UFC SERIES Low ProFile™ 400Hz AND 28VDC GROUND POWER UNIT (20kVA to 45kVA)

HORIZONTAL CONFIGURATION
(Shown with standard 4 inch stand and digital panel)

STANDARD FEATURES:

- IP55
- Certified to UL 1012
- 3 Phase, 50 - 60Hz, 380-480VAC Input
- ≤ 5% Input Current Distortion at max load
- 15% Automatic Line Drop Compensation
- Indoor/Outdoor (Hangar/Ramp) Use
- 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
- Emergency Power “OFF” Switch
- 18-Inch Hazard Area Clearance
- Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Output Current Limit Adjust from 150A to full rated current
- Input & Output Cable Racks
- 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:	20.0kVA = 701 lbs (318 kg) 30.0kVA = 758 lbs (344 kg) 45.0kVA = 845 lbs (383 kg)
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. 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 115/200VAC, 400Hz, 28VDC, 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. Kilowatt power for the complete unit is limited to the nominal rating of the 400Hz output of the 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 fixed GPUs, Unitron offers 400Hz, 28VDC and combination AC/DC units in towable, mobile and bridge-mounted configurations.

OPTIONS:

- Alternate input voltage range 3 Phase, 208-240 or 600VAC input
- Various Convenience Outlets (Specify Voltage and Frequency)
- 50 or 100 Foot Input Power Cable (Pigtail, Specify Required Length)
- AC and/or DC Output Power Cable with Plug (Specify Required Length)
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- Output Safety Disconnect
- Bench Top Voltage Adjust
- No Break Power Transfer Compatible
- 270VDC Output
- Second 28VDC output
- Indoor Touch Screen Panel
- Custom Paint & Decals (Standard Color - White)
- CSA Certified
- CE Mark Certified
- Ground Fault Monitor
- Lockable Front Door
- Pneumatic Ramp Tires
- Alternate Mounting Configurations Available
- Neutral Interrupt Protection
- Universal Safety Interlock

SPECIFICATIONS / STANDARDS:

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 Power 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
DFS-400	Specification for 400Hz aircraft power supply

*Defined Basis of CE Mark Certification

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

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GENERAL SPECIFICATIONS

AC INPUT:

Voltage	380-480V, +10%, -15%, 3Ø, 3 or 4 wire plus ground (Specify)
Frequency	50 - 60 Hz ± 10%
Phase Rotation	Any
Protection	Over/undervoltage, loss of phase, overcurrent, short circuit. Voltage transient protection IAW IEEE C62.41.1, Location Cat. B/C
Inrush Current	No greater than 100% of full load current

DC 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 ±10% input voltage	± 0.5%
▪ No load to rated load with nominal input voltage	± 0.5%
▪ Overload with nominal input voltage	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)	10%

ENERGY FACTORS:

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

AC OUTPUT:

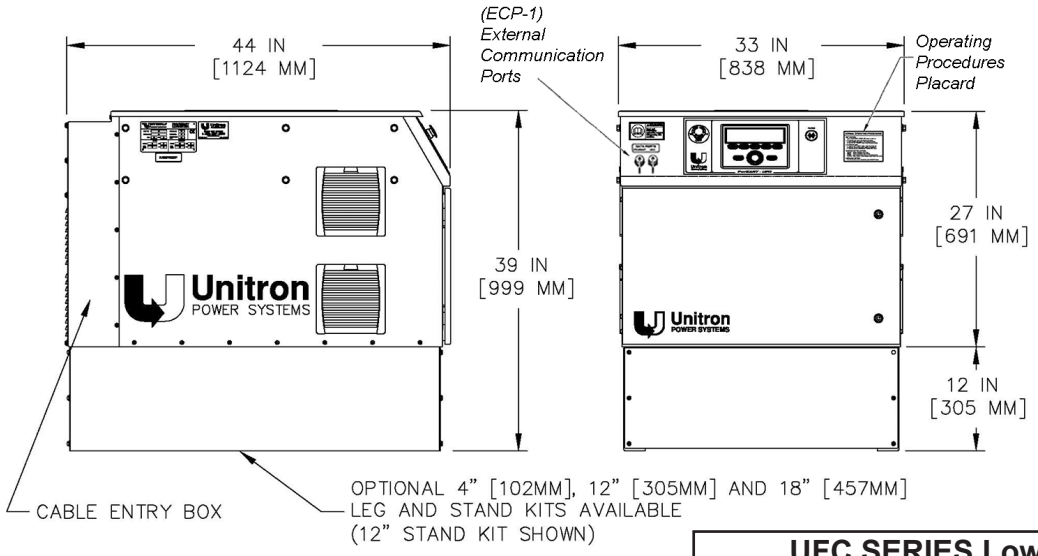
Power Rating	20, 30, or 45 kVA (Specify)
Power Factor Range	0.5 lagging to 0.8 leading
Overload	100% continuous 110% for 60 min 125% for 10 min 150% for 2 min 200% for 20 sec (45kVA) 300% for 20 sec (30kVA) 450% for 20 sec (20kVA)
Crest Factor	1.414 ± 3%
Voltage**	115/200 volts, 3Ø, 4 wire, grounded neutral
Voltage Adjust**	± 15%
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 conditions of line, load and temperature
Frequency Transients	None
Phase Angle Regulation	± 1° for balanced loads; ± 2° for unbalanced loads
Harmonic Distortion	2.0% maximum
Protection	Overload, short circuit, over/under voltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	15%

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

NOTE
*Use 28VDC output only during engine start mode
**Also available 120/208 VAC, adjustable ±10%

FIGURE 1



UFC SERIES Low ProFile™
GROUND POWER UNIT (GPU)

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