

## UDC SERIES PwrKart™ 28VDC GROUND POWER UNIT



50/60HZ INPUT CONFIGURATION  
(Shown with optional digital panel)

### STANDARD FEATURES:

- IP55
- Certified to UL 1012
- Indoor/Outdoor (Hangar/Ramp) Use
- Automatic Input Line Monitoring
- 8000 Event Log / Diagnostics
- TCP/IP/Ethernet Interface (Modbus)
- 10% Power Regulation
- Internal Communication Ports - USB, RJ45 (Ethernet), RS485 (Modbus), & RS232
- External Communication Ports - RJ45 (Ethernet) & USB
- Emergency Power "OFF" Switch
- 18-Inch Hazard Area Clearance
- Voltage and Current Monitoring
- Elapsed Time Meter Access
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Input & Output Cable handle
- Input High Voltage Transient Protection
- Output Current Limit Adjust from 150 to full rated current
- Multi Language (Romanization)  
Display - English, French, German, Italian, Portuguese, Russian and Spanish, Others  
- Specify

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. Selfdiagnostic systems (BITE) and modular construction, assure maximum power availability and minimal repair time.

The PwrKart Series includes lightweight 115/200VAC, 400Hz, 28VDC, and 270VDC 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 **28VDC mobile PwrKart** provides 425 amps continuous output power, with starting currents from 2000 amps and is capable of running off of 50 or 60Hz sources. In addition, Unitron offers a combination AC/DC GPU, which provides simultaneous 115/200VAC, 400Hz with 28VDC power from a single unit.

### OPTIONS:

- Alternate 3Ø Input Voltage Range Available - 575-600VAC
- Various Convenience Outlets (Specify Voltage & Frequency)
- 50 or 100 foot Input Power Cable (Pigtail)
- 9 or 12 Inch Top Cable Storage Rack
- DC Output Power Cable with Plug (Available in 20, 30, 40 ft. lengths)
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single Output Only)
- Output Safety Disconnect
- Bench Top Voltage Adjust
- Input Auto Ranging
- Dual 28VDC output (Contact Factory)
- Alternate Mounting Configurations Available
- Custom Paint & Decals (Standard Color - White. Also available in mango color for no extra charge)
- Lockable Front Door
- CSA Certified
- CE Mark Certified
- Pneumatic Ramp Tires
- UltraLite™ Upgrade Package

### MECHANICAL SPECIFICATIONS:

Size: See Figure 1  
 Weight: 340lbs. (154kg.)  
 Enclosure: NEMA 3RX Corrosion Resistant  
 Cooling: Forced Convection

### SPECIFICATIONS / STANDARDS:

ISO 461-1/2	Aircraft - Connectors for Ground Electrical Supplies
ISO 1540	Characteristics of aircraft electrical system
ISO 6858	Aircraft ground support electrical supplies
MIL-STD-704F	Aircraft electric power characteristics
MIL-STD-1472	Human Engineering Design Criteria

## GENERAL SPECIFICATIONS

### INPUT:

Voltage	208-240V and 380-480V, $\pm 10\%$ , 3 $\emptyset$ , 3 or 4 wire plus ground (Specify manual tap position at time of order)
Frequency	50 - 60 Hz $\pm 10\%$
Phase Rotation	Any
Protection	Over/undervoltage, loss of phase, overcurrent, short circuit. Voltage transient protection IAW IEEE C62.41.1, Location Cat. B/C
Inrush Current	No greater than 100% of full load current

### ENVIRONMENTAL:

Acoustical Noise	< 65 dBA maximum at 5 feet (1.5m)
Temperature Range	-40°C to +55°C
EMI/RFI	Compatible with aircraft systems
Relative Humidity	10 - 95%, Non-Condensing
Ingress of Water	Type 3RX, IP55

### OUTPUT:

Full Rated Load	425 amps continuous
Engine Start Capacity (10% duty cycle)	Adjustable up to 1600 amps for 35 seconds or 2000 amps for 30 seconds
Overload (10% duty cycle)	600 amps for 1 hour 1000 amps for 1 minute
Voltage	28 VDC, 2 wire, grounded negative
Voltage Regulation	
• 100% continuous rated load and $\pm 10\%$ input voltage	$\pm 0.5\%$
• No load to rated load with nominal input voltage	$\pm 0.5\%$
• Overload with nominal input voltage	See start mode curves
Voltage Adjust	28 VDC $\pm 10\%$
Current Limit Adjust	150A to full rated current
Protection	Overload, short circuit, over voltage and safety disconnect
Power Regulation	10%

FIGURE 1

