

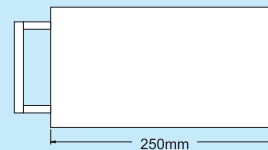
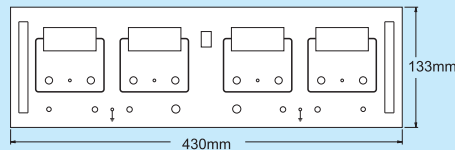
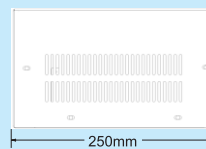
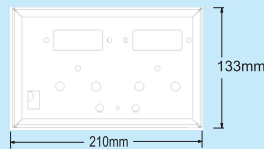


# DC Power Supplies

**POWERING  
YOUR IDEAS**



# 30 W - 300 W DC Power Supplies



We offer a range 30 to 300 watts of Linear DC Regulated Power Supplies for use in Laboratories & Industries.

These table top units are designed for 19" Rack Mounting.

There are 14 models to choose from, with output power ranging from 30 watts to 300 watts. Output voltages of 0-16V, 0-32V, 0-64V and 0-128V DC are available for single output supplies. There are four Dual output models with two independent isolated outputs. These outputs could be connected in series or parallel to double the voltage or current.

All the models operate in either constant voltage or constant current mode and are fully protected against continuous output short circuit and overload.

## Special feature at Extra Cost

- 1) 19" Rack mounting only for PS with 430mm width.
- 2) Over voltage protection.
- 3) Input 115V AC  $\pm 10\%$ .

- Optional Interface: RS232 / RS485 / USB
- Proven Reliability and Endurance
- 19" Rack Adaptable - 3U High
- Digital Output Metering 4 Digit DPM
- Constant Voltage/Constant Current Operation
- Remote Sensing Facility for 5A & Above Rating Models
- High Stability and Close Regulation  $\pm 0.01\%$

# 30 W - 300 W DC Power Supplies



## DIGITAL LAB SELECTION GUIDE

SINGLE OUTPUT 30-300W				
OUTPUT	DC OUTPUT		DIMENSIONS W x H x D (mm)	MODEL
	VOLTAGE	CURRENT		
16V	0-16V	0-1A	210 x 133 x 250	VS1601
	0-16V	0-2A	210 x 133 x 250	VS1602
	0-16V	0-6A	430 x 133 x 250	VS1606
	0-16V	0-10A	430 x 133 x 250	VS1610
32V	0-32V	0-1A	210 x 133 x 250	VS3201
	0-32V	0-2A	210 x 133 x 250	VS3202
	0-32V	0-5A	430 x 133 x 250	VS3205
	0-32V	0-10A	430 x 133 x 250	VS3210
64V	0-64V	0-3A	430 x 133 x 250	VS6403
	0-64V	0-5A	430 x 133 x 250	VS6405
128V	0-128V	0-2.5A	430 x 133 x 250	VS1282

## DIGITAL LAB SELECTION GUIDE

DUAL OUTPUT				
OUTPUT	VOLTAGE	CURRENT	DIMENSIONS W x H x D (mm)	MODEL
DUAL	0-32V	0-2A	430 x 133 x 250	VSD3202
	0-32V	0-3A	430 x 133 x 250	VSD3203
	0-16V	0-6A	430 x 133 x 450	VSD1606
	0-64V	0-2A	430 x 133 x 450	VSD6402

Load Regulation to be measured at sense terminals wherever provided.



## SPECIFICATIONS

**Output Voltage & Current :** See Selection Guide.

**Constant Voltage Mode :**  
**Regulation :**

**Line :**  $\pm 0.01\% \pm 2\text{mV}$  for  $\pm 10\%$  change in line output.

**Load :**  $\pm 0.01\% \pm 2\text{mV}$  for load change from zero to full load.

**Ripple & Noise :** 1mV rms max. 20Hz - 20MHz.

**Constant Current Mode :**  
**Regulation :**

**Line :**  $\pm 0.01\% \pm 250\mu\text{A}$  for  $\pm 10\%$  line change.

**Load :**  $\pm 0.01\% \pm 250\mu\text{A}$  for change in output voltage from 0 Volts to maximum output voltage.

**Ripple & Noise :** 0.04% rms.

**Metering :** 3 Digit DPM.

**Meter Accuracy :**  $\pm 3$  counts.

**Mode Indication :** LED indication for constant voltage / constant current operating mode.

**Output Polarity :** Floating w.r.t. ground.

**Overload Protection :** Automatic overload and short circuit protection. (Optional)

**Transient Response :** 100 $\mu\text{s}$  to within 10mV of set output voltage for load change from 10% to 90%.

**Stability :** Total drift within 8 hours, after warm-up.

<  $\pm 0.2\%$  plus 5mV in constant voltage mode.

<  $\pm 0.5\%$  plus 5mA in constant current mode with constant line, load and ambient temperature conditions.

