical system with a negative ground. It should have a dedicated battery rated at 100 amp-hours and an alternator capable of continuously supplying 100 amps. If additional electronics are drawing power from the same battery and alternator, higher-capacity components may be required.

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.

Position the EMD where wiring will work the best. **It is recommended to use only the appropriate wire length and gauge based on the current being drawn.** Secure the EMD to the equipment using plastic cable ties or screws to prevent the EMD from coming into contact with moving parts.

POWER BATTERY CONNECTION

Provide battery power to the EMD by connecting the 2-Pin SB175 connector with red and black cables to the power cable. Connect the other end of the cable to the battery and be sure to use a 60A circuit breaker or fuse to protect the EMD.

SIGNAL AND MOTOR CONNECTIONS

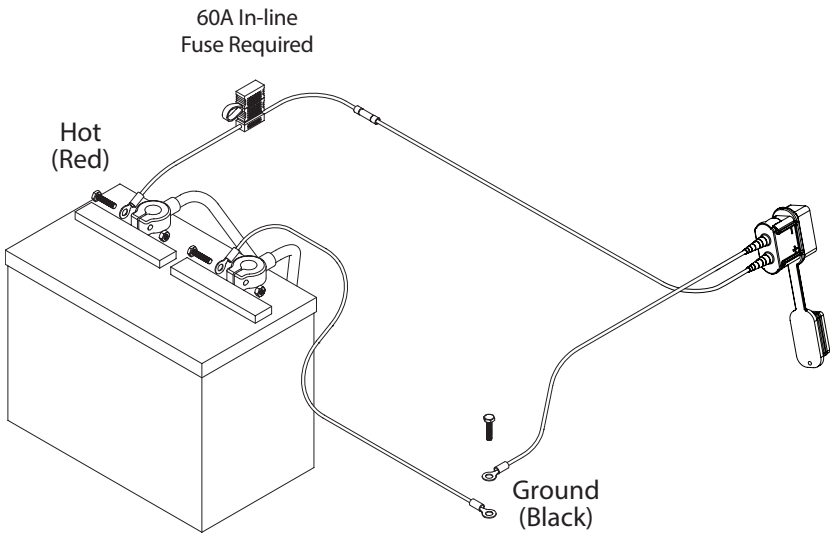
NOTE: Be sure to route cables away from sharp edges, areas of high heat and moving parts. Secure all cables firmly with plastic cable ties.
Connect PWM input to the 2-pin M/P connector on the module, using Adapter Cable P/N 17539 if required.

Locate the blue and orange motor cable, route to the motor, and connect the other end. Ensure 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 diagram. Attach the BLUE wire to ground. Be sure there is a good metal-to-metal contact. Connect the ORANGE wire to positive.

ENABLE CONNECTION

This 2-pin W/P connection provides an “instant-on” feature. It is triggered by a 12VDC input signal from a controller or other device applied to pin A of connector. A switch or relay circuit could also be installed between pins A and B to activate the Enable feature. Connect Micro-Trak controllers with “Multifunction” output to this connection for flow trigger functions (use P/N 17279 Enable Adapter).

If not using Enable feature, jumper P/N 18111 **must** be installed.



