

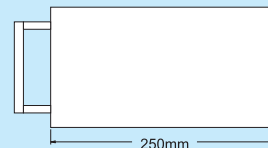
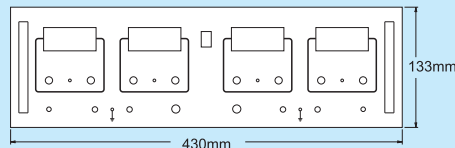
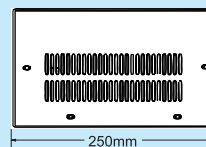
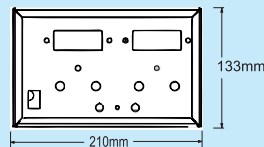


DC Power Supplies

**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 15 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 Features at Extra Cost

- 1) 19" Rack mounting only for PS with 430mm width.
- 2) 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 : $\pm 0.1\% \pm 250\mu\text{A}$ for $\pm 10\%$ line change.

Load : $\pm 0.1\% \pm 250\mu\text{A}$ for change in output voltage from 0 Volts to maximum output voltage.

Ripple & Noise : 0.04% rms.

Metering : 3 Digit DPM.

Meter Accuracy : ± 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.

Transient Response : 100 μsecs 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.

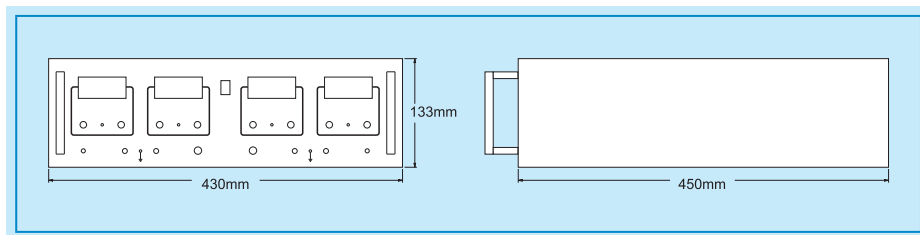
Dual Output 300W - 2000W DC Power Supplies



- High current density.
- Remote sensing.
- 19" rack adaptable -3U high
- 300W to 2000W different combinations
- 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

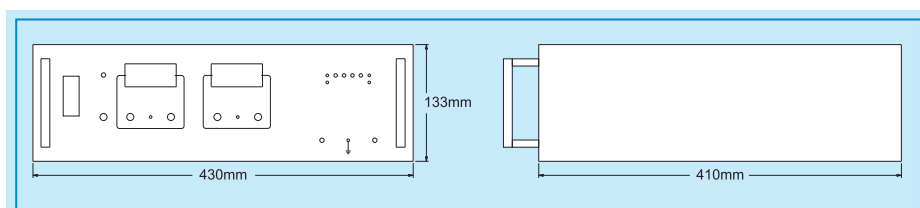
Special Features at Extra Cost

- 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 | VSD6420 | VSD1282 | VSD1285 | VSD1288 |
|--------------------------------|---------------------------------------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| 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 64V | 0 to 128V | 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 20A | 0 to 2.5A | 0 to 5A | 0 to 8A |
| Line Regulation CV * | $\leq 0.01\% \pm 2mV$ | | | | | | | | |
| Line Regulation CC ! | $\leq 0.1\% \pm 2mA$ | | | | | | | | |
| Load Regulation CV * | $\leq 0.01\% \pm 2mV$ | | | | | | | | |
| Load Regulation CC !! | $\leq 0.1\% \pm 2mA$ | | | | | | | | |
| 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 | ± 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 | 22.0 | 22.5 | 28 | 20 | 20 | 23 |

300W - 1.2KW DC Power Supplies



SPECIFICATIONS

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 : $\pm 0.1\% \pm 10\text{mA}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.1\% \pm 10\text{mA}$ 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 Features at Extra Cost

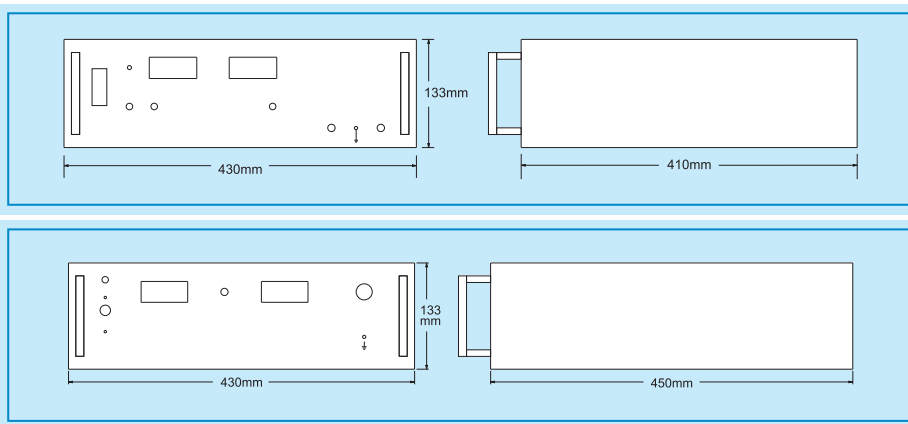
- Presetting Facility
- Over Voltage Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.
- Digital meters - 4 digit DPMs
- Optional interface: RS232 / RS485 / USB

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.

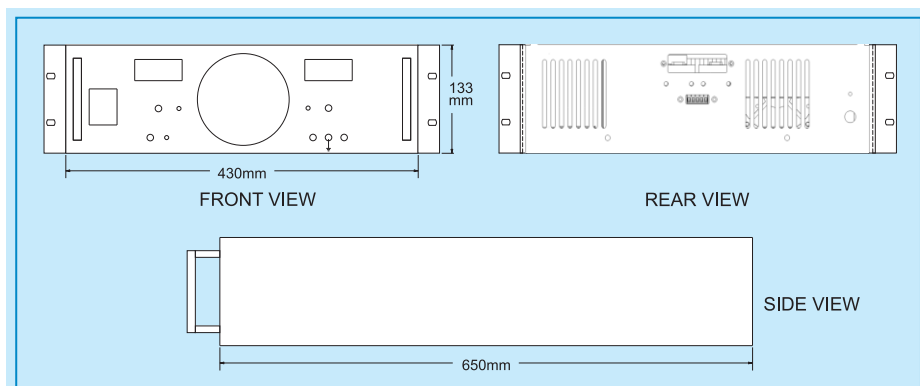
Line Voltage : 230V AC $\pm 10\%$, 50Hz single phase. Output protected against Short Circuit.

- 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 Features 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 * | $\leq 0.01\% \pm 5mV$ | | | | |
| Load Regulation CV ! | $\leq 0.01\% \pm 5mV$ | | | | |
| Line Regulation CC * | $\leq 0.1\% \pm 10mA$ | | | | |
| Load Regulation CC !! | $\leq 0.1\% \pm 10mA$ | | | | |
| 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 | ± 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

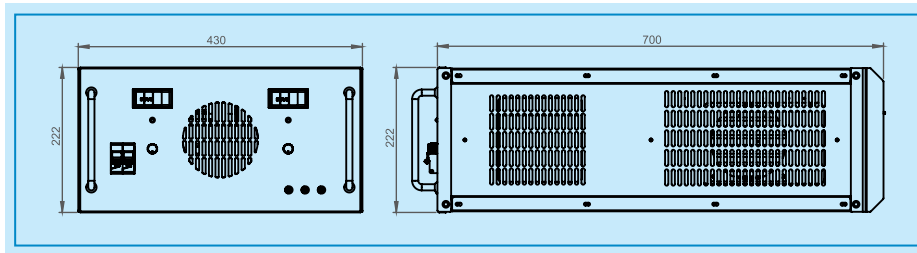
3KW DC Power Supplies



ELECTRICAL SPECIFICATION: 3KW DC POWER SUPPLY

| MODEL | VS3299 | VS6450 | VS12825 | VS3010 | VS0650 | VS1030 |
|---|---|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------|
| Input Voltage | 230V AC / 415 V AC , $\pm 10\%$, 1 Phase / 2 Phase | | | | | |
| Input Frequency | 50Hz ± 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* | $\leq 0.01\% \pm 2\text{mV}$ | $\leq 0.01\% \pm 2\text{mV}$ | $\leq 0.01\% \pm 2\text{mV}$ | $\leq 0.01\% \pm 2\text{mV}$ | $\leq 0.01\% \pm 2\text{mV}$ | $0.01\% \pm 2\text{mV}$ |
| Line Regulation CC* | $\leq 0.1\% \pm 10\text{mA}$ | $\leq 0.1\% \pm 10\text{mA}$ | $\leq 0.1\% \pm 10\text{mA}$ | NA | NA | NA |
| Load Regulation CV | $\leq 0.01\% \pm 2\text{mV}$ | $\leq 0.01\% \pm 2\text{mV}$ | $\leq 0.01\% \pm 2\text{mV}$ | $\leq 0.01\% \pm 2\text{mV}$ | $\leq 0.01\% \pm 2\text{mV}$ | $0.01\% \pm 2\text{mV}$ |
| Load Regulation CC | $\leq 0.1\% \pm 10\text{mA}$ | $\leq 0.1\% \pm 10\text{mA}$ | $\leq 0.1\% \pm 10\text{mA}$ | 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 | ± 3 count | ± 3 count | ± 3 counts | ± 3 count | ± 3 counts | ± 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 Voltage DC Power Supplies



Special Feature (Optional)

- 19" rack mounting

ELECTRICAL SPECIFICATION: High Voltage DC POWER SUPPLY

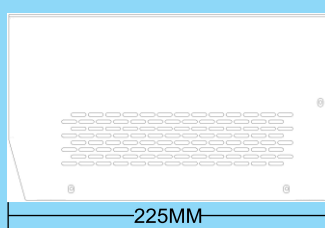
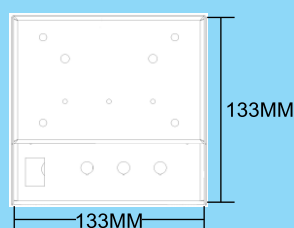
| MODEL | CBVS 1500V / 1A | CBVS 2000V / 1A | CBVS 3000V / 1A |
|---|-----------------------------|-----------------|-----------------|
| Input Voltage | 230VAC $\pm 10\%$, 1 PHASE | | |
| Output Power | 1.5 kw | 2 kw | 3 kw |
| Input Frequency | 50Hz ± 2 Hz | | |
| Output Voltage | 150 to 1500V | 200 to 2000V | 300 to 3000V |
| Output Current | 0 to 1A | 0 to 1A | 0 to 1A |
| Line Regulation CV* | $\leq 0.1\% \pm 2$ mV | | |
| Load Regulation CV | $\leq 0.1\% \pm 2$ mV | | |
| Output Ripple CV | 0.1% | | |
| Voltage Stability | 0.3% | | |
| Protection | OL/SC | | |
| Indication (LED) | CV/CL | | |
| 4 Digit DPM | V & I | | |
| Meter Accuracy | ± 3 count | | |
| Controls (2Pole MCB) | Input On/Off | | |
| Multi Turn Pots | 'V' Set/'I' Set | | |
| Dimensions (approx) W x H x D (mm) * * | 430x221x700 | | |

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 μ 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

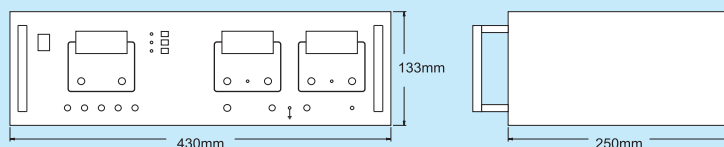
| | DC OUTPUT | | MODEL |
|---|---------------------------|---------|---------|
| | VOLTAGE | CURRENT | |
| 5V | 4.5 to 5.5V | 2A | FS0502 |
| | 4.5 to 5.5V | 5A | FS0505 |
| | 4.5 to 5.5V | 10A | FS0510 |
| 12V | 10.8 to 13.2V | 2A | FS1202 |
| | 10.8 to 13.2V | 5A | FS1205 |
| | 10.8 to 13.2V | 10A | FS1210 |
| $\pm 15V$ Dual Tracking | ± 13.5 to $\pm 16.5V$ | 1A | FSD1501 |
| | ± 13.5 to $\pm 16.5V$ | 2A | FSD1502 |
| | ± 13.5 to $\pm 16.5V$ | 5A | FSD1505 |
| 24V | 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 |
| 48V | 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

DC Electronic Active Load



**FOR REFERENCE ONLY



Technical Specifications

The DC Electronic Active Load by Joma is a high-performance MOSFET based electronic load designed to meet diverse testing requirements for power supply units, batteries, and other DC power sources. Engineered with precision, this active load offers excellent stability, accuracy, and a wide range of operating modes to ensure reliable performance in both laboratory and industrial applications.

Equipped with advanced features such as constant current (CC), constant voltage (CV) modes, the Joma DC Active Load provides flexibility for various testing scenarios. Its intuitive interface and comprehensive protection mechanisms ensure user safety and seamless operation.

Ideal for R&D laboratories, production testing, and quality assurance environments, the Joma DC Active Load delivers robust performance, ensuring precise control and accurate measurement capabilities.

