

## UFC Low ProFile™ SERIES 400 Hz AND 28 VDC GROUND POWER UNIT (20 kVA to 90 kVA)



BOARDING BRIDGE CONFIGURATION  
(Shown with overhead front panel mounting)

### STANDARD FEATURES:

- CE Mark certified
- 3 Phase, 380-480 VAC input
- 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)
- No Break Power Transfer (NBPT) Compatible
- I/O Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Summary Fault Indicators
- Input High Voltage Transient Protection (Lightning Strikes) with Front Panel Preventative Maintenance annunciation
- Multi Language Display (English, French, German, Italian, Russian and Spanish)

### MECHANICAL SPECIFICATIONS:

Size:	See Figure 1
Weight:	20.0 kVA = 661 lbs. (300 kg.)
(Not Incl. Bridge Mounting Brackets)	30.0 kVA = 718 lbs. (326 kg.)
	45.0 kVA = 805 lbs. (365 kg.)
	60.0 kVA = 891 lbs. (404 kg.)
	75.0 kVA = 968 lbs. (439 kg.)
	90.0 kVA = 1055 lbs. (479 kg.)
Construction:	Indoor/Outdoor
Cooling:	Forced Convection

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 Low ProFile™ Series includes 115/200 VAC, 400 Hz, 28 VDC, and 270VDC converters designed to provide aircraft ground power in "low profile" applications such as under passenger boarding bridges, in maintenance hangars, or on flight lines. The **dual output AC/DC GPU** provides simultaneous AC and DC power from a single unit. Because a single unit can do the work of two, Unitron's AC/DC GPU reduces operating and maintenance costs, and save valuable space in the hangar or on the ramp.

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

### OPTIONS:

- Alternate Input Voltage Range 3-phase, 208 or 575 VAC Input
- 50 or 100 Foot Input Power Cable (Pigtail, Specify Required Length)
- AC Output Power Cable with Plug (available in 30 or 60 foot standard lengths), specify required length
- DC Output Power Cable with Plug (available in 20, 30, 40, or 60 foot standard lengths), specify required length
- Input & Output Cable Racks
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- Output Safety Disconnect (without interlock)
- Front Panel AC Voltage Adjust (± 15%)
- 270VDC Output
- 300% Overload for 6 sec. (AC output only)
- Indoor Touch Screen Panel
- External Communication Ports (ECP)
- Custom Paint & Decals (Standard Color - White)
- Ground Fault Monitor
- Cockpit Control
- Lockable Front Door
- Alternate Mounting Configurations Available
- Stand - 4, 12 or 18 Inch
- Forklift Tubes - 4 Inch
- Leg Kit - 12 or 18 Inch

### 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

### AC INPUT:

Input Current Distortion	≤ 5%, typically 3%
Voltage	380 to 480 volts, +10%, -15%, 3Ø, 3 wire plus ground (Alternate voltages - specify)
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

