

J-PACK Series

Hi-Performance Dimmer Pack



J-PACK dimmers are a truly universal hi-performance series of 6 channel dimmer packs. Designed for versatility in virtually any environment, these unique and compact dimmer packs can be wall-mounted for permanent installations, 19" rack mounted, pipe mounted or used as portable units. Multiple units can be easily "ganged" together for fast system expansion.

Next generation "system-on-a-chip" technology provides unsurpassed value in SCR dimming. Stand-by power consumption of less than 1 Watt, allow for compliance with the International Energy Agency's "One Watt Initiative" for standby power consumption. This makes J-PACK's truly "green" with the minimal possible impact on the environment!

Available in various sizes and configurations, J-PACK's offer unique flexibility in professional grade dimming. Designed for modern lower wattage compact filament dimming loads these dimmers are full rated at 1,560 Watts for constant prolonged operation. Premium hydraulic magnetic circuit breakers offer safety and eliminate the false tripping concern of competitive dimmers. Intuitive LCD user interface combined analog inputs and contact closure inputs allow for industry wide application.



These products are energy efficient and consume less than 1 watt. Compliance with the International Energy Agency's "One Watt Initiative".

On demand "MagLev®" thermal management technology produces superior cooling that is virtually silent making J-PACK's the natural choice for "quiet space" dimming installations. Exclusive "lamp warming" techniques extends lamp life considerably while maintaining industry leading performance!

- ✦ Available in a range of voltage and output configurations.
- ✦ Unique power saving stand-by mode reduces power consumption to less than 1 Watt, a "green" dimmer pack.
- ✦ Dim standard or low-voltage incandescent quartz lamps. Compatible with SCR dimmable LED lamps and fixtures.
- ✦ Individual dimmer profile selection permits safe and silent control of non-dim lighting loads.
- ✦ DMX512 start addressable in single channel (offset) or individually (patch).
- ✦ DMX "snapshots" with scene playback.
- ✦ Unique "lamp warming" feature extends lamp life significantly.
- ✦ Analog and dedicated dry contact BMS inputs for interface with HVAC, security and audio.
- ✦ "Load Shed" inputs for power management and photocell interface.
- ✦ LCD user interface for easy setup and monitoring.
- ✦ Over-heat and over-current protected.
- ✦ Non-proprietary dimmer SCR's are 300% rated.
- ✦ On-demand 'MagLev®' thermal management technology produces superior cooling that is virtually silent.
- ✦ Up to 10 year product warranty available!



JOHNSON SYSTEMS INC.

"PROFESSIONAL LIGHT CONTROL PRODUCTS"

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J-PACK DIMMER PACK CHARACTERISTICS

Maximum Feeder Capacity

Edison 15 Amp 120 VAC 1Ø 3 wire. Max. Rating 1,800W.
 2 Circuits of Edison 15 Amp 120 VAC 1Ø 3 wire. Max. Rating 3,600W.
 30 Amp 120/208 VAC 3Ø 5 wire. Max. Rating 9,000W.
 40 Amp 120/240 VAC 1Ø 4 wire. Max. Rating 9,000W.

Power Termination

Power lug input.

Output selection of Terminal Block, Stage Pin, Edison, TLG or Socapex.
 Maximum output 1,560 Watts per circuit.

Environment

Temperature Range: 23°F (-5°C) to 104°F (40°C) ambient.
 Humidity Range: 0% to 90% non-condensing.

Load Type

Incandescent quartz lamps and electronic (SCR dimmable) low voltage fixtures.

Switch Type

300% rated, non-proprietary SCR solid state relay.

Rise Time

300uS.

Physical

13" x 17" x 3.4" (33 cm x 43 cm x 8.5 cm).

Weight

22 - 23 lbs. (10.0 - 10.5 Kg) depending on model.

