

# GROUND POWER UNIT 28VDC 1200A

## VGPU-28-1200-A01

The VGPU-28-1200 high-performance ground power unit delivers 28V DC power with up to 1200A continuous current, designed for aviation applications. Featuring modular power architecture, and hot-swap functionality, it ensures reliable operation with minimal downtime. The unit offers CAN communication for precise system control and monitoring. Compact and portable with wheels, the VGPU-28-1200 is designed for performance and convenience.

- Universal AC Power Input
- Hot-swap Capability with Built-In Power Modules
- Adjustable Output Voltage & Current
- Overload Protection
- Fault Indicators & Emergency Stop
- DC ON/OFF Switch
- Enhanced Safety
- AC Input Power Cable (20m)
- DC Output Power Cable (7m)



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The VGPU-28-1200 is a robust ground power unit (GPU) designed for mainly aviation applications, providing 28V DC output with up to 1200A of continuous current. It operates with a 3-phase 400VAC input, delivering reliable and robust performance for industrial environments. The unit operates at 47-63Hz, offering reliable performance under high load conditions. It supports modular use with 12 power modules, offering hot-swap capability. It supports seamless module replacements even during operation.



The GPU also comes equipped with a CAN communication interface for advanced system integration and control. Its stainless steel construction ensures durability, and the unit includes easy-to-access panel for efficient maintenance. The design features AC/DC digital meters, adjustable output voltage and current settings, emergency stop functionality, and additional safety features such as fault warning lights. With dimensions of 70.8cm x 80.9cm x 97.9cm and weighing 140 kg, it is built to be both portable and rugged, suitable for harsh environments.

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# Product Overview

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## 1. PRODUCT OVERVIEW

The VGPU-28-1200 is a high-performance Ground Power Unit (GPU) designed for demanding avionics applications, offering a 28V DC output with up to 1200A continuous current. It operates with a 3-phase 400VAC input, delivering reliable and robust performance for industrial environments. The unit's modular design, hot-swap capability, and advanced CAN communication interface ensure seamless operation and minimal downtime. Built with a stainless steel frame, it offers digital voltage and current measurements, adjustable output controls, and comprehensive safety features like emergency stop, overload protection, and fault warning indicators.

### 1.1. Capabilities

- Modular Design with 12 power supply units
- CAN communication interface
- Emergency stop button
- Hot-swap capability
- Adjustable output voltage
- Current limit setting

### 1.2. Features

- Fault warning indicators
- Overload protection
- Overvoltage Protection
- Short Circuit Protection
- Over-temperature Protection

# Electrical Specifications

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## 2. ELECTRICAL SPECIFICATIONS

Table 1: Absolute Maximum Ratings

PARAMETER	VALUE	UNIT
Input Voltage	400	V <sub>AC</sub>
Input Frequency	47-63	Hz
Output Voltage	23.5-30	V
Continuous Output Current <sup>1</sup>	1200	A

<sup>1</sup> Limited due to cable and output connector ratings. Please contact for full power output.

Table 2: Environmental Conditions

PARAMETER	VALUE	UNIT
Operating Temperature	-30 to +70	°C
Storage Temperature	-40 to +85	°C
Humidity	20% to 90% relative humidity	-



Figure 1: VGPU-28-1200

# Detailed Structure

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### 3. DETAILED STRUCTURE

The VGPU-28-1200 consists of 12 modular power supply units, each capable of providing 100A of current. In the event of a unit failure, the system can continue operating with a reduced current output, determined by the remaining functional units at 100A per unit. Additionally, the VGPU-28-1200 features hot-swap capability, allowing the faulty unit to be replaced without interrupting operation. Once the replacement is complete, the system resumes full functionality seamlessly. This modular and flexible design ensures minimal downtime and reliable performance in critical applications.

Table 3: Protections

PARAMETER	
Over Voltage Protection	The unit shut-down output voltage when the output voltage reaches 31.5 V, re-power on to recover.
Over Temperature Protection	The unit shut-down output voltage, recovers automatically after temperature goes down.
Fault Indicator	Fault LED will lights up red in case of overvoltage, fan failure, over temperature, short circuit, over current, input range abnormality, and failure at least one unit.