**Operating Temperature :** 0-50°C.

**Line Voltage :** 230V AC  $\pm 10\%$  50Hz, single phase.

**NOTE :** REGULATION TO BE MEASURED AT SENSE TERMINALS.

**CUSTOM CAPABILITY :**  
SPECIAL VOLTAGE AND CURRENT RATINGS AVAILABLE ON REQUEST.



# Dual Output

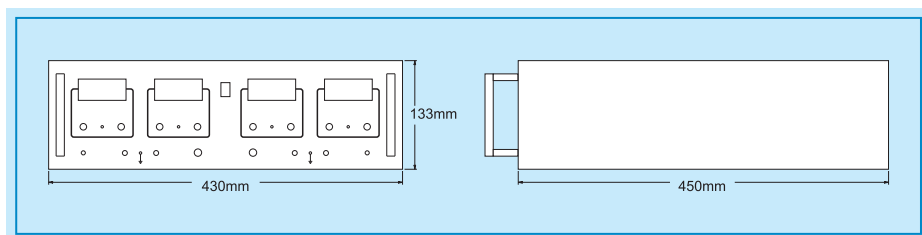
## 300 W - 1280 W DC Power Supplies



- High current density.
- Remote sensing.
- 19" rack adaptable -3U high
- 300W to 1280W different combination
- Front panel potentiometer to set V&I
- 3 Digit seven segment display for V&I
- High stability and close regulation
- Phase controlled pre-regulation plus linear post regulation

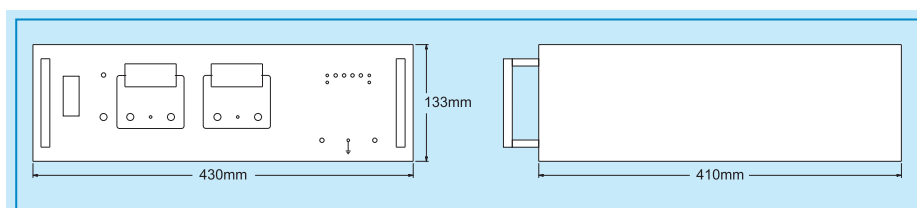
### Special feature at Extra Cost

- Over voltage protection
- 19" rack mounting
- Analogue programming and monitoring for V&I
- Digital meters - 4 digit DPMs
- Optional interface: RS232 / RS485 / USB



MODEL	VSD3205	VSD3210	VSD3220	VSD6405	VSD6410	VSD1282	VSD1285
Input Voltage	230VAC $\pm 10\%$ , 50Hz, 1Phase						
Output Voltage	0 to 32V	0 to 32V	0 to 32V	0 to 64V	0 to 64V	0 to 128V	0 to 128V
Output Current	0 to 5A	0 to 10A	0 to 20A	0 to 5A	0 to 10A	0 to 2.5A	0 to 5A
Line Regulation CV *	CV $\pm 0.01\%$ +2mV						
Line Regulation CC !	CC $\pm 0.01\%$ +2mA						
Load Regulation CV *	CV $\pm 0.01\%$ +2mV						
Load Regulation CC !!	CC $\pm 0.01\%$ +2mA						
Output Ripple CV (max.)	1mV rms						
Output Ripple CC (max.)	0.05%						
Remote Sensing	Provided						
Operating Temp.	0 to 50°C						
Protection	OL/SC (constant current type)						
Indication (LED)	CV/CC						
3 Digit DPM	V & I						
Meter Accuracy	$\pm 3$ counts						
Input on/off	MCB						
Single Turn Pots Coarse & Fine	V set & I set						
Dimensions appr. **	430W $\times$ 133H $\times$ 450D (mm)						
Weight appr. (Kg)	22.0	22.5	30	22.5	28	20	23

# 300W - 1.2KW DC Power Supplies



## SPECIFICATIONS

**Metering** : 3 digit DPMs for voltage and current measurement.

**Meter Accuracy** :  $\pm 3$  counts.

**Constant Voltage Mode** :

**REGULATION** :

Line :  $\pm 0.01\% \pm 2\text{mV}$  for  $\pm 10\%$  change in line voltage.

Load :  $\pm 0.01\% \pm 2\text{mV}$  for load change from zero to full load.

**Ripple AND Noise** : 1mV rms max. 20Hz to 20MHz.

**Constant Current Mode** :

**REGULATION** :

Line :  $\pm 0.01\% \pm 10\text{mA}$  for  $\pm 10\%$  change in line voltage.

Load :  $\pm 0.01\% \pm 10\text{mA}$  for change in output voltage from 0 volts to maximum output voltage.

**Ripple AND Noise** : 0.04% rms

**Mode Indication** : LED indication for constant voltage / constant current operation mode.

**Output Polarity** : Floating w.r.t. ground.

**Overload Protection** : Constant current type.

**Transient Response** : 100 micro sec within 10mV of set output voltage for load change from 10% to 90%.

**Stability** : Total drift within 8 hours, after 30 minutes warm-up under constant line, load and temperature.

<  $\pm 0.2\% \pm 10\text{mV}$  in CV mode.

<  $\pm 0.5\% \pm 10\text{mA}$  in current mode.

**Operating Temperature** : 0 to 50°C.

**Temp. Coefficient** :  $\pm 0.05\% \pm 5\text{mV}$  per OC after initial warm-up of 30 minutes, in voltage mode.

**Line Voltage** : 230V AC  $\pm 10\%$ , single phase 50Hz.

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- Two Digital Meters - 3 Digit DPMs
- Constant Voltage / Constant Current Operation
- 19" Rack Adaptable
- Remote Sensing Facility
- High Stability and Close Regulation  $\pm 0.01\%$

## Special feature at Extra Cost

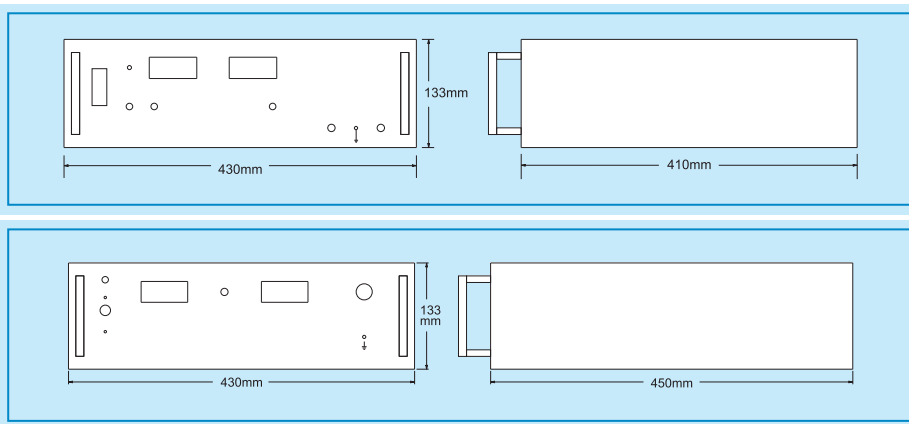
- Presetting Facility
- Over Voltage Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.
- Digital meters - 4 digit DPMs
- Optional interface: RS232 / RS485 / USB

