



SINEDCGPU-28VDC
28VDC GROUND POWER UNIT



Sinepowers' policy, has always been, to offer the best designed products that are environmentally friendly, simple to use, easy to maintain and exceptionally well manufactured thus meeting our clients requirements as well as complying with all standards and legislation.

Sinepower offer 28VDC solid-state Ground Power Supplies that range from 300 A continuous – 1200 A Peak load and 600 A continuous – 2400 A Peak load.

Sinepower ensure high quality, efficient and secure electrical power supplies.



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SINEPOWERS 28 VDC GPUs are continuous DC power supply units that supply DC power to aircrafts that are on the ground to start the engine and the APU (Auxiliary Power Unit) of the aircraft as well as for the on-board power supply.

SINEPOWERS 28 VDC GPUs are solid-state Ground Power Supplies and range from:

- **300 A continuous** – 1200 A Peak load (450 enclosure)
- **600 A continuous** – 2400 A Peak load (500 enclosure)

The units are available in mobile and fixed options.



- **CE Mark Certified** (EN61000-6-4 Electromagnetic compatibility - Generic emission standard; EN61000-6-2 Electromagnetic compatibility - Generic immunity standard; Low Voltage Directive (LVD) 2006/95/EC)
- **State of the art semiconductor technology** (IGBT) guarantee **Unity Power Factor** and **Low Input Harmonics** (THDi < 3 %)
- **High Efficiency** (up to 95% efficiency)
- **User friendly control panel**
- **Data logging**
- **IP54 enclosures** for outdoor use in extreme environmental conditions
- **Low noise emission** (<65dBA@1m)



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POWER QUALITY

INPUT

- State of the art semiconductor technology (IGBT) Rectifier.
- Power Factor Correction (PF=1)
- 95% efficiency
- 4 Quadrant Operation (better response of the system and safer operation for NBPT)
- Low input harmonics (< 1.5 % THDi), to comply with the strictest regulations @ any load.

OUTPUT

- 800Hz DC-DC Converter
- Galvanic Isolation

EFFICIENCY

- Up to 95% efficiency
- Green Standby Function - losses: 20 W
- No load losses: <1.5 kW.

PROTECTION AND SAFETY

- Enclosure Protection class up to Ip55
- Over/under voltage at input
 - Under voltage <20V (4 sec)
 - Over voltage >34V (4 sec)
 - Short Circuit <5V (4 sec)
- Overload capability designed for:
 - Power stage 150% - Continuous
 - Magnetics 120% - Continuous
- Overload protections set at:
 - 125% for 600seconds
 - 150% for 60 seconds
 - 400% for 5 seconds
- Over temperature protection.

INTERFACE AND COMMUNICATIONS

- Rs232

OPTIONAL FEATURES

- Communications
 - Monitoring by Web and SNMP
 - MODBUS Rs485
 - Remote control box
- Leakage current supervision.

NORMS AND STANDARDS

- **ISO 6858** Aircraft ground support electrical supplies
- **ISO 1540** Characteristics of aircraft electrical system
- **MIL-STD-704** Aircraft electric power characteristics
- **EN62040-1-1** General & safety requirement
- **EN61558-2-6** General & safety requirement
- **EN61000-6-4** Electromagnetic compatibility - Generic emission standard
- **EN61000-6-2** Electromagnetic compatibility - Generic immunity standard.



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SPECIFICATIONS

INPUT

| | |
|-------------------------|---------------------------------------|
| 3 Phase 3 Wire | |
| 3 phase 400V/415V AC | ± 10%* |
| 50Hz or 60Hz | ± 5%(frequency independent) |
| Input Current Harmonics | <1.5% at nominal current (Sinusoidal) |

OUTPUT

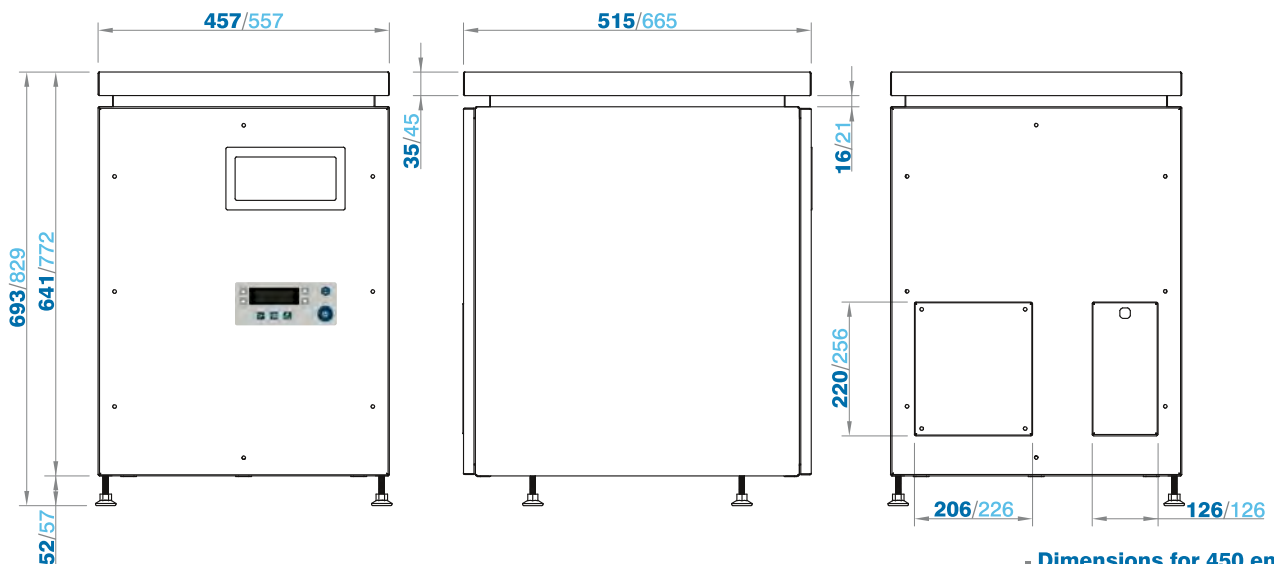
| | |
|--|-----------------------------------|
| Output 28.5VDC | |
| Continuous current capability (at 28.5VDC) | 300A/600A |
| Maximum Current Limit (at 28VDC) | 1200/2000A for up to 5sec |
| Current Limit adjusting steps (from 600A) | 300A |
| Voltage regulation up to 600A | ± 0.5% |
| Efficiency (at 600A) | 90% |
| Ripple | <0.5% |
| Dynamic Recovery to 90% VDC | <40mS |
| Voltage Compensation | 0-4V up to 600A (remote feedback) |
| Galvanic Isolation | 800Hz Transformer |
| IGBT + DIODE Rectifier | |

ENVIRONMENTAL CONDITIONS

| | |
|-------------------|-----------------------------|
| Temperature range | |
| Sea level: | -30°C to +50 °C(@100% Load) |
| Above 2000m: | 35 °C (@100% Load) |
| Relative Humidity | 10%-100% |
| Noise Level | < 65 dBA@1 meter |
| Protection Index | IP54 |

- * Other voltages and frequencies available on request
- * Other Electronic Overload limits available on request

INDOOR | OUTDOOR | AERONAUTICAL APPLICATIONS



- Dimensions for 450 enclosure
- Dimensions for 500 enclosure



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