

UDC PwrKart™ SERIES 28 VDC GROUND POWER UNIT



MOBILE CONFIGURATION
(Shown with digital panel & standard paint)

STANDARD FEATURES:

- CE Mark certified
- Indoor/Outdoor (Hangar/Ramp) Use
- ≤ 5% Input Current Distortion
- Automatic Input Line Monitoring
- Advanced Integrated Display (AID™) Console
- 8000 Event Log / Diagnostics
- USB, ETHERNET, RS 485, and Serial Port
- 15% Automatic Line Drop Compensation (ALDC)
- Emergency Power "OFF" Switch (EPO)
- 18-Inch Hazard Area Clearance
- I/O Voltage and Current Monitoring
- Input Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Summary Fault Indicators
- Input & Output Cable Rack
- Input High Voltage Transient Protection (Lightning Strikes) with Front Panel Preventative Maintenance annunciation
- Output Current Limit Adjust from 150 to full rated current
- Front Panel Voltage Adjust (± 10%)
- Multi Language Display (English, French, German, Italian, Russian and Spanish)

This product was manufactured in a plant whose quality management system is registered to ISO 9001:2008.

APPLICATION:

Since its beginning in 1960, Unitron has specialized in the design and development of reliable solid-state power systems. Through an innovative design, advanced self-diagnostic systems (BITE) and modular construction, Unitron products assure maximum power availability and minimal repair time.

The PwrKart™ Series includes lightweight 115/200 VAC, 400 Hz, 28 VDC, and 270 VDC mobile converters for aircraft ground power applications in the hangar or ramp area. With the lightest weight-to-power rating ratio in the market, all Unitron mobile units are easily maneuvered by a single person within the hangar environment.

Unitron's 28 VDC mobile PwrKart™ provides either 425 or 600 amps continuous output power, respectively either 1600 or 2000 amps start current capacity. In addition, Unitron offers a combination AC/DC GPU, which provides simultaneous 115/200 VAC, 400 Hz with 28 VDC power from a single unit.

OPTIONS:

- 50 or 100 foot Input Power Cable (Pigtail)
- Side Cable Hanger(s) or Top Cable Storage Rack
- DC Output Power Cable with Plug (Available in 20, 30, 40 ft. lengths)
- 400 Hz Output
- Output 28VDC Aircraft Safety Interlock Circuit Disconnect
- Output Safety Disconnect
- Alternate Mounting Configurations Available
- Indoor Touch Screen Panel
- External Communication Ports (ECP)
- Lockable Front Door
- Custom Paint & Decals (Standard Color - Mango)
- Ground Fault Monitor
- Cockpit Control

MECHANICAL SPECIFICATIONS:

Size:	See Figure 1
Weight:	400 lbs. (181 kg.)
Construction:	Indoor/Outdoor
Cooling:	Forced Convection

SPECIFICATIONS / STANDARDS:

EN 61000-6-2*	Electromagnetic compatibility Immunity standard for industrial environments
EN 61000-6-4*	Electromagnetic compatibility Emission standard for industrial environments
2006/95/EC*	Low Voltage Directive
ISO 1540	Characteristics of aircraft electrical system
ISO 6858	Aircraft ground support electrical supplies
SAE ARP 5015	Ground equipment 400Hz ground power performance requirement
MIL-STD-704F	Aircraft electric power characteristics
MIL-STD-1472	Human Engineering Design Criteria
DFS-400	Specification for 400Hz aircraft power supply

*Defined Basis of CE Mark Certification

GENERAL SPECIFICATIONS

INPUT:

Input Current Distortion	≤ 5%, typically 3%
Voltage	380 to 480V @ 600A rating or 208 to 480V @ 425A rating, +10%, -15%, 3Ø, 3 wire plus ground
Frequency	50 - 60 Hz ± 10%
Phase Rotation	Any
Protection	Over/undervoltage, loss of phase, overcurrent, short circuit. Voltage transient protection IAW IEEE C62.41.Location Cat. B/C
Inrush Current	No greater than 100% of full load current

