

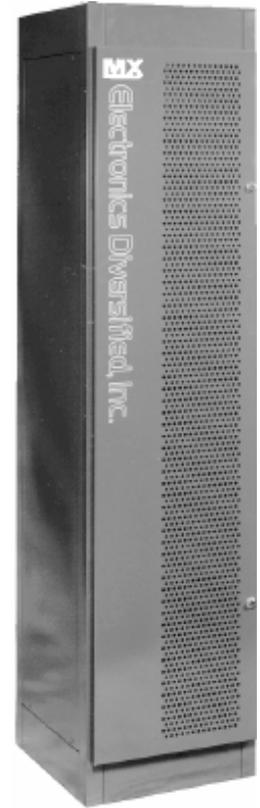
Features

- Plug-in modular system
- 1.2kW, 1.8kW, 2.4kW and 6kW dimmer capacity
- Incandescent dimmer rise times of 350, 500 & 800 μ S
- Universal fluorescent dimmer modules for 2, 3, and 4 wire ballasts
- User programmable control module
- Integral main circuit breaker option
- User configurable panic input assignments
- Real-time dimmer feedback option (DIS)
- Custom SCR rise times and custom curves are available for Incandescent, low voltage, and non-incandescent loads available
- Interfaces with photocells, occupancy sensors, and building management systems providing load shedding and energy management. Additional equipment required.
- 100,000 A.I.C. rating available (option)
- U.L. and c-U.L. listed

Description

The MX System is suitable for medium to large theater installations as well as architectural dimming systems. Sophisticated enough to satisfy the theater professional, it provides simple programming and troubleshooting for the general facilities manager.

The MX System provides the latest in dimming technology, including offline programming via a handheld programmer, user assignable patchable DMX inputs, backup memories with remote access, and LCD status indicators. The unique 3 \emptyset vertical bus bar allows up to 96 dimmers to be sequentially numbered in the cabinet with no two consecutive dimmer modules on the same phase.



Technical Information

- **Access**
All load outputs, control signal inputs and main power terminals are accessible from the front of the rack.
- **Control Input**
All dimmer control electronics are contained in one plug-in control module. There is a provision for two optically isolated DMX-512A inputs and up to twelve 0 to +10V analog inputs.
- **Convenience Panels**
Each rack is supplied with a convenience panel containing a breaker protected 20A 60Hz 120VAC grounded duplex power outlet.
- **Dimmer Modules**
The MX System is capable of dimming a complete range of incandescent, low voltage, fluorescent, neon, cold-cathode and non-dimmed loads.
- **Front Locking Door**
The MX dimmer bank is supplied with a full-height locking door to prevent unauthorized access to the equipment.

- **Filtered Cooling System**
Each rack is cooled by a low noise fan which draws air through an electrostatic air filter. The filter is removable for easy cleaning.
- **Quiet operation**
For sound sensitive locations, the MX rack is one of the quietest dimmer racks in the industry. Both the half and full racks have a maximum rating of 52dBA/NC45 and the quarter rack 38dBA/NC 32.

Options

- **System Protection**
An integral main circuit breaker is available to disconnect all power to the system.
- **Inter-Rack Bussing Kit**
Allows installation of multiple racks off of a single feed
- **Dimmer Information System (DIS)**
Real-time feedback of dimmer status, current and input/output voltage is an available added feature.

Electrical Characteristics

Input Power

120/208VAC, 3 Ø, 4-wire plus ground, 50/60Hz. Other voltage and phase options available upon request.

Operating Environment

Temperature range: 32° F. (0° C) to 104° F. (40° C).

Humidity range: 0% - 90% non-condensing.

Overcurrent

Up to 100,000 AIC available. U.L. & c-U.L. Listed.

Interaction

No interaction between dimmers.

Control Response

25 mS or better.

Mechanical Characteristics

Enclosure

Tubular steel frame with code gauge panels finished in scuff and impact-resistant polyurethane.

Circuit Cards

Plug-in style, U.L. recognized with FR-4 mill grade material.

Dimensions

MX-12 - 29.5" H x 21" W x 21" D (74.9 cm x 53.3 cm x 53.3 cm)

MX-24 - 48" H x 21" W x 21" D (121.9 cm x 53.3 cm x 53.3 cm)

MX-48 - 84" H x 21" W x 21" D (213.4 cm x 53.3 cm x 53.3 cm)

Maximum Module Count

	With Main Breaker	Main Lugs Only
MX-12	12 Modules	12 Modules
MX-24	12 Modules	24 Modules
MX-48	36 Modules	48 Modules

Shipping Weights

MX-12 185-235 lbs. (84-106 kg)

MX-24 275-325 lbs. (125-147 kg)

MX-48 400-450 lbs. (181-204 kg)