# Mechanical Specifications

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## 4. MECHANICAL SPECIFICATIONS

Table 4: Mechanical Specifications

PARAMETER	VALUE	UNIT
Dimensions	70.8 x 80.9 x 97.9(L×W×H)	cm
Weight	140	kg
Case Color <sup>2</sup>	Yellow (RAL 1028)	

<sup>2</sup> Please contact for a product with a different case color.

### 4.1. Connector Interface

Table 5: Mating Connectors

CONNECTOR	DESCRIPTION
5X63A IP44 Straight Plug	Power Input Connector
LPA TYPE M1/3 28V DC CONNECTOR	Power Output Connector

### 4.2. Panel Interface

- Input ON/OFF Paco Switch
- Output ON/OFF Button
- Digital Voltmeter (AC)
- Digital Voltmeter (DC)
- Digital Amperemeter
- Emergency Stop Button
- Fault Warning LED
- DC Voltage Adjustment
- DC Current Adjustment
- 220VAC Outlet

### 4.3. VGPU Dimensions

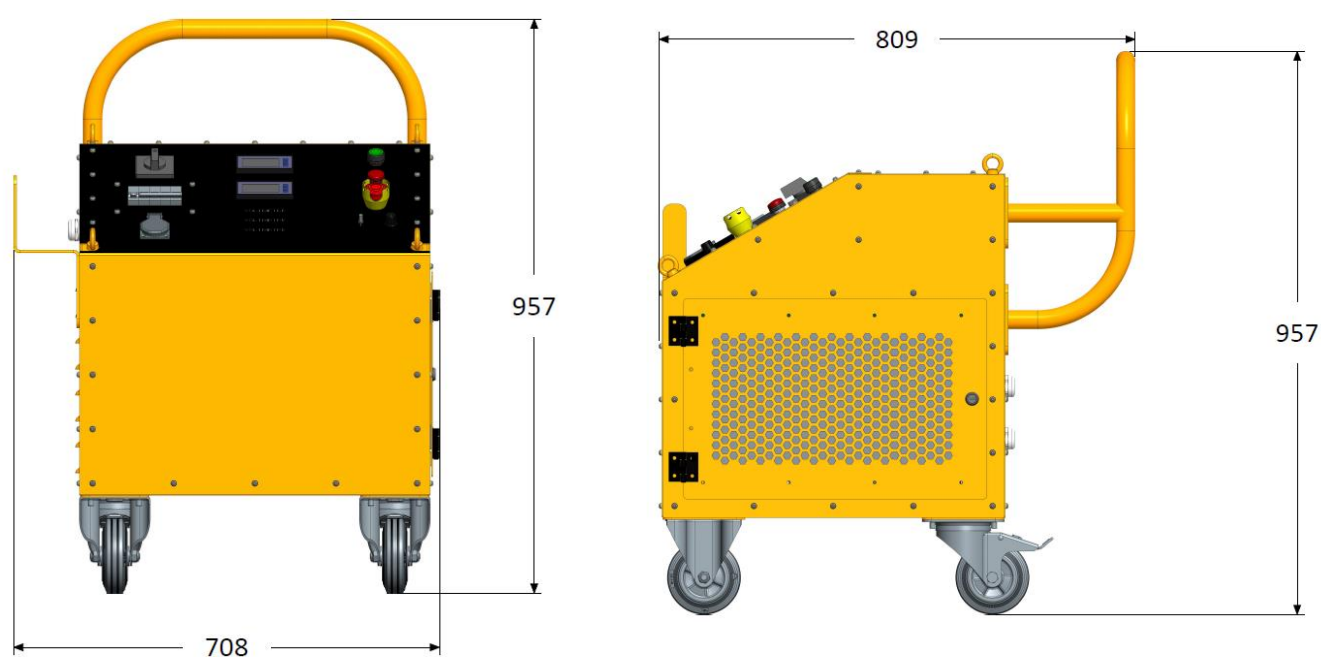


Figure 2: VGPU-28-1200 Dimensions