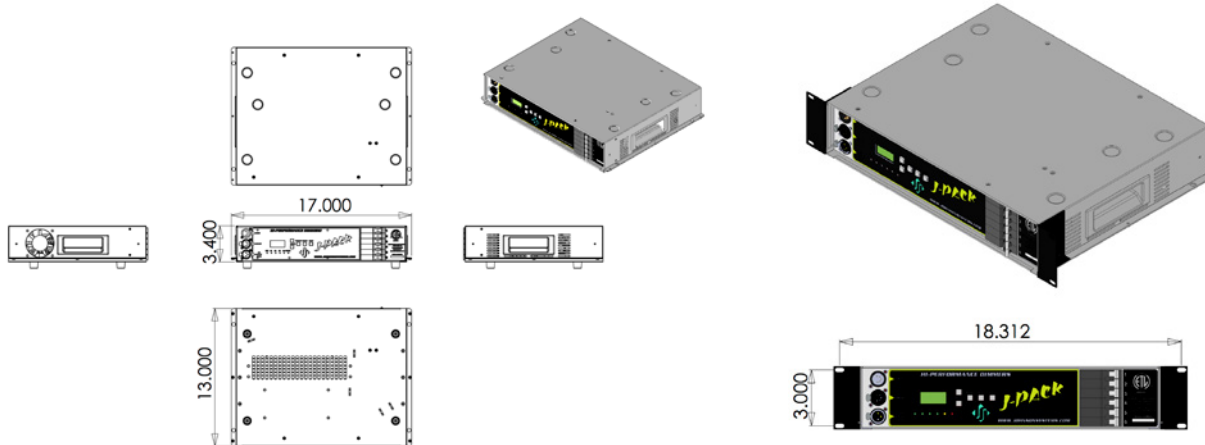
Material

18-gauge steel CRS.

Finish

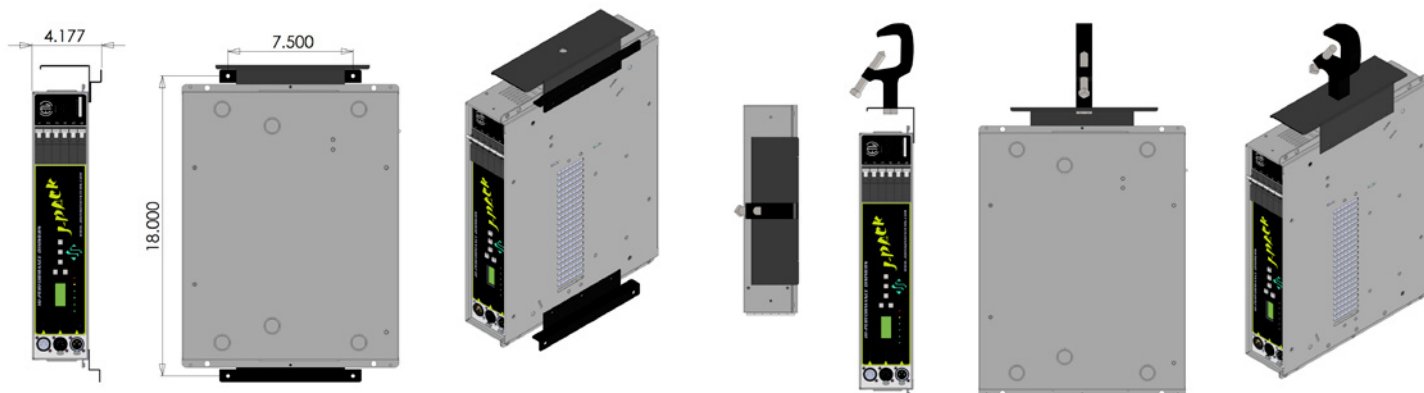
Hammer texture black powder coat.

J-PACK DIMMER PACK (DP) MOUNTING OPTIONS



Rubber Feet = RF

19" Rack Mount = RM



Wall Mount - WM

Pipe Mount = PM

* C-Clamp & Safety Cable Included



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J-PACK DIMMER PACK (DP) ORDERING INFORMATION

HOW TO ORDER:

Example: **DP - 120/208 - SP - WM**

Dimmer Pack
Power Input Options

120 = 120VAC 1Ø 3 wire via Single 5' Edison Power Cord
120HO = 120VAC 1Ø 3 wire via Dual 5' Edison Power Cords
120/240RC = Pre-installed 1.5 meter, 8 Gauge, 40 Amp Range Cord
120/240 = 120/240 VAC 1Ø 4 wire Terminal Block
120/208 = 120/208 VAC 3Ø 5 wire Terminal Block


Output Options

ED = 15A Duplex Edison
SP = 20A Stage Pin (Bates)
TL = L5-20R Twist Lock Ground
SO = 19 Pin Socapex
TB = Terminal Block


Mounting Options

RF = Rubber Feet
PM = Pipe Mount
WM = Wall Mount
RM = 19" Rack Mount


OUTPUT/REAR PANEL OPTIONS



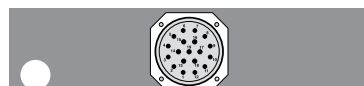
SP = 6 x 20 AMP Stage Pin (Bates)




TB = Terminal Block (Internal)



TL = 6 x L5-20R TLG Receptacles



SO = 19 Pin Socapex



ED = 6 x 15 AMP Duplex Edison



These products are energy efficient and consume less than 1 watt. Compliance with the International Energy Agency's "One Watt Initiative".

