



GPS-3000 series

Linear DC Power Supply



Six Supplies, One Bench Standard.

A line of six linear DC bench supplies from 90 W to 600 W. Three triple-output models with two adjustable channels and a third low-voltage rail, and three single-output models including a 30 V, 20 A unit.

Linear regulation is the reason to choose them. Ripple and noise stay below 1 mV rms from 5 Hz to 1 MHz, load regulation inside one part in ten thousand plus 3 mV, and recovery from a fifty per cent load step in under 100 μ s.

Every output floats. Nothing is tied to the chassis, and insulation between the two is not less than 20 M Ω at 500 V DC, which is what allows a channel to be inverted for a negative rail or stacked with another. Bond a terminal to the ground post when a circuit needs a defined reference, and leave it floating when it does not.

On the triple-output models the two adjustable channels run independently, in series for double the voltage or a matched $\pm$ supply, or in parallel for double the current, selected on one switch and tracked from one knob.

Everything is set from the front panel: a voltage control and a current control on every adjustable channel, with automatic CV to CC crossover and an indicator for each. On every model except the GPS-3020S the output can be disabled while the limits are set, so nothing reaches the load until it is right.

KEY FEATURES

- Six models, 90 W to 600 W
- Ripple and noise below 1 mV rms
- Series and parallel tracking on D models
- A voltage and a current control per channel
- Preset with the output off, except the GPS-3020S
- Touch-proof shrouded terminals

IDEAL FOR

- Teaching and training laboratories
- Analogue and mixed-signal design
- Sensor biasing and instrumentation
- Production and service benches
- Burn-in and soak testing

MODELS IN THE SERIES

Model	Channel ratings	Tracking	Max power
Models in the series · single and triple output · 90 W to 600 W			
GPS-3303D · triple	CH1 and CH2 0–30 V, 0–3 A · CH3 2.2–5.2 V, 1 A	Series 0–60 V · parallel 0–6 A	190 W
GPS-3306D · triple	CH1 and CH2 0–30 V, 0–6 A · CH3 5 V, 3 A	Series 0–60 V · parallel 0–12 A	375 W
GPS-3603D · triple	CH1 and CH2 0–60 V, 0–3 A · CH3 5 V, 3 A	Series 0–120 V · parallel 0–6 A	375 W
GPS-3303S · single	0–30 V, 0–3 A	—	90 W
GPS-3305S · single	0–30 V, 0–5 A	—	150 W
GPS-3020S · single	0–30 V, 0–20 A	—	600 W

Maximum power is the sum of the channels at their rated voltage and current. On the triple-output models the two adjustable channels are identical and the third is a low-voltage rail, adjustable on the GPS-3303D and fixed on the other two. Regulation, ripple and recovery figures below are common to every model in the series and apply to the adjustable channels; the fixed rail is specified separately.



WHAT'S IN THE BOX

- GPS-3000 series power supply
- Mains lead
- User manual

AVAILABLE SEPARATELY · Test leads, rack mounting and calibration are available from GPS. The declaration of conformity is supplied with any quotation on request.

GENERAL SPECIFICATIONS

Code	Item	Part Number
GPS-3303D	Triple output linear DC power supply, 2 × 0–30 V at 0–3 A plus 2.2–5.2 V at 1 A, 190 W	560214
GPS-3306D	Triple output linear DC power supply, 2 × 0–30 V at 0–6 A plus 5 V at 3 A, 375 W	560355
GPS-3603D	Triple output linear DC power supply, 2 × 0–60 V at 0–3 A plus 5 V at 3 A, 375 W	560678
GPS-3303S	Single output linear DC power supply, 0–30 V at 0–3 A, 90 W	510120
GPS-3305S	Single output linear DC power supply, 0–30 V at 0–5 A, 150 W	510080
GPS-3020S	Single output linear DC power supply, 0–30 V at 0–20 A, 600 W	510902

CONSTANT VOLTAGE

Line regulation $\leq 1 \times 10^{-4} + 3 \text{ mV}$ · load regulation $\leq 1 \times 10^{-4} + 3 \text{ mV}$ to 3 A, $\leq 2 \times 10^{-4} + 3 \text{ mV}$ above

RIPPLE AND NOISE

$\leq 1 \text{ mV rms}$ from 5 Hz to 1 MHz on the adjustable channels

SERIES TRACKING

Line $\leq 1 \times 10^{-4} + 5 \text{ mV}$ · load $\leq 300 \text{ mV}$ · gives double the voltage or a matched $\pm$ supply

THIRD RAIL, CH3

Adjustable 2.2 to 5.2 V at 1 A on the GPS-3303D, fixed 5 V at 3 A on the GPS-3306D and GPS-3603D · line $\leq 5 \text{ mV}$ · load $\leq 15 \text{ mV}$ · ripple $\leq 2 \text{ mV rms}$ · overload lamp

CONTROL

One voltage and one current control per adjustable channel · automatic CV to CC crossover with an indicator for each · output switch for presetting on every model except the GPS-3020S

TRACKING SWITCHES

Two rockers with the positions printed beside them · independent both out · series left in, right out · parallel both in · set them with the output off

REAR PANEL, GPS-3020S

High-current output terminals for currents above 10 A, and remote sensing terminals to regulate at the load rather than at the instrument

PROTECTION

Adjustable current limit in constant current mode · overload and short circuit held to the set current

POWER AND ENVIRONMENT

220 V $\pm 10\%$, 50/60 Hz, selectable · operating 0 °C to 40 °C below 80% RH · storage –10 °C to 40 °C below 70% RH

CONSTANT CURRENT

Line and load regulation $\leq 2 \times 10^{-3} + 3 \text{ mA}$ · ripple and noise $\leq 1 \text{ mA rms}$

RECOVERY

$\leq 100 \mu\text{s}$ for a fifty per cent load change, minimum load 0.5 A

PARALLEL TRACKING

Line $\leq 1 \times 10^{-4} + 3 \text{ mV}$ · load as constant voltage · the channel currents add

METERS

Three-digit LED, one pair per adjustable channel · voltage 0.1 V · current 0.01 A, or 0.1 A on the GPS-3020S · precision $\pm(0.5\% \text{ of reading} + 2 \text{ digits})$

OUTPUTS

Floating and isolated from the chassis and from each other · shrouded touch-proof terminals · continuous duty at full load

METER SELECT

On the triple-output models a switch sends the right-hand meter pair to CH1 or to CH3 · the left-hand pair always reads CH2

FUSE

Rating marked on the rear panel · replace only with the same type and rating, and disconnect the mains lead first

INSULATION

Chassis to terminal $\geq 20 \text{ M}\Omega$ at 500 V DC

SIZE AND MASS

Triple 280 × 255 × 145 mm, 7.0 kg · GPS-3303S and 3305S 260 × 150 × 145 mm, 4.0 kg · GPS-3020S 280 × 255 × 185 mm, 20.0 kg