28 Vdc 600A GPU

- **Output current 400 A, 600 A.**
- **Input Voltages ~ 3 400 Vac ± 15% (consult other versions).**
- **Input Frequency 50/60 Hz**
- **Output voltage 28 Vdc (adjustable).**
- **Output voltage ripple 2% (Full load).**
- **Input power factor PF ≥ 0.9**
- **Easily portable.**
- **Air cooling.**

General description

Ground power units (GPU) developed by SUPSONIK, S.L. are equipment intended for installation at airports, with the aim of fuelling aircraft utilities when their generator is disconnected.

In general conditions, the characteristics of an aircraft supply voltage are very different from those of a conventional network. These ground-based units convert the distribution network voltage and adapt it to the needs of the aircraft.

GPUs have a voltage drop compensation system in the power cable that regulates the voltage according to the characteristics of the cable to ensure that voltage value in aircraft connector remains constant, regardless of the applied load.

28 Vdc GPUs have two operating states; Activated and Service. In the activated state, the 28 Vdc unit is idle, delivering a correct voltage to the terminals located before output contactor. The GPU is ready to provide service to the aircraft. The operating state is the one in which - from the activated state, the output contactor has been closed and the unit supplies power at 28Vdc. to the aircraft

On the other hand, in order to facilitate the manoeuvre of the equipment, two operation modes are available; Normal and automatic. In normal mode, the operation button must be pressed each time power is needed. In automatic mode, once the aircraft cable is disconnected, the system waits for a certain time - without output voltage - without equipment disconnection. If another aircraft is connected in that time interval the equipment will start up again, without the need to make a manual command.

To detect that a load has been connected, the GPU receives two signals from the aircraft. One is a potential-free signal indicating that the cable is connected, and the other one is a 28 V permit to indicate that connection can be made.

The equipment is easily portable in a cart equipped with four wheels - two of them guide wheels that is supplied as a whole with the equipment. The cart is provided with a towing hitch to be towed by another vehicle. It is also provided with a braking device which is released only in towing position and incorporates a support to keep the output cables during transport.

SUPSONIK offers the possibility of adapting each equipment to application and customer needs.

CE

24 Vdc GPU

Technical features

INPUT

Voltage range	~3 400 Vac ± 15%
Frequency	50/60 Hz ± 5%
Rectification	6-pulse rectifier
Rated current	19.7 A (400 A output), 29.6 A (600 A output),
Power factor	≥ 0.9
Start-up current	≤ I_{NOM} (Soft start)

OUTPUT

Rated current	400 A, 600 A
Voltage	28 Vdc (Adjustable)
Ripple	≥ 2%
Voltage regulation	<0.5% vacuum at full load

EFFICIENCY

η	≥0.91
Loss at rest	150W

DIMENSIONS AND WEIGHT

Dimensions	800 x 700 x 500 mm
Weight	200 kg
Colour	RAL7035

ENVIRONMENTAL CHARACTERISTICS

Protection degree	IP55
Working temperature	-40ºC A 65ºC
Relative humidity	10-95%
Noise level	<65dB @ 1m

OVERLOAD RANGE

200%	during 30s
300%	during 10s
350%	During 5s
400%	During 2s

USER INTERFACE

Communications via wired signals, MODBUS, PROFIBUS, TCP / IP via RS485 and Ethernet.
Local Control.
Operation Panel

Specifications subject to change without notice

CE