## SELECTION GUIDE

	PV	PI	DIMENSIONS	MODEL	WEIGHT
16V	0-16V	0-20A	430 x 133 x 410	VS1620	16.8
	0-16V	0-40A	430 x 133 x 410	VS1640	20.8
32V	0-32V	0-20A	430 x 133 x 410	VS3220	18.8
	0-32V	0-30A	430 x 133 x 410	VS3230	21.5
64V	0-64V	0-10A	430 x 133 x 410	VS6410	18.0
	0-64V	0-20A	430 x 133 x 410	VS6420	23.4
128V	0-128V	0-5A	430 x 133 x 410	VS1285	18.5
	0-128V	0-8A	430 x 133 x 410	VS1288	20.5

# 300V - 5000V DC Power Supplies

## High Voltage Series Power Supply



The New HIGH VOLTAGE DC Series offers a range of Regulated Supplies for use in Industries, PIV, HV, etc Research Labs, Capacitor Testing. The range has seven models. All the models have electrically floating outputs and operate in constant voltage current limiting mode.

The 3000V & 5000V models have two versions each. The Suffix N is used when negative output terminal is grounded & P is used when Positive output terminal is grounded.

### SPECIFICATIONS

**Output Voltage & Current :** See Selection Guide.

**Metering :** 3 digit DPM to indicate voltage & current

**Regulation :**

Line :  $\pm 0.1\%$ .

Load :  $\pm 0.1\%$ .

**Ripple & Noise :** 0.05% rms.

**Operating Temperature :** 0-50 C.

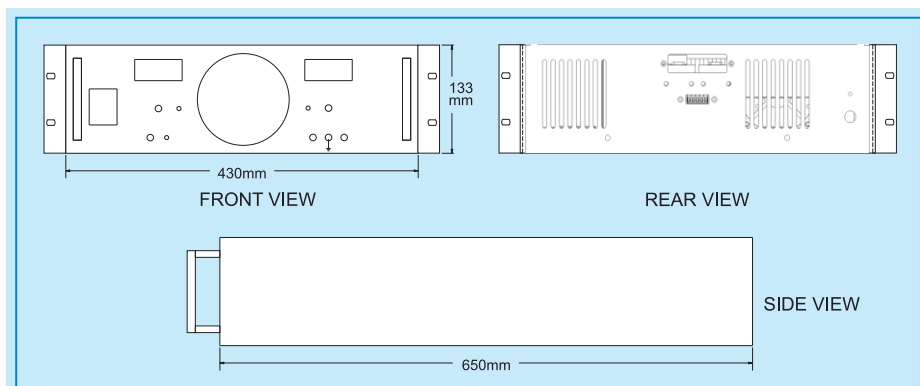
**Line Voltage :** 230V AC  $\pm 10\%$ , 50Hz single phase. Output protected against Short Circuit.

- 19" Rack Adaptable
- Laboratory Bench Unit
- Digital Output Metering  
4 digit DPMs
- Constant Voltage / Constant  
Limit Type Character
- Micro Switch Provided for  
Protection against Shock
- 3U High (133 mm)
- Power Saving Thyristor  
Pre regulator Technique
- Optional interface:  
RS232 / RS485 / USB

### SELECTION GUIDE

	PV	PI	DIMENSIONS	MODEL
300V	15-300V	1.00A	430 x 133 x 410	VS0310
	15-300V	3.00A	430 x 133 x 410	VS0330
	15-300V	5.00A	430 x 177 x 410	VS0350
600V	30-600V	1.50A	430 x 133 x 410	VS0615
1000V	100-1000V	1.00A	430 x 133 x 410	VS1010
3000V	-300 to -3000V	0.05A	430 x 133 x 450	VS3K05P
	+300 to +3000V	0.05A	430 x 133 x 450	VS3K05N
5000V	-500 to -5000V	0.02A	430 x 133 x 450	VS5K02P
	+500 to +5000V	0.02A	430 x 133 x 450	VS5K02N

# 2KW DC Power Supplies



- Phase controlled pre-regulation plus linear post regulation
- High stability and close regulation
- 3 Digit seven segment display for V&I
- Remote sensing
- 19" rack adaptable -3U high
- Front panel potentiometer to set V&I
- 2000W different combination
- High current density.

## Special feature at Extra Cost

- Over voltage protection
- 19" rack mounting
- Analogue programming and monitoring for V&I
- Digital meters - 4 digit DPMs
- Optional interface: RS232 / RS485 / USB

MODEL	VS1699	VS3260	VS6430	VS8025	VS12815
Input Voltage	230V AC / 415V AC, $\pm 10\%$ , 50Hz, 1Phase/ 2 Phase				
Output Voltage	0 to 16V	0 to 32V	0 to 64V	0 to 80V	0 to 128V
Output Current	0 to 100A	0 to 60A	0 to 30A	0 to 25A	0 to 15A
Line Regulation CV *	$\pm 0.01\% \pm 5mV$				
Load Regulation CV !	$\pm 0.01\% \pm 5mV$				
Line Regulation CC *	$\pm 0.01\% \pm 10mA$				
Load Regulation CC !!	$\pm 0.01\% \pm 10mA$				
Output Ripple CV (max)	1mV rms				
Output Ripple CC (max)	100mA rms				
Remote Sensing	Provided				
Operating Temp.	0 to 50°C				
Protection	OL/SC (constant current type)				
Indications (LED)	CV & CC				
3 Digit DPM	V & I				
Meter Accuracy	$\pm 3$ counts				
Input On/Off	M.C.B.				
Multi Turn Pot	V Set & I Set				
Dimensions appr.** W x H x D	19 inches x 133 mm x 650 mm				
Weight appr. (Kg)	36.0.	44.0			

