

HP6c

6 CHANNEL 6 kW HIGH PERFORMANCE DIMMER RACK



DESCRIPTION

The Jands HP6c is a high quality, rugged, six channel 6 kW per channel (25A/240V) dimmer rack specifically designed for demanding touring and theatre applications.

FEATURES

- * Microprocessor control
- * Opto-fired SCR output devices
- * Easy to use menu driven software
- * 14.3 bit firing resolution for optimum power control
- * Function keypad with indicators
- * "LOAD" & "DRIVE" LED per channel
- * "DMX IN" LED
- * "1/2/3 PHASE" LED (indicates 3-phase supply OK)
- * Scrolling 4-digit 16-segment alpha-numeric display
- * "SELECT" switch per channel (controls function)
- * "STATUS" LED per channel (indicates modified output, i.e. 120V, 60V)
- * 2 x Quiet 75mm DC speed-controlled fans (temperature sensitive)
- * Rotary encoder for function/level select
- * DMX start address code selected by banks or specific start channel
- * DMX-512 input with loop-through output
- * Neutral failure detect with override facility
- * Over-temperature detect/warning
- * Dimmer "wakes-up" in previously selected mode
- * Built-in test facilities
- * Toroidal chokes
- * Stand alone operation with individual channel level control
- * Pre-heat facility on a per channel basis
- * Selectable output voltage (240V/120V/60V chopped) on a per channel basis
- * Six built-in factory programmed chase functions
- * Switched output selectable on a per channel basis
- * Dimmer will hold last DMX value should control data be interrupted
- * Ability to store up to three DMX snapshots
- * Ability to build two (non-volatile) custom scenes which can be stored and recalled later
- * Rear panel DMX port provisions
- * CE and RoHS approved

OVERALL SPECIFICATIONS

Channels: 6
 Power rating: 6 kW (25A/240V) per channel
 Power supply type: 3-phase, 240V phase-to-neutral (415V phase-to-phase) with earth (single phase version available)

Power requirements: Nominally 240V/50 Hz (limits 47Hz - 54Hz)
 Under-voltage symptoms appear if all phase voltages fall below 190V
 Internal electronics will tolerate 415V on all phases

Current: 50A per phase (max.)
 Dissipation: <1.0% of output load (360W max.)
 Dimmer curve: Linear power/switched
 Max. ambient operating temp: 40 °C maximum for 100% duty cycle. Cut out 85 °C heatsink temperature

Control input: USITT DMX-512/1990 protocol
 Input connector: 5-pin AXR with loop-through socket
 Mains injected tone limits: 15Vrms @ 750 Hz, 25Vrms @ 1050Hz

Output connectors: 2 x 3-pin Australian 20A (parallel) outlet per channel (JND-HP6-A) (others available, see ordering information below)

Output risetime: 280µs with 5000W incandescent load
 <340µs with 6000W incandescent load
 Output current risetime 50 mA/µs

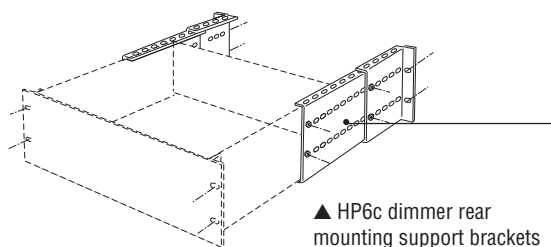
Output protection: Magnetic circuit breakers (0.1 - 1 sec. delay @ 200% overload, instantaneous @ 700% overload)

Test facility: Individual channel selection using channel select switches and software menu

Dimensions: 483mm(19")(W) x 350mm(D) x 132mm(3RU)(H)
 Net/shipping weight: 21.5/25.7 kg

