

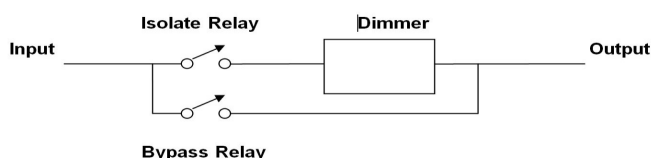


## 12 CHANNEL DMX CONTROLLED DIMMER PLUS CONTACTOR UNIT

Technical Specification Sheet

### DESCRIPTION

The Jands HPC represents a fully featured range of power control products designed for the remote control of all mains powered equipment. It integrates both dimming and high current full-on and full-off contactor-type elements for each channel to create a power control product that can be used to control **any** type of mains load. See Figure below.



Relay operation is dependant upon the channel mode as set by the operator i.e. Off, Dimmer, Switch, or On. Additionally the appropriate relay/s will operate if the dimmer drive level is at full or off for more than 1 minute, maximising system efficiency and safety. Relay control is fully automatic and requires no user intervention.

The HPC will operate from a nominal 100 to 240VAC supply with various rise times, single Triac or dual SCR dimming devices, various channel current ratings, and with a variety of output connector options. Additionally the HPC may be optionally fitted with an RCD protection device per channel. All models may be powered from two phase power supplies while maintaining equal numbers of channels per phase, and will operate from mains power supply frequencies of between 40 and 66Hz with no setting changes.

The HPC has been designed with flexibility and ease of use as a priority. The high brightness display ensures the product is easy to use in dark environments, while the feature set has been optimised for use in all applications.

The HPC provides many features found in top-end products. Current control algorithms reduce the instance of circuit breaker drop-outs due to cold lamp inrush, while dual speed-controlled fans, extremely high performance mains filtering, and a soft over-temperature cut-out eliminate problems before they appear to the operator. DMX RDM support is provided.

### FEATURES

- Combined dimmer and contactor per channel. A channel in switch mode that is turned off has a true air gap between the incoming mains and the output socket.
- DMX-512 digital control protocol with RDM
- Soft over-temperature cut-out
- Dual temperature controlled DC fans
- Third-order active filters eliminate mains noise issues

### SPECIFICATIONS

Channels	:	12
Power Rating	:	10A per channel
Mains type	:	1, 2, or 3 phase with neutral
Mains Voltage	:	100 to 240 VAC +/-10% phase to Neutral
Mains Frequency	:	40-66Hz
Operating Temp	:	0 - 40°C max
Output Protection	:	Thermal-Magnetic circuit Breaker per channel. Optional combined thermal-magnetic breaker plus 30mA RCD
Control Input	:	ANSI E1.11:2004 DMX512A ANSI E1.20:2006 RDM
Input Connector	:	5 pin AXR with loop through
Dimmer Curve	:	Linear Power
Snapshot scenes	:	2
Output rise-time	:	220 or 470µs, 10-90% @240V
Dissipation	:	<1.0% of output load
User Interface	:	3 x 7 segment red LED + 4 switches
Indicators	:	3 x blue, 2 x bicolour, 1 red, 1 x green
Start Channel	:	Any number from 1 to 512
Ingress Protection	:	IP20
Dimensions (mm)	:	478(W) x 350(D) x 133(H)
Net/shipping weight	:	Approx 28kg (Dependant upon the as-built configuration)

### SUPPLIED ACCESSORIES

- 2 metre 3-phase lead and P540 (or equivalent) plug  
Note: lead and plug not supplied with hardwire product
- 2 x heavy duty rear mounting support brackets
- User Manual

### ORDERING INFORMATION

MODEL/PART	PART NUMBER
10A/220us/Triac/P540/Australian Output	JND-HPC12-AZ100
10A/220us/Triac/Hardwired Input and Output	JND-HPC12-AZ102
10A/470us/SCR/P540/Australian Output	JND-HPC12-AZ110
10A/470us/SCR/P540/Australian Output/RCD	JND-HPC12-AZ110R
10A/470us/SCR/2 x Socapex style outlets	JND-HPC12-AZ111
10A/470us/SCR/2 x Socapex style outlets/RCD	JND-HPC12-AZ111R
10A/470us/SCR/Hardwired output	JND-HPC12-AZ112
10A/470us/SCR/Hardwired output/RCD	JND-HPC12-AZ112R



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## 12 CHANNEL DMX CONTROLLED DIMMER PLUS CONTACTOR UNIT

### ARCHITECT & ENGINEER'S SPECIFICATION

#### Electronics

The dimmers shall receive and decode twelve (12) control channels complying with the industry standard ANSI E1.11 DMX512-A protocol. The dimmer shall also provide support for ANSI E1.20 RDM.

