



GPS-3303DC

Programmable DC Power Supply



KEY FEATURES

- Three outputs, 220 W total
- 0 to 32 V at 0 to 3.2 A on two channels
- Series to 60 V, parallel to 6.4 A
- Coarse and fine setting to 10 mV and 10 mA
- Settable over-current protection
- USB with SCPI, and five stored setups

IDEAL FOR

- Electronics design and prototyping
- Teaching and training laboratories
- Production, service and repair benches
- Automated test racks
- Sensor and instrumentation work

Three Outputs, Two That Track Together.

A programmable triple-output DC supply delivering up to 220 W. Two adjustable channels of 0 to 32 V at 0 to 3.2 A, and a third rail switchable between 2.5 V, 3.3 V and 5 V at 3.2 A.

The two adjustable channels link at the touch of a button. Series makes them one 60 V supply, parallel makes them one 6.4 A supply, and in either case CH1 becomes the master and sets both.

Setting is by knob against a four-digit voltmeter, coarse in 0.1 V or 0.1 A steps and fine to the resolution of 10 mV and 10 mA. Both setting and readback are accurate to $\pm(0.5\% \text{ of reading} + 2 \text{ digits})$.

An over-current protection value can be set per channel, closing the output rather than merely limiting it, and five complete setups can be saved and recalled. The USB port takes SCPI commands, so the instrument drops straight into an automated rack.

MEASUREMENT RANGES

Range	Accuracy	Resolution	Notes
Outputs and regulation · 220 W total · independent, series and parallel			
CH1 and CH2, independent	$\pm(0.5\% \text{ of reading} + 2 \text{ digits})$	10 mV and 10 mA	0 to 32 V at 0 to 3.2 A, each channel
CH1 and CH2, series	$\pm(0.5\% \text{ of reading} + 2 \text{ digits})$	10 mV and 10 mA	0 to 60 V at up to 3.2 A, set from CH1
CH1 and CH2, parallel	$\pm(0.5\% \text{ of reading} + 2 \text{ digits})$	10 mV and 10 mA	0 to 32 V at up to 6.4 A, set from CH1
CH3	—	—	2.5 V, 3.3 V or 5 V selected on a switch, at 3.2 A
Constant voltage, line regulation	$\leq 0.01\% + 3 \text{ mV}$	—	CH1, CH2 and CH3
Constant voltage, load regulation	$\leq 0.01\% + 3 \text{ mV}$	—	
Constant voltage, ripple and noise	$\leq 1 \text{ mV rms}$	—	5 Hz to 1 MHz
Constant current, line and load regulation	$\leq 0.2\% + 3 \text{ mA}$	—	
Constant current, ripple and noise	$\leq 3 \text{ mA rms}$	—	
Series mode regulation	Line $\leq 0.01\% + 5 \text{ mV}$, load $\leq 300 \text{ mV}$	—	
Parallel mode regulation	Line and load $\leq 0.01\% + 3 \text{ mV}$	—	
Tracking error	$\leq 0.5\% + 10 \text{ mV}$ of the master	—	No load
Recovery time	$\leq 50 \mu\text{s}$	—	Fifty per cent load change, minimum load 0.5 A

Figures apply after about thirty minutes of warm-up at an ambient temperature between +20 °C and +30 °C. The 220 W total is the sum of the three channels at their rated voltage and current. Series and parallel modes link CH1 and CH2 internally, so the pair is set and read from CH1.



WHAT'S IN THE BOX

- GPS-3303DC power supply
- Mains lead
- USB cable
- Quick start guide

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

GENERAL SPECIFICATIONS

Code	Item	Part Number
GPS-3303DC	Programmable triple-output DC power supply, 2 × 0–32 V at 0–3.2 A plus a switchable 2.5, 3.3 or 5 V rail at 3.2 A, 220 W, with USB	TBC

OUTPUTS

Three isolated channels · two adjustable 0 to 32 V at 0 to 3.2 A · a third at 2.5 V, 3.3 V or 5 V, 3.2 A · 220 W in total

SETTING

Multi-function knob · coarse steps of 0.1 V or 0.1 A · fine steps to the full resolution of 10 mV and 10 mA

ACCURACY

Setting and readback both $\pm(0.5\% \text{ of reading} + 2 \text{ digits})$ on voltage and on current

MEMORY

Five stored setups, each holding the operating mode and the voltage and current settings

KEY LOCK

The front panel locks and unlocks from a long press, or over the interface, so a running test is not disturbed

INSULATION

Case to terminal $\geq 20 \text{ M}\Omega$ · case to mains $\geq 30 \text{ M}\Omega$, both at 500 V DC

ENVIRONMENT

Operating 0 °C to 40 °C below 80% RH · storage –10 °C to 70 °C below 70% RH · altitude to 2000 m · installation category II, pollution degree 2

TRACKING

Independent, series or parallel, selected by button · series gives 60 V, parallel gives 6.4 A · CH1 is the master in both

DISPLAY

Four-digit voltmeter to 32 V and three-digit ammeter to 3.2 A per adjustable channel · constant voltage and constant current indicators

OVER-CURRENT PROTECTION

A protection value set per channel · the output closes when the current reaches it, rather than holding at the limit

REMOTE CONTROL

USB, class-compliant USBTMC · SCPI command set covering channel select, setting, measurement, output and tracking mode

TEMPERATURE COEFFICIENT

$\leq 300 \text{ ppm per } ^\circ\text{C}$

MAINS INPUT

100 V, 120 V, 220 V or 230 V $\pm 10\%$, 50/60 Hz, selected on a rear panel switch · the fuse changes with the setting

SIZE AND MASS

275 × 225 × 136 mm · 7.5 kg