



SINEDCGPU-28VDC 28VDC GROUND POWER UNIT



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Sinpowers' 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.

Sinpower 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.

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

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
- 600 A continuous – 2400 A Peak load

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 < 1.5%)

- **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)

INPUT

- State of the art semiconductor technology (IGBT) Rectifier
- Power Factor Correction (PF=1)
- Up to 90% efficiency
- Low input harmonics (<1.5% THDi), to comply with the strictest regulations @ any load.

OUTPUT

- 800Hz DC-DC Converter
- Galvanic Isolation.

EFFICIENCY

- Up to 90% 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 output:
 - 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:
 - 1200A - 5 seconds
 - 2400A - 5 seconds
- Over temperature protection.

INTERFACE AND COMMUNICATIONS

- RS232 (Optional)

OPTIONAL FEATURES

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

NORMS AND STANDARDS

- **ISO 6858:2017** Aircraft - Ground support. electrical supplies - General requirements.
- **MIL-STD-704F:2004** Aircraft Electric Power Characteristic.
- **SAE ARP 5015B:2018** Ground Equipment - 400 Hertz Ground Power Performance Requirements.
- **IEC 62040-1:2008** Uninterruptible power systems (UPS). Part 1: General and safety requirements for UPS.
- **IEC 61558-2-6:2009** Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1100 V. Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers.
- **IEC 61000-6-4:2011 +AMD1:2010** Electromagnetic compatibility (EMC). Part 6-4: Generic standards- Emission standard for industrial environments.
- **IEC 61000-6-2:2016** Electromagnetic compatibility (EMC). Part 6-2: Generic standards - Immunity for industrial environments.

SPECIFICATIONS

SINEDCGPU - 28VDC
28VDC GROUND POWER UNIT

INPUT

4 Wire	3 Wire Optional
3 phase 400V/415V AC	± 15%*
50Hz or 60Hz	± 10%(frequency independent)
Input current harmonics	<2% @ Full Load

OUTPUT

Output 28.5VDC	± 1%*
Continuous current capability (at 28.5VDC)	300A/600A*
Maximum Current Limit (at 28VDC)	1200/2400A 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	

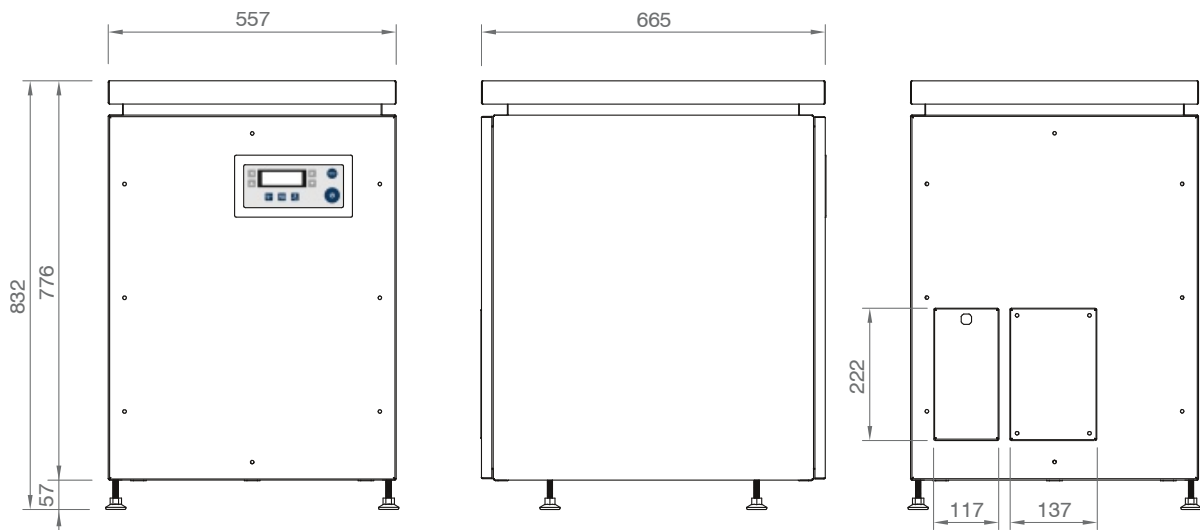
ENVIRONMENTAL CONDITIONS

Temperature range	
Sea Level	-40°C to +50 °C(@100% Load)
Above 2000m	30 °C (@100% Load)
Relative Humidity	up to 90% without condensation
Noise Level	<65 dBA@1 meter
Protection Index	IP54

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



TECHNICAL DRAWINGS



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