Special Features

- Modes of operation: CV, CC
- Hardware circuit for CV function, faster transient response and higher CV accuracy
- Over current, over voltage, over temperature and reverse voltage protections.
- 3 Digit DPM provided for voltage & current
- Multi-turn Potentiometer provided for control on front panel
- Voltage & Current presetting
- Force cooling system, ensure high stability during long-time operation under full load

Optional Features At Extra Cost

- 4 digit DPM for voltage & current
- Battery voltage monitor DPM
- Timer facility
- AH meter
- Watt meter
- Analog programming of 0-10V DC for both CV & CC, selectable by 24V DC signal
- Standard USB Interface, support LabView.
- RS-485 Interface, support LabView
- Ethernet Interface
- 19" rack mounting

| MODEL | AS PER SELECTION GUIDE |
|------------------------|---|
| Input Voltage | AS PER SELECTION GUIDE |
| Input Current | AS PER SELECTION GUIDE |
| Input Power | AS PER SELECTION GUIDE |
| CV Mode | Accuracy: $\leq \pm 0.1\%$ |
| CC Mode | Accuracy: $\leq \pm 0.1\%$ |
| CV / CC Control | 10 turn pot on front panel |
| Metering | 3 digit DPM Accuracy : ± 3 counts |
| Accessories | user's manual, mains cord & RJ-45 to RJ-45 cable(optional), USB to USB cable (optional) |
| Power Supply | 230V AC $\pm 10\%$, 60Hz |
| Indications | CV, CC, Over voltage, over temp. |
| Dimensions (W X H X D) | AS PER SELECTION GUIDE |

DC Electronic Active Load

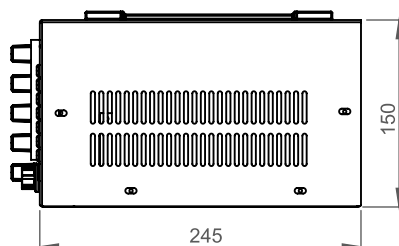
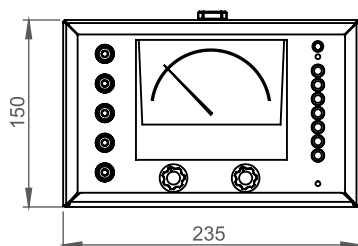
| SELECTION GUIDE 0 - 320W | | | | |
|--------------------------|---------|---------|------------------------------|------------------|
| OUTPUT | VOLTAGE | CURRENT | DIMENSIONS W x H x D (mm) | MODEL |
| 16V | 1-16V | 0-20A | 210 x 133 x 250 | JL16V/20A |
| 32V | 1-32V | 0-10A | 210 x 133 x 250 | JL32V/10A |
| 64V | 1-64V | 0-5A | 210 x 133 x 250 | JL64V/5A |

| SELECTION GUIDE 0 - 1KW | | | | |
|-------------------------|---------|---------|------------------------------|------------------|
| OUTPUT | VOLTAGE | CURRENT | DIMENSIONS W x H x D (mm) | MODEL |
| 16V | 1-16V | 0-60A | 430 x 133 x 250 | JL16V/60A |
| 32V | 1-32V | 0-30A | 430 x 133 x 250 | JL32V/30A |
| 64V | 1-64V | 0-15A | 430 x 133 x 250 | JL64V/15A |
| 128V | 1-128V | 0-8A | 430 x 133 x 250 | JL128V/8A |

| SELECTION GUIDE 0 - 2KW | | | | |
|-------------------------|---------|---------|------------------------------|-------------------|
| OUTPUT | VOLTAGE | CURRENT | DIMENSIONS W x H x D (mm) | MODEL |
| 16V | 1-16V | 0-130A | 430 x 133 x 410 | JL16V/130A |
| 32V | 1-32V | 0-65A | 430 x 133 x 410 | JL32V/65A |
| 64V | 1-64V | 0-33A | 430 x 133 x 410 | JL64V/33A |
| 128V | 1-128V | 0-16A | 430 x 133 x 410 | JL128V/16A |

| SELECTION GUIDE 0 - 4KW | | | | |
|-------------------------|---------|---------|------------------------------|-------------------|
| OUTPUT | VOLTAGE | CURRENT | DIMENSIONS W x H x D (mm) | MODEL |
| 16V | 1-16V | 0-250A | 430 x 133 x 650 | JL16V/250A |
| 32V | 1-32V | 0-125A | 430 x 133 x 650 | JL32V/125A |
| 64V | 1-64V | 0-65A | 430 x 133 x 650 | JL64V/65A |
| 128V | 1-128V | 0-33A | 430 x 133 x 650 | JL128V/33A |

Audio Power Meter PM150



Application

- **Sound Reinforcement:** Ensuring speakers and amplifiers are not overloaded, leading to better sound quality and avoiding equipment damage.
- **Broadcasting:** Monitoring audio levels to maintain consistent broadcast quality and comply with regulatory standards.
- **Audio Engineering:** Assisting in mixing and mastering processes by providing precise measurements of audio power levels.



FEATURES

- Power Measurement upto 150 Watts
- Frequency Range 30Hz to 20KHz
- Power Indication in Watts and dB
- Choice of 12 Standard Load impedances
- Thermal Shut Down for Overheat Protection

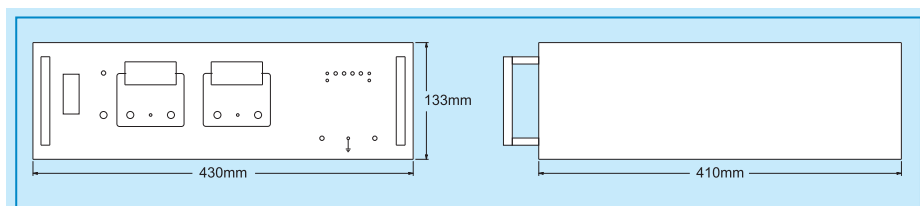
Description

- Audio Power Meter Model PM150 measures the power delivered to a load by a circuit such as a power amplifier.
- It provides a choice of twelve standard terminating loads.
- The output power is measured in both watts and decibels.
- The frequency range of operation is 30Hz to 20KHz. Output power upto 150Watts can be measured with load impedance of 4, 8 and 16 ohms & upto 15W from 50 ohms to 10K ohms.
- A thermal shutdown is provided to protect the meter as well as the power source in case of overheat.

| MODEL | PM150 |
|-----------------------------------|--|
| Supply Voltage | 6 V DC, 1.5V PENCIL CELLS X 4, Mains optional |
| Supply Current | 1mAmp |
| Power Range | 5mW, 50mW, 0.5W, 5W, 15W, 50W and 150W full scale 50W & 150W full scale range only for 4,8 & 16 ohms impedances |
| Type Of Measurement | Unbalanced |
| Impedance Range | Twelve position switch selects impedances viz. 4,8,16,50,75,125,150,600,1K,2K,5K and 10K in ohms. |
| Impedance Accuracy | ±3% at 1KHz ±5% from 30Hz to 20KHz |
| Power Accuracy | For Input 1/2 FSD to FSD: ±6% of reading when measured at 1KHz at normal ambient temp. (15 to 35 °C). For Input 1/10 FSD to 1/2 FSD: ±6% of reading, ±3% of FSD when measured at 1KHz at ambient temp.(15 to 35 °C) |
| Frequency Characteristics | 30Hz to 20KHz, ±1dB, w.r.t.1KHz, |
| Calibration Of Meter | In Watt / mW & dB |
| Operating Temperature | 0 - 40° C |
| Dimensions approx.** W x H x D | 235mm x 150 mm x 245 mm |
| Weight approx. (Kg)** | 5.4 kg |
| Accessory | Banana to alligator clip 1 pair |

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Bi-directional DC Power Supplies



SPECIFICATIONS

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 continuously adjustable from 10% to 100% at any voltage $> 1\text{V}$ (In CC mode)

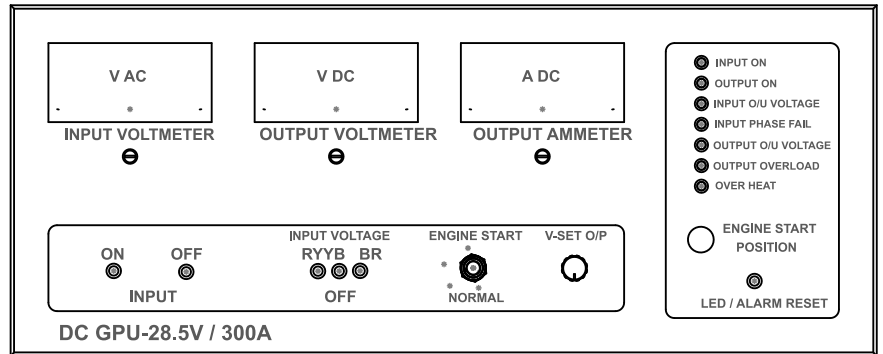
- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- Two Digital Meters - 3 Digit DPMs
- Constant Voltage / Constant Current Operation
- 19" Rack Adaptable
- Remote Sensing Facility
- High Stability and Close Regulation $\pm 0.01\%$
- Bidirectional Function

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 |



SPECIFICATION:

1) Input Voltage : 415V \pm 10% 3 Phase 50Hz AC supply

2) Output : 28.5 V DC at 300A & 26V DC at 2000A

3) Voltage Variation : \pm 1V (from No load to full load)

4) Ripple Voltage : < 0.2 V rms

5) Voltage adjustment : 26 V to 30 V

6) Output Current : 600A (continuous)

7) Inrush current: inrush of 2000A for 500mSec

8) Current limiting setting: Adjustable 100A to 2000A

9) Output overload:

1500A for at least 27V for at least 30 sec

2000A for at least 27V for at least 5 sec

7) ambient temp.: operating : 0 to 50°C
storage : -10°C to 70°C

7) Humidity: 10% to 100% with condensation

7) Audible noise level: < 68dB @ 2 meters

7) Parameters to display: digital - output voltage, output ammeter, elapsed time

7) Operating controls: main ON / OFF MCCB
load ON / OFF push button

7) system indicators: a. Mains R, Y, B, - LED
b. load - ON LED

8). Protection indicators:

- a). Output under / over voltage
- b). Output overload / short circuit
- c). Input over / under voltage
- d). Input phase fail / reversal
- e). Over temperature
- f). Audible alarm

8). Protections:

- a). Output under / over voltage
- b). Output overload / short circuit
- c). Input over / under voltage
- d). Input phase fail / reversal
- e). Over temperature
- f). Output phase reversal

11) Out put cable : 95 Sq.mm 2x1 core 15 mtrs length with NATO connector.

12). Input Cable : 10 Sq.mm 5 core cable length 50 mtrs with male and female industrial sockets.

13). Weight : Approx 400 Kgs

Digital Psophometer JPM90

Description

A Joma make Digital Psophometer is a precision instrument designed to measure noise levels in telecommunication circuits, particularly within the audio frequency range. This portable unit is equipped with a Psophometric filter, adhering to CCITT recommendations, for accurate weighted and unweighted noise measurements. It also includes additional features such as a 'Recorder Out' for response curve plotting and a built-in stable calibration signal, enhancing its utility in testing and ensuring high-quality voice communication.

Application

- **Telecommunication Network Testing:** Measures and monitors noise in voice communication channels to ensure clear audio quality.
- **Broadcasting:** Assesses audio circuit noise levels in radio and TV to maintain high sound quality.
- **Audio Equipment Testing:** Ensures low noise levels in devices like amplifiers and microphones during production.
- **Military and Aerospace Communications:** Maintains communication integrity by minimizing noise interference.
- **Research and Development:** Supports the study and advancement of communication technologies by analyzing noise in various environments.

Features

- Compact and Portable for Field Application
- Extremely Sensitive and Accurate
- Weighted and Flat Frequency Response as per CCITT Standard
- Highly Stable Internal Calibration Signal
- Measurement of Metallic Noise, Longitudinal Noise, Level and Transmission Loss Over a Transmission Line
- Operated on Mains / Internal Battery or on External 6V DC Source
- Built-in 'Power Hum' measurement facility
- Recorder Output Available
- I/P Impedance 600, 1120 ohms or Hi Selectable
- 3½ Digit LCD Display
- Lo Battery' Indication



Technical Specifications

| | | | | |
|--|---|--------------------|---|--|
| Frequency Range | : | a) Weighted Mode | : | 15Hz to 6KHz as specified by CCITT. |
| | | b) Unweighted Mode | : | 15Hz to 10KHz. |
| Measuring Range | : | a) dBm | : | -90dBm to 0dBm. |
| | | b) Voltage | : | 30μV to 1V. |
| Min. Measurable Value | : | | | 10μV (-98dBm). |
| Calibration Accuracy at 800Hz | : | | | 0 to -60dBm : ±0.5dB. -60 to -90dBm : ±1.0dB. |
| Display | : | | | 3½ Digit LCD type. |
| Input Impedance | : | | | 600 ohms, 1120 ohms balanced, 'Hi'. |
| Frequency Response of Psophometric Measurements | : | | | According to CCITT weighting coefficient for Telephone circuits. |

| Frequency Hz | Relative Weight dB | Limit ±dB |
|-----------------|-----------------------|--------------|
| 16.6 | -85.0 | — |
| 50 | -63.0 | 2 |
| 100 | -41.0 | 2 |
| 200 | -21.0 | 2 |
| 300 | -10.6 | 1 |
| 400 | -6.3 | 1 |
| 500 | -3.6 | 1 |
| 600 | -2.0 | 1 |
| 700 | -0.9 | 1 |
| 800 | 0.0 | 0 |
| 900 | +0.6 | 1 |
| 1K | +1.0 | 1 |
| 1.2K | 0.0 | 1 |
| 1.4K | -0.9 | 1 |
| 1.6K | -1.7 | 1 |
| 1.8K | -2.4 | 1 |
| 2.0K | -3.0 | 1 |
| 2.5K | -4.2 | 1 |
| 3K | -5.6 | 1 |
| 3.5K | -8.5 | 2 |
| 4K | -15.0 | 3 |
| 4.5K | -25.0 | 3 |
| 5K | -36.0 | 3 |
| 6K | -43.0 | 3 |

| | | |
|-----------------------------|---|---|
| Recorder Facility | : | 100μA at 0dBm 1120 impedance. |
| Power | : | a) 230V AC ±10%, 47-53Hz. Optional 115V AC ±10%, 57-63Hz. b) Internal rechargeable 6V battery. c) External battery operation. |
| Dimensions | : | 265 (W) x 105 (H) x 356 (D) mm approx. |
| Weight | : | 6 Kg. approx. with battery. |
| Standard Accessories | : | Instruction Manual - 1 No. Dual Banana to Dual Banana Cable - 1 No. Dual Banana to BNC(M) Cable - 1 No. Dual Banana to Alligator Clip - 1 No. Ext. Battery Jack Cable - 1 No. |

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FCBC Series

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 | Float Cum Boost Charger |
|--------------------------|--|
| AC Input Voltage | 230 VAC 10% 50Hz |
| DC Output / Current | 12V / 24V / 5A - 100A 48V / 5A - 100A 110V / 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 |

Regulation :

Line Regulation : <1%

Load Regulation : <1%

Ripple(Vrms) : <1%

Digital Metering :

- 3 Digit Digital Voltmeter
- 3 Digit Digital Ammeter

Indications :

- Float
- Boost
- CV mode
- Phase Fail (for 3Ø units)
- Battery reverse
- Output under voltage
- Output Over voltage

Features : CV mode

Efficiency : >82%

JFG3 3MHz Function Generator



Features

- Wide Frequency Range
- Sine, Triangle, Square, Ramp, Pulse, TTL (Sync) & DC Outputs
- Low Distortion High Resolution on Low Frequency
- Output Attenuation upto 80dB
- Variable DC Offset Control
- Four Digit digital Display with Frequency Indication in Hz, KHz, MHz / Amplitude display

Application

JOMA's JFG3 Function Generator series is the answer to most engineer's test requirements. Economical with plenty of advantages makes this series the best in the market today. These Signal generators can be used as a signal source to check amplifiers, filters, attenuators and also to generate in circuit based signals. This series of signal generators are designed to provide the user with all the specifications of a good quality Function Generator while maintaining easy operability. The wide Frequency range from 0.01Hz up to 3MHz through coarse and fine controls makes quick adjustment possible.

