

# Twin DC Power Supplies

**TENMA™**



## Twin independent outputs

The outputs operate in constant voltage or constant current mode with automatic crossover and mode indication. Each output has its own on-off switch.

If required, the outputs can be wired in series or parallel to achieve up to double the maximum voltage or double the maximum current.

## PowerFlex design

Each output can provide twice as much current as a conventional PSU of the same maximum voltage and power (see the power curve for each model).

This is achieved by using the latest switch-mode technology. Advanced techniques are used to achieve noise and RFI figures comparable with linear PSUs.

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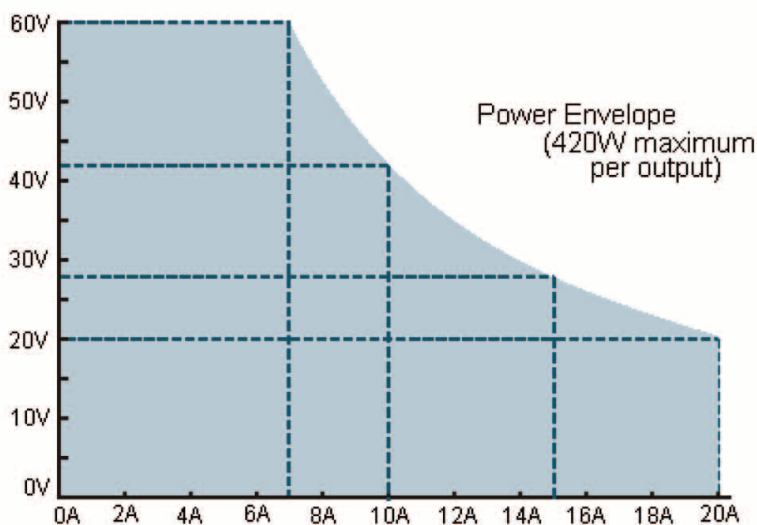


## Precision adjustment and metering

Coarse and fine controls permit the output voltage to be set within 10mV. The current limit control is logarithmic to give good resolution at low current settings.

When each output switch is set to 'OFF', the meters display the set levels. This enables voltage and current levels to be set accurately before connection to the load.

Switchable remote sense terminals are provided to allow the effects of connection lead resistance to be eliminated.



## Safety and protection

The series is designed and manufactured to meet the latest safety and EMC standards.

They incorporate full active power factor correction (PFC) which substantially reduces the levels of harmonic current taken from the ac line supply.

Comprehensive protection includes an adjustable overvoltage trip for each output.

compact high power PSUs offering flexibility of voltage-current combination



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## Output Specifications (each output)

Voltage Range	: 0V to 60V.
Current Range	: 0A to 20A.
Power Range	: Up to 420W - see power envelope graph.
Operating Mode	: Constant voltage or constant current with automatic cross-over and mode indication.
OVP Setting	: Via screwdriver adjustable preset on front panel.
OVP range	: 10% to 110% of maximum output voltage.
Voltage Setting	: By coarse and fine controls.
Current Setting	: By single logarithmic control.
Load regulation	: <0.01% for a 90% load change.
Line regulation	: <0.01% for a 10% line voltage change.
Output impedance	: Typically <5m. in constant voltage mode. Typically >5k. in constant current mode, (voltage limit at maximum).
Ripple & Noise	: Typically <1mV rms, <10mV pk-pk, (20MHz bandwidth) both outputs loaded (10A at 42V) in CV mode.
Transient Response	: <250µs to within 50mV of set level for 90% load change.
Temperature Coefficient	: Typically <100ppm/°C.
Output Protection	: Forward protection by OVP trip; maximum voltage that should be applied to the terminals is 50V. Reverse protection by diode clamp for reverse currents up to 3A.
Protection Functions	: Overvoltage trip, over-temperature trip.
Status Indication	: LED indication of Output On, CV, CI and Power Limit. Message on display for over-voltage trip.
Output Switch	: Push-push switch operating electronic power control. Preset voltage and current are displayed when the output is off.
Output Terminals	: 4mm terminals on 19mm (0.75 Inch) pitch. 30A maximum rating
Sensing	: Remote sensing via a front panel terminal block or local sensing (at output terminals). Selection by slide switch.

## Meter Specifications (each output)

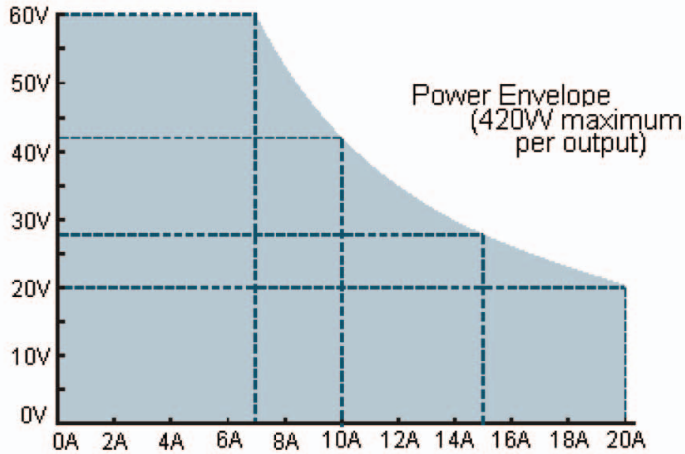
Meter Types	: Separate 4 digit meters for voltage and current with 14mm (0.56Inch) LED displays. Reading rate 4/second.
Meter Resolutions	: 10mV, 10mA.
Meter Accuracies	: Voltage 0.1% ±2 digits. Current 0.3% ±2 digits.

## General

AC Input	: 110 to 240 volts ±10% 50/60Hz by factory option. Installation Category II.
Power Consumption	: 1200VA maximum
Cooling	: Rear discharge 'smart' fan.
Operating Range	: +0°C to +40°C, 20% to 80% RH (non condensing).
Storage Range	: -40°C to +70°C.
Environmental	: Indoor use at altitudes to 2000m, Pollution Degree 2. Safety: Complies with EN61010-1.
EMC	: Complies with EN61326.
Size	: 210 x 130 x 350mm (W x H x D) half rack width x 3U height .
Weight	: 7kg (15lb).
Options	: Rack mounting kit.



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## Power Envelope (each output)

The maximum current at any voltage settings is limited by the power envelope which is set to give 7A at 60V rising to 20A at 20V under all ac supply conditions (both outputs loaded).

At lower output voltages the power is restricted by the 20 amps current maximum.

## Part Number Table

Description	Part Number
twin dc power supplies	72-7570

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