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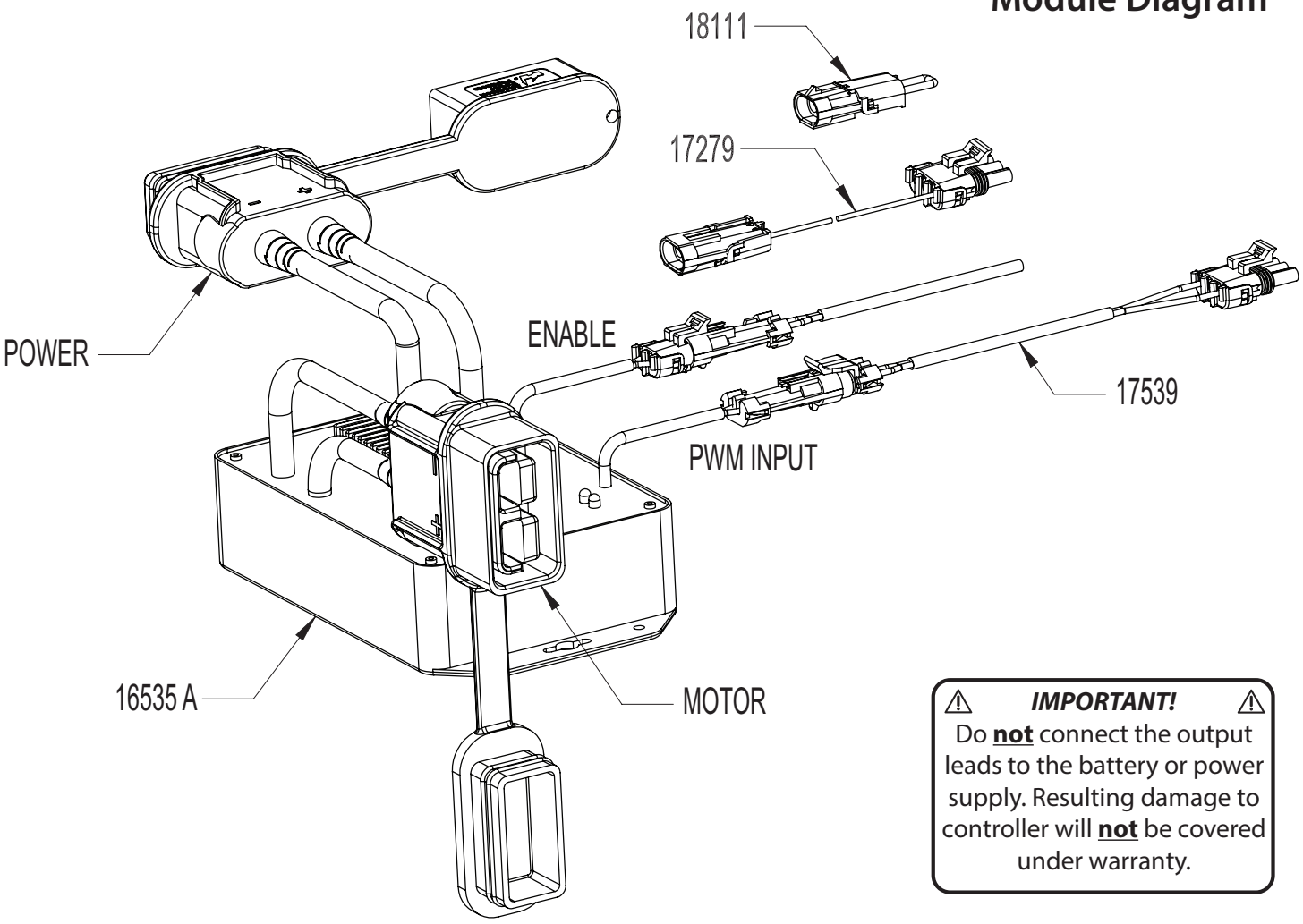
CONTROL SIGNAL STATUS LEDS (only one of the two LEDS will light)
LED unlit when no signal is present - glows brighter as signal increases; dims as signal decreases.

LED STATUS INDICATOR CODES		
Light on steady		Unit is turned on and operating normally
Steady Flashing		Unit in HOLD. Check Run/Hold jumper or remote switch on controller for correct operation.
1 Flash/pause		Open circuit detected. Check motor connections for open.
2 Flashes/pause		Output short circuit detected. Check motor wiring.
3 Flashes/pause		Over-current condition. Check total load.
4 Flashes/pause		Input Power fault. Check input power wiring.
5 Flashes/pause		Input frequency out of range.
NOTE: Cycle power with the controller ON/OFF switch to clear a fault code		

Module Diagram



⚠ ***IMPORTANT!*** ⚠

Do **not** connect the output leads to the battery or power supply. Resulting damage to controller will **not** be covered under warranty.