

## DC-DC Converter

### GPD500, 500W DC-DC converter

The GPD500 500W DC-DC converter has a wide-range DC input voltage, from 10 to 20 volts, making it ideal for vehicle mounted systems, tactical and non-tactical, fixed and mobile communications and security systems.

The GPD500 low-profile units have an ultra-high efficiency of typically 96% at full load and can operate over an ambient temperature range of -40° to 70°C. They are small-sized, high stability, long life and have a high degree of protection, making them an ideal choice for step-up, non-isolated converters for vehicle systems.

Fully sealed encapsulation, IP67 protection class, withstand exposure to harsh environments. Guaranteed operation in complex environments with high reliability.

The GPD500 meets MIL-STD-1275A standards.

The power module has a built-in thermal sensing device including thermal shutdown and automatic recovery, reverse input protection, over-temperature shut down, current limit protection, short circuit protection, input under-voltage shut down and overvoltage protection.

It is possible to connect several units in parallel to achieve higher power.

#### Features

- High efficiency 97%
- Parallel operating for higher power
- Rugged and reliable
- Fully sealed
- 10-20V input voltage range.
- Epoxy resin sealing, IP67

#### Applications

- Automotive/RV/military
- Marine and other rugged environments
- Mobile communication (TV and radio vans)
- Base-station power
- Industrial controls
- Emergency backup power
- Solar and alternative power systems



Specifications	
<b>Model</b>	<b>GPD500-12-24</b>
<b>Input</b>	
Input Voltage (DC)	10 to 20Vdc
Max. Input Current	54A
Min. Input Voltage	9.8V
MAX. Input Noise	< 50mV
<b>Output</b>	
Output Voltage (*Customize)	24VDC
Max. output current	20A
Output Ripple Noise	<50mV
Line & Load Regulation	±0.5%
Frequency	100KHz
Efficiency	96% typical
<b>Protection</b>	
Overload/Short Circuit	Auto Recovery
Over Voltage	130% Latch Shut Down
Over Temperature	Shut Down, Auto Recovery
Under Voltage	9.8± 0.2V Shut Down
Reverse Polarity	Not Function
Input Protection	Up to 100V
<b>Environment</b>	
Operation Temperature	-40 to +70°C
Storage	-40 to +85°C
Cooling	Free Convection-Base Plate
Humidity	up to 95% RH non-condensing
Shock	Peak Acceleration 20GPK max
Vibration	Random Vibration ,10Hz to 1KHz,3 axis 1.9grms max
Altitude	Operating 10,000 ft. Non- operating 40,000 ft
Surge protection	meet MIL-STD-1275A
<b>Safety Regulatory &amp; EMC Specifications</b>	
FCC PART 15 CLASS A, CISPR 22 CLASS A, EN55022 CLASS A	
EN6000-4-2	ESD +8KV AIR +4KV contact discharge, performance criteria B
EN61000-4-3	Radiated Immunity: 80-1000 MHz 3V/m, AM 80% (1 KHz), criteria A
EN61000-4-4	Fast transient: 0.5KV on DC power port, performance criteria B
EN61000-4-5	Surge: 1KV line to Ground and 0.5KV line to line
EN61000-4-6	3VRMS, 80% A.M. BY 1 kHz
EN61000-4-8	3A /m at 50Hz, performance criteria A
<b>Mechanical Dimensions</b>	
Size (L,H,D)	149, 27, 119mm    5.87", 1.06", 4.69"
Weight	750g    1.65lb
IP rated	IP 67

Product specifications are subject to change without further notice



**Metromatics**

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