ENVIRONMENTAL:

Acoustical Noise	< 65 dBA at 5 feet (1.5m) (60 dBA typically)
Temperature Range	-40°C to +55°C
EMI/RFI	Compatible with aircraft systems
Relative Humidity	10 - 95%
Enclosure(s)	NEMA 3R IP24 (optional IP54 or IP55; contact factory)

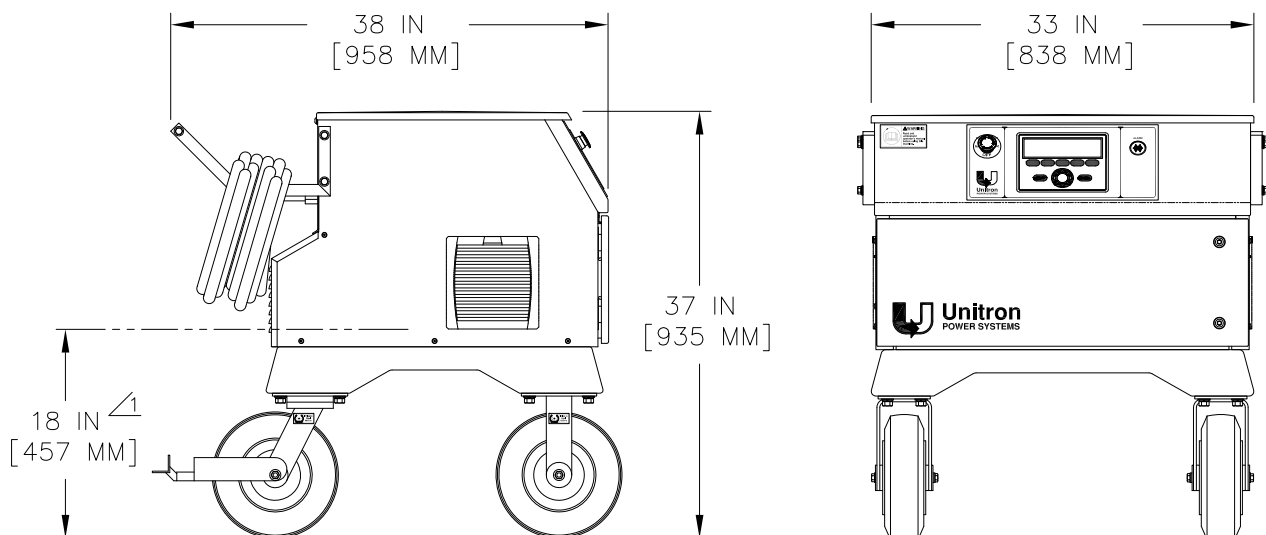
ENERGY FACTORS:

Efficiency	95% typical at full load 93% typical at half load
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OUTPUT:

Full Rated Load	600 amps continuous with 380 to 480V input 425 amps continuous with 208 to 480V input
Engine Start Capacity	Adjustable up to 2000 amps for 30 seconds at 10% duty cycle with 380 to 480V input Adjustable up to 1600 amps for 30 seconds at 10% duty cycle with 208 to 480V input
Voltage	28 VDC, 2 wire, grounded negative
Voltage Regulation	<ul style="list-style-type: none"> 100% continuous rated load and ±10% input voltage ± 0.05% No load to rated load with nominal input voltage IAW ISO 6858 Overload with nominal input voltage See start mode curves
Voltage Adjust	28 VDC ± 10%
Current Limit Adjust	150A to full rated current
Protection	Overload, short circuit, over voltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	15%, internal adjustment

FIGURE 1



∠ Safety clearance IAW Article 513-10(a) of the National Electrical Code (NEC)—Reference NFPA 70-1996, and EN60079-10

**UDC PwrKart™ SERIES
28 VDC GROUND POWER UNIT (GPU)**