

DLM LOW VOLTAGE SHADE MOTORS

LMSH-MCA1XX

DLM shade motors feature a unique counterbalance spring system that allows shades to be manually operated by pulling the shade

Speed Control feature enables DLM motors to calibrate rotational speed for more consistent alignment amongst similar shades in the room

DLM shade motors have integrated wireless Bluetooth® low energy technology for system setup using mobile apps

Low voltage counterbalanced shade motors are quiet and energy efficient

Tri-color LED on motor allows for status feedback

Pre-terminated four wire 13 inch low voltage whip and a wide range of pre-configured cable options allow for easy wiring



DESCRIPTION

The LMSH-MCA140 and LMSH-MCA173 DLM motors incorporate both a wired connection and wireless Bluetooth low energy technology built-in for a variety of control options. The DLM shade motors have a unique counter-balance spring design that allows shade to use less energy and for extremely quiet operation. This patented design also allows the shades to be manually pulled into position using the hembar. The low voltage motors are powered by 24-36VDC coming from the DLM shade controller power supply and there a number of wired switch options for control of the shades.

Using the patented Plug n' Go™ (PnG) operation when the MCA is connected to the shade network, the MCA will automatically join the network, set a default upper and lower shade limit, and be assigned to any shade switches on the project. These settings can be customized later by using the Push n' Learn™ (PnL) and Pull n' Save (PnS) procedures found in shade controller power supply or shade switch installation instructions. The automated start up procedures are designed to save installation and startup time by defaulting to a default initial system configuration based on installed components.

OPERATION

DLM shades motors have two different gear ratios to support shades of different sizes. The LMSH-MCA140 40:1 gear ratio motors are used on smaller shades while the LMSH-MCA173 73:1 gear ratio motors are used on larger and coupled shades. For each shade motor there is a counter-balance spring that is designed specifically for the weight of the shade and motor type. The motor and spring assembly is specified and tested by the factory.

Motors are configurable for slow, normal (default), or fast rotation and include a built-in Speed Control feature to ensure shade motors rotate at the same speed to align shade hembars.

APPLICATIONS

LMSH-MCAs are part of a DLM motorized shade control system designed to control shades in either a standalone configuration or as part of a combined shading and lighting control system. The DLM systems are recommended for virtually all applications, including offices, conference rooms and classrooms. They are ideal for any area where motorized and automated shade control is desired.

PROJECT		LOCATION/ TYPE	
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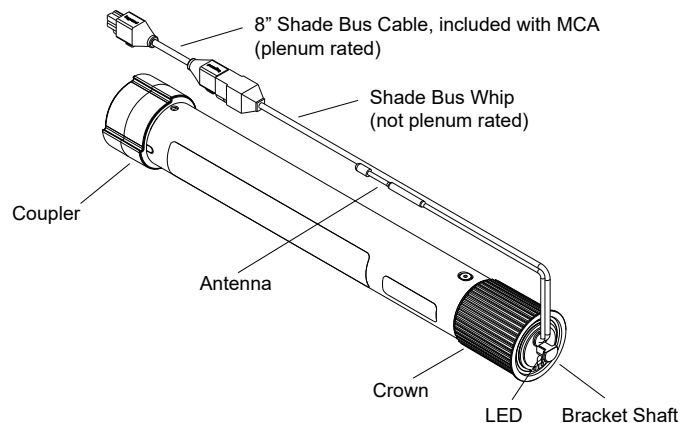
FEATURES

- Distributed motorized shade control system reduces multiple lengthy home-run cables
- Four wire shade bus with pre-configured wires simplifies wiring to shade motors. The wiring system is plug and play with many options for configured wiring. Makes pre-wiring and installation quick and easy
- Plug n' Go automatic configuration along with Pull n' Save and Push n' Learn for system personalization
- Two different shade room controller options PS610 for up to 10 shades and PS602 for up to two shades allows for system flexibility when setting up a shade room network
- The Speed Control feature enables DLM motors to calibrate their rotational speed for more consistent alignment amongst other shades on the same room wire bus with a similar fabric, length, and tube size. See Speed Control FAQ for details
- Shade room controllers provide buttons for shade control and system configuration to allow testing and control of the system while installing the shades
- Component of Digital Lighting Management integrated shade and lighting control system
- The product meets the materials restrictions of RoHS

SPECIFICATIONS

- Input voltage: 24/36VDC, Connect to LMSH-PS602 or LMSH-PS610 Shade Controller
- Current Consumption: 250mA, 6W
- Torque
 - LMSH-MCA140: 10 N-cm
 - LMSH-MCA173: 15 N-cm
- Speed Options: slow (20rpm), normal/ default (25rpm), and fast (30rpm)
- Connection to Shade Bus: 4-Conductor wire whip with female terminal (power and data over four wires)
- Cable Whip Length: 13 inches (not plenum rated).
- LMSH-MCAxxx comes with LMSH-SBCA-P008 eight inch shade bus cable already attached
- Motors Status LED: Tri-color (RGB)
- Minimum Shade Size: 16 inches wide
- Maximum Shade Size (non-coupled): 13 foot wide by 15 foot tall
- Operating Temperature: 32° to 120°F (0° to 50°C)
- Storage Temperature: -20° to 180°F (-28° to 82°C)
- Relative Humidity: 5 to 95% (non condensing)
- IP Rating: IP44
- UL and cUL listed; UL/C-UL Ratings: 36 VDC, 0.12 A, Class 2 Supply
- Warranty: Lifetime; for shade motors, shade controls, and shade power supplies manufactured by Legrand: Standard five-year warranty applies to all other DLM components. See <https://legrand.us/commercial-shading> to download the complete Legrand Shading warranty