Terminals: Input and output at rear side



## ELECTRICAL SPECIFICATION: 3KW DC POWER SUPPLY

- 2200W to 3200W different combination
- High current density
- 19" rack adaptable-5U high
- Front panel potentiometer to set V&I
- Remote sensing.
- 3 Digit seven segment display for V&I
- High stability and close regulation.
- Phase controlled pre-regulation plus linear post regulation.

### Special Features at Extra Cost

- Over voltage protection
- 19" rack mounting.
- Analogue programming can be provided only for model no. VS3299, VS6450 & VS12825.
- Digital meters - 4 digit DPMs
- Optional interface: RS232 / RS485 / USB



# 3KW DC Power Supplies



## ELECTRICAL SPECIFICATION: 3KW DC POWER SUPPLY

MODEL	VS3299	VS6450	VS12825	VS3010	VS6005	VS1030
Input Voltage	230V AC / 415 V AC , $\pm 10\%$ , 1 Phase / 2 Phase					
Input Frequency	50Hz $\pm 2$ Hz					
Output Voltage	0 to 32V	0 to 64V	0 to 128V	30 to 300V	60 to 600V	150 to 1000V
Output Current	0 to 100A	0 to 50A	0 to 25A	0 to 10A	0 to 5A	0 to 3A
Line Regulation CV*	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV
Line Regulation CC*	0.01% $\pm 10$ mA	0.01% $\pm 10$ mA	0.01% $\pm 10$ mA	NA	NA	NA
Load Regulation CV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV	0.01% $\pm 2$ mV
Load Regulation CC	0.01% $\pm 10$ mA	0.01% $\pm 10$ mA	0.01% $\pm 10$ mA	NA	NA	NA
Output Ripple CV	1mV rms	1mV rms	1mV rms	10mV rms	10mV rms	10mV rms
Output Ripple CC	100mA rms	100mA rms	100mA rms	NA	NA	NA
Remote Sensing	Provided	Provided	Provided	NA	NA	NA
Operating Temp.	0 to 50°C	0 to 50°C	0 to 50°C	0 to 50°C	0 to 50°C	0 to 50°C
Protection	OL/SC	OL/SC	OL/SC	OL/SC	OL/SC	OL/SC
Indication (LED)	CV/CC	CV/CC	CV/CC	CV/CL	CV/CL	CV/CL
3 Digit DPM	V & I	V & I	V & I	V & I	V & I	V & I
Meter Accuracy	$\pm 3$ count	$\pm 3$ count	$\pm 3$ counts	$\pm 3$ count	$\pm 3$ counts	$\pm 3$ counts
Controls (2Pole MCB)	Input On/Off	Input On/Off	Input On/Off	Input On/Off	Input On/Off	Input On/Off
Multi Turn Pots	'V' Set/'I' Set	'V' Set/'I' Set	'V' Set/'I' Set	'V' Set/'I' Set	'V' Set/'I' Set	'V' Set/'I' Set
Dimensions (approx) W x H x D (mm) * *	430x221x700	430x221x700	430x221x700	430x221x700	430x221x700	430x221x700

# High Power Series Power Supplies



High Power Series range regulated and variable DC power supplies are solid state units utilizing thyristor technology in a single and three phase full-bridge rectifier topology that offer constant voltage control, constant current control, automatic crossover, series regulation, DC filter, digital metering and various operational and protective monitoring features. We manufacture DC regulated variable power supplies with power rating from 3kW to 200kW. These are designed to meet Industrial applications. The Power Supplies have high efficiency, precise regulation and low output ripple and noise. KWDC Series Power supplies are available in ratings from 3KW to 200kW with current ratings up to 2000A.

## Application

High Power Series of JOMA DC power supplies and systems are rugged high-power DC Sources being used in several industrial, research and military applications including electrochemical, steel, welding, plating, circuit breaker testing, bus-bar testing, desalinization, aircraft engine starting etc. Each unit is based on standard designs and precision engineered to meet your specific application. These are ideal for use in chemical, automotive and Industrial application such as Electro-coating, Anodizing, Plating, Cleaning etc and also as high power DC testing source in wide variety of Industries and Test Houses.



## Available Models

DCPS	50A	100A	300A	500A	1000A	1500A	2000A
0.8-32kW	1.6-16V/50A	1.6-16V/100A	1.6-16V/300A	1.6-16V/500A	1.6-16V/1000A	1.6-16V/1500A	1.6-16V/2000A
1.6-32kW	3.2-32V/50A	3.2-32V/100A	3.2-32V/300A	3.2-32V/500A	3.2-32V/1000A	3.2-32V/1500A	3.2-32V/2000A
3.75-150kW	7.5-75V/50A	7.5-75V/100A	7.5-75V/300A	7.5-75V/500A	7.5-75V/1000A	7.5-75V/1500A	7.5-75V/2000A
7.5-150kW	15-150V/50A	15-150V/100A	15-150V/300A	15-150V/500A	15-150V/1000A	--	--
10-200kW	20-200V/50A	20-200V/100A	20-200V/300A	20-200V/500A	20-200V/1000A	--	--

## Custom Designed DCPS

Please contact us for technical advice. We will assist you in specifying a proper DC Power Source for your application. KWDC Series DC Power Sources are available with Remote Digital Programming and Monitoring features with RS232, RS485 or USB port.