Specifications

- The MX Dimmer Rack shall be a freestanding, dead front switchboard, framed and enclosed with code gauge steel panels. All rack components shall be properly treated, primed and finished. Exterior surfaces shall be finely textured with scratch resistant, two-part polyurethane or equal. Removable top, side, back and bottom panels shall facilitate conduit termination. Racks shall be designed for front access to allow back-to-back or side-by-side installation.
- The MX Dimmer Rack shall be designed to allow easy insertion and removal of all modules without the use of tools. Internal supports shall be provided for precise alignment of dimmer modules into power and signal connector blocks. With modules removed, racks shall provide clear front access to all load, neutral and control terminations. Racks that require removable panels to access load, neutral or control terminations shall not be acceptable.
- The rack shall be configured to accept mixed dimmer types and ratings throughout the rack.
- An optional buss kit shall be available from the factory to allow adjacent racks to be powered by a single feed.
- Each rack shall have a lockable full height door containing an electrostatic air filter that shall be removable for easy cleaning. Forced air cooling of the rack shall be provided by a low noise fan. The fan shall turn on whenever any dimmer in the system is activated. In the event of an overtemperature condition, only the affected dimmer module(s) shall shut down and an LED indicator shall appear on the affected dimmer module(s) and the control module. The fans shall remain on during thermal shutdown of individual dimmer modules.
- Cooling Fan noise shall not exceed:
 - 52 dBA/NC45 for racks with 25 - 96 dimmers or,
 - 38 dBA/NC32 for racks with 1 - 24 dimmers.*
- Each rack shall be supplied with a breaker protected panel containing a 20A 120 VAC 60 Hz grounded duplex power outlet.
- The dimmer rack shall be equipped with an illuminated LCD status beacon. The LCD status beacon shall display rack status and messages.
- The standard rack shall have a vertical phase buss rated for 100% continuous duty and a system fault current rating of up to 100,000 AIC. The dimmer rack shall have the capacity to house an optional system main breaker. The main breaker shall serve as a disconnect for the system. The system shall have an AIC rating limited by the main breaker. (Specify if required.)
- The dimmer modules shall be sequentially numbered, labeled and addressed from top to bottom. No two physically consecutive dimmer modules shall be on the same phase.
- All control wiring shall conform to the recommended practices for DMX-512A E1.11 as published by USITT and ESTA.
- Dimmer control electronics shall be contained in one plug-in control module. The control module shall contain rack status indicators. The control module shall include a single function service switch that shall allow the end user to bypass the control electronics configuration. When activated, the service switch shall drive all circuits to full output.
- Dimmer output shall be regulated for fluctuations in incoming line voltages. The control module shall monitor and adjust each dimmer's output to maintain a constant output voltage to the load. The desired output voltage shall be maintained throughout the entire operating input voltage range (90/140VAC) with the exception that the maximum output will be no greater than the line voltage minus dimmer insertion voltage drop. There shall be no interaction between dimmers or any other equipment in the system.
- A hand-held remote control keypad with LCD display shall be provided for system configuration, testing and diagnostics. The LCD remote keypad shall also display rack status and messages. All control module system functions may be activated by a hand-held remote control keypad. Systems that do not offer this feature shall not be acceptable.
- A minimum of two (2) optically isolated DMX-512A inputs shall be provided, allowing overlapping or separation of any control level. 2.5KV of optical isolation shall be provided between the DMX-512A inputs and the control module. Optical isolation shall protect the DMX-512A inputs from a failed control module and shall protect the control module from failed DMX-512A inputs. Systems that do not have optical isolation shall not be acceptable.
- There shall be provision for a minimum of twelve 0 - +10VDC analog inputs to allow for analog control of the rack. Each dimmer may be assigned to any one of the twelve analog inputs. When so supplied, the analog input option shall not reduce the number of incoming DMX-512A signals.
- With the exception of the optional analog inputs, the control module shall be completely digital without employing any digital to analog demultiplexing schemes or analog ramping circuits. Each rack shall, in the event of signal loss, maintain the last level for a user programmable time. Systems that do not offer this feature shall not be acceptable.
- Two separate and distinct patches shall be available. Selection between the patches shall be possible by remote control. Each dimmer may be individually assigned a specific address for each DMX-512A input.
- The control module shall contain diagnostic routines that allow the user to test and troubleshoot the system.
- A system wide panic circuit shall be provided. Any dimmer or group of dimmers in any rack may be assigned proportionally to the panic circuit.
- The control module shall be capable of recording backup looks. Backup looks may be programmed by either recording current dimmer levels (as set by the console or other remote programming device) or entering dimmer levels on the control module directly via the handheld remote. Multiple backup looks may be active simultaneously with inputs operating on a highest take precedence (HTP) basis.
- The MX Dimmer Rack System shall be manufactured by Electronics Diversified, Inc., Hillsboro, Oregon 97124.

* 6 feet from front door center