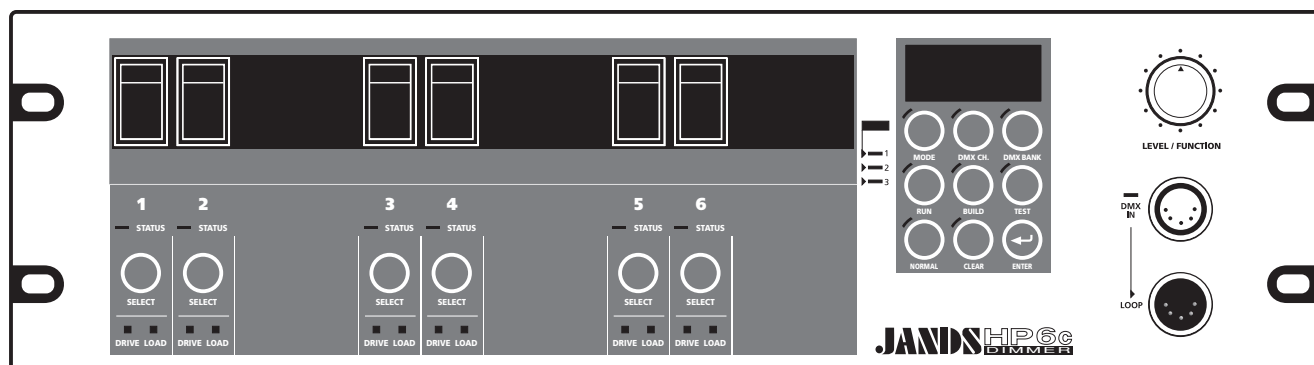
SUPPLIED ACCESSORIES

- Operating manual
- 2m 3-phase lead and plug (Clipsal 56 P550 50A) (Others available)
- 2 x heavy duty rear mounting adjustable support brackets



ORDERING INFORMATION

MODEL/PART	PART NO.
• HP6c with 12x GPO 3-pin/20A output back panel (standard)	JND-HP6C-A
• HP6c with hard wired output back panel	JND-HP6C-H
• Roobar II (3RU) stackable equipment rollcage	JND-ROOBARII-3RU



▲ HP6c dimmer front panel

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ARCHITECTS & ENGINEERS SPECIFICATION

Electronics

The dimmer shall receive and decode six (6) control signals complying with the industry standard USITT DMX-512/1990 protocol. The DMX start channel shall be adjustable to any DMX channel, or in banks of twelve (12). If the DMX signal is interrupted, the dimmer outputs shall default to the last received DMX packet.

The dimmer shall have a control response time of not more than twenty (20) milliseconds, input to output.

The dimmer shall utilise a highly visible four (4) character alpha-numeric LED display to provide parameter and editing information to the operator. The dimmer shall also utilise red and green LEDs to show channel status and output level information to the operator.

The dimmer shall have a memory capacity of at least 512 Kbytes and shall be battery-backed to prevent memory loss when switched off. The battery shall have a life of at least four (4) years.

For heatsink temperatures above 40°C (104°F) the temperature controlled fans shall run at full speed. The dimmer shall feature temperature monitoring electronics that will shut-down the dimmer when the heatsink temperature exceeds 85°C (185°F).

The dimmer shall utilise Toroidal inductors which provide a risetime in excess of 280 microseconds. Dimmers using conventional gapped iron core chokes will not be acceptable.

The dimmer shall utilise a digitally-generated dimmer curve to accurately match a linear control voltage versus power output relationship. The dimmer shall also feature a switching curve for on/off applications. Each of the six (6) dimmer channels shall smoothly control loads from 25 watts to 6000 watts.

The dimmer shall detect and inform the operator of substantial mains supply imbalances and a bad (soft) neutral connection.

The dimmer shall be factory tested and cyclically burned-in for a minimum of 24 hours.

The dimmer operating software shall incorporate diagnostic test routines that exercise the different systems on the CPU card. These test routines shall indicate to the operator (using LEDs and/or displays) the result (pass/fail) of the tests.

The dimmer shall display an error message to the operator should the software malfunction or be corrupted. The dimmer shall indicate the current operating mode of the dimmer by means of the alpha-numeric display or individual LEDs on the keypad.

The console shall incorporate design techniques and electronic filters to comply with Australian and European Union directives on electrical safety and electromagnetic compatibility (EMC).

The dimmer shall be capable of selecting an alternative output voltage (e.g. 120 volts, 60 volts) for designated channels. The dimmer shall provide the means to test outputs by allowing the operator to manually fade individual channels from zero to full. The dimmer shall provide the means to disable individual channel outputs. The dimmer shall provide a selectable lamp filament preheat voltage to reduce mains inrush to lamps.