# High Power Series Power Supplies

## Technical Specifications Note 5

Power Line Input	Phase	3 Phase - 4 Wire	3 Phase - 3 Wire	1 Phase - 2 Wire		
	Voltage	415VAC 3Ø or 230VAC 1Ø up to power level of 5kW				
	Voltage Range	± 10% <sup>(Note 1)</sup>				
	Frequency	50Hz, ±3Hz or 60Hz, ±3Hz				
DC Output	Voltage	4 - 400V DC (Refer the chart)				
	Settable Limit	10% - 100%				
	Rated Current	50A - 2000A (Refer the chart)				
	Line Regulation	≤ 1%				
	Load Regulation	≤ 1%				
	Overload Capacity	110% Continuous 150% 1 minute				
	Ripple(Vrms)	≤ 1%				
Digital Metering		a. 3 Digit Digital Voltmeter <sup>(Note 2)</sup> b. 3 Digit Digital Ammeter				
Features		Cable Drop Compensation				
Protections		a. Input Over/UnderVoltage c. DC Over Voltage e. Overheat		b. Phase Fail (for 3Ø units) d. Power Device Guard f. Soft-start Feature g. Output Overload		
Enclosure		IP 20 <sup>(Note 3)</sup>				
Enclosure Colour		Customised				
Indications		a. Line PowerON c. DC Output ON e. Overheat		b. PhaseFail (for 3Ø input) d. Line Over/ Under Voltage f. DC Over/ Under Voltage g. Output Overload		
Cooling System		Air Forced				
Environment		0 to 45°C <sup>(Note 4)</sup>				
Humidity		0-95% (Non-Condensing) Continuous Working				
Dielectric Voltage		1500V AC 10mA / 1 Min				
Noise		≤ 65dB				
Optional Features		a. <b>Drop Characteristics</b> b. Output Blocking Diode c. Input MCCB as per Required KIAC d. Auto Phase Correction e. Isolated Output Controlling Signals f. Front Access to Electrical Circuitry g. DC Distribution box as per Customer Need				
Digital Programming Option		1. Output Voltage & Current programming through RS 232/USB. 2. PSU Performance Monitoring via RS485/USB.				
Dimensions		up to 10kW	11-20kW	21-40kW	41-75kW	Above 75kW
	Height (mm)	940	1225	1325	1650	As per customer request
	Width (mm)	450	500	600	700	
	Depth (mm)	650	800	800	1000	

- Notes:
- (1) Optional upto -30% to +10% on request.
  - (2) Optional Input Line Metering.
  - (3) Optional IP-21, IP-30, IP31, IP-40, IP41, IP-42 or IP-54.
  - (4) Optional interface: RS232 / RS485 / USB.
  - (5) Optional digital meters - 4 digit DPMs
  - (6) All specifications given here are subject. to change to meet the newly imposed standards and technology.



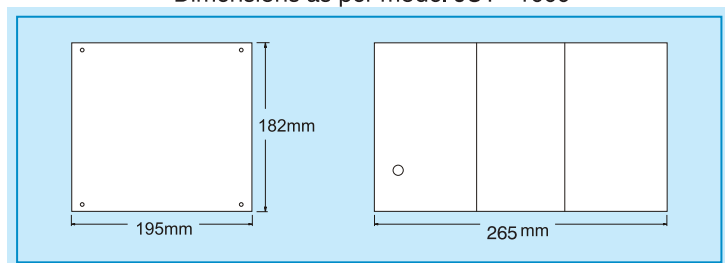
Certified & Approved by



## Ultra Isolation Transformer

- ◆ Minimizes transverse mode noise.
- ◆ Complete electrostatic shielding.
- ◆ Filters power line noise, spikes and transients.
- ◆ Isolates sensitive equipments from noisy power lines.
- ◆ Minimizing common mode noise by over 130dB.
- ◆ Line and load regulation better than  $\pm 3.5\%$ .
- ◆ Quality components, conserving ratings and ruggedised design for best long term value.

\* Dimensions as per model JUT - 1000



MODEL	JUT - 400	JUT - 1000	JUT - 1500	JUT - 2000
Power Rating	400VA	1000VA	1500VA	2000VA
Input Voltage	120V/240V AC, $\pm 10\%$ , 1Phase, 47-63Hz			
Output Voltage	120V/240V AC (2 windings in series or parallel)			
Mode of Operation	As step down or step up or 1:1 Isolation transformer			
Load Regulation	Less than 3.5%			
Common Mode Noise Rejection	Over 130dB			
Operating Temperature	0 - 55°C			
Termination	On terminal block			
Powder Coating Thickness	50 - 100 microns			
Stainless Steel Hardware	Yes			
Coupling Capacitance	< 0.005pF (typically 0.001pF)			
Breakdown Strength	2000V AC for 1 minute			
Insulation Resistance	> 1000M Ohm between any windings to ground at 25°C & 50% R.H.			
Dimensions apprx.** W x H x D (Tol : $\pm 5$ mm)	162 x 137 x 247	195 x 182 x 265	195 x 182 x 290	195 x 182 x 315
Weight apprx. (Tol : $\pm 0.5$ kg)	14Kg	21Kg	28Kg	36Kg

Note: JOMA reserves the right to specifications and are subject to change without notice. \* All dimensions are behind the panel and excluding height legs



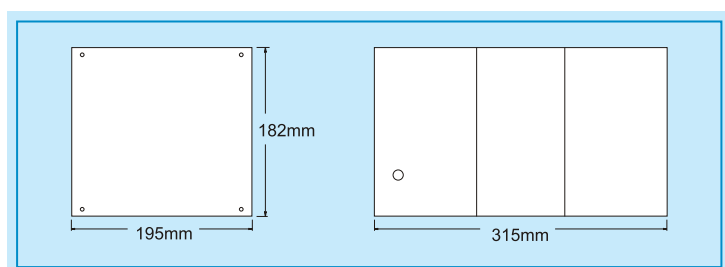


Certified & Approved by



## Ultra Isolation Transformer

- ◆ Minimizes transverse mode noise.
- ◆ Complete electrostatic shielding.
- ◆ Filters power line noise, spikes and transients.
- ◆ Isolates sensitive equipments from noisy power lines.
- ◆ Minimizing common mode noise by over 130dB.
- ◆ Line and load regulation better than  $\pm 3.5\%$ .
- ◆ Quality components, conserving ratings and ruggedised design for best long term value.



