

## UDC SERIES PwrKart™ 270VDC GROUND POWER UNITS



MOBILE CONFIGURATION  
(Shown with standard touch screen panel)

### STANDARD FEATURES:

- IP55
- Certified to UL 1012
- 3 Phase, 380-480VAC input
- Indoor/Outdoor (Hangar/Ramp) Use
- ≤ 5% Input Current Distortion at Max Load
- Automatic Input Line Monitoring
- Advanced Integrated Display (AID™) Console
- 8000 Event Log / Diagnostics
- TCP / IP / Ethernet interface (Modbus)
- Internal Communication Ports - USB, RJ45 (ETHERNET), RS485 (Modbus), & RS232
- External Communication Port – USB
- 10% Power Regulation
- Emergency Power “OFF” Switch
- 18-Inch Hazard Area Clearance
- I/O Voltage and Current Monitoring
- Input Frequency Monitoring
- Elapsed Time Meter
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Input & Output Cable Rack
- Input High Voltage Transient Protection
- Multi Language Display - Arabic, Asian, English, French, German, Italian, Portuguese, Russian and Spanish, Others - Specify

### MECHANICAL SPECIFICATIONS:

Size:	See Figure 1
Weight:	36kW = 637lbs. (289kgs.) 48kW = 753lbs. (342kgs.) 60kW = 925lbs. (420kgs.) 72kW = 1,017lbs. (461kgs.)
Enclosure:	NEMA 250 - Type 3SX
Cooling:	Forced Convection

### APPLICATION:

Since its beginning in 1960, Unitron has specialized in the design and development of reliable solid-state power systems for military applications. Through an innovative design, Built-In Test Equipment (BITE) and modular construction, Unitron products assure maximum power availability and minimal repair time for the latest military aircraft including the F-22A Raptor and the JSF F-35A.

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 one of 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. This eliminates the need for expensive towing equipment or additional labor that other Ground Power Units (GPUs) may require.

In addition to mobile GPUs, Unitron offers 400Hz, 28VDC, 270VDC and combination AC/DC units in towable, fixed and bridge-mounted configurations.

### OPTIONS:

- Alternate Input Voltages Available (Specify)
- Various Convenience Outlets (Specify Voltage and Frequency)
- 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 up to 65 ft. length)
- 400Hz Output (Combination Units)
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- External Communication Port - Ethernet
- Output 28VDC, 15Amps Aircraft Safety Interlock Circuit Disconnect
- Output Safety Disconnect
- Alternate Mounting Configurations Available
- Indoor Touch Screen Panel
- Lockable Front Door
- Bench Top Voltage Adjust
- Custom Paint & Decals (Standard Color - White)
- Pneumatic Ramp Tires
- CE Mark Certified
- CSA Certified

### SPECIFICATIONS / STANDARDS (Meets or Exceeds):

NFPA 70 (NEC 500)	EN 61000-6-2 and -4**
EN 60079-10	2006/95/EC**
MIL-STD-704F	UFGS 26 35 44
MIL-STD-1472	Lockheed Martin F-35 Ground
ISO 461-1/2	Electrical Power Interface Specification
ISO 1540	(Document No. 2ZEU00004, Rev-0007)
ISO 6858	

\*\*Defined Basis of CE Mark Certification



This product was manufactured in a plant  
whose quality management system is  
registered to ISO 9001:2015.

## GENERAL SPECIFICATIONS

### AC INPUT:

Input Current Distortion	≤ 5%, typically 3%
Voltage	380 - 480 V, +10%, -15%, 3Ø, 3 or 4 wire plus ground (Alternate Voltages Available)
Frequency	50 - 60 Hz ± 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

### 28VDC OUTPUT:

Overload	100% continuous; 150% for 5 sec; 200% for 1 sec; 250% for 50 msec
Current Rating	15 Amps continuous
Voltage	28 VDC, 2 wire, grounded
Voltage Regulation	± 0.5%
Voltage Adjust	28 VDC ± 10%
Output Ripple Voltage	150 mV pk to pk
Protection	Overload, short circuit, overvoltage

