

SPECTRUM MODULE **G2**

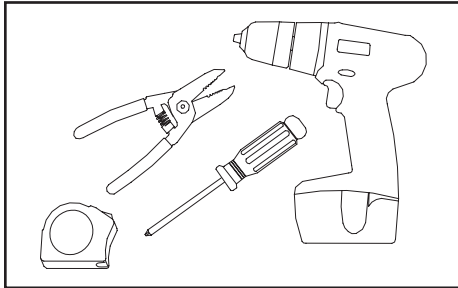


Installation Guide for M-SPTC01-24-4C and M-SPTC03-24-4C

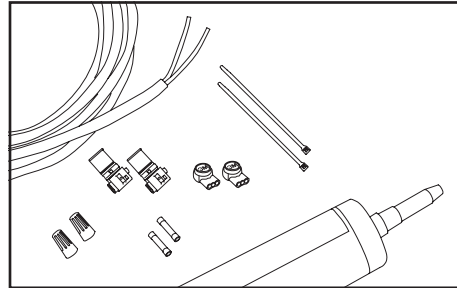
WARNING: Risk of electrical shock. New installation and LED Retrofit Kit installation requires knowledge of sign electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician. Follow all NEC and local codes. Spectrum Module is not suitable for submersion or direct exposure to water for extended periods of time. **AVERTISSEMENT:** Risque de choc électrique. La nouvelle installation et l'installation du kit de modification à LED nécessitent la connaissance des systèmes électriques de signalisation. Si non qualifié, ne tentez pas l'installation. Contactez un électricien qualifié. Suivez tous les codes NEC et locaux. Spectrum Module ne convient pas à la submersion ni à l'exposition directe à l'eau pendant de longues périodes.

For New Installation, proceed with Step 1 below. For Retrofit Installations, begin with Retrofit Instructions on page 2.

New Installation



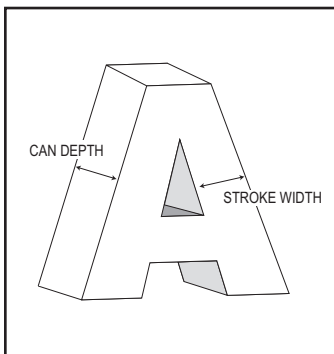
1. **Tools required:** Measuring tape, wire strippers. Optional: Drill, screwdriver.



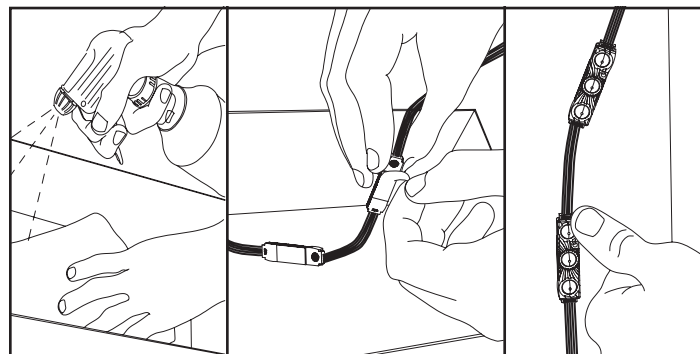
2. Components list:

- Spectrum Module, model number M-SPTC01-24-4C or M-SPTC03-24-4C
- 24 V Class 2 output power supply
- UL approved 18 AWG or larger diameter supply wire
- UL approved wire connectors appropriate for wire gauge used
- UL approved 5-conductor cable
- Optional for mounting: Electrical grade silicone, #6 (M3) sheet metal screws, or 0.125" aluminum rivets
- 24 V 4-channel RGBW LED controller

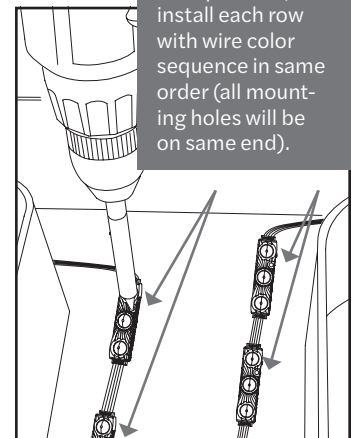
NOTE: Modules must be mounted in an enclosed sign. This product is not suitable for immersion or direct exposure to water for extended periods of time.
REMARQUE: Les modules doivent être montés dans un panneau fermé. Ce produit ne convient pas à une immersion ou à une exposition directe à l'eau pendant de longues périodes.



3. **Layout:** To populate sign, refer to Spectrum Module density guidelines as well as power supply loading chart below to determine appropriate number of modules and power supplies.



4. **Peel and stick:** Clean inside sign with rubbing alcohol and allow to dry. Using predetermined layout and LED placement from Step 3, remove tape backing and stick modules into place. Ensure modules are firmly attached.



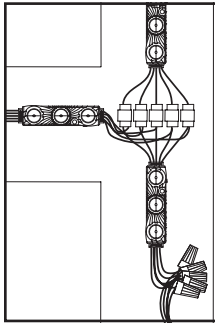
When using multiple rows, install each row with wire color sequence in same order (all mounting holes will be on same end).

5. **Fasteners:** If desired, modules can be secured with #6 pan head sheet metal screws, electrical grade silicone, or 0.125" aluminum rivets.