MODEL	JUT - 2500	JUT - 3000	JUT - 4000	JUT - 5000
Power Rating	2500VA	3000VA	4000VA	5000VA
Input Voltage	120V/240V AC, $\pm 10\%$ , 1Phase, 47-63Hz			
Output Voltage	120V/240V AC (2 windings in series or parallel)			
Mode of Operation	As step down or step up or 1:1 Isolation transformer			
Load Regulation	Less than 3.5%			
Common Mode Noise Rejection	Over 130dB			
Operating Temperature	0 - 55°C			
Termination	On terminal block			
Powder Coating Thickness	50 - 100 microns			
Stainless Steel Hardware	Yes			
Coupling Capacitance	< 0.005pF (typically 0.001pF)			
Breakdown Strength	2000V AC for 1 minute			
Insulation Resistance	> 1000M Ohm between any windings to ground at 25°C & 50% R.H.			
Dimensions apprx.** W x H x D (Tol : $\pm 5$ mm)				
Weight apprx. (Tol : $\pm 0.5$ kg)				

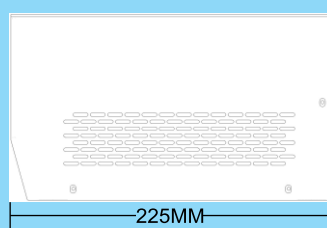
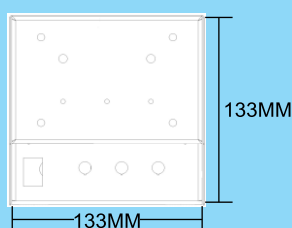
Note: JOMA reserves the right to specifications and are subject to change without notice. \* All dimensions are behind the panel and excluding height legs

# Fix Linear Power Supply Series With Dual Tracking



## FEATURES

- Specially Designed for OEM Use Battery Eliminator/Float Charger
- Output Voltage Adjustability  $\pm 10\%$
- Quality Components and Conservative Ratings for High Reliability and Long Life
- High Regulation, Low Ripple and Noise
- Suitable for Bench/Rack Use



## SPECIFICATIONS

### INPUT VOLTAGE :

230V AC  $\pm 10\%$ . Single phase 50Hz.

### OUTPUT VOLTAGE AND CURRENT :

See Selection Guide.

**Adjustability :**  $\pm 10\%$  of rated voltage.

**Regulation:** Line : 0.05%.\* Load : 0.05%.\*

**Ripple & Noise :** 1mV rms.

**Protection :** Overload & short circuit.

**Stability :** 0.3%. \*\*

**Transient Recovery :** 100 $\mu$ sec.

**Remote Sensing :** Provided for all models with 5A and above.

**Note :** Load Regulation to be measured at sense terminals.

\* For 5V Power Supplies 0.05% +1.5mV

\*\* For 5V Power Supplies 0.03% +15mV

*Built-in Crowbar Type Over Voltage*

*Protection for 5V Power Supply.*

*All power supply with Built-in Mains cord.*

### OPTION AT EXTRA COST

- OVP Crow Bar Type
- 3 Digit DPM for V&I
- Input 115 Volts 50Hz Single Phase
- 19" Rack Adaptable for width of PS with 430 mm.

## SELECTION GUIDE

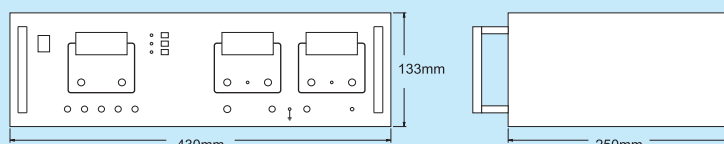
	DC OUTPUT		MODEL
	VOLTAGE	CURRENT	
<b>5V</b>	4.5 to 5.5V	2A	FS0502
	4.5 to 5.5V	5A	FS0505
	4.5 to 5.5V	10A	FS0510
<b>12V</b>	10.8 to 13.2V	2A	FS1202
	10.8 to 13.2V	5A	FS1205
	10.8 to 13.2V	10A	FS1210
<b><math>\pm 15V</math> Dual Tracking</b>	$\pm 13.5$ to $\pm 16.5V$	1A	FSD1501
	$\pm 13.5$ to $\pm 16.5V$	2A	FSD1502
	$\pm 13.5$ to $\pm 16.5V$	5A	FSD1505
<b>24V</b>	21.6 to 26.4V	2A	FS2402
	21.6 to 26.4V	5A	FS2405
	21.6 to 26.4V	10A	FS2410
	21.6 to 26.4V	20A	FS2420
<b>48V</b>	43.2 to 52.8V	2A	FS4802
	43.2 to 52.8V	5A	FS4805
	43.2 to 52.8V	10A	FS4810
	43.2 to 52.8V	20A	FS4820

For 10% variation in input voltage with constant rated load. All dimensions are behind the panel and excluding legs. Load change from no load to full load. Change in output voltage from zero volt (Short circuit) to max. output voltage.