Technical Specifications

| FUNCTION GENERATOR | JFG3 |
|--|---|
| Frequency Range | 0.01Hz to 3MHz in 8 decade ranges. |
| Frequency Indication | ±1% ±1 digit. |
| Output Impedance | 50 ohms |
| Frequency Indication Accuracy | ±1% +1 digit |
| Output Waveforms | Sinusoidal, Triangle, Square, Ramp, Pulse, TTL (Sync) & DC Outputs. |
| Sine Distortion | <1% (typical). |
| Square Wave Rise / Fall Time | <75nsec. |
| Frequency Stability | <0.5% of the set frequency (after ½ Hour warm up). |
| Duty Cycle | 10% to 90% variable. |
| Maximum Output Voltage a) Into 50 ohms b) Open Circuit | 10V p-p output. 20V p-p output. |
| Amplitude Indication | 3 digit seven segment display (Vp-p) ±5%. |
| Amplitude Flatness | ±0.5dB upto 100KHz range / ±1.0dB for 1MHz range. |
| Attenuator | Two step attenuators of 20dB & 40dB. Fine attenuation of 20dB through vernier control. (Total 80 dB attenuation). |
| Attenuator Accuracy | ±0.5dB per 20dB at 1KHz. |
| DC Offset | ±10V ±5% (DC + AC peak) in open circuit ±5V ±5% (DC + AC peak) in 50 ohms. |
| POWER REQUIREMENT | |
| AC Mains Power | 230V AC ±10%, 50Hz., 15VA. (Approx.) |
| GENERAL | |
| Dimensions (mm) | 270 (W) x 88 (H) x 310 (D) |
| Weight (approx.) | 3 Kg. |
| Standard Accessories | Instruction Manual 1 No. BNC(M) to Alligator Clip 1 No. Mains Cord 1 No. |
| Optional Accessory | 50 ohms Termination. |

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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% ^(Note 1) | | | | |
| | 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 ^(Note 2) 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 ^(Note 3) | | | | |
| 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 ^(Note 4) | | | | |
| Humidity | | 0-95% (Non-Condensing) Continuous Working | | | | |
| Dielectric Voltage | | 1500V AC 10mA / 1 Min | | | | |
| Noise | | ≤ 65dB | | | | |
| Optional Features | | a. Droop Characteristics 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 | |

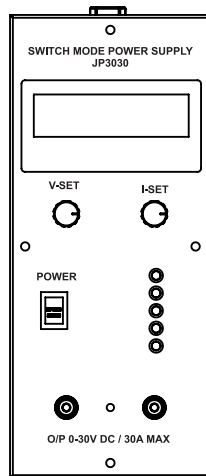
- Notes: (1) Optional upto -30% to +10% on request.
 (2) Optional Input Line Metering.
 (3) Optional IP-21, IP-30, IP31, IP-40, IP41, IP-42 or IP-54.
 (4) Optional interface: RS232 / RS485 / USB.
 (5) Optional digital meters - 4 digit DPMs
 (6) All specifications given here are subject. to change to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

Switch Mode Power Supply

JP3030

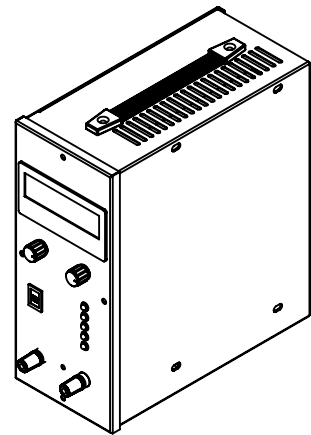
Standard Feature

- SMPS Based Design
- Two Digital Meters - 3 Digit DPMs
- Constant Voltage / Constant Current Operation
- Front panel potentiometer to set V&I
- 3 Digit seven segment display for V&I
- High Efficiency, Long Life & High Reliability
- Lighter in weight
- Over voltage protection
- Over temperature protection



Additional Features (with extra cost)

- Analog programming 0-5V / 0-10V for output voltage & current
- Interface : RS485, USB, Ethernet
- Readback or monitoring 0-5V / 0-10V for output Voltage & Current
- 4 digit display
- Over/under voltage protection
- PFC as per customer requirement for remote annunciation



| MODEL | JP3030 |
|--------------------------------|--------------------------------|
| Input Voltage | 180VAC to 270VAC, 50Hz, 1Phase |
| Output Voltage | 0 to 30V |
| Output Current | 0 to 30A |
| Line Regulation CV * | $\leq 1\% \pm 2mV$ |
| Line Regulation CC ! | $\leq 1\% \pm 10mA$ |
| Load Regulation CV * | $\leq 1\% \pm 2mV$ |
| Load Regulation CC !! | $\leq 1\% \pm 10mA$ |
| Output Ripple | $< 10mV$ rms |
| Efficiency | $> 85\%$ |
| Cooling | Forced cooling |
| Operating Temp. | 0 to 50°C |
| Protection | over load / short circuit |
| Indication (LED) | CV/CC |
| 3 Digit DPM | V & I |
| Meter Accuracy | ± 3 counts |
| Input on/off | Rocker Switch |
| Single Turn Pots Coarse & Fine | V set & I set |

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 | 530 x 1200 x 750 | VS16300 |
| 32V | 0-32V | 0-200A | 530 x 1200 x 750 | VS32200 |
| 64V | 0-64V | 0-100A | 530 x 1200 x 750 | VS64100 |
| 80V | 0-80V | 0-80A | 530 x 1200 x 750 | VS8080 |
| 128V | 0-128V | 0-50A | 530 x 1200 x 750 | VS12850 |

SINGLE OUTPUT 10kW

| OUTPUT | DC OUTPUT | | DIMENSIONS W x H x D (mm) | MODEL |
|--------|-----------|---------|------------------------------|----------|
| | VOLTAGE | CURRENT | | |
| 32V | 0-32V | 0-300A | 530 x 1200 x 750 | VS32300 |
| 64V | 0-64V | 0-150A | 530 x 1200 x 750 | VS64150 |
| 128V | 0-128V | 0-80A | 530 x 1200 x 750 | VS12880 |
| 300V | 0-300V | 0-30A | 530 x 1200 x 750 | VS30030 |
| 600V | 0-600V | 0-10A | 530 x 1200 x 750 | VS60010 |
| 600V | 0-600V | 0-20A | 530 x 1200 x 750 | VS60020 |
| 1000V | 0-1000V | 0-10A | 530 x 1200 x 750 | 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 : ± 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.

Transient Response : 100 μ 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.

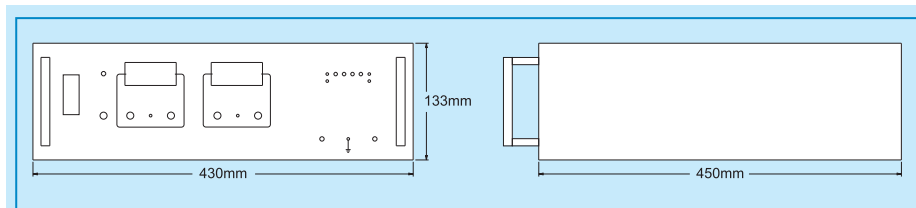
< $\pm 0.5\%$ plus 5mA in constant current mode with constant line, load and ambient temperature conditions.

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.

Multi-output Regulated DC Power Supply CBVS5/25/25



SPECIFICATIONS:

Metering : 4 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 3 counts.

Constant Voltage Mode :

REGULATION :

Line : $\leq 0.02\% \pm 4\text{mV}$ for $\pm 10\%$ change in line voltage.

Load : $\leq 0.02\% \pm 4\text{mV}$ for load change from zero to full load.

RIPPLE AND NOISE : 1mV rms max. 20Hz to 20MHz.

Constant Current Mode :

REGULATION :

Line : $\pm 0.1\% \pm 250\mu\text{A}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.1\% \pm 250\mu\text{A}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise(20Hz to Mhz):

$< 350\mu\text{Vrms}$

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

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

Protection : OCP, OVP

Programming Resolution :

100mV / 10mA

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.

Output Voltage & Current :

Output voltage : Ch1: 0 TO 5V

Ch2: 0 TO 25V

Ch3: 0 TO 25V

Output current : Ch1: 0 TO 3A

Ch2: 0 TO 2A

Ch3: 0 TO 2A

Dimensions : 430 x 133 x 450

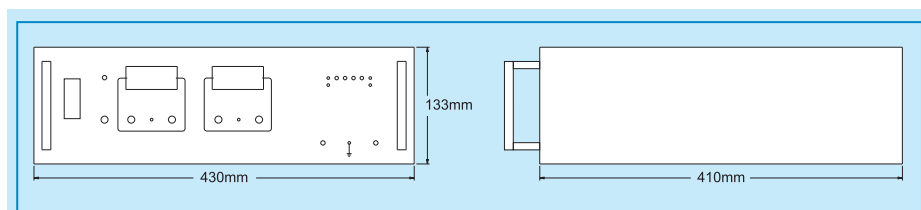
Weight : 25 kg approx.

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- One Digital Meters - 4 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- USB Interface
- Remote Sensing
- High Stability and Close Regulation $\pm 0.01\%$

Special feature at Extra Cost

- Presetting Facility
- Over Voltage / Current Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.

Multi-output Regulated DC Power Supply CBVS6/25/5/1



SPECIFICATIONS:

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 : $\pm 0.01\% \pm 250\mu\text{A}$ for $\pm 10\%$ change in line voltage.

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

Ripple & Noise(20Hz to Mhz):

$< 350\mu\text{Vrms}$

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.

Output Voltage & Current :

Output voltage : Ch1: 0 TO 6V

Ch2: 0 TO +25V

Ch3: 0 TO -25V

Output current : Ch1: 0 TO 5A

Ch2: 0 TO 1A

Ch3: 0 TO 1A

Dimensions : 430 x 133 x 450

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

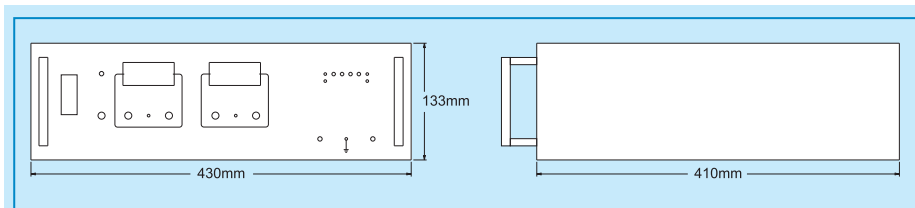
Special feature at Extra Cost

- Presetting Facility
- Over Voltage / Current Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.
- USB Interface

Programmable Regulated DC Power Supply CBVS10/30/60/1



**for reference only



SPECIFICATIONS:

Metering : 4 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 & noise : 1mV rms max. 20Hz to 20MHz.

Constant Current Mode :

REGULATION :

Line : $\pm 0.1\% \pm 2\text{mA}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.1\% \pm 2\text{mA}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise(20Hz to Mhz):
<4mArms

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

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

Protection : Overload and short circuit protection

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.

Output Voltage & Current :

Output voltage : Ch1: 0 TO 10V

Ch2: 0 TO 30V

Ch3: 0 TO 60V

Output current : Ch1: 0 TO 1A

Ch2: 0 TO 1A

Ch3: 0 TO 1A

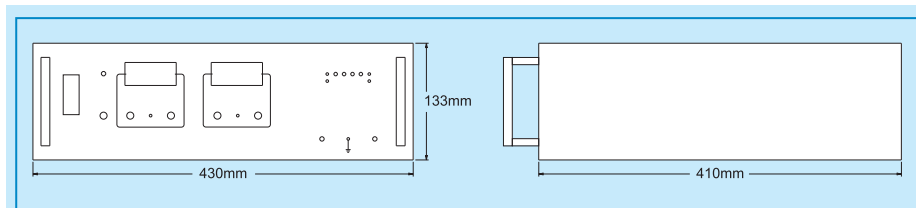
Dimensions : 430 x 133 x 450

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- One Digital Meters - 4 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- 19" Rack Adaptable
- USB interface
- High Stability and Close Regulation $\pm 0.01\%$

Special features at Extra Cost

- a) Presetting Facility
- b) Over Voltage / Current Protection
- c) 19" Rack Mounting

Multi-output Regulated DC Power Supply CBVS30/5/3



SPECIFICATIONS:

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 : $\pm 0.1\% \pm 250\mu\text{A}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.1\% \pm 250\mu\text{A}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise(20Hz to Mhz):

$< 350\mu\text{Vrms}$

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.