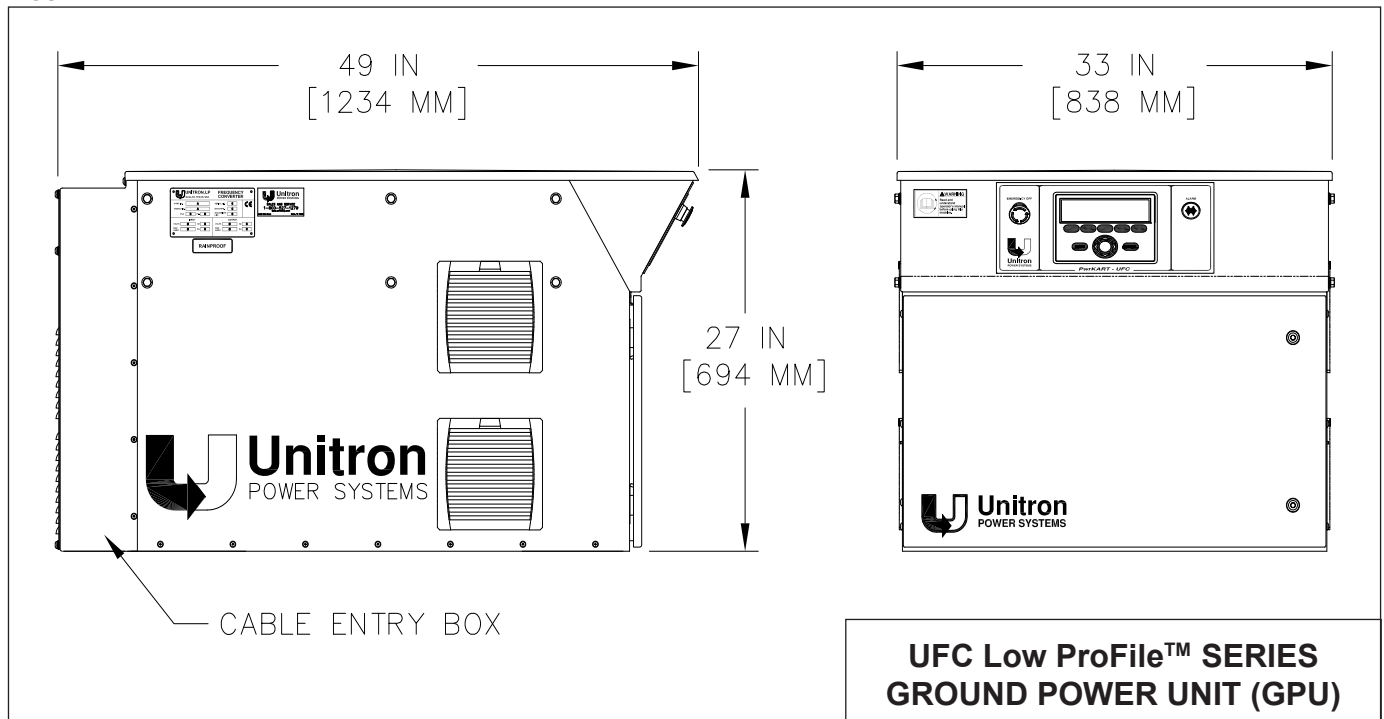
### AC OUTPUT:

Power Rating	20, 30, 45, 60, 75, or 90 kVA (specify)
Overload	150% for 5 min., 200% for 20 sec.
Crest Factor	1.414 ± 3%
Voltage	115/200 volts, 3Ø, 4 wire, grounded neutral
Voltage Regulation	± 1.0% under all conditions of line, balanced loads and temperature
Voltage Transients	IAW MIL-STD-704F
Frequency Regulation	400 Hz ± 0.01% under all condi- tions of line, load and temperature
Frequency Transients	None
Phase Angle Regulation	± 1° for balanced loads; ± 2° for unbalanced loads
Harmonic Distortion	≤ 2.0%, typical 1.5%
Protection	Overload, short circuit, over/under voltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	15%, internal adjustment

### DC OUTPUT:

Full Rated Load	600 amps continuous
Engine Start Capacity	Adjustable up to 2000 amps for 20 seconds at 10% duty cycle
Voltage	28 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> <li>▪ Overload with nominal input voltage</li> </ul>	± 0.05%  IAW ISO 6858  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
<b>ENVIRONMENTAL:</b>	
Acoustical Noise	< 65 dBA at 5 feet (1.5m) (60 dBA typical)
Temperature Range	-40°C to +55°C
Relative Humidity	10 - 95%
Enclosure(s)	NEMA 3R, IP24 (optional IP54 or IP55; contact factory)
<b>ENERGY FACTORS:</b>	
Efficiency	95% typical at full load, 93% typical at half load; varies depending on configuration
Energy Efficiency Ratio	20.0 typical

FIGURE 1



**UFC Low ProFile™ SERIES  
GROUND POWER UNIT (GPU)**