

## UDC PwrKart™ SERIES 28 VDC GROUND POWER UNIT



50 / 60 HZ INPUT CONFIGURATION  
(Shown with digital panel & standard paint)

### STANDARD FEATURES:

- 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 ( $\pm 10\%$ )
- 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. Our PWM topography represents the most advanced design available in today's market. Self-diagnostic systems (BITE) and modular construction, 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 600 amps continuous output power, with starting currents from 1600-2000 amps depending upon input voltage available for alternate input configurations and is capable of running off of 400, 50 or 60Hz sources. 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)
- Top Cable Storage Rack
- DC Output Power Cable with Plug (Available in 20, 30, 40 ft. lengths)
- 400 Hz Output (combination units)
- Output 28VDC Aircraft Safety Interlock Circuit Disconnect
- Output Safety Disconnect
- Alternate input voltage: 115/200V, 400Hz
- Alternate Mounting Configurations Available
- Indoor Touch Screen Panel
- External Communication Ports (ECP)
- CE Mark certified
- 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	208 to 480V @ 600A 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 / IP55

### 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 200 to 480V input nominal voltages
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 200 to 208V input
Voltage	28 VDC, 2 wire, grounded negative
Voltage Regulation	<ul style="list-style-type: none"> <li>100% continuous rated load and ±10% input voltage ± 0.05%</li> <li>No load to rated load with nominal input voltage IAW ISO 6858</li> <li>Overload with nominal input voltage See start mode curves</li> </ul>
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

