

UDC SERIES PwrKart™ 270VDC GROUND POWER UNITS



MOBILE CONFIGURATION
(Shown with standard digital 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 Ports – RJ45 (ETHERNET) & 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 (Romanization) Display - 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 3RX Corrosion Resistant
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 35, 63, or 83 ft. lengths)
- 400Hz Output (Combination Units)
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- 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:

2ZEU00004, Rev-0007	F-35 Ground Electrical Power Interface Document
EN 61000-6-2 and -4*	Electromagnetic Compatibility Immunity and Emission Standards for Industrial Environments
2006/95/EC*	Low Voltage Directive
ISO 461-1/2	Aircraft - Connectors for Ground Electrical Supplies
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

*Defined Basis of CE Mark Certification



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

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	10 - 95%, Non-Condensing
Ingress of Water	Type 3RX, IP55

270VDC OUTPUT:

Power Rating	36, 48, 60, or 72 kW
Overload	100% continuous; 150% for 5 sec; 200% for 1 sec; 250% for 50 msec
Pulse Loads	IAW LMCO Drawing No. 2ZEU00004, Rev-0007
Voltage	270 VDC, 2 wire, grounded negative
Voltage Regulation	
<ul style="list-style-type: none"> ■ 100% continuous rated load and ± 10% input voltage ■ No load to rated load with nominal input voltage 	± 0.5%
Voltage Adjust	270 VDC ± 10%
Output Ripple Voltage	3.0 volts pk to pk
Transient Response	(25% load changes) IAW MIL-STD-704F
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

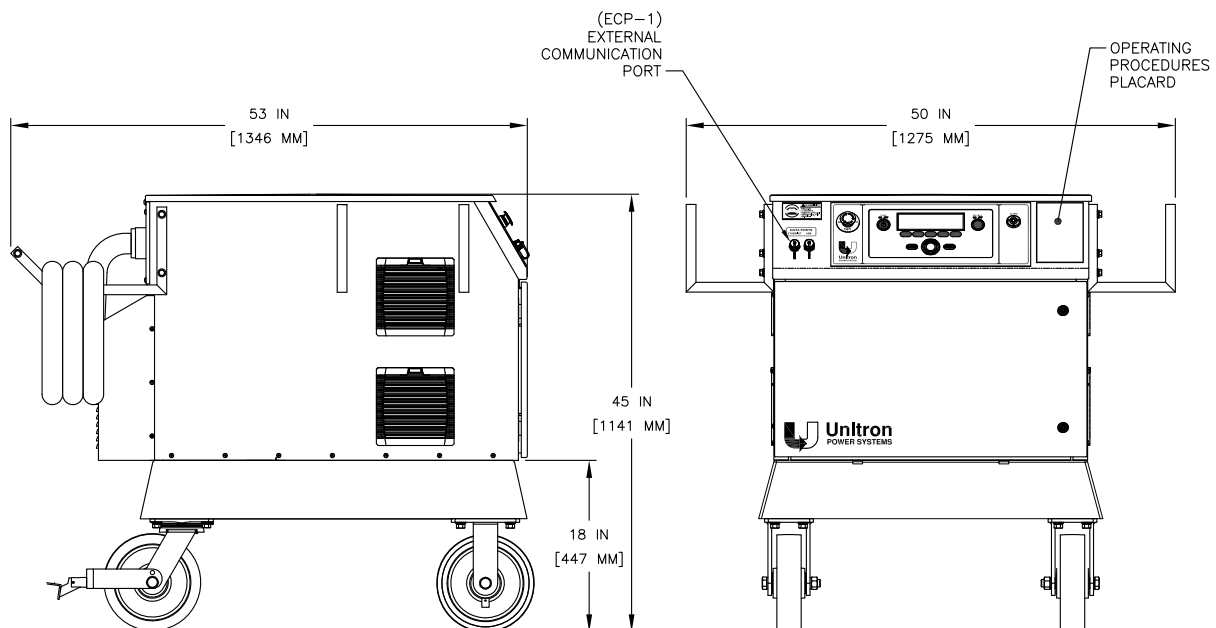


FIGURE 1