Output Voltage & Current :

Output voltage : Ch1: 0 TO 30V

Ch2: 0 TO 30V

Ch3: 0 TO 5V

Output current : Ch1: 0 TO 3A

Ch2: 0 TO 3A

Ch3: 0 TO 3A

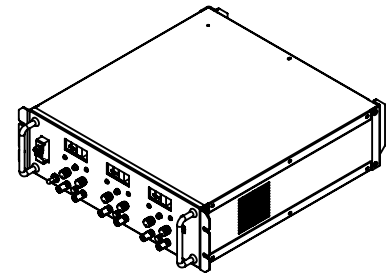
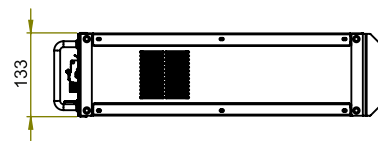
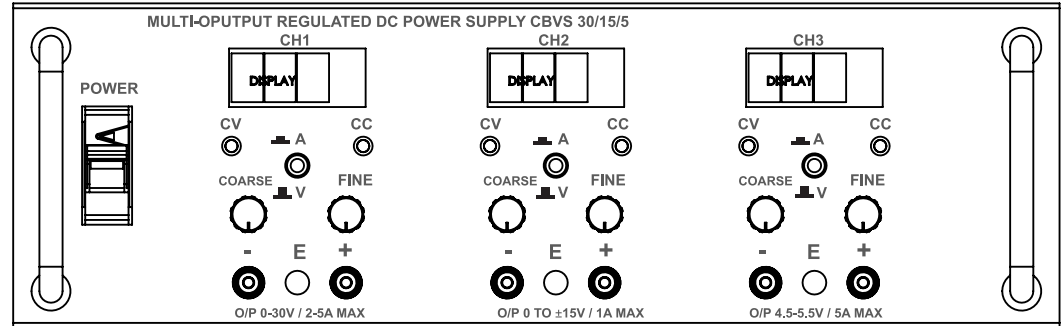
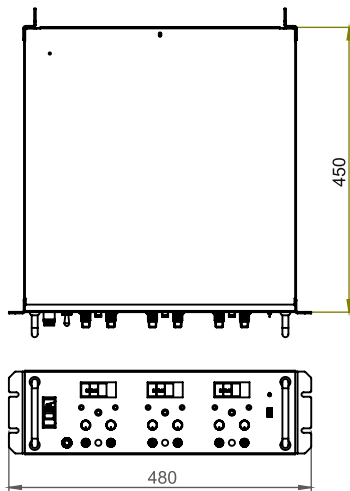
Dimensions : 430 x 133 x 450

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- One Digital Meters - 3 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- USB Interface
- Remote Sensing
- High Stability and Close Regulation $\pm 0.01\%$

Special feature at Extra Cost

- Presetting Facility
- Over Voltage / Current Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.

Multi-output Regulated DC Power Supply CBVS30/15/5



SPECIFICATIONS:

Metering : 3 digit seven segment LED DPMs for voltage and current measurement.

Meter Accuracy :

V: $\pm(1\%+1 \text{ digit})$

I: $\pm(1\%+3 \text{ digit})$

Constant Voltage Mode :

REGULATION :

Line : $\pm 0.05\% \pm 10\text{mV}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.05\% \pm 10\text{mV}$ for load change from zero to full load.

Ripple & Noise : 1mV rms max. 20Hz to 20MHz./ $< 5\text{mVp-p}$

Constant Current Mode :

REGULATION :

Line : $\pm 0.1\% \pm 3\text{mA}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.1\% \pm 3\text{mA}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise(20Hz to Mhz):

$< 6\text{mArms}$

Setting Resolution:

voltage : 10mV

current : 5mA

Protection : Overload protection (CC type), over voltage protection

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

Internal resistance Stability : $\leq 10\text{m}\Omega$, 2.5mV at full load

Current limit adjustment:

100mA to max, CC & CV

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.

Output Voltage & Current :

Output voltage : Ch1: 0 TO 30V
Ch2: 0 TO $\pm 15\text{V}$
Ch3: 4.5 TO 5.5V

Output current : Ch1: 2 TO 5A
Ch2: 0 TO 1A
Ch3: 0 TO 5A

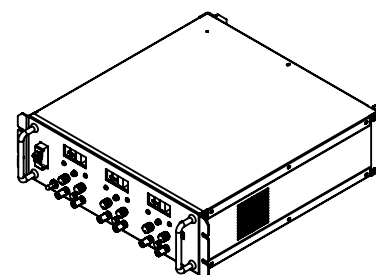
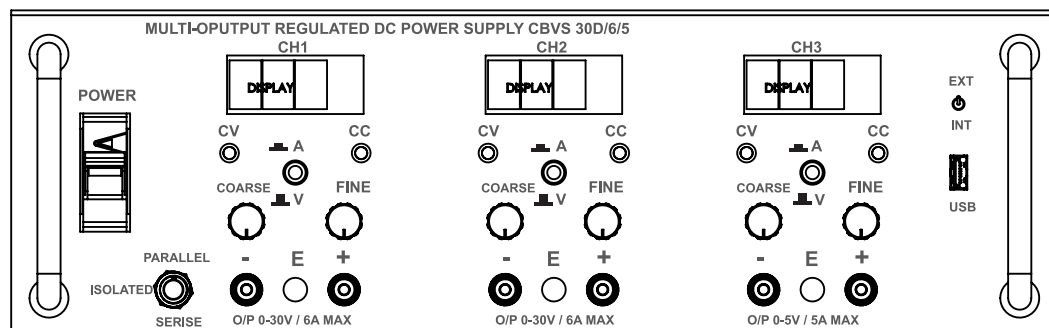
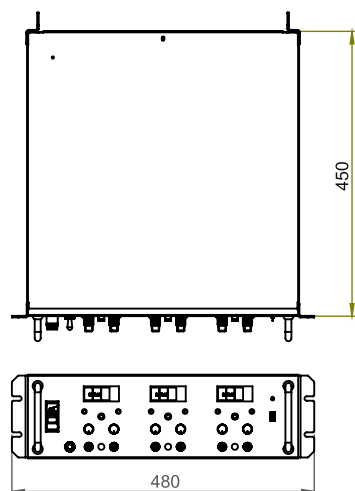
Dimensions : 430 x 133 x 450

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- One Digital Meters - 3 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- Over Temperature protection

Special feature at Extra Cost

- a) 19" Rack Mounting

Multi-output Regulated DC Power Supply CBVS30D/6/5



SPECIFICATIONS:

Metering : 4 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 3 counts.

Constant Voltage Mode :

REGULATION :

Line : $\pm 0.01\% \pm 3\text{mV}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.01\% \pm 3\text{mV}$ for load change from zero to full load.

Ripple & Noise : 1mV rms max. 20Hz to 20MHz./ $< 3\text{mVp-p}$

Constant Current Mode :

REGULATION :

Line : $\pm 0.1\% \pm 1\text{mA}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.1\% \pm 1\text{mA}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise(20Hz to Mhz):

$< 6\text{mArms}$

Setting/Read back Resolution

Accuracy :

voltage : 10mV, $< 0.06\% \pm 20\text{mV}$

current : 1mA, $< 0.2\% \pm 10\text{mA}$

Operation modes :

v1+v2 series ; I1+I2 parallel

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.

Output Voltage & Current :

Output voltage : Ch1: 0 TO 30V

Ch2: 0 TO 30V

Ch3: 0 TO 5V

Output current : Ch1: 0 TO 6A

Ch2: 0 TO 6A

Ch3: 0 TO 5A

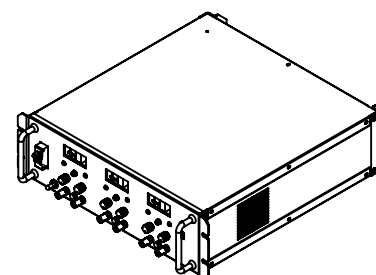
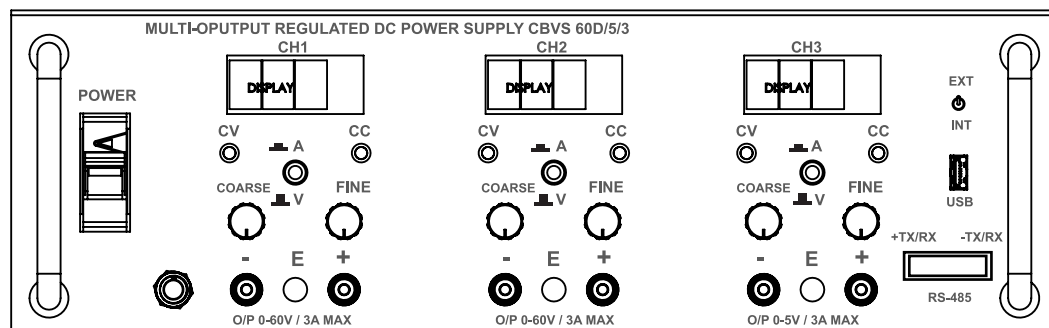
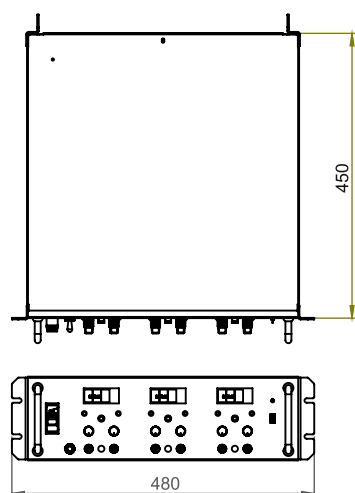
minimum Power : 180 watt

Dimensions : 430 x 133 x 450

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- One Digital Meters - 4 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- USB, LAN, RS-485 Interface
- Over Temperature protection

Connectivity & Software : USB, LAN, RS-485 connections to control & monitor the power supply using PC based HMI software

Multi-output Regulated DC Power Supply CBVS60D/5/3



SPECIFICATIONS:

Metering : 4 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 3 counts.

Constant Voltage Mode :

REGULATION :

Line : $\pm 0.01\% \pm 3\text{mV}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.01\% \pm 3\text{mV}$ for load change from zero to full load.

Ripple & Noise : 1mV rms max. 20Hz to 20MHz./ $< 4\text{mVp-p}$

Constant Current Mode :

REGULATION :

Line : $\pm 0.01\% \pm 3\text{mA}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.01\% \pm 3\text{mA}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise(20Hz to Mhz):
 $< 5\text{mArms}$

Setting Resolution :

voltage : 10mV

current : 1mA

Setting & measurement Accuracy

voltage : $< 0.05\% \pm 10\text{mV}$

current : $< 0.1\% \pm 5\text{mA}$

Protection : internal protection circuit on set voltage/current

Floating voltage : up to 0-400V (DC+peak AC) between protective earth and any output terminal.

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 40°C.

Storage Temperature:

-20°C to 70°C

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

Output Voltage & Current :

Output voltage : Ch1: 0 TO 60V

Ch2: 0 TO 60V

Ch3: 0 TO 5V

Output current : Ch1: 0 TO 3A

Ch2: 0 TO 3A

Ch3: 0 TO 3A

minimum Power : 375 watt

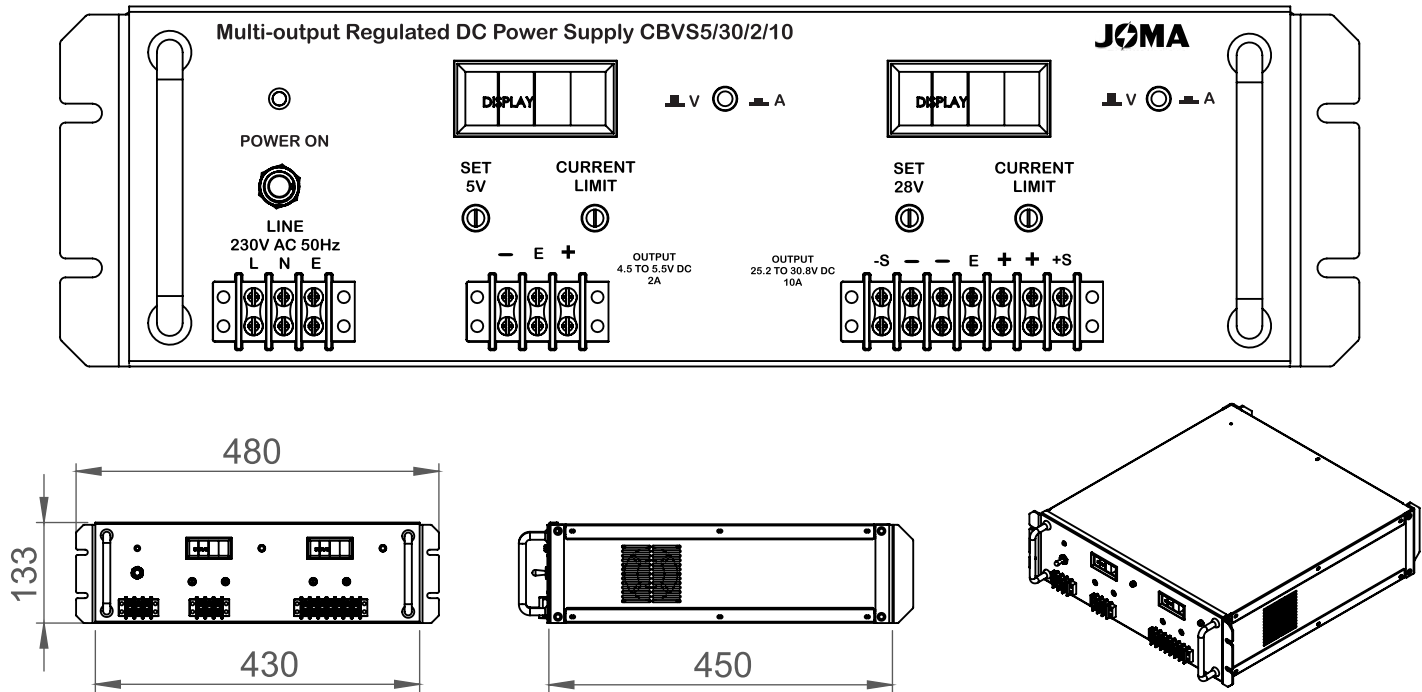
Dimensions : 430 x 133 x 450mm

Weight: $\leq 25\text{kg}$

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- One Digital Meters - 4 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- USB & RS-485 Interface
- 3 independently programmable & isolated channels
- Over Temperature protection
- 10 turn potentiometer for v-set & i-set

Connectivity & Software : USB connections to control & programme the power supply using PC based software & with complete control over all the channels to operate simultaneously.
via USB interface with HMI

Multi-output Regulated DC Power Supply CBVS5/30/2/10



SPECIFICATIONS:

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 & Noise : 1mV rms max. 20Hz to 20MHz.

