Heavy Duty

Battery Guard® 1000 (12v)

Part number: 00-01145-000

The HD Battery Guard® 1000 was designed to make installation simple. With its unique all in one design, Intellitec brought the electronics to the source, eliminating additional wiring and simplifying the installation process. The HD Battery Guard® 1000 has two mounting holes located on both sides and uses automotive standard connectors for peripheral connections.

Through its correct use you may:

1. Prevent unwanted discharging of batteries during extended periods of storage.
2. Safely disconnect 12 Volt electrical system when storing for extended periods.
3. Prevent overcharging of batteries if RV is plugged into shore power for extended periods.

These instructions contain all the information needed to help you install the Battery Disconnect. It is assumed the installer has basic skills in electrical wiring, mechanics, and carpentry. If you have any doubts about these techniques or instructions consult with someone BEFORE you connect a wire or cut a hole.

The HD Battery Guard® 1000 Kit (10-01145-000) includes the following:

1 – HD Battery Guard® 1000 (00-01145-000)

1 - 10 ft Harness (11-01118-001)

1 - 10 ft Extension Harness (11-01118-000)

1 - Battery Guard® Switch with LED indicator (11-01085-000)

*Note: Not included in the kit is the hardware for mounting the Battery Guard® 1000, Ring Terminals for attaching the battery and load cables.*

**Locating the HD Battery Guard® 1000 Switch:**

The HD Battery Guard® Switch should be readily accessible by the user. This switch not only controls the state of the battery disconnect but also provides indication of the disconnect state and whether faults have occurred. A typical location for installing the switch is on the interior wall near the entrance door of the coach. This allows the user an opportunity to disconnect or reconnect when necessary as they enter and exit the vehicle. Ensure the wall used for mounting the switch has enough clearance behind it to allow cables access. Typically, ¾” to 1” is required.

**Routing the Control Cable:**

The control cable used in the 10-01145-000 kit is a multi-conductor wire which includes the switch input signal, the alarm output signal, and the ground signal. This cable must go back to the HD Battery Guard® 1000. It is recommended to leave a service loop or at least 1 ft of extra wire in the run for servicing purposes. This cable does not need to be run inside of conduit and need any other sort of cabling protection.

*Note: The HD Battery Guard® 1000 kit includes a 10 ft harness as well as a 10 ft extension harness. Be sure to use the correct configuration when routing the wires.*

**Installing the HD Battery Guard® 1000:**

*WARNING: Before proceeding, disconnect all sources of power. Unplug the shore power cable and turn off the generator. Disconnect the battery(s) negative (-) terminal.*

The HD Battery Guard® 1000 controls a relay that acts as electro-mechanical switch that disconnects the battery. It should be located near the battery for wiring simplicity. When installed, the relay will be inserted "in-line" with the cable coming from the positive (+) terminal of the battery. Keep this in mind when choosing the installation location.

*WARNING: When installing between battery and vehicle operation safety critical devices, ensure the correct inhibit signal is wired to the inhibit input to prevent unintended isolations.*

While holding the relay in place near the chassis battery, mark the location of the two holes for the relay mounting bolts. Set the relay aside, and drill two mounting holes. Before bolting the relay in place, route the Control Cable near the mounting place. When installing unit in an engine compartment, be sure to provide enough space for airflow to allow for cooling.

**Connecting the Cables:**

Locate the positive battery cable for the battery. Carefully cut the cable near the relay. Strip the cable insulation back about 1/2" on each end and crimp on the battery cable terminals. Remove flange nuts from both copper studs. Connect the terminals to the copper studs on the relay. Connect the terminals to the copper studs on the relay according to the label. It is important that the cable going to the battery be connected to the side of the relay indicated on the label as "BATTERY" and the cable going to the electrical circuits be connected to the side labeled "LOAD". Torque requirements for the high-power copper contact studs should be **5 – 7 FT-LBS**. Use of calibrated torque device is recommended to ensure proper installation.

Please refer to the wiring diagram on the following page for additional information regarding how to connect to the HD Battery Guard*®* 1000.

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| **WIRING DIAGRAM** |
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*Note: Color combinations represented in the wiring diagram are from the 10-01145-000 kit harnesses. If using a different harness, please refer to the signal definitions when connecting to the device.*

*When Using 10-01145-000 kit harness, an additional ground wire from the battery terminal must be connect to the ground quick connect on module (see “Battery Ground” wire in wire diagram).*

*\*Quick connect receptacle not included in kit.*

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| **PANEL CUTOUT** |
| (Dimensions in inches)  RECOMMENDED PANEL CUTOUT  Max Panel thickness should not exceed 0.3 inches |

*Note: If using switch as part of the Intellitec kit number 10-01145-000 refer to the dimensions above for mounting the switch in the wall.*

**Configuration:**

The HD Battery Guard® 1000 comes with two preconfigured settings, one for chassis disconnect loads and one for coach disconnect loads. By default, the HD Battery Guard® 1000 is set to its chassis configuration. The differences between the two configurations are the low voltage disconnect threshold and the isolation delay. The parameters can be found in the 53-01145-100 User Guide.

To change the HD Battery Guard® 1000 parameters from chassis disconnect to coach disconnect and vice versa, the following steps are required:

1. Remove power from the HD Battery Guard® 1000 by disconnecting the battery feed to the cooper stud.
2. Connect the switch input to the ground by pressing and holding the switch button or by other means.
3. Apply power back to the HD Battery Guard® 1000.
4. Hold the switch button in for 30 seconds.

When successfully reconfigured, the diagnostic LED on the HD Battery Guard® 1000 will blink.

* 4 blinks indicate the HD Battery Guard® 1000 is using “chassis” parameters.
* 5 blinks indicate the HD Battery Guard® 1000 is using “coach” parameters.

If after roughly 30 seconds, the device does not display a blink code on the diagnostics LED, start the process over by removing power from the HD Battery Guard® 1000 and following the remain steps stated above.

Available Product Literature and Guides:

Brochure: 53-01145-000

Product Specification: 53-01145-001

User’s Guide: 53-01145-100

Installation and Applications: 53-01145-200

Supporting Documents: 53-01145-300

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