

UFC SERIES Low ProFile™ 400Hz GROUND POWER UNIT 20kVA to 90kVA



BOARDING BRIDGE CONFIGURATION
(Shown with overhead digital front panel mounting)

STANDARD FEATURES:

- IP55
- Certified to UL 1012
- 3 Phase, 380-480VAC input
- Indoor/Outdoor (Hangar/Ramp) Use
- ≤ 5% Input Current Distortion
- 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
- 15% Automatic Line Drop Compensation
- Emergency Power “OFF” Switch
- I/O Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- 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 = 543lbs. (246kg.)
(Not Incl. Bridge Mounting Brackets)	30.0kVA = 600lbs. (272kg.)
	45.0kVA = 687lbs. (312kg.)
	60.0kVA = 773lbs. (351kg.)
	75.0kVA = 850lbs. (386kg.)
	90.0kVA = 937lbs. (425kg.)
Enclosure:	NEMA 3RX Corrosion Resistant
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 115/200VAC, 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. This versatile design is particularly well suited for field installations where low clearances for aircraft are required.

Output power ratings for the **400Hz Horizontal Low ProFile** Ground Power Unit (GPU) range from 20kVA to 180kVA. Larger power ratings are available in towable, fixed and bridge-mounted configurations. When ramp or floor space is a premium, the **Low ProFile** GPU can be installed as an overhead mounted unit.

In addition to bridge-mounted GPUs, Unitron offers mobile, fixed and towable 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 Output Power Cable with Plug (Specify Required Length - Available in 30 or 60 foot standard lengths)
- Input & Output Cable Racks
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- Output Safety Disconnect
- Bench Top Voltage Adjust
- 28VDC or 270VDC output
- Second 28VDC output
- Indoor Touch Screen Panel
- No Break Power Transfer Compatible
- Custom Paint & Decals (Standard Color - White)
- Ground Fault Monitor
- 300% overload for 6 seconds or 425% overload for 1 second* (Specify)
- CSA Certified
- CE Mark Certified
- Lockable Front Door
- Alternate Mounting Configurations Available
- Stand - 4, 12 or 18 Inch
- Forklift Tubes - 4 Inch
- Leg Kit - 12 or 18 Inch
- Neutral Interrupt Protection
- Universal Safety Interlock

*IAW MIL-STD-704F and ISO 6858

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 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
DFS-400	Specification for 400Hz aircraft power supply

**Defined Basis of CE Mark Certification

GENERAL SPECIFICATIONS

INPUT:

Input Current Distortion	≤ 5%, typically 3%
Voltage	380 to 480 volts, +10%, -15%, 3Ø, 3 or 4 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 C62.41.1, 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
Relative Humidity	10 - 95%, Non-Condensing
Ingress of Water	Type 3RX, IP55

ENERGY FACTORS:

Efficiency	94% typical at full load, 92% typical at half load; varies depending on configuration
Energy Efficiency Ratio	20.0 typical

OUTPUT:

Power Rating	20, 30, 45, 60, 75, or 90 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 (45-90kVA)	300% for 20 sec (30kVA)
450% for 20 sec (20kVA)	
Voltage**	115/200 volts, 3Ø, 4 wire, grounded neutral
Voltage Adjust**	± 15%
Crest Factor	1.414 ± 3%
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/undervoltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	15%

Note:

**Also available 120/208 VAC, adjustable ±10%

FIGURE 1