Constant Current Mode :

REGULATION :

Line : $\pm 0.05\% \pm 250\mu\text{A}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.05\% \pm 250\mu\text{A}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise(20Hz to Mhz) : $< 350\mu\text{Vrms}$

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.

Output Voltage & Current :

Output voltage :

Ch1: 4.5 TO 5.5V

Ch2: 25.2 TO 30.8V

Output current :

Ch1: 0 TO 2A

Ch2: 0 TO 10A

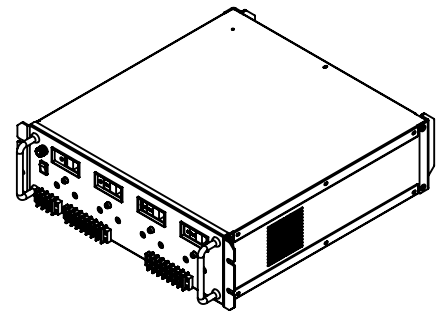
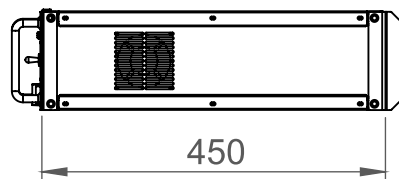
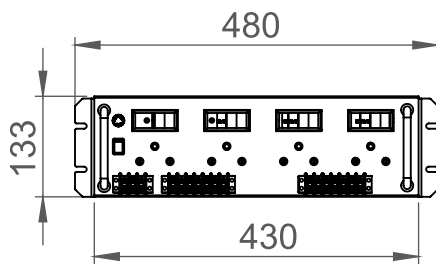
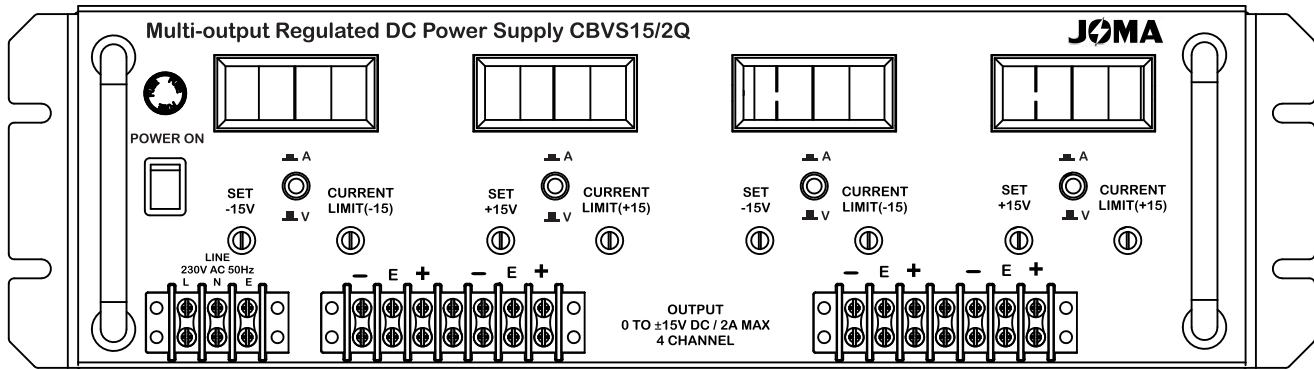
Dimensions : 430 x 133 x 450

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

Special feature at Extra Cost

- Presetting Facility
- Over Voltage / Current Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.

Multi-output Regulated DC Power Supply CBVS15/2Q



SPECIFICATIONS:

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 & Noise : 1mV rms max. 20Hz to 20MHz.

Constant Current Mode :

REGULATION :

Line : $\pm 0.05\% \pm 250\mu\text{A}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.05\% \pm 250\mu\text{A}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise(20Hz to Mhz):

< 350 μVrms

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.

Output Voltage & Current :

Output voltage :

Ch1: -15V TO 0

Ch2: 0 TO +15V

Ch3: -15V TO 0

Ch4: 0 TO +15V

Output current :

Ch1: 0 TO 2A

Ch2: 0 TO 2A

Ch3: 0 TO 2A

Ch4: 0 TO 2A

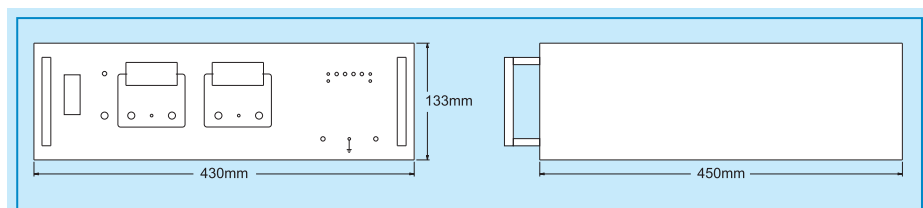
Dimensions : 430 x 133 x 450

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

Special feature at Extra Cost

- Presetting Facility
- Over Voltage / Current Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.

Multi-output Regulated DC Power Supply CBVS30/3T



- All 3 Channels are identical ; specifications for one are given below

SPECIFICATIONS

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 3 counts

Display Resolution: 10mV , 10mA

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 & 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 & Noise : 0.05% 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.

Output Voltage & Current :

Output voltage : 0-30V

Output current : 0-3A

Max Output Power(per channel): $\geq 90\text{W}$

Total Output Power: $\geq 270\text{W}(\text{Min})$

Type of Interface: USB/LAN

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- One Digital Meters - 3 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- Interface - USB/LAN
- Remote Sensing Facility
- High Stability and Close Regulation $\pm 0.01\%$

Special feature at Extra Cost

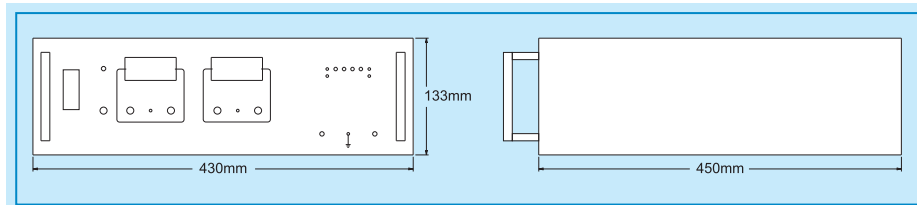
- Presetting Facility
- Over Voltage Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.

Programming Resolution: upto 10mV , 10mA

Programming Accuracy: $\leq 0.3\% \pm 20\text{mV}$

| | PV | PI | DIMENSIONS | MODEL | WEIGHT |
|-----|-------|------|-----------------|-----------|--------|
| 30V | 0-30V | 0-3A | 430 x 133 x 450 | CBVS30/3T | 21.5 |

Multi-output Regulated DC Power Supply CBVS60/3T



- All 3 Channels are identical ; specifications for one are given below

SPECIFICATIONS

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 3 counts

Display Resolution: 10mV , 10mA

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 & Noise : 1mV rms max. 20Hz to 20MHz. 4mV p-p

Constant Current Mode :

REGULATION :

Line : $\pm 0.05\% \pm 3\text{mA}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.05\% \pm 3\text{mA}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple & Noise : 4mA 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 : $\pm 0.02\% \pm 1\text{mV}$ per OC after initial warm-up of 30 minutes, in voltage mode.

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

Output Voltage & Current :

Output voltage : 0-60V

Output current : 0-3A

Max Output Power(per channel):

$\geq 180\text{W}$

Total Output Power:

$\geq 540\text{W}(\text{Max})$

- Phase Controlled Pre- Regulation Plus Linear Post- Regulation
- One Digital Meters - 3 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- Remote Sensing Facility
- High Stability and Close Regulation $\pm 0.01\%$

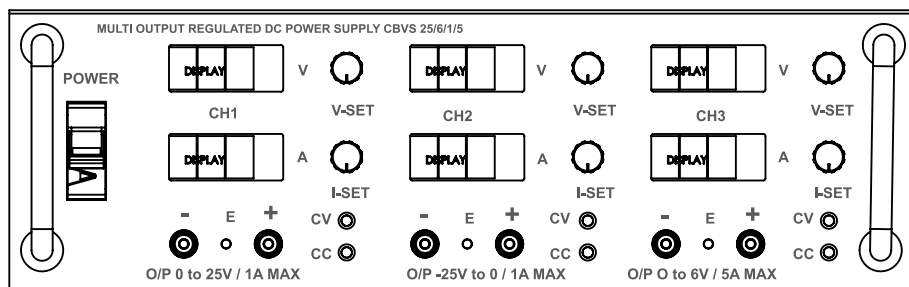
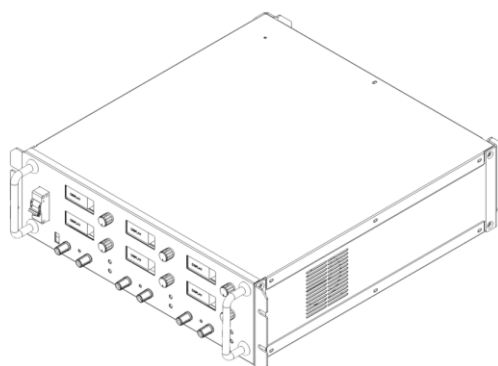
Special feature at Extra Cost

- Presetting Facility
- Over Voltage Protection
- 19" Rack Mounting
- Analog programming & monitoring for Voltage & Current.

| | PV | PI | DIMENSIONS | MODEL | WEIGHT |
|-----|-------|------|-----------------|-----------|--------|
| 60V | 0-60V | 0-3A | 430 x 133 x 450 | CBVS60/3T | 21.5 |

Multi-output DC Power Supply

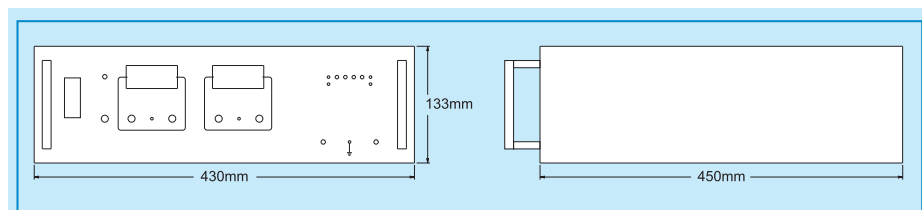
CBVS 25/6/1/5



- Phase controlled pre-regulation plus linear post regulation
- High stability and close regulation
- 4 Digit digital display for V&I
- Remote sensing
- USB Interface
- Front panel potentiometer to set V&I
- High current density.

Special feature (Optional)

- Over voltage protection
- 19" rack mounting
- Analogue programming and monitoring for V&I



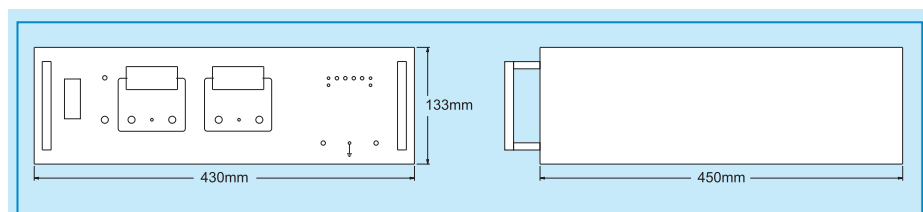
| MODEL | CBVS 25/6/1/5 | | |
|---------------------------------|------------------------------------|----------------|--------------|
| Input Voltage | 230V AC, $\pm 10\%$, 50Hz, 1phase | | |
| Output Voltage | Ch1: 0 to 25V | Ch2: -25V to 0 | Ch3: 0 to 6V |
| Output Current | 0 to 1A | 0 to 1A | 0 to 5A |
| No. Output | 3 | | |
| Line Regulation CV * | $\pm 0.01\% \pm 2\text{mV}$ | | |
| Load Regulation CV ! | $\pm 0.01\% \pm 2\text{mV}$ | | |
| Line Regulation CC * | $\pm 0.01\% \pm 1\text{mA}$ | | |
| Load Regulation CC !! | $\pm 0.01\% \pm 1\text{mA}$ | | |
| Output Ripple CV (max) | 2mV rms | | |
| Output Ripple CC (max) | 2mA rms | | |
| Setting Resolution | 10mV & 10mA | | |
| Operating Temp. | 0 to 40°C | | |
| Protection | OV/OC/OT (constant current type) | | |
| Indications (LED) | CV & CC | | |
| 3 Digit DPM | V & I | | |
| Meter Accuracy | ± 3 counts | | |
| Input On/Off | M.C.B. | | |
| Single Turn Pots | V Set & I Set (Coarse & Fine) | | |
| Dimensions appr.** W x H x D | 430mm x 133 mm (3U) x 450 mm | | |

Multi-output DC Power Supply

CBVS 30/5/3



- Phase controlled pre-regulation plus linear post regulation
- High stability and close regulation
- 3 Digit digital display for V&I
- Remote sensing
- Front panel potentiometer to set V&I
- High current density.



