

# IDU500



## DC Power Supply

IDU500 is a DC UPS which integrates multiple functions in one unit including a smart battery charger, battery monitor and load management software. The built-in adaptive charging algorithm with automatic temperature compensated charging makes this an ideal choice for back-up power systems used for various outdoor applications.

### Key features include:

- Adjustable input voltage 110V<sub>DC</sub> or 220V<sub>AC</sub>
- Power factor correction
- Temperature compensated charging
- High temperature operation -40 – 70°C
- Low power consumption
- Self-cooling design
- IP55 rated
- RS485 communication for real-time data acquisition for:
  - Power supply
  - Alarm
  - Battery voltage, discharge current, capacity & run-time
  - History
- Protection from:
  - Over voltage
  - Over current
  - Over temperature
  - Short circuit

### Alpha Power Systems

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Power Systems

**Product Specifications**

Model	IDU500-12	IDU500-24	IDU500-48
<b>Master Output Voltage</b>	14.4V	28.8V	57.6V
<b>Master Output Current</b>	<b>Nominal</b>	8A	3.5A
	<b>Peak</b>	20A	20A
<b>Nominal Input Voltage</b>	90 - 165V <sub>AC</sub> , 50/60Hz or 165 – 265V <sub>AC</sub> 50/60Hz		
<b>Charging Curve</b>	3 step smart charging		
<b>Temperature Compensation</b>	Automatic		
<b>Absorption Voltage</b>	14.4V	28.8V	57.6V
<b>Floating Voltage</b>	13.5V	27V	54V
<b>Charging Current</b>	3A	1.5A	1A
<b>Equalisation</b>	Automatic/manual		
<b>Efficiency</b>	90%		
<b>Ripple noise</b>	≤ 500mV <sub>P-P</sub>		
<b>Voltage Precision</b>	≤ 2%		
<b>Working Temperature</b>	-40 – 70°C – full load at 60°C, derating 60% at 70		
<b>Communication</b>	RS485		
<b>Dry Contact</b>	AC grid fault, low battery voltage, unit fault, battery equalisation		
<b>Battery LVD Protection</b>	11V <sub>DC</sub>	22V <sub>DC</sub>	44V <sub>DC</sub>
<b>Battery EQ Voltage Protection</b>	11.5V <sub>DC</sub>	23V <sub>DC</sub>	46V <sub>DC</sub>
<b>Output Short Circuit Protection</b>	Master output: master output cut-off. Auto restart when fault is rectified Slave output: slave output cut off. Auto restart when fault is rectified		
<b>Battery Polarity Protection</b>	No output when polarity reversed		
<b>Charger Over Temperature</b>	Output de-rated		
<b>Battery Over Temperature</b>	Charging stops		
<b>Case Material</b>	Aluminium		
<b>Dimensions W x D x H</b>	16 x 110 x 45 mm		
<b>Weight</b>	1kg		
<b>IP Rating</b>	IP55		
<b>Mounting</b>	Wall Mount		
<b>Isolation Resistance</b>	≥ 50MΩ		