Rowe Electronics

# PDM60
## POWER DISTRIBUTION MODULE


# Instruction Manual

Thank you for your purchase. The PDM60 was designed with one goal in mind: to provide you, the owner, with years and years of superior, hassle free electrical performance.

## *Package Contents:*

- 1 - PDM60 Power Distribution Module
- 1 – Programming cable
- 1 - Black 9” ground cable with protection boot
- 6 - ¼” ring terminal – used on your accessories’ ground wires for connections to ground points/ground bus cable
- 1 - 6MM bolt/nut - used for connecting all accessory ground wires to the main ground cable
- 6 - Posi-Lock Connectors – one per circuit output wire – to allow for secure connections, and quick & easy installation
- 1 - Posi-Tap Connector – the tap connector is to be used on the “Ignition Trigger” wire – tap into any switched circuit

*Posi-Tap*

*Posi-Lock*

*Programming Cable*

*PDM60 Module*

## *Overview:*

The PDM60 provides 6 individual +12V output circuits with a total load handling capacity of 60 Amps. This device is designed to connect directly to a primary (12V) vehicle battery and efficiently power, protect and monitor the supply of power to your electronic devices. A stock configuration is installed on all PDM60 units when they ship from the factory and is ready to use right out of the package. The option to change some of the parameters is available by programming the PDM60 using the programming cable and a computer with usb.

Stock Configuration

| Wire Color | Circuit/LED | Max AMP Load | Switched Via | Delay ON | Delay OFF |
|---|---|---|---|---|---|
| White | 1 | 5 Amps | Ignition Trigger | 7 seconds | None - Instant |
| Purple | 2 | 5 Amps | Ignition Trigger | 7 seconds | None - Instant |
| Yellow | 3 | 10 Amps | Ignition Trigger | 7 seconds | None - Instant |
| Red | 4 | 15 Amps | Ignition Trigger | 7 seconds | None - Instant |
| Brown | 5 | 15 Amps | Ignition Trigger | 7 seconds | None - Instant |
| Orange | 6 | 10 Amps | Ignition Trigger | 7 seconds | None - Instant |

## *Standard Operation:*

The PDM60 uses advanced technology to constantly, and rigorously, monitor and evaluate each of the six circuits. The unit processes the information it obtains, and differentiates between typical voltage spikes, and true fault conditions. If a short or over-current situation arises, the PDM60 will immediately detect the fault and shut down power to that circuit. Once the problem is resolved the PDM60 can be reset by turning off the ignition then back on again.

## *LED Indicators:*

After installing the module and properly connecting all wires, turning on the ignition will activate the unit. The LED indicators on the top of the module will illuminate green, indicating power present. The legend below details the information the LEDs reveal.

| | |
|---|---|
| **Green** | Active – live circuit functioning properly |
| **Red** | Fault - circuit interrupted due to fault |
| **Orange** | Inactive – voltage drops to 6 volts and <10 mA |
| **Off** | Off – no current on the circuit |

The orange inactive state can be observed in some custom configurations when a ground trigger or delay off circuit is set. If one to five circuits are active, the remaining inactive circuits will drop to 6 volts and turn Orange. A circuit that has experienced a temporary fault will display an orange led if the fault condition was corrected prior to being reset.

## *Getting Started:*

Connect the small BLACK ground wire to the battery negative terminal or ground bus cable that is connected to the battery. This is the ground wire for the internal circuitry of the PDM60. Connect the heavy gauge (RED) power wire directly to your battery positive terminal. This wire supplies all power to the PDM60.

**DO NOT REVERSE POLARITY ON POWER AND GROUND LEADS – DAMAGE WILL RESULT AND VOID WARRANTY**

Connect the Ignition Trigger wire (GRAY WIRE) to any ignition switched power source. A Posi-Tap connector is supplied to make it easy to tap into another wire. A stock PDM60 unit will remain off until a positive signal is detected on the Ignition Trigger wire for 7 seconds. The 7 second start delay allows all available battery power to be utilized for starting the vehicle. After the delay period, all circuits will activate and turn green indicating 6 live +12V circuits.