MODEL #S

DP-120-ED-*XX
 DP-120HO-ED-*XX

DP-120/240-ED-XX
 DP-120/240RC-ED-XX
 DP-120/240-SP-XX
 DP-120/240-TL-XX
 DP-120/240-SO-XX
 DP-120/240-TB-XX

DP-120/208-ED-XX
 DP-120/208-SP-XX
 DP-120/208-TL-XX
 DP-120/208-SO-XX
 DP-120/208-TB-XX

MAX. OUTPUT CAPACITY

1800 Watts
 3600 Watts

9000 Watts
 9000 Watts
 9000 Watts
 9000 Watts
 9000 Watts
 9000 Watts

9000 Watts
 9000 Watts
 9000 Watts
 9000 Watts
 9000 Watts

* Not available in wall mount (WM).



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SPECIFICATIONS

1.0 J-PACK - DIMMER PACKS - GENERAL

- 1.1 On power up, J-PACK dimmers shall default to "Basic Mode" of operation permitting access to only two menus; DMX Address and DMX Termination. J-PACK's advanced features access shall require a specific button push sequence in order to protect all programmed system configuration/data from accidental or unauthorized access.
 - 1.2 J-PACK dimmers shall be capable of dimming standard incandescent, quartz, SCR (silicon controlled rectifier) dimmable electronic fixtures, and SCR dimmable LED lamps and fixtures.
 - 1.3 J-PACK dimmers shall be powered by a 120/208 VAC 3Ø or 120/240 VAC 1Ø supply of up to 30 and 40 Amps respectively per phase. Individual 13 Amp magnetic load breakers shall permit full rated operation in performance environments. Voltage range shall be selectable from the menu for either 120VAC or 230VAC operation.
 - 1.4 J-PACK dimmer outputs shall employ an exclusive "lamp warming" technique that extends lamp life by limiting the in-rush current to cold lamp filaments by up to 70% over other performance dimmers.
 - 1.5 An LCD user interface for ease of set up and monitoring. All programming shall be via a user-friendly, intuitive and self-prompting menu structure. No PC or special software will be required.
 - 1.6 DMX512 start address shall be addressable in single channel (offset) or individually (patch) on a per circuit/dimmer basis. It shall be possible to address any dimmer to any channel within the entire DMX 512 universe or all dimmers to a single DMX channel.
 - 1.7 Dedicated DMX IN and DMX THRU ports shall be supplied internally via 3 pin break-away connectors as well as externally via 5-PIN XLR connectors.
 - 1.8 Two auxiliary contacts inputs shall be supplied internally as well as externally via 3-PIN XLR connector. Dry-contact input triggers shall activate stored DMX snapshots with time fade for automation with other AV control equipment. It shall be possible to program the inputs for "load shedding" applications when interfaced to photocell, aux. sensor or BMS for power management applications.
 - 1.9 Each individual dimmer in the dimmer cabinet shall be capable of being assigned one of four dimmer curves: incandescent square law curve, direct curve, linear curve, or non-dim (adjustable threshold with 5% hysteresis).
 - 1.10 Thermal protection shall be employed on both the internal heat sink as well as internally in the CPU. An active over-temp input shall illuminate a red warning LED when an internal temperature of 75°C is measured. An internal temperature of 80°C shall immediately disconnect all dimmer control outputs.
- ## 2.0 CONTROL PCB
- 2.1 J-PACK's shall employ the "system-on-a-chip" advanced "3000 Series" digital technology. The control electronics shall be contained on the Multiple Application Dimmer Driver (MADD-6) and its associated User Interface Board (UIB). Advanced state-of-the-art voltage regulation hardware and software will ensure >1% accuracy on all dimmer outputs.
 - 2.2 The MADD-6 will operate with a voltage input range of 85-264VAC at 50 or 60Hz.
 - 2.3 J-PACK's shall be capable of memorizing and storing up to six presets in the form of a DMX "snapshot" or individually programmed via the keypad. Scene playback shall be seamless on loss of DMX as well as allowing high resolution fades between scenes. Scene playback shall be optionally triggered from one or both of the contact inputs. Each scene shall have a selectable fade time from 0-99 seconds.
 - 2.4 The DMX inputs shall comply with USITT DMX512-A (ANSI E1.11 - 2008), standard protocol for digital data control. DMX data shall take priority over an active auxiliary contact input.
 - 2.5 Compliance with the International Energy Agency's "One Watt Initiative" stand-by power requirement. Please refer to U.S. Executive Order #13221. Processor standby power on J-PACK dimmer packs shall not exceed 1 Watt.
 - 2.6 J-PACK's shall allow "back up" of all system configuration data. All data shall be protected from power failure by EEROM for a minimum of 100 years.
 - 2.7 The face of the J-PACK shall include an LCD display and momentary, self-illuminating push buttons for function select, parameter setting and feature monitoring. All programming shall be via a user-friendly, intuitive and self-prompting menu structure. It shall not be necessary to use a PC or any external programming device to configure or set up any function of the J-PACK.