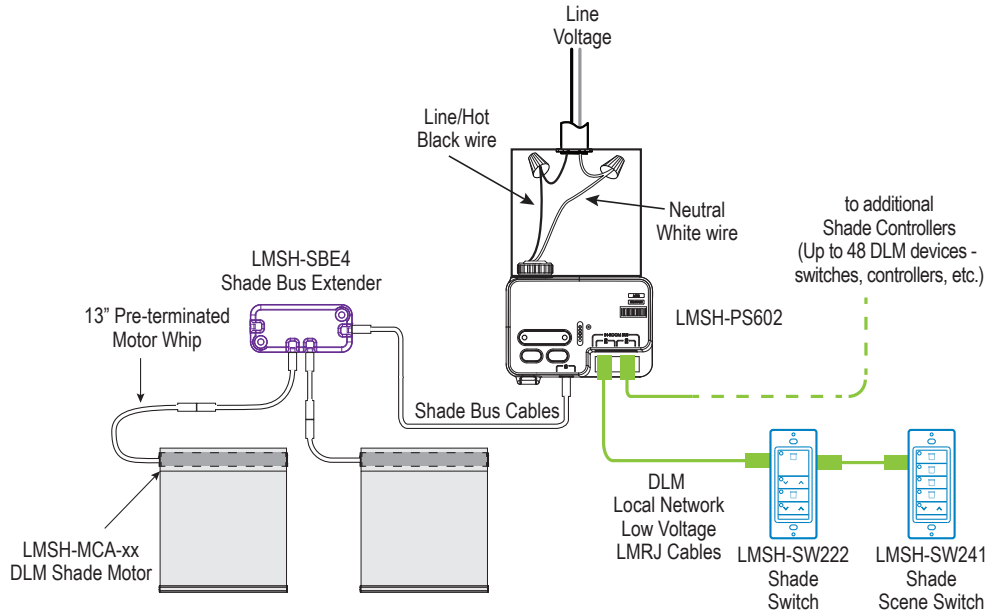
MOTOR COMPONENTS



SYSTEM CONNECTION

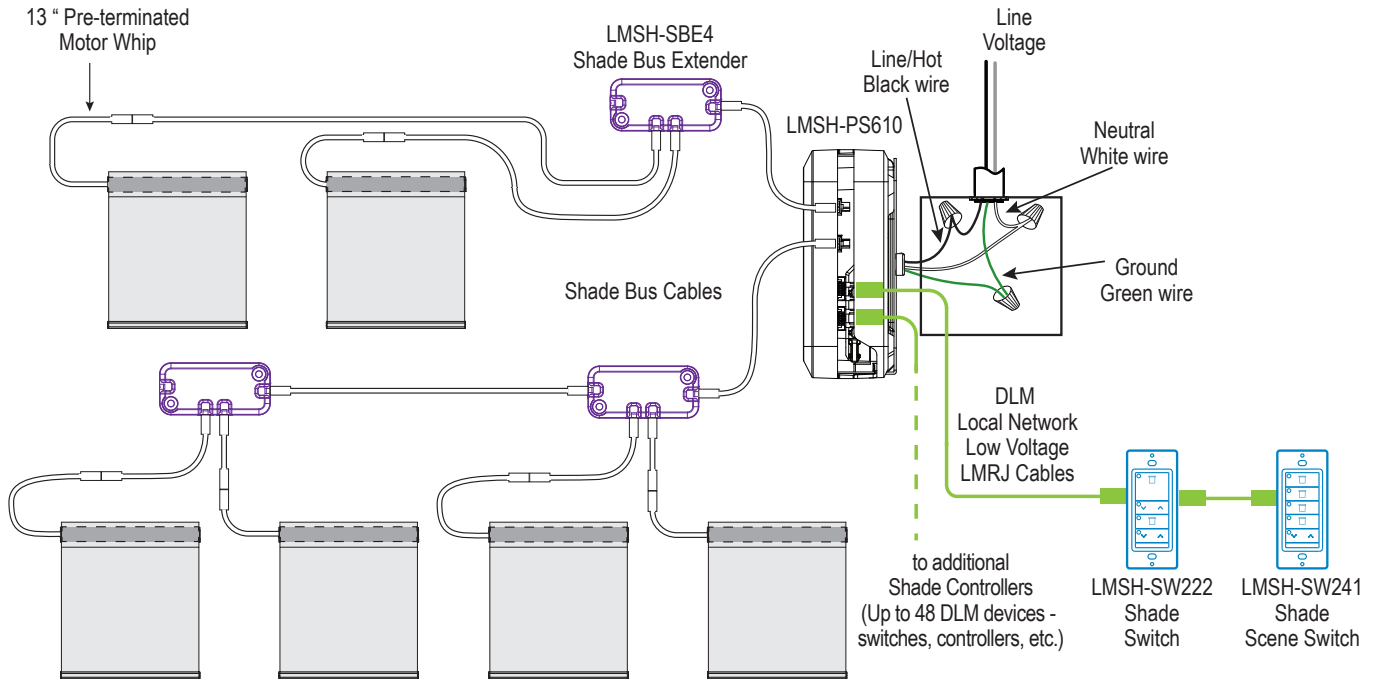
LMSH-PS602

A single shade can connect directly to the LMSH-PS602. To connect a second shade, use the LMSH-SBE4 Shade Bus Extender



LMSH-PS610

Use the LMSH-SBE4 Shade Bus Extender to chain together multiple shades.



ORDERING INFORMATION

Catalog #	Description
<input type="checkbox"/> LMSH-MCA140	DLM Motor Control Assembly, 24V, 40:1 Gear Ratio, 13" wire whip
<input type="checkbox"/> LMSH-MCA173	DLM Motor Control Assembly, 36V, 73:1 Gear Ratio, 13" wire whip