Special feature (Optional)

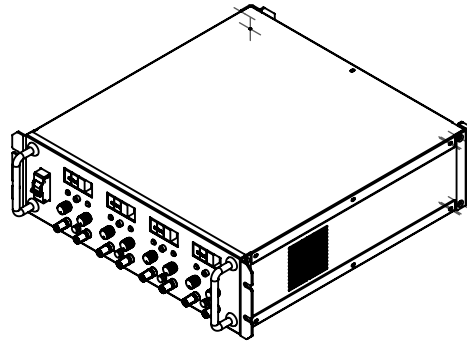
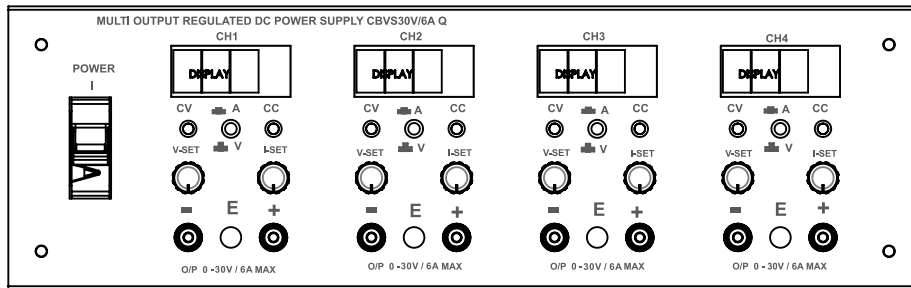
- Over voltage protection
- 19" rack mounting
- Analogue programming and monitoring for V&I

Note: During series mode CH-1 meter will read combined voltage

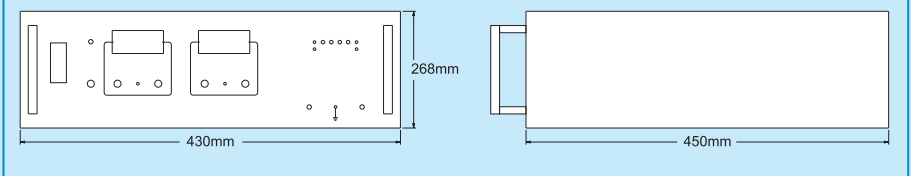
| MODEL | CBVS 30/5/3 | | |
|--|---|----------------|---------------|
| Input Voltage | 230V AC, $\pm 10\%$, 50Hz, 1phase | | |
| Output Voltage | Ch1 - 0 to 30V | Ch2 - 0 to 30V | Ch3 - 0 to 5V |
| Output Current | 0 to 3A | 0 to 3A | 0 to 3A |
| Maximum Power | <220W | | |
| Line Regulation CV * | $\leq 0.02\% \pm 4\text{mV}$ | | |
| Load Regulation CV ! | $\leq 0.02\% \pm 4\text{mV}$ | | |
| Line Regulation CC * | $\leq 0.2\% \pm 3\text{mA}$ | | |
| Load Regulation CC !! | $\leq 0.2\% \pm 3\text{mA}$ | | |
| Output Ripple CV (max) | $\leq 1\text{mV rms} / 5\text{mVp-p}$ | | |
| Output Ripple CC (max) | $\leq 6\text{mA rms}$ | | |
| Setting Resolution & Accuracy | voltage: 10mV, $\leq 0.06\% \pm 20\text{mv}$ current: 1mA, $\leq 0.2\% \pm 10\text{mA}$ | | |
| Operating mode | series & parallel toggle for V & I combinations | | |
| Operating Temp. | 0 to 50°C | | |
| Protection | OL/SC (constant current type) | | |
| Indications (LED) | CV & CC | | |
| 3 Digit DPM | V & I (LED Display) | | |
| Meter Accuracy | ± 3 counts | | |
| Input On/Off | M.C.B. | | |
| Single Turn Pots | V Set & I Set (Coarse & Fine) | | |
| Dimensions appr.** W x H x D | 430mm x 133 mm (3U) x 450 mm | | |

Multi-output DC Power Supply

CBVS 30V/6A Q



- Bench Top type power supply
- Phase controlled pre-regulation plus linear post regulation
- High stability and close regulation
- 3 Digit digital display for V&I
- V - A Switch provided
- Front panel potentiometer to set V&I
- High current density.
- Optional 4 digit DPM as per requirement.



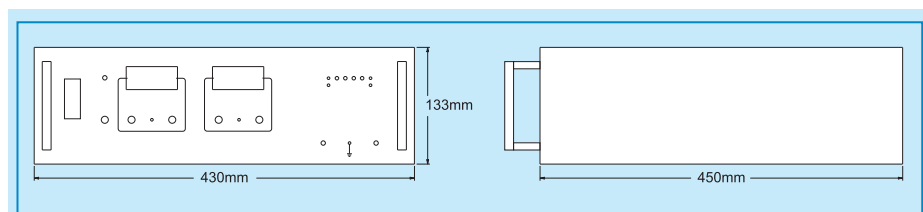
| MODEL | CBVS 30V/6A Q | | | |
|--------------------------------|---|----------------|------------------------|----------------|
| Input Voltage | 230V AC, ±10%, 50Hz, 1phase | | | |
| Output Voltage | Ch1 - 0 to 30V | Ch2 - 0 to 30V | Ch3 - 0 to 30V | Ch4 - 0 to 30V |
| Output Current | 0 to 6A | 0 to 6A | 0 to 6A | 0 to 6A |
| Output Power | 180W per channel | | | |
| Line Regulation CV * | ≤0.05% ±5mV | | | |
| Load Regulation CV ! | ≤0.05% ±5mV | | | |
| Line Regulation CC * | ≤0.2% ±5mA | | | |
| Load Regulation CC !! | ≤0.2% ±5mA | | | |
| Output Ripple CV (max) | ≤1mV rms | | | |
| Output Ripple CC (max) | ≤2mA rms | | | |
| Output | All 4 channels are isolated from each other | | | |
| Interface | USB | | | |
| Single Turn Pots | V set & I set | | | |
| Operating Temp./ Humid. | 0 to 50°C / ≤80%Rh | | | |
| Protection | OL/SC (constant current type), OVP, OCP | | | |
| Indications (LED) | CV & CC | | | |
| 3 Digit DPM | Voltmeter & Ammeter | | | |
| Meter Accuracy | ±3 counts | | | |
| Resolution | voltage : 15mV | | current : 1mA | |
| Setting Accuracy | voltage : ≤0.3% ± 20mV | | current : ≤0.3% ± 20mA | |
| Readback Accuracy | voltage : ≤0.3% ± 20mV | | current : ≤0.3% ± 20mA | |
| Input On/Off | M.C.B. | | | |
| Dimensions appr.** W × H× D | 430mm × 268 mm (6U) × 450 mm | | | |
| Weight appr.** (kgs) | 45 kg | | | |

Multi-output DC Power Supply

CBVS 30/12/5/3



- Phase controlled pre-regulation plus linear post regulation
- High stability and close regulation
- 4 Digit digital display for V&I
- Remote sensing
- Front panel potentiometer to set V&I
- High current density.



Special feature (Optional)

- Over voltage protection
- 19" rack mounting
- Analogue programming and monitoring for V&I

| MODEL | CBVS 30/12/5/3 | | |
|---------------------------------|------------------------------------|----------------|---------------|
| Input Voltage | 230V AC, $\pm 10\%$, 50Hz, 1phase | | |
| Output Voltage | Ch1 - 0 to 30V | Ch2 - 0 to 12V | Ch3 - 0 to 5V |
| Output Current | 0 to 3A | 0 to 3A | 0 to 3A |
| Line Regulation CV * | $\pm 0.01\% \pm 2\text{mV}$ | | |
| Load Regulation CV ! | $\pm 0.01\% \pm 2\text{mV}$ | | |
| Line Regulation CC * | $\pm 0.05\% \pm 2\text{mA}$ | | |
| Load Regulation CC !! | $\pm 0.05\% \pm 2\text{mA}$ | | |
| Output Ripple CV (max) | 1mV rms | | |
| Output Ripple CC (max) | 0.05% rms | | |
| Setting Resolution | 10mV & 1mA | | |
| Remote Sense | Provided | | |
| Operating Temp. | 0 to 50°C | | |
| Protection | OL/SC (constant current type) | | |
| Indications (LED) | CV & CC | | |
| 4 Digit DPM | V & I | | |
| Meter Accuracy | ± 3 counts | | |
| Input On/Off | M.C.B. | | |
| Single Turn Pots | V Set & I Set (Coarse & Fine) | | |
| Dimensions appr.** W x H x D | 430mm x 133 mm (3U) x 450 mm | | |

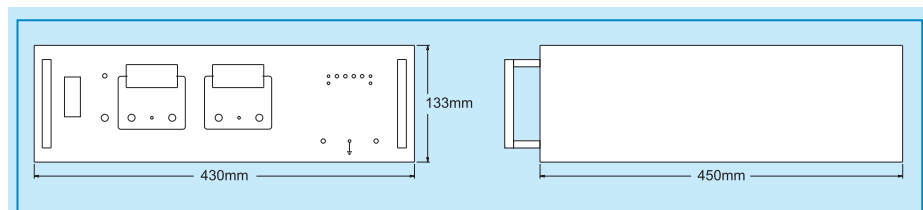
Multi-output DC Power Supply

CBVS 32D/5/3



**for reference only

- Phase controlled pre-regulation plus linear post regulation
- High stability and close regulation
- Digital Meters - 4 Digit DPMs with V/A Selector Switch
- Remote sensing
- Front panel potentiometer to set V&I
- High current density.
- Over voltage protection
- PC interface software
- Mains cord provided internally



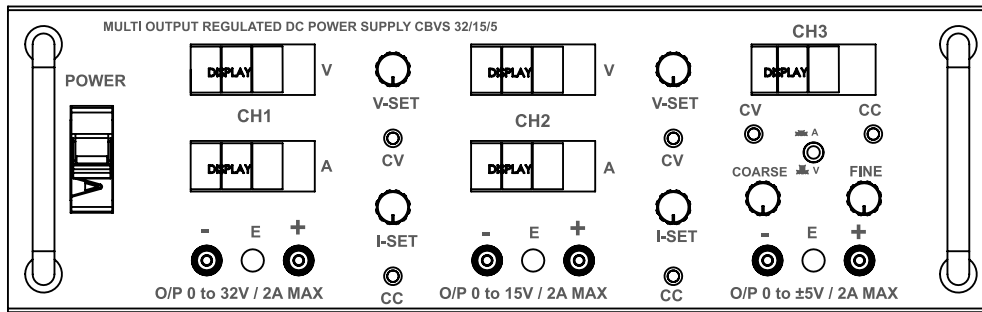
Special feature (Optional)

- 19" rack mounting
- Analogue programming and monitoring for V&I

| MODEL | CBVS 32D/5/3 (3 CHANNELS) | | |
|---------------------------------|--|-----------------|------------------------------|
| Input Voltage | 230V AC, $\pm 10\%$, 50Hz, 1phase | | |
| Output Voltage | Ch1 - 0 to +32V | Ch2 - 0 to -32V | Ch3 - 5V (fixed) |
| Output Current | 0 to +3A | 0 to -3A | 3A (fixed) |
| Maximum Power | 200W | | |
| PC Interface Software | Memory Function: 50 sets memory function to store/recall data | | |
| | Auto Step Running: auto step running with timer setting of 1 sec - 99min & resolution 1 sec | | |
| | Interface: RS-485 | | |
| Line Regulation CV * | $\pm 0.01\% \pm 3mV$ | | |
| Load Regulation CV ! | $\pm 0.01\% \pm 3mV$ | | |
| Line Regulation CC * | $\pm 0.1\% \pm 250\mu A$ | | |
| Load Regulation CC !! | $\pm 0.1\% \pm 250\mu A$ | | |
| Output Ripple CV (max) | 1mV rms | | |
| Output Ripple CC (max) | 0.04% rms | | |
| Display Resolution | 10mV & 1mA | | |
| Tracking fuction(series) | Auto series tracking error $\leq 0.1\% \pm 50mV$ | | |
| Operating Temp. | 0 to 40°C / $\leq 80\%RH$ | | |
| Protection | OVP (0 to +33V, 0 to -33V), OL/SC (constant current type), OC | | |
| Indications (LED) | CV & CC, OVP (CH1,CH2) | | |
| 4 Digit DPM | V & I | | |
| Prog. & Readback Accuracy | voltage: $\leq 0.05\% \pm 25mV$ | | current: $\leq 2\% \pm 10mA$ |
| Input On/Off | M.C.B. | | |
| Multi Turn Pots | V Set & I Set, OVP set(CH1, CH2) | | |
| Weight kgs**. | 22.5kg | | |
| Dimensions appr.** W x H x D | 430mm x 133 mm (3U) x 450 mm | | |
| Accessories | test leads, user manual | | |

Multi-output DC Power Supply

CBVS 32/15/5

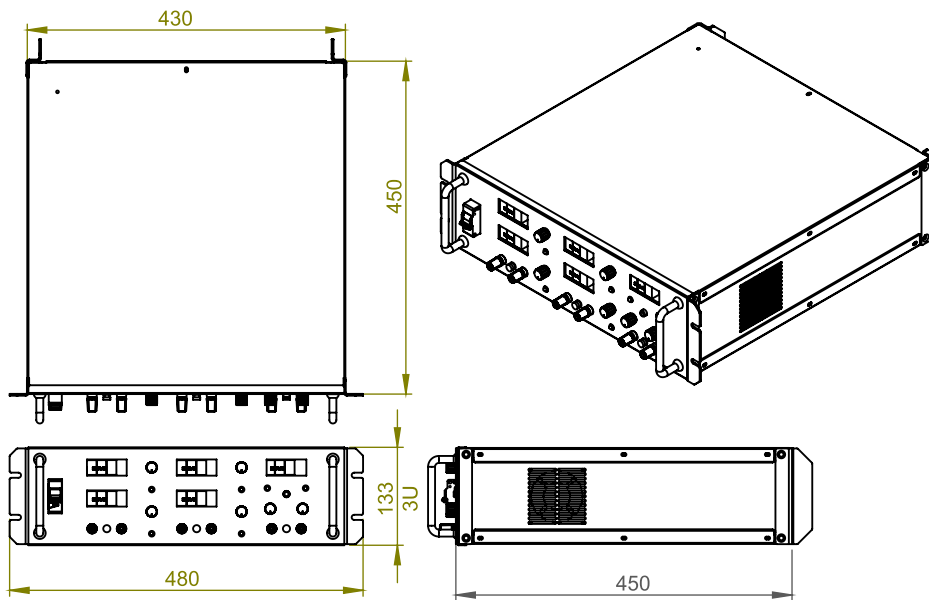


- Phase controlled pre-regulation plus linear post regulation

- High stability and close regulation
- One Digital Meters - 3 Digit DPMs with V/A Selector Switch
- 3 Digit digital display for V&I for CH1 & CH2
- Front panel potentiometer to set V&I
- High current density.

