

Ground Power Unit GPU 1100



■ APPLICATIONS

■ MOBILE POWER SUPPLY

These devices are used for mobile supply of consumers with 24 ... 28VDC supply voltages, such as Handling, military equipment, motor vehicle, mobile and stationary engines, aircraft and other consumers with high power requirements.

■ STARTING AND PROVIDING OF AEROPLANES WITH 28VDC SUPPLY SYSTEMS ON BOARD LINES

These power supplies (MOBILE AVIATION GROUND POWER UNIT) provide energy for starting of aircrafts and to conserve board-battery during maintenance. They provide quite large and uninterrupted DC-currents.

■ CHARACTERISTICS

■ WORLDWIDE USE

The device 1100-128 can be configured for all standard worldwide 3-phase public grids, because it contains a reconnectable main voltage adaption for Y voltages of 190-200-210 and 380-400-415VAC with 50 / 60Hz.

Operation with 400 Hz is also possible on request. Only the grid-cable and a few other components must be ordered according to the respective main voltage. The retooling for operation on American or European grids can also be done by the customer afterwards.

- for starting helicopters and planes with 28VDC supply systems on board
- for 190...415VAC grid 50/60Hz (400Hz)
- Ambient temperature -40 ... + 50 ° C easily movable
- Starting current up to 800 A
- Cabinet made of stainless V2A steel with powder coating
- 24 ... 28V / 800A power supply for other applications as well

■ FOR MAINTENANCE OPERATIONS

ON AEROPLANES WITH 115 / 230VAC DEVICES

Measurements for diagnostics and tools for maintenances, which require 115VAC- or 230VAC main voltage and can be supplied via the service outlets (Schuko-plug or USA-plug).

■ FOR ROUGH ENVIRONMENTAL CONDITIONS

These ground power units are designed for worldwide use and can be used in rough climatic conditions. Cabinet from stainless V2A-steel with powder coating with special air vents and appropriate rain protection guarantee an operating temperature range of -40 °C ... + 50 °C.

■ STABLE SUPPLY

The output voltage of these devices is fitted with an LC-filter, so that the fault values (PARD Periodic and Random Deviations) will be only about 1,5% of the output voltage.

■ VOLTAGE- AND CURRENT-INDICATIONS

Voltage and current are displayed on a bright, large 3,5-digit display. An additional digital bar-graph display represents fast current peaks.

■ POWER ON/ DISPLAY OF DIRECT OF ROTATION

LED green: all phases o.k., correct phase position

LED red: all phases connected, wrong phase position

LED both light: one phase is missing

LED not light: 2 - 3 phases are missing

■ SERVICE SOCKETS

Two service sockets with 230VAC or 115VAC for maintenance equipment are available. They are protected with 6A resp. 10A circuit breakers. The frequency of these voltages corresponds to the mains frequency.

■ OPERATION

The operation is very simple. It is sufficient to plug the power cable and the output cable and turn on the unit. The preset output voltage is available, the plane can be started.

■ ADAPTATION DIFFERENT NETWORKS

The adaptation to various public grids and the adjustment of the output voltage (both by concealed screw terminals) can be done only once at the first start.

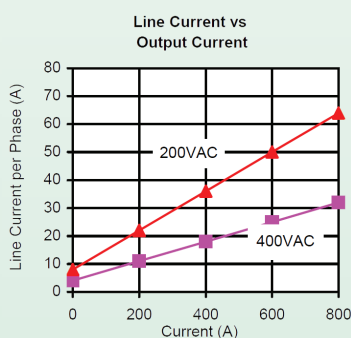
■ EASY TO USE

These power supplies are designed as mobile trolley with parking brakes and can be easily moved by one person. For operating it does not require any specialized personnel. The operating elements are arranged for protection behind a slewable acrylic glass cover, which allows to read the displays and operating even when it is closed. Generous winding devices for the power and output cables facilitate the handling.

■ CONNECTING CABLE

The order number 1100-128 includes the device without power or output cable. The current consumption from the public grid is dependent on the supply voltage and the maximum load. Therefore, the connection cable must be ordered separately depending on the mains voltage. They would be inclusive delivered.

The current load of the power cable shows the following diagram. It is possible by exchanging the power cable and less of other components, devices which are configured for the European market, for example, American market rebuild and vice versa.