WE PURSUE A POLICY OF CONTINUOUS DEVELOPMENT AND PRODUCT IMPROVEMENT. THUS THE SPECIFICATIONS IN THIS DOCUMENTS AND THE LOCATION OF CONTROLS ON THE FRONT PANEL MAY BE CHANGE D WITHOUT NOTICE

# Regulated DC Power Supply

## Model VSM 32/15/05



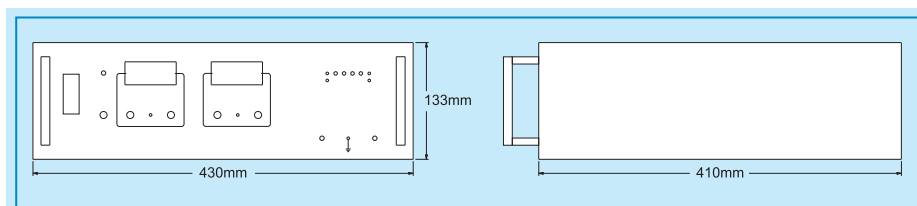
## FEATURES

- Low cost general purpose laboratory bench unit.
- Fully protected against overload and short circuit.
- Three independent outputs electrically isolated from each other.
- 5V/5A with over voltage crowbar protection for digital ICs.
- Electrically floating outputs up to 500V DC w.r.t. ground.
- Compact modular construction.
- Precise regulation, low ripple and noise for both constant voltage and constant current operation.
- Quality components and conserving ratings for high reliability and long life.

OUTPUT	32V/2A	±15V/0.5A	5V/5A
Input Voltage	230V AC, ±10%, 50Hz, 1 Phase		
Output Voltage	0 to 32V	12V to 15V	4.50 to 5.50V
Output Current	0 to 2A	0.5A	5A
Line Regulation CV *	±0.01% ±2mV	±0.1%	±0.1%
Load Regulation CV	±0.01% ±2mV	±0.1%	±0.1%
Line Regulation CC *	±0.1% ±250µA	N.A.	N.A.
Load Regulation CC	±0.1% ±250µA	N.A.	N.A.
Output Ripple CV	1mV rms	1mV rms	1mV rms
Output Ripple CC	0.04% rms	N.A.	N.A.
Remote Sensing	N.A.	N.A.	N.A.
Operating Temp.	0 to 50°C	0 to 50°C	0 to 50°C
Protection	OL/SC (CC type)	OL/SC (fold back type)	OL/SC (fold back type)
O/P OVP	N.A.	N.A.	Crowbar type
Indication (LED)	CV/CC	CV	CV
3 Digit DPM	V & I	Common 3 digit voltmeter with sel. switch	
Meter Accuracy	±3 counts	±3 counts	±3 counts
Input on/off	Rocker switch	Rocker switch	Rocker switch
Single Turn Pots	Coarse & fine to set V & I	V set	V set
Dimensions apprx. W × H × D (mm)	430 × 133 × 250		
Weight apprx.	12.0kg.		

\* For 10% variation in input voltage with constant rated load. \*\* All dimensions are behind the panel and excluding legs  
 WE PURSUE A POLICY OF CONTINUOUS DEVELOPMENT AND PRODUCT IMPROVEMENT. THUS THE SPECIFICATIONS IN  
 THIS DOCUMENTS AND THE LOCATION OF CONTROLS ON THE FRONT PANEL MAY BE CHANGE D WITHOUT NOTICE

# Bi-directional DC Power Supplies



## SPECIFICATIONS

**Metering** : 3 digit DPMs for voltage and current measurement.

**Meter Accuracy** :  $\pm 3$  counts.

**Constant Voltage Mode :**

### REGULATION :

Line :  $\pm 0.01\% \pm 2\text{mV}$  for  $\pm 10\%$  change in line voltage.

Load :  $\pm 0.01\% \pm 2\text{mV}$  for load change from zero to full load.

**Ripple AND Noise** : 1mV rms max. 20Hz to 20MHz.

**Constant Current Mode :**

### REGULATION :

Line :  $\pm 0.01\% \pm 10\text{mA}$  for  $\pm 10\%$  change in line voltage.

Load :  $\pm 0.01\% \pm 10\text{mA}$  for change in output voltage from 0 volts to maximum output voltage.

**Ripple AND Noise** : 0.04% rms

**Mode Indication** : LED indication for constant voltage / constant current operation mode.

**Output Polarity** : Floating w.r.t. ground.

**Overload Protection** : Constant current type.

**Transient Response** : 100 micro sec within 10mV of set output voltage for load change from 10% to 90%.

**Stability** : Total drift within 8 hours, after 30 minutes warm-up under constant line, load and temperature.

$< \pm 0.2\% \pm 10\text{mV}$  in CV mode.

$< \pm 0.5\% \pm 10\text{mA}$  in current mode.

**Operating Temperature** :

0 to 50°C.