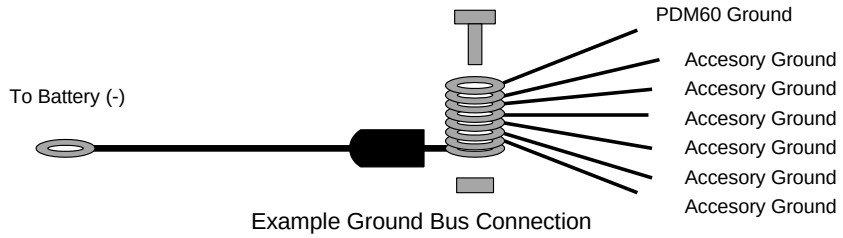
## *Mounting:*

One of the things that make the PDM60 the best on the market is the fact that it's small and fully sealed. The unit is designed for use in harsh operational conditions and can be mounted virtually anywhere it will fit without concern for moisture, dust or dirt intrusion. We recommend keeping the programming header filled with dielectric grease to provide additional corrosion protection for the terminals.

## *Connecting Your Devices:*

Connect the PDM60 output wire to the positive (+) power lead of your accessory and connect the ground wire of your accessory to a common ground. The Posi-Lock connectors are supplied to make installation easier. The ground bus cable and boot supplied with your PDM60 can be connected to your battery and serve as a single ground point for all of your accessories. The supplied ring terminals and bolt can be used for a clean and secure ground wire installation.

**To ensure long-term, hassle free operation, make sure that all of your wiring connections are secure.**



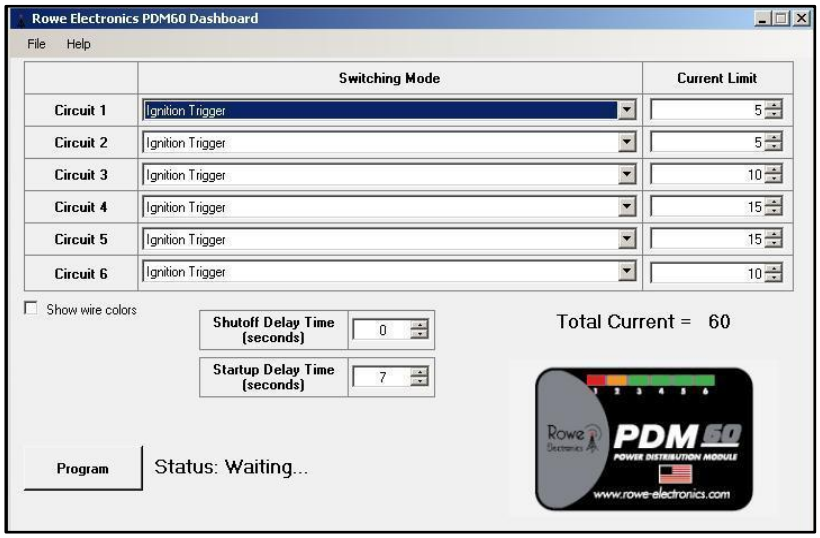

Example Ground Bus Connection

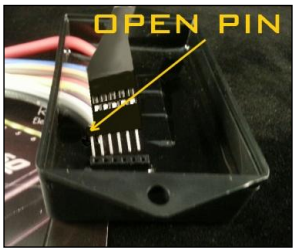
## *Programming Dashboard (Windows Only):*

Programming allows you to configure individual circuit amperage limits, individual circuit triggering methods, and timed delay on and off options. The dashboard programming software is available for download on the homepage of our website: www.pdm60.com. After downloading the dashboard setup file, unzip the folder and run the setup file. The dashboard help file will guide you through the programming procedure.