A digital display and miniature switches shall be used to select the DMX start channel, control the test functions, and set other operating modes. The start channel shall be able to be set to any valid DMX number from 1 to 512. The DMX circuitry shall incorporate an internal terminate facility that when activated minimises signal reflections on long data control lines.

If the DMX signal is interrupted, the dimmer outputs shall default to hold the last received DMX packet. The operator may configure the dimmer so that if control is not restored the dimmer fades to a programmable snapshot. In either case if control is not restored within 10 minutes the DMX controlled outputs shall be driven off.

Each output channel shall contain both dimming and both full-on and full-off contactor-type elements - the appropriate element shall automatically be used depending on the channel mode. The dimmer element shall match a control input to power output in a linear relationship. Each of the identical dimmer elements shall control loads from 25 watts to the rated maximum, and utilise acoustically quiet toroidal chokes. Channels set to On, Off, or DMX Switch shall use the contactor-type element resulting in an AirGap between input and output when Off, and a clean undistorted mains supply when On.

For heatsink temperatures above 50°C the temperature controlled fans shall run at full speed. A full thermal shutdown shall occur when the heatsink temperature exceeds 100°C. In addition the output levels shall be reduced as the temperature approaches the upper limit.

The dimmer shall have a control response time of not more than fifty (50) milliseconds, input to output.

#### Electrical

The dimmers shall operate from a single, dual, or three-phase plus neutral and earth AC supply of between 100 and 240 VAC +/-10% phase-to-neutral with a frequency of between 40 and 65 Hz. Third-order active filters shall minimise the effect of mains-borne noise on the dimmer output. Each channel shall be protected by a miniature thermal-magnetic circuit breaker, or optionally by a combined over-current thermal-magnetic circuit breaker and RCD.

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

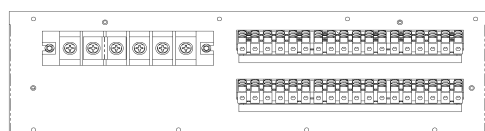
#### Mechanical

The dimmers shall be designed to mount in a standard 19-inch equipment rack, and be 478mm wide x 350mm deep x 133mm (3RU) high.

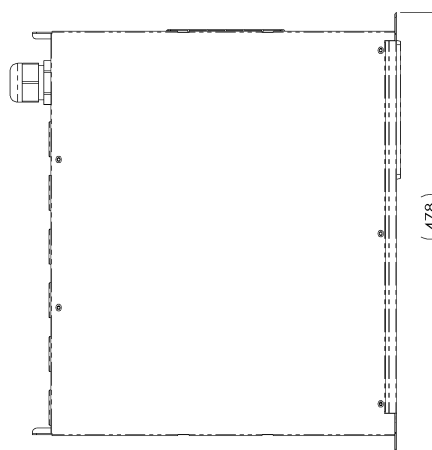
The chassis shall be constructed primarily from 1.2 mm steel, and shall be provided with a removable lid for access to internal electronics. All metal surfaces shall be properly treated and finished in powdercoat or zinc plating. Rear support brackets shall be provided as standard.

The control surface shall be scratch-resistant 0.25 mm polyester with legends printed from behind.

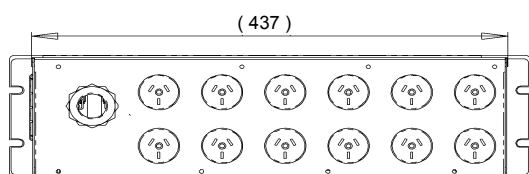
The power control products shall be designed to operate in ambient temperatures not greater than 40°C. Adequate ventilation must be provided.



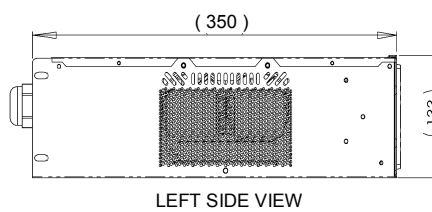
REAR VIEW - Hardwire Version



TOP VIEW



REAR VIEW - Australian Outlet Version



LEFT SIDE VIEW