### ENVIRONMENTAL:

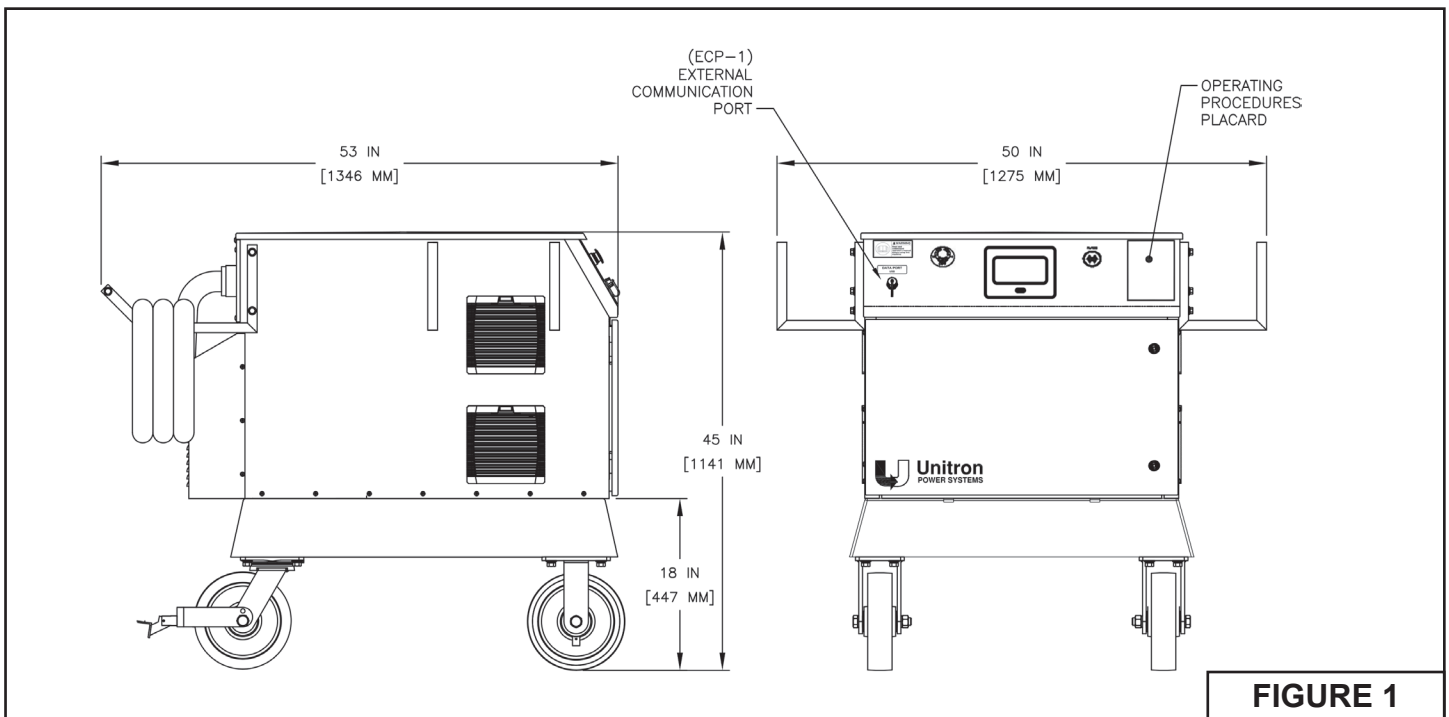
Acoustical Noise	< 65 dBA maximum at 5 feet (1.5m)
Temperature Range	-40°C to +55°C
Relative Humidity	0 - 95%, Non-Condensing
Ingress of Water	Type 3SX, IP55

### 270VDC OUTPUT:

Power Rating	36, 48, 60, or 72 kW
Overload/Transient (IAW LMCO Document No. 2ZEU00004, Rev-0007)	100% continuous; 150% for 5 sec; 200% for 1 sec; 250% for 50 msec
Pulse Loads	IAW LMCO Document No. 2ZEU00004, Rev-0007
Voltage	270 VDC, 2 wire, grounded negative
Voltage Regulation	
<ul style="list-style-type: none"> <li>■ 100% continuous rated load and ± 10% input voltage</li> <li>■ No load to rated load with nominal input voltage</li> </ul>	± 0.5%
Voltage Adjust	270 VDC ± 10%
Output Ripple Voltage	3.0 volts pk to pk
Transient Response	IAW MIL-STD-704F, Fig.16 and LMCO Document No. 2ZEU00004, Rev-0007
Protection	Overload, short circuit, overvoltage and safety disconnect
Power Regulation	10%

### ENERGY FACTORS:

Efficiency	93% typical at full load; 91% typical at half load; varies depending on configuration
Energy Efficiency Ratio	20.0 typical



**FIGURE 1**