



# UDC-24 Universal Dimmer Controller



The **UDC-24** provides the industry's most flexible and capable dimmer controller available. This 19" unique multi-function unit is specifically designed to convert up to 24 channels of DMX512-A lighting protocol and 24 channels of analog 0-10 Volt DC into precise **pulse width modulated (PWM)** control of Solid State Relays (SSR's). Hi-resolution control of lighting loads allows for precision fades that outperform most dimmers.

The **UDC-24** incorporates an unprecedented array of "smart" features that include back-lit LCD display, phase reference patching, state-of-the-art voltage regulation, analog patching, bump buttons, full diagnostics and much more. Available in either 19" rack mount or desktop models, this powerful product will allow for easy retrofit of virtually any dimmer model/type.

Truly universal, the **UDC-24** will operate from 85 to 265 VAC with any power arrangement at 50 or 60 Hz, thereby permitting global application.

- Opto-isolated DMX inputs (front and rear). RDM ready.
- 24 analog inputs (0-10VDC) with grand master input.
- 24 individual bump buttons with programmable lockout.
- State-of-the-art, 100% digital voltage regulation for extreme speed and accuracy.
- 9-bit hi-resolution PWM outputs for superior fade quality.
- LCD display and user-friendly programming permits ease of setup and operation.
- Programmable voltage limit for each dimmer.
- Individual PWM output profiles include square, linear, direct and non-dim curves.
- Analog patching allows for multi-room dimmer control.
- Infrared LED output with optional handheld wireless printer.
- Low profile 19" wall mount enclosures available for multi-unit applications.



**JOHNSON SYSTEMS INC.**

"PROGRESSIVE ALTERNATIVES IN LIGHTING CONTROL"

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## UDC-24 CHARACTERISTICS

### Power Requirements

120/208V 3 phase or 120/240V single-phase at 50 or 60 Hz.  
Maximum current 1 Amp.

### Environment

Temperature Range: 23° F. ( -5° C.) to 113° F. ( 45° C.)  
ambient. Humidity Range: 0% to 90% non-condensing.

### Physical

17.5" W x 9.5" D x 1.75" H (44.5cm x 24.1cm x 4.4cm)

### Material

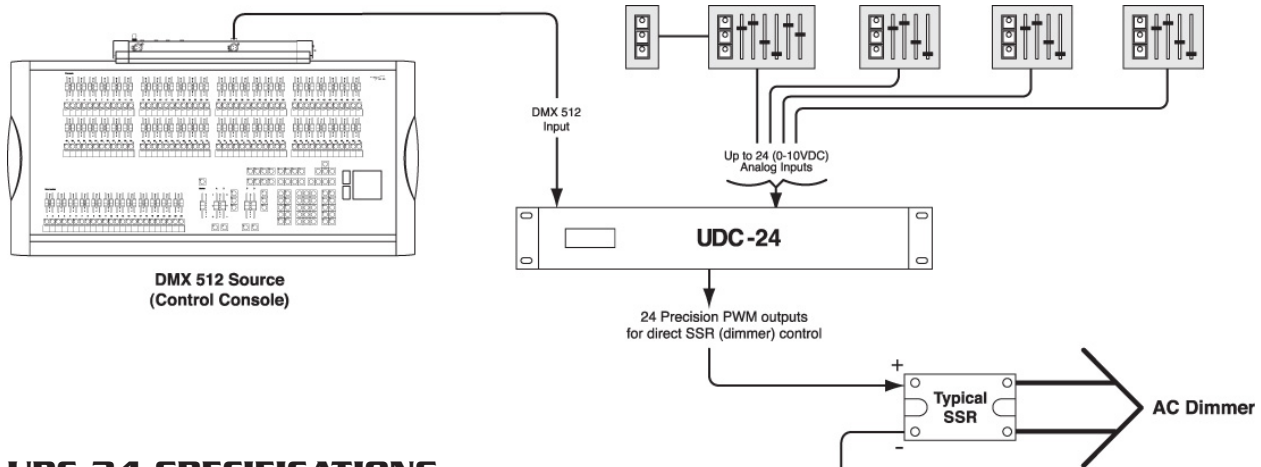
18 guage CRS.