## *Programming Procedure:*

1. Disconnect power to the PDM60, leaving power connected will interfere with programming or cause damage
2. Open the dashboard and plug in the programming cable to the computer
3. Next plug in the cable to the PDM60, be sure to orient the cable correctly as shown in the photo below
4. All the leds should be flashing rapidly indicating it is ready to program
5. Make sure the correct COM port and "pdm60 programming cable" are selected in Options under the File menu
6. Configure the settings and click "program" then wait a few seconds for the successful message to appear
7. Unplug the cable from the PDM60 and it's ready for installation on your vehicle.




OPEN PIN is closest to the circuit wires.

## .*Programming Options:*

**Ignition Trigger - GRAY WIRE**

The Ignition Trigger (IT) responds to positive voltage. Any circuits assigned to activate on IT mode will go live when it detects a positive voltage. If the IT is connected to a vehicle wire that goes "live" when the ignition is turned on, the PDM60 circuits set to IT will activate and deactivate with the ignition. All PDM60 circuits are factory set to Ignition Trigger.

**Ground Trigger - BLUE WIRE**

The Ground Trigger (GT) wire responds to any ground signal. Any circuits assigned to activate on GT mode will go live when it detects a ground signal. This feature is great for switching high amperage loads on/off, without the use of relays. Connect the blue GT wire to any switch that leads to ground and you can easily switch all GT circuits on or off with the switch.

***Switching Mode (assign one mode for each of the six PDM60 circuits)***

The "switching mode" is the parameter used to establish the behavior of each circuit.

INACTIVE - for circuits not being used
IGNITION TRIGGER – Circuit activates with the ignition trigger
IGNITION TRIGGER (with time delay off) – Circuit activates with ignition trigger and turns off after the "shutoff delay"
GROUND TRIGGER – Circuit activates with the ground trigger
IGNITION *OR* GROUND TRIGGER – Circuit activates with Ignition trigger or ground trigger
IGNITION *OR* GROUND TRIGGER (with time delay off) – Circuit activates with either trigger and turns off after "shutoff delay"
IGNITION *AND* GROUND TRIGGER **–** Circuit activates with both the ignition trigger and ground trigger
ALWAYS LIVE – Circuit is active without the use of triggers

**WARNING –** THE ALWAYS LIVE CONFIG HAS A CONSTANT CURRENT DRAW OF 50mA – IT IS NOT RECOMMENDED FOR VEHICLE BATTERIES WITH LESS THAN A 15Ah RATING, NOR FOR VEHICLES THAT ARE USED INFREQUENTLY or IN STORAGE WITHOUT A CHARGING SYSTEM CONNECTED

***Current Limit – Circuit Capacity (set for each circuit) – Max 60Amps total load***
A current limit is assigned to each of the six circuits. Current limits can be set in 1 amp increments up to the max for each circuit. Circuit #5 can be set to 20A but should only be used for intermittent applications like a horn**.** Refer to the specifications of your accessory to determine the appropriate current limit. To allow for slight variances, it's typically advisable to set the current limit with a slight margin (25%) above the standard current draw of any accessory. This is only a guideline recommendation, and you should always check with the manufacturer of your accessory to determine the maximum current setting.

***Shutoff and Startup Delay Time***
Startup Delay: 0-240 seconds - This setting applies to all circuits regardless of switching mode.
The feature allows all of the available battery power to be used for starting prior to powering your accessories. Once triggered, the PDM60 will remain off until the startup delay period expires.

Shutoff Delay: 1-600 seconds - This setting only applies to circuits set for 'time delay off".
When the trigger signal is turned off, the circuit will remain live for the specified period of time then automatically turn off. During the delay off period, all other circuits will remain in the inactive "orange" mode. A setting of "0" in the shutoff delay field defaults to the maximum time of 600 seconds.

***Testing***
Before installing your PDM60 and anytime you change the programming, we recommend testing the functionality. This can be done easily by connecting the power and ground leads of the PDM60 to your battery then holding the ignition trigger on the positive battery terminal. You can verify your settings once the PDM60 activates. Time off delays can be checked by removing the ignition trigger and waiting for the shutoff delay time to expire. Your specific configuration may require a different testing steps.

We are available to answer questions during standard business hours. Should you have any questions, or need assistance, feel free to contact us via phone or e-mail.

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