

UFC SERIES Low ProFile™ 400Hz AND 28VDC GROUND POWER UNIT (60kVA to 90kVA)



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

STANDARD FEATURES:

- IP55
- Certified to UL 1012
- 3 Phase, 50 - 60Hz, 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, RS485 (Modbus), & RS232
- External Communication Port – USB
- 15% Automatic Line Drop Compensation
- Emergency Power “OFF” Switch
- Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- 4 Inch Leg Kit
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Output Current Limit Adjust from 150A to full rated current
- 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: 60.0kVA = 891lbs. (404kg.)
 75.0kVA = 968lbs. (439kg.)
 90.0kVA = 1,055lbs. (479kg.)
 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. 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 either 425 or 600 amps continuous 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 Output Power Cable with Plug (Specify Required Lengths - Available in 30 or 60 foot standard lengths)
- DC Output Power Cable with Plug (Specify Required Lengths - Available in 20, 30, 40, or 60 foot standard lengths)
- External Communication Port - Ethernet
- Input & Output Cable Racks
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- Output Safety Disconnect
- No Break Power Transfer Compatible
- Bench Top Voltage Adjust
- 270VDC output
- Second 28VDC output
- 300% overload for 6 seconds or 425% overload for 1 second* (Specify)
- RJ45 (Ethernet) Port - Internal or External (Specify)
- Indoor Touch Screen Panel
- Custom Paint & Decals (Standard Color - White)
- Ground Fault Monitor
- Lockable Front Door
- CSA Certified
- CE Mark Certified
- 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: 2017

SPECIFICATIONS / STANDARDS (Meets or Exceeds):

NFPA 70 (NEC 500)	SAE ARP 5015
EN 60079-10	UFGS 26 35 43
DFS-400	MIL-STD-1472
ISO 461-1/2	MIL-STD-704F
ISO 1540	EN 61000-6-2 and -4**
ISO 6858	2006/95/EC**

**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	380-480V, +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

AC OUTPUT:

Power Rating	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	
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%

DC OUTPUT:

Model 420

Full Load Rating	425 amps continuous
Overload	600 amps for 1 hour
(10% duty cycle)	1000 amps for 1 minute

Model 620

Full Load Rating	600 amps continuous
Overload	1000 amps for 1 minute
(10% duty cycle)	

Model 420/620

Engine Start Capacity	Adjustable up to 1600 amps for 35 seconds or 2000 amps for 30 seconds
(10% duty cycle)	

Voltage 28 VDC, 2 wire, grounded negative

Voltage Adjust 28 VDC ± 10%

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

Current Limit Adjust 150A to full rated current

Protection Overload, short circuit, over voltage and safety disconnect

Automatic Line Drop Compensation (ALDC) 10%

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 3SX, IP55

ENERGY FACTORS:

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

NOTE

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

**Use 28VDC output only during engine start mode

FIGURE 1