2.8 J-PACK's shall support the following menu items:

Basic Menus (power up default access only)

1. **ADDRESS** Set the DMX start address.
2. **DMX TRM** Enable or disable termination on the DMX input.

Advanced Menus

3. **SCENESET** Enable and setup 6 different backup scenes.
4. **FADETIME** Set the fade time for each of the 6 scenes from 0 to 99 seconds.
5. **SNAPSHOT** Record DMX levels into the backup scenes.
6. **DIM TEST** Test the dimmer outputs one at a time, or all at once.
7. **MONITOR** View the control level to each dimmer output.
8. **DMX O/P** Configure the on-board DMX protocol manager for offset or patch mode.
9. **DMX PAT** Patch each of the 6 dimmer (PWM) outputs to any DMX input channel.
10. **SH TIME** Set the DMX status hold time from 0 to 99 minutes or infinite.
11. **DC PATCH** Configure the dimmer to channel patch for the dimmer pack.
12. **DIM CURV** Configure the dimmer curve for each output.
13. **ND-LEVEL** Set the non-dim trigger level threshold for each output.
14. **VOU LIM** Set the maximum RMS output voltage for each dimmer.
15. **REGULATE** Enable or disable the dimmer output voltage regulation.
16. **STANDBY** Enable or disable the power savings standby mode.
17. **TEST INC** Set the test increment units to percent or hexadecimal.
18. **SCENEMOD** Enable or disable scene mode.
19. **AUX TEST** Test the auxiliary dry-contact inputs.
20. **AUX1MODE** Set the auxiliary input 1 mode to activate a selected scene or load shed.
21. **AUX2MODE** Set the auxiliary input 2 mode to activate a selected scene or load shed.
22. **LOADSHED** Select dimmers to be disabled (turned off) by the auxiliary inputs.
23. **Ø-PATCH** Set the zero-cross phase reference for each dimmer control output circuit.
24. **WARMING** Turn the "lamp warming" feature on or off.
25. **V-RANGE** Set the supply voltage range for 120 Volts or 240 Volts operation.
26. **LINE V** View the RMS line voltage for each power phase.
27. **LINE F** View the line frequency of phase A.
28. **REM TEMP** View the temperature of the remote temperature sensor.
29. **CTL TEMP** View the temperature of the microcontroller.
30. **RTIME** View the total run time of the microcontroller.
31. **HARD-KEY** View the microcontroller's unique eight-character hard-key code.
32. **SERIAL#** View the microcontroller's unique eight-character silicone serial number.
33. **VERSION** View the microcontroller's firmware version.
34. **DEFAULTS** Set various system configuration settings to the factory default.
35. **LED INT** Set the LED intensity for the programming switches.
36. **LCD VIEW** Adjust the contrast of the LCD Display for optimum viewing.

- 2.9 J-PACK face panels shall include a green LED indicator for power supply and microprocessor status. The LED, when illuminated, shall indicate normal operation, and when flashing shall indicate a hardware fault. A power supply or power failure, shall cause the LED to extinguish.
- 2.10 J-PACK face panels shall include three green LED's for phase detect and one yellow LED for data receive indication. Loss of accurate phase detect signal and/or invalid DMX512 data shall cause the corresponding LED to extinguish.
- 2.11 J-PACK face panels shall include one red LED for active alarm status or dimmer pack over temperature. Active inputs shall cause these cause the corresponding LED to illuminate.
- 2.12 A reset push-button shall be included on the face panel of the J-PACK's. Resetting the unit, whether by the reset button or power up shall not affect any stored parameters or presets, and dimmer outputs shall automatically return to their former status.
- 2.13 All face panel buttons shall be blue LED back lit with adjustable intensity.
- 2.14 All printed circuit boards (PBC's) shall be FR4/G10 with a UL 94V-0 Flame Class Rating.
- 2.15 J-PACK series dimmers are ETL listed and comply fully with UL 508 and CSA 22.2 safety approvals.

Specifications subject to change without notice.



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