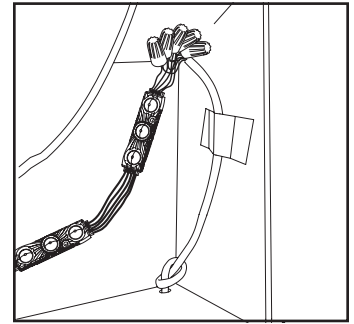
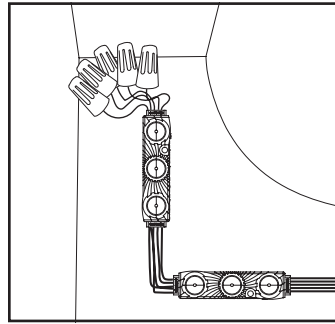
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Installation Guide for M-SPTC01-24-4C and M-SPTC03-24-4C



WARNING: Connect Yellow wire to 24V+ from power supply or RGBW controller. Connect Red, Green, Blue, and White wires to DC-, or appropriate terminals of RGBW controller. Reverse polarity connections may damage LEDs and will void product warranty.
AVERTISSEMENT: Connectez le fil jaune à 24V+ de l'alimentation ou du contrôleur RGBW. Connectez les fils rouge, vert, bleu et blanc aux bornes CC ou appropriées du contrôleur RGBW. Des connexions inversées peuvent endommager les LEDs et annuler la garantie du produit.



6. **Connections:** Modules may be connected in series or parallel.

NOTE: It is recommended to connect no more than half of maximum 60 W and 96 W power supply capacity in series to minimize line loss.

7. **Cap all unused wires:**

Strand of modules should not be looped to create a closed circuit.

8. **Connect first module on string:**

See RGB controller install guide for more information regarding power supply, controller, and amplifier installation.

Retrofit Instructions for Existing Signs



GENERAL PURPOSE
RETROFIT SIGN CONVERSION.

FOR USE ONLY IN ACCORDANCE
WITH KIT INSTRUCTIONS.

KIT IS COMPLETE ONLY WHEN ALL PARTS REQUIRED BY
THE INSTRUCTIONS ARE PRESENT.

WARNING: Risk of fire or electric shock. Install this kit only in host signs that have been identified in the installation instructions, and where the input rating of the retrofit kit does not exceed the input rating of the sign. Installation of this LED retrofit kit may involve drilling or punching of holes into the structure of the sign. Check for enclosed wiring and components to avoid damage to wiring and electrical parts. **AVERTISSEMENT:** Risque d'incendie ou de choc électrique. Installez ce kit uniquement sur les panneaux hôtes identifiés dans les instructions d'installation et dans lesquels les caractéristiques nominales d'entrée du kit de modification ne dépassent pas celles du panneau. L'installation de ce kit d'amélioration des LED peut impliquer de percer ou de percer des trous dans la structure de l'enseigne. Vérifiez le câblage et les composants inclus pour éviter d'endommager le câblage et les pièces électriques.

1. Identify sign to be retrofit and ensure branch circuit supplying existing sign are within voltage range for LED power supply. Refer to components list (page 1) and "24 VDC Power Supply Capacity Chart" (page 3).
2. Remove existing lighting equipment intended to be replaced, such as neon or fluorescent, and all power supplies, transformers, or ballasts. Remove existing neon and all standoffs to leave an empty channel letter can. **NOTE:** All materials removed must be disposed of in accordance with applicable local, state, and federal laws.
3. If required by local, state, or national electrical code, install a new disconnect switch.
4. Determine suitability and structural integrity of existing sign after removal of existing lighting equipment. If retrofit does not require the making of any new holes, do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation. If existing holes are present in a wet or outdoor location sign, repair and seal any unused openings in the electrical enclosure. Openings greater than 0.5" (12.7 mm) diameter require a metal patch secured by screws or rivets and caulked with non-hardening caulk. Smaller openings may be sealed with non-hardening caulk.
5. Clean inside of sign using non-oil based cleaner. Follow all manufacturer's instructions and ensure inside of sign is dry before proceeding with installation. This is an important step for good adhesion of Principal Sloan channel letter module mounting tape.
6. To populate sign, refer to Spectrum Module density guidelines as well as power supply capacity chart to determine appropriate number of modules and power supplies.
7. Follow all instructions under "New Installation" to properly install LED modules, controllers, power supplies, and amplifiers.
8. Connect power supply input as outlined in power supply installation guide in accordance with local, state and national electrical codes by qualified personnel. Refer to power supply install guide included with power supply for details.
9. If required, install disconnect switch in accordance with local, state and national electrical codes by qualified personnel.

24 VDC Power Supply Capacity Chart

	Maximum feet / modules	
	M-SPTC01-24-4C	M-SPTC03-24-4C
Power output	RGBW (2/ft)	RGBW (1.5/ft)
20 W	28 / 56 mods	13.4 / 20 mods
60 W	85 / 170 mods	40 / 60 mods
96 W	135 / 270 mods	66.7 / 100 mods
Power used per ft in watts	0.64 W	1.38 W

* Must split load at power supply output to prevent exceeding maximum wire/module ampacity of 5A per single leg.




Capacities based on 90% of power supply output.

Extension of Power Supply Leads

If longer lead wire from power supply to LED modules is needed, an extension can be used. Extension should be kept as short as possible, i.e., under 15 ft for 18 AWG UL Listed PLTC or under 50 ft for 14 AWG UL Listed PLTC.



Customer service and technical support

-  principalsloan.com
-  325.227.4577
-  3490 Venture Dr., San Angelo, TX 76905