Electrical

The dimmer shall operate from a three-phase plus neutral and earth supply of 415 volts AC phase-to-phase with a nominal supply frequency of 50 Hz. The dimmer shall draw 50 amps per phase when all output channels are fully loaded. All channel outputs shall be protected by fast-acting magnetic circuit breakers.

The dimmer shall be supplied with a two (2) metre power cable fitted with a 50 amp three-phase connector (Australia only).

Mechanical

The dimmer shall be designed to mount in a standard 19-inch equipment rack, and be 483 mm wide x 350 mm deep x 132 mm (3RU) high. The dimmer shall be constructed of 1.2 mm steel, and

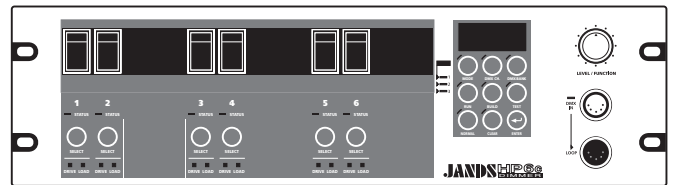
shall be provided with a removable lid for access to internal electronics. All metal surfaces shall be properly treated and finished in powdercoat or zinc passivating.

The control surface shall be scratch-resistant 0.25mm Lexan with legends reverse silk-screen printed from behind.

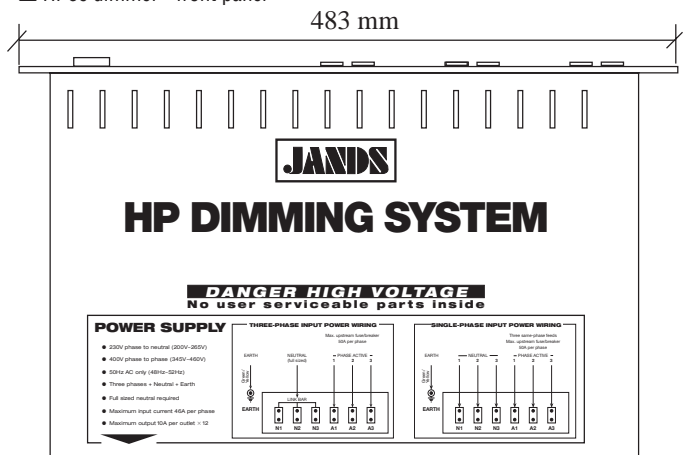
Standard accessories shall include rear support brackets.

Adequate ventilation must be provided.

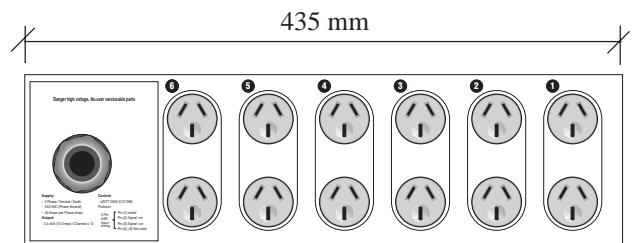
The dimmer shall be the JANDS HP6c.



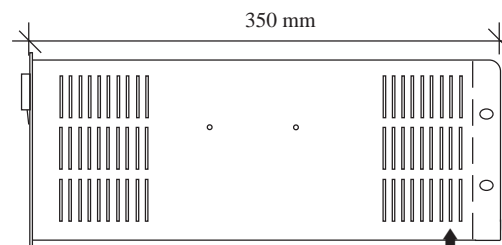
▲ HP6c dimmer - front panel



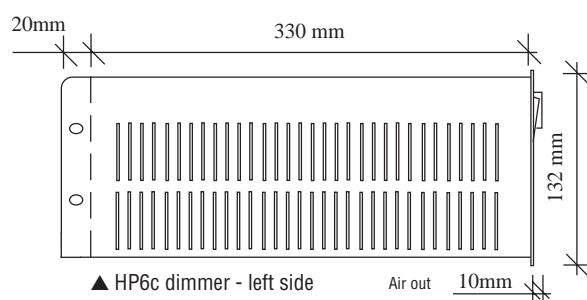
▲ HP6c dimmer - top view



▲ Standard HP6c dimmer - back panel



▲ HP6c dimmer - right side



▲ HP6c dimmer - left side

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