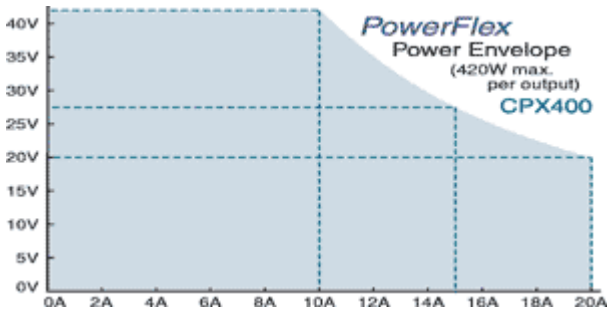
CPX400 - Description and Specifications

CPX400 - compact dual output 2 x 420 watts

- Dual isolated outputs, 420 watts each
- PowerFlex design gives variable voltage & current combinations within a maximum power range.
- Higher current capability at lower voltages
- Variable OVP trips
- Precision control & metering
- Selectable remote sense terminals
- Compact half-rack 3U case size



CPX400 - 0 to 42V, 0 to 20A * each channel

[* PowerFlex - max. voltage and current not available together - see graph]

A new type of bench PSU

The CPX400 is designed to meet the need for flexibility in the choice of voltage and current capabilities. Todays engineers often need the voltage range capability of a 0 to 42V PSU and the current capability of 20A PSU. Normally, however, the maximum voltage and maximum current are not required simultaneously. A conventional bench PSU has a fixed current limit giving a power capability that reduces directly with the output voltage.

PowerFlex design

The TTi PowerFlex design of the CPX400 enables higher currents to be generated at lower voltages within an overall power limit envelope. Each output can provide 42 Volts at a maximum current of 10 Amps. As the voltage setting is reduced the output current capability increases up to a maximum of 20 Amps. This is achieved by using the latest switch-mode technology. Advanced techniques are used to achieve noise and RFI figures comparable with linear PSUs. As a result the CPX400 can be used with confidence in sensitive environments.

Twin independent outputs

Compact and convenient

The CPX400 is housed in a compact and robust steel case which is half-rack width and uses little bench space. It is lightweight to transport and generates much less heat than a conventional PSU of similar power.

Precision adjustment and metering

The CPX400 incorporates separate high resolution voltage and current meters for each output using bright 14mm (0.56") LED displays. 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. Remote sense terminals are provided to allow the effects of connection lead resistance to be eliminated. When each output switch is set to 'OFF', the meters display the set levels enabling them to be set accurately *before* connection to the load.

Safety and protection

The CPX400 is designed and manufactured to meet the latest safety and EMC standards. Comprehensive protection includes an adjustable overvoltage trip for

The CPX400 is a dual output PSU with two completely independent and isolated outputs each with a 420W capability. 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 voltages up to 84V or currents up to 40A.

each output. This can be accurately set anywhere in the range 3.5V to 46.5V.

OUTPUT SPECIFICATIONS (each output)

Voltage Range:	0V to 42V.
Current Range:	0A to 20A.
Power Range:	Up to 420W - see PowerFlex envelope graph.
Operating Mode:	Constant voltage or constant current with automatic cross-over.
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 <5mW in constant voltage mode. Typically >5kW in constant current mode.
Ripple & Noise (20MHz bandwidth):	Typically <1mV rms, <10mV pk-pk, both outputs fully loaded (10A @ 42V).
Transient Response:	<250us to within 50mV for 90% load change.
Temp. Coefficient:	Typically <100ppm/^{o}C.
Output Protection:	Forward protection by OVP trip; maximum voltage 50V. Reverse protection by diode clamp for reverse currents up to 3A.
Protection Functions:	Overvoltage trip. Over-temperature Trip
Status Indication:	Output on, CV, CI, Power Limit, Trip.
Output Switch:	Electronic. Preset levels displayed when output is off.
Output Terminals:	4mm terminals on 19mm (0.75") pitch. 30A max.
Sensing:	Switchable Local/Remote. Remote via spring-loaded terminals.

METER SPECIFICATIONS (each output)

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

GENERAL

AC Input:	Internally set for 230V AC or 115V AC ±14%, 50/60Hz. Installation Category II.
Power Consumption:	1200VA max.
Cooling:	Speed-controlled low-noise fan.
Operating Range:	+5^{o}C to +40^{o}C, 20% to 80%
RH. Storage Range:	-40^{o}C to + 70^{o}C.
Environmental:	Indoor use at <2000m, Pollution Degree 1.
Safety:	Complies with EN61010-1.
EMC:	Complies with EN61326
Size:	210 x 130 x 350mm (WxHxD) half rack width x 3U height (optional rack mounting kit available).