Special feature (Optional)

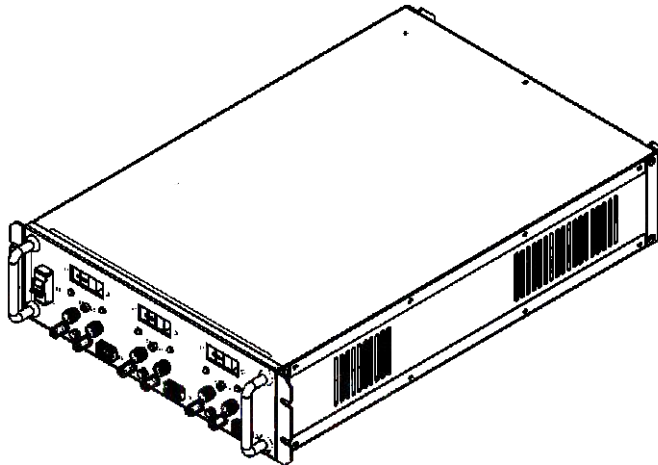
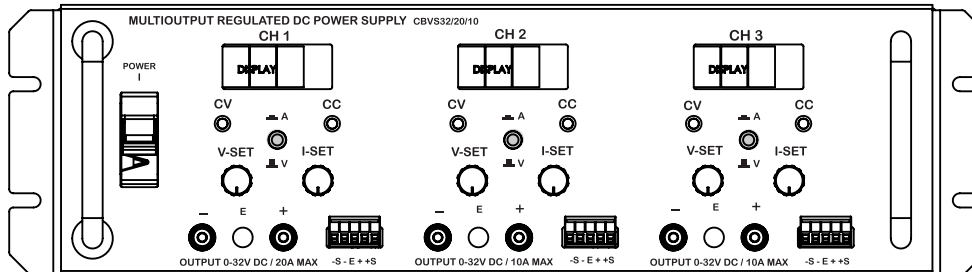
- Over voltage protection
- 19" rack mounting
- Analogue programming and monitoring for V&I



| MODEL | CBVS 32/15/5 | | |
|---------------------------------|------------------------------------|----------------|---------------------|
| Input Voltage | 230V AC, $\pm 10\%$, 50Hz, 1phase | | |
| Output Voltage | Ch1 : 0 to 32V | Ch2 : 0 to 15V | Ch3 : 0 to $\pm 5V$ |
| Output Current | 0 to 2A | 0 to 2A | 0 to 2A |
| Line Regulation CV * | $\pm 0.01\% \pm 2mV$ | | |
| Load Regulation CV ! | $\pm 0.01\% \pm 2mV$ | | |
| Line Regulation CC * | $\pm 0.1\% \pm 2mA$ | | |
| Load Regulation CC !! | $\pm 0.1\% \pm 2mA$ | | |
| Output Ripple CV (max) | 1mV rms | | |
| Output Ripple CC (max) | 0.05% rms | | |
| Setting Resolution | 10mV & 1mA | | |
| Operating Temp. | 0 to 50°C | | |
| Protection | OL/SC (constant current type) | | |
| Indications (LED) | CV & CC | | |
| 4 Digit DPM | V & I | | |
| Meter Accuracy | ± 3 counts | | |
| Input On/Off | M.C.B. | | |
| Single Turn Pots | V Set & I Set (Coarse & Fine) | | |
| Dimensions appr.** W x H x D | 430mm x 133 mm (3U) x 450 mm | | |

Multi-output DC Power Supply

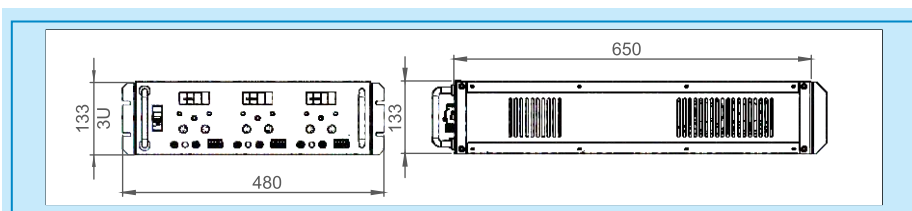
CBVS 32/20/10



- Phase controlled pre-regulation plus linear post regulation
- High stability and close regulation
- One Digital Meter per channel
3 Digit DPMs with V/A Selector Switch
- Constant Voltage / Constant Current Operation
- Remote sensing
- USB /RS232 Interface
- Front panel potentiometer to set V&I
- High current density.

Special feature (Optional)

- Over voltage protection
- 19" rack mounting
- Analogue programming and monitoring for V&I



| MODEL | CBVS 32/20/10 | | |
|---------------------------------|------------------------------------|----------------|----------------|
| Input Voltage | 230V AC, $\pm 10\%$, 50Hz, 1phase | | |
| Output Voltage | Ch1 - 0 to 32V | Ch2 - 0 to 32V | Ch3 - 0 to 32V |
| Output Current | 0 to 20A | 0 to 10A | 0 to 10A |
| Maximum Power | 640W | | |
| Line Regulation CV * | $\pm 0.01\% \pm 2mV$ | | |
| Load Regulation CV ! | $\pm 0.01\% \pm 2mV$ | | |
| Line Regulation CC * | $\pm 0.01\% \pm 2mA$ | | |
| Load Regulation CC !! | $\pm 0.01\% \pm 2mA$ | | |
| Output Ripple CV (max) | $\leq 1mV$ rms / $4mVp-p$ | | |
| Output Ripple CC (max) | $\leq 5mA$ rms | | |
| Setting Resolution | 1mV & 1mA | | |
| Remote Sense | provided | | |
| Operating Temp. | 0 to 50°C | | |
| Protection | OL/SC (constant current type) | | |
| Indications (LED) | CV & CC | | |
| 3 Digit DPM | V & I (LED Display) | | |
| Meter Accuracy | ± 3 counts | | |
| Input On/Off | M.C.B. | | |
| Single Turn Pots | V Set & I Set (Coarse & Fine) | | |
| Dimensions appr.** W x H x D | 430mm x 133 mm (3U) x 650 mm | | |

Switch Mode Power Supplies

0-30V Power Supplies JP Series

Standard Feature

- SMPS Based Design
- Two Digital Meters - 3 Digit DPMs
- Constant Voltage / Constant Current Operation
- Front panel potentiometer to set V&I
- 3 Digit seven segment display for V&I
- High Efficiency, Long Life & High Reliability
- Lighter in weight
- Over voltage protection
- Over temperature protection

Additional Features (with extra cost)

- Analog programming 0-5V /0-10V for output voltage & current
- Interface : RS485, USB, Ethernet
- Readback or monitoring 0-5V / 0-10V for output Voltage & Current
- 4 digit display
- Over/under voltage protection
- PFC as per customer requirement for remote annunciation

| MODEL | JP3005 | JP3010 | JP3020 | JP3030 | JP3050 | JP3060 | JP3099 | JP3150 |
|--------------------------------|--------------------------------|----------|----------|----------|----------|----------|-----------|-----------|
| Input Voltage | 180VAC to 270VAC, 50Hz, 1Phase | | | | | | | |
| Output Voltage | 0 to 30V | | | | | | | |
| Output Current | 0 to 5A | 0 to 10V | 0 to 20A | 0 to 30A | 0 to 50A | 0 to 60A | 0 to 100A | 0 to 150A |
| Line Regulation CV * | $\leq 1\% \pm 2mV$ | | | | | | | |
| Line Regulation CC ! | $\leq 1\% \pm 10mA$ | | | | | | | |
| Load Regulation CV * | $\leq 1\% \pm 2mV$ | | | | | | | |
| Load Regulation CC !! | $\leq 1\% \pm 10mA$ | | | | | | | |
| Output Ripple | <10mV rms | | | | | | | |
| Efficiency | >85% | | | | | | | |
| Cooling | Forced cooling | | | | | | | |
| Operating Temp. | 0 to 50°C | | | | | | | |
| Protection | over load / short circuit | | | | | | | |
| Indication (LED) | CV/CC | | | | | | | |
| 3 Digit DPM | V & I | | | | | | | |
| Meter Accuracy | ± 3 counts | | | | | | | |
| Input on/off | MCB | | | | | | | |
| Single Turn Pots Coarse & Fine | V set & I set | | | | | | | |

Switch Mode Power Supplies

0-60V Power Supplies JP Series

Standard Feature

- SMPS Based Design
- Two Digital Meters - 3 Digit DPMs
- Constant Voltage / Constant Current Operation
- Front panel potentiometer to set V&I
- 3 Digit seven segment display for V&I
- High Efficiency, Long Life & High Reliability
- Lighter in weight
- Over voltage protection
- Over temperature protection

Additional Features (with extra cost)

- Analog programming 0-5V /0-10V for output voltage & current
- Interface : RS485, USB, Ethernet
- Readback or monitoring 0-5V / 0-10V for output Voltage & Current
- 4 digit display
- Over/under voltage protection
- PFC as per customer requirement for remote annunciation

| MODEL | JP6005 | JP6010 | JP6020 | JP6030 | JP6050 | JP6100 |
|--------------------------------|--------------------------------|----------|----------|----------|----------|-----------|
| Input Voltage | 180VAC to 270VAC, 50Hz, 1Phase | | | | | |
| Output Voltage | 0 to 60V | | | | | |
| Output Current | 0 to 5A | 0 to 10V | 0 to 20A | 0 to 30A | 0 to 50A | 0 to 100A |
| Line Regulation CV * | $\leq 1\% \pm 2mV$ | | | | | |
| Line Regulation CC ! | $\leq 1\% \pm 10mA$ | | | | | |
| Load Regulation CV * | $\leq 1\% \pm 2mV$ | | | | | |
| Load Regulation CC !! | $\leq 1\% \pm 10mA$ | | | | | |
| Output Ripple | <10mV rms | | | | | |
| Efficiency | >85% | | | | | |
| Cooling | Forced cooling | | | | | |
| Operating Temp. | 0 to 50°C | | | | | |
| Protection | over load / short circuit | | | | | |
| Indication (LED) | CV/CC | | | | | |
| 3 Digit DPM | V & I | | | | | |
| Meter Accuracy | ± 3 counts | | | | | |
| Input on/off | MCB | | | | | |
| Single Turn Pots Coarse & Fine | V set & I set | | | | | |

Switch Mode Power Supplies

0-130V Power Supplies JP Series

Standard Feature

- SMPS Based Design
- Two Digital Meters - 3 Digit DPMs
- Constant Voltage / Constant Current Operation
- Front panel potentiometer to set V&I
- 3 Digit seven segment display for V&I
- High Efficiency, Long Life & High Reliability
- Lighter in weight
- Over voltage protection
- Over temperature protection

Additional Features (with extra cost)

- Analog programming 0-5V /0-10V for output voltage & current
- Interface : RS485, USB, Ethernet
- Readback or monitoring 0-5V / 0-10V for output Voltage & Current
- 4 digit display
- Over/under voltage protection
- PFC as per customer requirement for remote annunciation

| MODEL | JP1305 | JP1310 | JP1315 | JP1320 | JP1350 |
|--------------------------------|--------------------------------|----------|----------|----------|----------|
| Input Voltage | 180VAC to 270VAC, 50Hz, 1Phase | | | | |
| Output Voltage | 0 to 130V | | | | |
| Output Current | 0 to 5A | 0 to 10V | 0 to 15A | 0 to 20A | 0 to 50A |
| Line Regulation CV * | $\leq 1\% \pm 2mV$ | | | | |
| Line Regulation CC ! | $\leq 1\% \pm 10mA$ | | | | |
| Load Regulation CV * | $\leq 1\% \pm 2mV$ | | | | |
| Load Regulation CC !! | $\leq 1\% \pm 10mA$ | | | | |
| Output Ripple | <10mV rms | | | | |
| Efficiency | >85% | | | | |
| Cooling | Forced cooling | | | | |
| Operating Temp. | 0 to 50°C | | | | |
| Protection | over load / short circuit | | | | |
| Indication (LED) | CV/CC | | | | |
| 3 Digit DPM | V & I | | | | |
| Meter Accuracy | ± 3 counts | | | | |
| Input on/off | MCB | | | | |
| Single Turn Pots Coarse & Fine | V set & I set | | | | |

Switch Mode Power Supplies

0-200V Power Supplies JP Series

Standard Feature

- SMPS Based Design
- Two Digital Meters - 3 Digit DPMs
- Constant Voltage / Constant Current Operation
- Front panel potentiometer to set V&I
- 3 Digit seven segment display for V&I
- High Efficiency, Long Life & High Reliability
- Lighter in weight
- Over voltage protection
- Over temperature protection

Additional Features (with extra cost)