**Temp. Coefficient** :  $\pm 0.05\% \pm 5\text{mV}$  per OC after initial warm-up of 30 minutes, in voltage mode.

**Line Voltage** : 230V AC  $\pm 10\%$ , single phase 50Hz.

**NOTE:** Discharging current can be set from 10% to 100%

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- Two Digital Meters - 3 Digit DPMs
- Constant Voltage / Constant Current Operation
- 19" Rack Adaptable
- Remote Sensing Facility
- High Stability and Close Regulation  $\pm 0.01\%$
- Bidirectional Function

## Special feature at Extra Cost

- Presetting Facility
- Over Voltage Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.
- Digital meters - 4 digit DPMs
- Optional interface: RS232 / RS485 / USB

## SELECTION GUIDE

	PV	PI	DIMENSIONS	MODEL	WEIGHT
32V	0-32V	0-02A	430 x 133 x 250	VS3202B	16.8
	0-32V	0-05A	430 x 133 x 450	VS3205B	23.4
32V	0-32V	0-10A	430 x 133 x 450	VS3210B	23.4
	0-32V	0-30A	430 x 133 x 750	VS3230B	44.5
64V	0-64V	0-05A	430 x 133 x 450	VS6405B	23.4
	0-64V	0-10A	430 x 133 x 450	VS6410B	23.4
32V	0-32V	0-60A	430 x 222 x 750	VS3260B	70.0
64V	0-64V	0-30A	430 x 222 x 750	VS6430B	70.0



# Master-Slave Series

## 6.4kW - 10kW DC Power Supplies



### DIGITAL LAB SELECTION GUIDE

SINGLE OUTPUT 6.4kW				
OUTPUT	DC OUTPUT		DIMENSIONS W x H x D (mm)	MODEL
	VOLTAGE	CURRENT		
16V	0-16V	0-300A	485 x 870 x 655	VS16300
32V	0-32V	0-200A	485 x 870 x 655	VS32200
64V	0-64V	0-100A	485 x 870 x 655	VS64100
80V	0-80V	0-80A	485 x 870 x 655	VS8080
128V	0-128V	0-50A	485 x 870 x 655	VS12850

SINGLE OUTPUT 10kW				
OUTPUT	DC OUTPUT		DIMENSIONS W x H x D (mm)	MODEL
	VOLTAGE	CURRENT		
32V	0-32V	0-300A	485 x 870 x 655	VS32300
64V	0-64V	0-150A	485 x 870 x 655	VS64150
128V	0-128V	0-80A	485 x 870 x 655	VS12880
300V	0-300V	0-30A	485 x 870 x 655	VS30030
600V	0-600V	0-20A	485 x 870 x 655	VS60020
1000V	0-1000V	0-10A	485 x 870 x 655	VS100010

### SPECIFICATIONS

**Output Voltage & Current :** See Selection Guide.

**Constant Voltage Mode :**

**Regulation :**

**Line :**  $\pm 0.01\% \pm 2\text{mV}$  for  $\pm 10\%$  change in line output.

**Load :**  $\pm 0.01\% \pm 2\text{mV}$  for load change from zero to full load.

**Ripple & Noise :** 1mV rms max. 20Hz - 20MHz.

**Constant Current Mode :**

**Regulation :**

**Line :**  $\pm 0.01\% \pm 10\text{mA}$  for  $\pm 10\%$  line change.

**Load :**  $\pm 0.01\% \pm 10\text{mA}$  for change in output voltage from 0 Volts to maximum output voltage.

**Ripple & Noise :** 100mA rms.

**Metering :** 3 Digit DPM.

**Meter Accuracy :**  $\pm 3$  counts.

**Mode Indication :** LED indication for constant voltage / constant current operating mode.

**Output Polarity :** Floating w.r.t. ground.

**Overload Protection :** Automatic overload and short circuit protection. (Optional)

**Transient Response :** 100 $\mu$ secs to within 10mV of set output voltage for load change from 10% to 90%.

**Stability :** Total drift within 8 hours, after warm-up.

<  $\pm 0.2\%$  plus 5mV in constant voltage mode.

<  $\pm 0.5\%$  plus 5mA in constant current mode with constant line, load and ambient temperature conditions.

**Operating Temperature :** 0-50°C.

**Line Voltage :** 415V AC  $\pm 10\%$  50Hz, 3 phase. OR 230V AC  $\pm 10\%$  50Hz, 1 Phase

**NOTE :** REGULATION TO BE MEASURED AT SENSE TERMINALS.

## FCBC Series Charger

Heavy Duty 50Hz Charger For Heavy Industrial Environments



- Input Voltage 1PH or 3PH
- Automatic Float to Boost Conversion
- Auto / Manual Switch
- Digital Volt & Current Meter for Output
- True CV-CC Charging
- Reverse Polarity Protection
- Product Range: 10w to 50kw

FLOAT CUM BOOST CHARGER SERIES		
	DC OUTPUT	MODEL
12V	12V/5A	FCBC12V/5A
	12V/10A	FCBC12V/10A
	12V/20A	FCBC12V/20A
	12V/30A	FCBC12V/30A
	12V/60A	FCBC12V/60A
	12V/100A	FCBC12V/100A
24V	24V/5A	FCBC24V/5A
	24V/10A	FCBC24V/10A
	24V/20A	FCBC24V/20A
	24V/30A	FCBC24V/30A
	24V/60A	FCBC24V/60A
	24V/100A	FCBC24V/100A
48V	48V/5A	FCBC48V/5A
	48V/10A	FCBC48V/10A
	48V/20A	FCBC48V/20A
	48V/30A	FCBC48V/30A
	48V/60A	FCBC48V/60A
	48V/100A	FCBC48V/100A
110V	110V/30A	FCBC110V/30A

SPECIFICATIONS	FCBC CHARGER
AC Input Voltage	230 VAC 10% 50Hz
DC Output / Current	24V / 36V / 10A - 45A 48V / 10A - 30A
Recommended Battery Size	75Ah to 520Ah
Recommended Battery Type	Lead Acid, VRLA and Li Ion Batteries
Charger Efficiency	Approx 82%
Operating Temperature	0°C to 55°C (-32°F to 158°F)
Storage Temperature	-25°C to 70°C
Temperature Compensation	Internal
Application	Fork Lifts, Pallet Trucks, Stackers

Manufacture By:

**JOMA INDIA EV PVT. LTD.**

210, Jaydeep Emphases, Plot No. A-09,  
Near Datta Mandir, Wagale Estate, Thane (W) 400604

