



Technical Bulletin: New 12V/24V Kwik-Raze Plug Options Facts and Recommendations

Havis-Shields has long been on the leading edge of low-voltage HID technology, with the distinction of being the first company to introduce a 70W 12VDC HID fixture to our market. Since then, our HID product line has grown to include various lamps up to 150W, and these HID lamps are now used in a myriad of applications. All of our 120/240V halogen fixtures are built according to UL 1598 and/or UL 153, and follow many well-established standards for construction, wiring, and installation. Unfortunately, there are few applicable standards for wiring and connectors for low-voltage HID lighting, so fixtures have traditionally shipped either with no connectors or with a variety of connectors that were adapted for the application. While this certainly worked, the situation was not ideal, as customers did not always know what connector (if any) to expect on a fixture, or how to obtain suitable mating connectors. In order to remedy this situation, Havis-Shields is now standardizing all connector and wiring options for low-voltage lighting, as described in this document.

To provide some background regarding what connectors were chosen and why, following is a list of the major types of connectors, and their advantages and disadvantages:

Cigarette Lighter Plugs:

Advantages: Inexpensive, readily available, standardized.

Disadvantages: Not suitable for outdoor use, limited power-carrying capability (most are not suitable for use with 150W fixtures.), not vibration-resistant.

Marine/RV/Automotive Plugs:

Advantages: Some models available with high current ratings, waterproof, and vibration-resistant.

Disadvantages: Very expensive, non-standard/difficult to match.

Line-Voltage Plugs:

Advantages: Relatively inexpensive, readily available, standardized, available in high-current versions, acceptable for outdoor use, vibration-resistant models available.

Disadvantages: No models specifically rated for low-voltage use.

Considering these advantages and disadvantages, Havis-Shields has chosen the optimal plug for each application. For portable 70W fixtures that are not normally outdoors continuously, we will continue to offer cigarette lighter plugs standard. All other models will use special two-prong twistlock line-voltage rated plugs, either as a standard offering, or as an option. The male plug will be type 7102C, and the female receptacle will be type 7101C for cord-mounted versions and type 8809C for panel-mounted versions.



Below are the major fixture types and their new standard cord/connector options:

Fixed-Mounted Poles:

Models: SB-100, SB-200, SB-300, SB-400, SB-500, SB-600, SB-1100, and SB-1200

Standard connector at base of pole: No connector provided; fixtures will have conductors available for direct-wiring to the vehicle.

Standard connector at top of pole (Demountable only): Type 7102C male connector factory-attached at base of fixture, mating with Type 7101C female connector attached to top of pole.

Portable Tripods:

Models: SB-800, SB-800-SL

Standard connector at base of pole: Type 7102C male connector factory-attached at base of pole. Havis-Shields will also ship Type 7101C female (mating) connector with each fixture for customer attachment. Type 8809C panel-mounted female connector will also be offered as a separate purchase item for customer installation.

Standard connector at top of pole (Demountable only): Type 7102C male connector factory-attached at base of fixture, mating with Type 7101C female connector attached to top of pole.

Portable Fixtures:

Models: 700

Standard connector at end of coil cord: For 70W fixtures, a standard male cigarette lighter plug will be provided. For 150W fixtures, a Type 7102C male connector will be provided. For customer convenience, Havis-Shields will also supply a Type 7101C female (mating) connector with each fixture for customer attachment. Type 8809C panel-mounted female connector will also be offered as a separate purchase item for customer installation.

All Other Fixtures:

No connectors provided; fixtures will have conductors available for direct-wiring to the vehicle.

If you have any questions, please contact your Havis-Shields representative. Alternatively, you may contact the factory directly at 800-524-9900.