### Weight

Approximately 7 lbs. (3.2 Kg).

### Finish

Fine texture black powdercoat.



## UDC-24 SPECIFICATIONS

- Each UDC-24 system controller shall be capable of driving up to 24 individual phase controllable SSR's with an input control requirement not exceeding 20mA each. One DB25 output connector shall contain all 24 PWM outputs. An optional interface PCB and wall mount enclosure shall permit the use of CAT5E wiring and remote signal distribution up to 1000'. Termination via punch-down or RJ-45 shall be optional.
- Control input protocol shall be standard USITT DMX-512A and/or 0-10 Volt DC analog. A total of 24 separate/isolated analog inputs shall be provided. UDC-24's output shall be highest takes precedence (HTP) of the input control signals. The DMX input shall be fully opto-isolated for controller protection up to 2500 Volts. The UDC-24 shall contain RMD compliant hardware.
- The UDC-24 system controller shall contain a backlit LCD display and five (5) buttons to allow simple user interface for programming and system testing.
- Each UDC-24 system controller shall have dual switching power supplies capable of 85-265VAC at 50 or 60 Hz.
- All connections shall be via premium "breakaway" style connectors. It shall not be necessary to re-wire any portion of the control electronics to facilitate system repair or replacement.
- It shall be possible to program the following system functions without any proprietary programmers, software or a PC:
  - Dimmer Test** to verify the PWM output of any or all output signals.
  - DMX Address Select** in single channel increments.
  - DMX Source Location** either the front or rear of the controller.
  - DMX Termination** to select end-of-line if applicable.
  - DMX Hold Time** of the last received DMX levels on loss of signal.
  - Phase Patch** of any dimmer (PWM output) to any referenced power phase.
  - Dimmer Curve Selection** of either square, linear, direct translation or non-dim PWM output.
  - Voltage Regulation** enable/disable to compensate for fluctuations in line voltage.
  - Voltage Limit** of each dimmer from 0.5 to 127.5VAC in 0.5 VAC increments.
  - Analog Block** to enable/disable all analog system inputs.
  - Voltage Output Adjust** of the external power supply (9.5 to 13.2VDC).
  - Analog Patch** of any input to any PWM output (24 x 24).
- Analog Filter** to enable additional input filtering where excessive noise exists.
  - Grand Master** to enable/disable the Gm control over the 24 primary analog inputs.
  - Bump Control** to enable/disable the front panel bump/test buttons for security.
  - OC Output Driver** to select the trigger source (DMX or analog) of the auxiliary contact.
  - Defaults** to permit fast selection of all factory default programming/settings.
  - Printout** of any/all programmed parameters via the infrared LED transmitter.
  - LCD View Angle Adjust** to compensate for extreme viewing angles.
- It shall be possible to view the following system functions on the system LCD via simple and intuitive menuing without any proprietary programmers, software or a PC:
  - DMX Test** to permit fast testing of the DMX signal integrity.
  - Analog Test** of each analog input individually. Displays analog input level in percent.
  - Line Voltage Test** to check the voltage of each incoming phase.
  - Line Frequency** to check the incoming line frequency.
  - Temperature** will display the internal operating temperature of the micro-controller.
  - Serial #** will display the silicon serial number for the UDC-24 controller.
  - Version** will display the current software version of the UDC-24 controller.
- A keypad lockout feature shall permit electronic lock/unlock of the controller keypad.
- The systems controller shall contain status L.E.D. indicators of correct line voltage, phase reference voltage, DMX receive, output level, and system over-temp.
- Control electronics shall contain the necessary hardware for future implementation of both RDM (ESTA Remote Device Management) and JDM (Johnson Device Management).

Specifications subject to change without notice.



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