Voltage	Current nom.	Current pk. 3Min / 5sec	Protection
28VDC	200A	300A / 800A	IP 54
Display U	Display I	Display Bar-Graph	Dimension
30V f.s. 1%+-1D	1.000A f.s. 5%+-3D	10x100A	600mm x990mm x1.000mm
Grid Input	Iout =200A	Iout =800A	
3phas. 190VAC	22A	65A	50Hz or 60Hz
3phas. 200VAC	22A	65A	
3phas. 210VAC	22A	65A	
3phas. 380VAC	11A	32A	
3phas. 400VAC	11A	32A	
3phas. 415VAC	11A	32A	

■ POWER CABLE 1100-901

The power cable 1100-901 (length 15 m) is equipped with a 5-pole connectors for CEKON 32A persistent current load. It is suitable for the operation of the appliance to public 3 phase grids with 400VAC Y voltage. The poles to connect are: L1, L2, L3, N, PE.

■ POWER CABLE 1100-903

The power cable 1100-903 (length 15 m) is delivered without any connecting plugs. It is suitable for the operation of the appliance to public 3-phase systems with 190 ... 210VAC Y voltage. There are the poles L1, L2, L3, PE and N to connect OUTPUT CABLE 1100-954, 1100-958 These two-wire output cable are provided with an aircraft plug R65G3B.

■ GENERAL

These power supplies are designed for mobile use and is rugged, portable device with L = 1000 mm, B = 600 mm without wheels = run (870 mm with wheels), H 990 mm and parking brakes on the steering wheels. They can be moved by one person.



Ground Power Unit GPU 1101 Lilo

- for starting helicopters and planes with 28VDC board systems
- Ambient temperature 0 ... + 50 °C easily movable
- -30 ° - + 85 ° C by operating
- Line-independent
- easy to move
- Power supply: 190 ... 415 VAC 3ph
- Special versions on request



■ VERSIONS

- 1101_li ion 29VDC ca.2.000 Apeak 120 Acontinuous
- 1101_li lonen_270 Ed. 2m 70qmm (Standard)
- 1101_li lonen_295 Ed. 2m 95qmm
- 1101_li lonen_470 Ed. Cable 4m 70qmm
- 1101_li lonen_495 Ed. Cable 4m 95qmm

■ APPLICATIONS

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■ MOBILE POWER SUPPLY

These devices are used for mobile supply of consumers with 24 ... 29VDC supply voltages, such as Handling, military equipment, motor vehicle, mobile and stationary engines, aircraft and other consumers with high power requirements.

■ CHARACTERISTICS

■ INTERNAL ENERGY STORAGE

The energy required to start or to supply high-performance batteries removed from new internal Lithium Iron Phosphate with 100Ah, which are loaded with the integrated charger.

■ ENERGY FOR > 5 START OPERATIONS

In the standard equipment (EC135) may be carried out without recharging up to 15 starting procedures conventional helicopter. For this reason these devices exceeding all previously available on the market!

■ MINIMUM CHARGING TIME

The charging of an energy storage is mainly dependent on the discharge, the permissible charging current and the performance / intelligence of the charger. The necessary energy for a deflated down to 30% battery is <60 minutes. The computer processed charging up to 3000W allows very short charging times.

■ CONTINUOUS POWER SUPPLY WITH HIGH PERSISTENT CURRENT

For service or maintenance a continuous power supply is required. If the required energy is not or only partially removed from the batteries, the unit must be connected to the public AC-grid.

The built-in-charger charges the energy storage up to 120A. If more than this charging current is continuously taken from the device, the energy storage is discharged with the difference between the discharging and charging current. If less current is continuously taken out, the energy storage is charged simultaneously.

■ **Use in the maintenance**

If 150A for maintenance purposes for example: required continuously for 2 hours, can even the Type 1101 Lilon afford this when its energy storage was charged.

Then there are 120A supplied from the charger and removing the re-

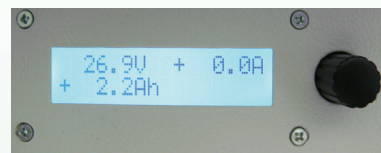


■ **Integrated Battery Management System (BMS)**

■ **Temperature monitoring**



- **Measurement and display of voltages and currents**
- **Ampere-hour counter**



■ **Monitoring of all single cells**



Voltage	Current Dau-	Discharging
28VDC	300A	2000A
Rated capacitance	Charger	Technology
100Ah	3000W / 120A	Litium-Ion

Battery		Charger	
Rated capacitance	25,6V	max. Feature	3.000V
Rated capacitance	100Ah	Voltage	29V
Durability ¹⁾	>2.000	Current	0-120A
max. contin. Discharge-voltage	300A	Input	85-265VAC (1p)/150 - 450 VAC(3P)
max. Pulsedischarge-voltage	2.000A		

¹⁾ (IEC254) Teil1 mit 75% Entladetiefe