- Analog programming 0-5V /0-10V for output voltage & current
- Interface : RS485, USB, Ethernet
- Readback or monitoring 0-5V / 0-10V for output Voltage & Current
- 4 digit display
- Over/under voltage protection
- PFC as per customer requirement for remote annunciation

| MODEL | JP2005 | JP20010 | JP20015 | JP20020 | JP20030 |
|--------------------------------|--------------------------------|----------|----------|----------|----------|
| Input Voltage | 180VAC to 270VAC, 50Hz, 1Phase | | | | |
| Output Voltage | 0 to 200V | | | | |
| Output Current | 0 to 5A | 0 to 10V | 0 to 15A | 0 to 20A | 0 to 30A |
| Line Regulation CV * | $\leq 1\% \pm 2mV$ | | | | |
| Line Regulation CC ! | $\leq 1\% \pm 10mA$ | | | | |
| Load Regulation CV * | $\leq 1\% \pm 2mV$ | | | | |
| Load Regulation CC !! | $\leq 1\% \pm 10mA$ | | | | |
| Output Ripple | <10mV rms | | | | |
| Efficiency | >85% | | | | |
| Cooling | Forced cooling | | | | |
| Operating Temp. | 0 to 50°C | | | | |
| Protection | over load / short circuit | | | | |
| Indication (LED) | CV/CL | | | | |
| 3 Digit DPM | V & I | | | | |
| Meter Accuracy | ± 3 counts | | | | |
| Input on/off | MCB | | | | |
| Single Turn Pots Coarse & Fine | V set & I set | | | | |

Static Frequency Converter Systems

With In-built Isolation Transformer



Technical Specifications (4KVA to 7.5KVA, 1Ø - 1Ø)

| Model no. | JFC4K-3P3 | JFC5K-3P3 | JFC7K5-3P3 |
|-----------------------|--|-----------------------|-----------------|
| Ratings | 4 KVA | 5 KVA | 7.5 KVA |
| Output Rating | 2400W | 4000W | 6000W |
| Topology | IGBT based DSP Control. | | |
| Input Voltage | Single Phase 230V AC, 190 to 265V AC. | | |
| Input Frequency | 50Hz, 47 to 53Hz. | | |
| Input PF | 0.8. | | |
| Output Voltage | 220V AC / 115V AC +/- 1%. | | |
| Output Frequency | 60Hz / 400Hz +/-0.5%. | | |
| Crest Factor | 3:1. | | |
| Isolation Transformer | Provided Inbuilt. | | |
| Waveform | Sinusoidal. | | |
| THD | < 3% on linear load. | | |
| Overload | 110% for 10 minutes, 125% for 1 minutes, 150% for 5 seconds. | | |
| Effeciency | > 80%. | | |
| Protections | Input & Output Over / Under Voltage. DC - High / Under Voltage, Output - Overload / Short Circuit / Over Temp. | | |
| Audio Alarm | Inverter Trip. | | |
| Metering | Numerical Display for Input & Output Voltage, Current, Frequency. | | |
| Messages | Input - On / High / Low. DC High. SFC - On / Off / Normal, Output - Low / High / Overload / Fail / Short Ckt., Over Temp. | | |
| Indications | Mains On / Inverter On / Trip. | | |
| Controls | Start, Stop & Scroll. | | |
| Noise | <50 dB. | | |
| Humidity | Upto 95% Rh (non-condensing). | | |
| Operating Temp. | 0 to 40°C. | | |
| Cooling | Forced Air. | | |
| Enclosure | IP 20. | | |
| Dimensions (mm) | 300 x 530 x 450 | W 450 x D 650 x H 950 | 350 x 750 x 710 |

Technical Specifications (10KVA to 60KVA)

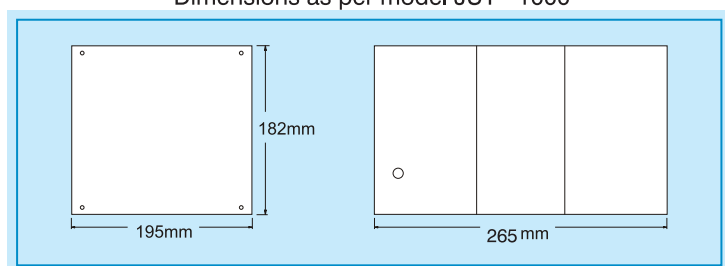
| Model No. | JFC10K-3P3 | JFC20K-3P3 | JFC30K-3P3 | JFC40K-3P3 | JFC50K-3P3 | JFC60K-3P3 |
|--------------------------------|--|------------|------------|------------|-----------------------|------------|
| Ratings | 10 KVA | 20 KVA | 30 KVA | 40 KVA | 50 KVA | 60 KVA |
| Output Rating | 8 KW | 16 KW | 24 KW | 32 KW | 40 KW | 48 KW |
| Topology | IGBT based. | | | | | |
| Input Voltage | 415V AC, 335 to 475V AC. | | | | | |
| Input Frequency | 50Hz, 47 to 53Hz. | | | | | |
| Input PF | 0.92. | | | | | |
| Input Current THD | <30%. | | | | | |
| Output Voltage | 115V 1Ø / 200V 3Ø / 400V 3Ø ±1% | | | | 200V 3Ø / 400V 3Ø ±1% | |
| Output Frequency | 60 Hz / 400Hz ±0.5%. | | | | | |
| Isolation Transformer | Provided Inbuilt. | | | | | |
| Power Factor | 0.8 Lag to Unity. | | | | | |
| Crest Factor | 3:1. | | | | | |
| Waveform | Sinusoidal. | | | | | |
| THD | <3% on linear load & <5% on non-linear load. | | | | | |
| Overload | 110% for 10 minutes, 125% for 1 minute, 150% for 10 sec. | | | | | |
| Transient Response | For 0 - 50% & 50% - 100% load change voltage remains within ±5%. | | | | | |
| Inverter Efficiency | >88%. | | | | | |
| Protections | Input & Output Over / Under Voltage, Single Phasing DC - High / Under Voltage Output Overload / Short Circuit / Over Temp. | | | | | |
| Audio Alarm | Inverter Trip. | | | | | |
| Metering | Numerical display for Input & Output - Voltage, Current & Frequency, Battery - Voltage & Current. | | | | | |
| Indications | Mains - On / High / Low / Single Phasing DC - On Inverter - On / Trip / High / Low / Over Current | | | | | |
| Termination | Input, Output. | | | | | |
| Switchgear | MCB / MCCB for Input, Output. | | | | | |
| Enclosure | IP 20 / IP 21 / IP 42 / IP 54. | | | | | |
| Humidity | Upto 95% Rh (non-condensing). | | | | | |
| Operating Temp. | 0 to 40°C. | | | | | |
| Cooling | Forced Air. | | | | | |
| Noise | <75 dB. | | | | | |
| Configuration | Standalone / Hot Standby. | | | | | |
| Dimensions (mm) (W x H x D) | 600 x 800 x 1300 | | | | | |
| Altitude | <1500m. | | | | | |



Certified & Approved by



* Dimensions as per model JUT - 1000



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, conservating ratings and ruggedised design for best long term value.

| 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 : ± 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 : ± 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

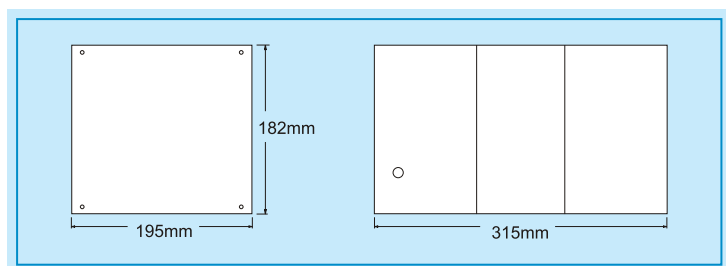


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Ultra Isolation Transformer

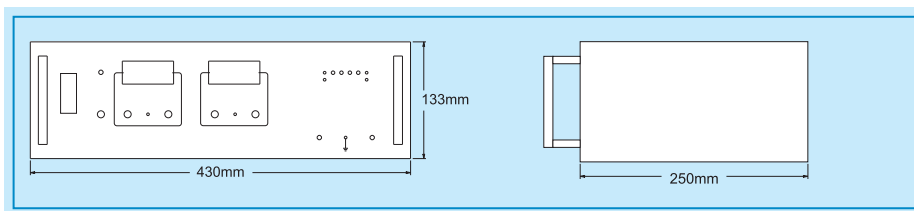
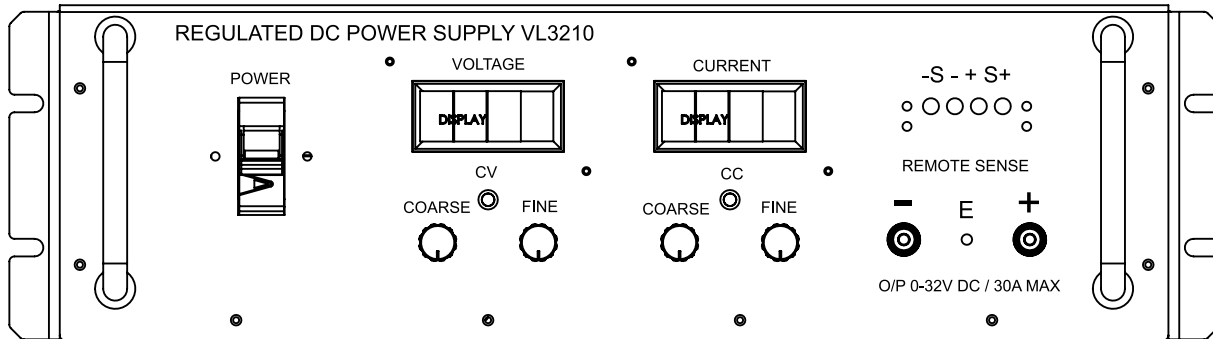
- ◆ Minimizes transverse mode noise.
- ◆ Complete electrostatic shielding.
- ◆ Filters power line noise, spikes and transients.
- ◆ Isolates sensitive equipments from noisy power lines.
- ◆ Minimizing common mode noise by over 130dB.
- ◆ Line and load regulation better than $\pm 3.5\%$.
- ◆ Quality components, 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 : ± 5 mm) | 208 x 246 x 350 | 208 x 246 x 350 | | |
| Weight apprx. (Tol : ± 0.5 kg) | 42kg | 48kg | | |

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

Regulated DC Power Supply VL3210



SPECIFICATIONS

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 : $\pm 0.1\% \pm 250\mu\text{A}$ for $\pm 10\%$ line change.

Load : $\pm 0.1\% \pm 250\mu\text{A}$ for change in output voltage from 0 Volts to maximum output voltage.
Ripple & Noise : 0.04% rms.

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

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

Protection : Overload & short circuit

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 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 to 55°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.

Output Voltage & Current :

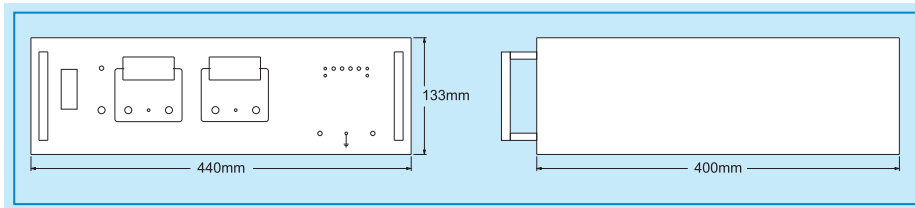
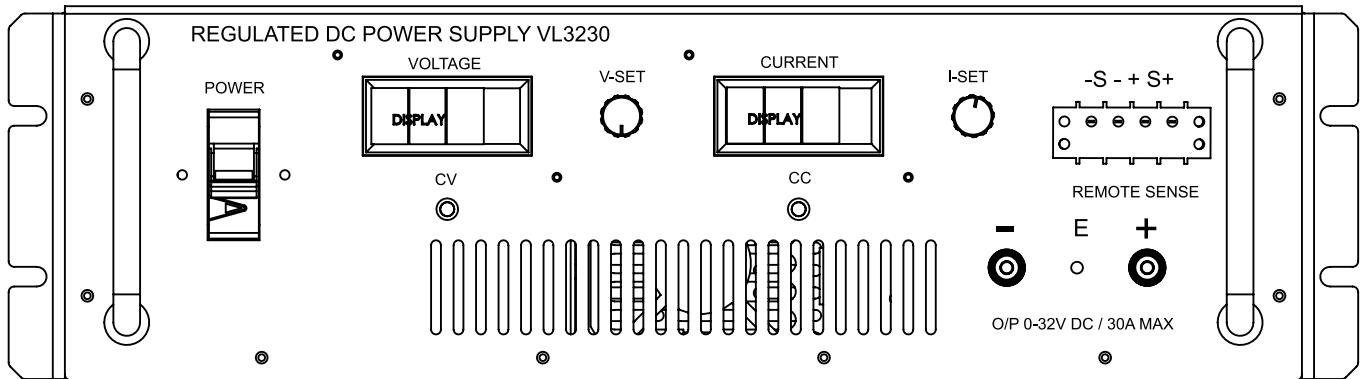
Output voltage : 0-32V

Output current : 0-10A

- 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 $\pm 0.01\%$

| | PV | PI | DIMENSIONS | MODEL | WEIGHT |
|-----|--------|--------|-----------------|--------|--------|
| 32V | 0- 32V | 0- 10A | 430 x 133 x 250 | VL3210 | 16.5 |

DC Regulated Power Supply VL3230



SPECIFICATIONS

Metering : 3 digit DPMs for voltage and current measurement.

Meter Accuracy : ± 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 : $\pm 0.1\% \pm 10\text{mA}$ for $\pm 10\%$ change in line voltage.

Load : $\pm 0.1\% \pm 10\text{mA}$ for change in output voltage from 0 volts to maximum output voltage.

Ripple and Noise : 0.05% rms

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

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

Protection : Overload short circuit (through CC/CV mode)

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.

Output Voltage & Current :

Output voltage : 0-32V

Output current : 0-30A

- 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.

| | PV | PI | DIMENSIONS | MODEL | WEIGHT |
|-----|-------|-------|-----------------|--------|--------|
| 32V | 0-32V | 0-30A | 440 x 133 x 400 | VL3230 | 22.4 |