

## AHP SERIES FlatPak™ 400Hz GROUND POWER UNIT 150-200kVA



(Shown with standard digital front panel, optional bottom privacy panel, and indoor configuration)

### STANDARD FEATURES:

- IP23
- Certified to UL 1012
- 380/220V to 415/240V (50Hz, ±10%) or 460/266V to 480/277V (60Hz, ±10%) (Specify)
- ≤ 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 Port – USB
- 15% Automatic Line Drop Compensation
- Emergency Power “OFF” Switch
- I/O Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Forklift Tubes - 4 Inch
- 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: See Figure 1  
 Enclosure: NEMA 250, Type 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 FlatPak™ product line includes 400Hz converters specifically designed for installation where space is limited. The units mount “flat” against a wall, and offer the smallest size to power rating ratio in the industry. Also, by using noise reduction technology, Unitron converters are quiet enough to be located close to the equipment they serve. No special soundproofing or other insulation is required.

Standard output power ratings for the **400Hz FlatPak Converter** range from 20kVA to 400kVA. For higher system ratings to 2MW, contact factory. In addition to fixed units, Unitron offers 400Hz, 28VDC and combination AC/DC converters in mobile and towable configurations. Also available are 270VDC outputs at various power ratings.

### OPTIONS:

- Second 28VDC output
- Alternate Input voltage (600/346V)
- Alternate Output Voltages (120/208V, 600/346V)
- Various Convenience Outlets (Dependent upon input utility voltage)
- Input/Output Contactor
- Input and/or Output Circuit Breaker
- IP55
- Auto Restart
- 300% overload for 6 seconds
- Non Linear Load
- Parallelable (Grid Expansion)
- Redundant (N+1/Hot Swap)
- Custom Paint & Decals (Standard Color - White)
- Ground Fault Monitor
- Lockable Front Door
- CSA Certified
- CE Mark Certified
- No Break Power Transfer Compatible (Aircraft Load)
- Touch Screen Front Panel
- Stand - 4, 12 or 18 Inch
- Neutral Interrupt Protection
- Universal Aircraft Safety Interlock (Single or Dual)
- 28VDC Aircraft Safety Interlock (Single or Dual)
- Anti-Condensation Heater(s)

### SPECIFICATIONS / STANDARDS:

- EN 61000-6-2/4\* Electromagnetic compatibility  
 Immunity standard 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



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

## GENERAL SPECIFICATIONS

### INPUT:

Input Current Distortion ≤ 5%, typically 3%  
 Voltage (Frequency)\*\* 380/220V to 415/240V (50Hz, ±10%) or 460/266V to 480/277V (60Hz, ±10%), +10%, -15%, 3Ø, 3 or 4 wire plus ground (Specify)

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 0 - 95%, Non-Condensing

Ingress of Water IP23 (optional IP55)

### ENERGY FACTORS:

Efficiency 92% typical at full load, 90% typical at half load; varies depending on configuration

Energy Efficiency Ratio 20.0 typical

### OUTPUT:

Standard Power Ratings 150, 156.5, 180, 187.5, 200 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

Voltage\*\* 115/200 volts, 3Ø, 4 wire, grounded neutral

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

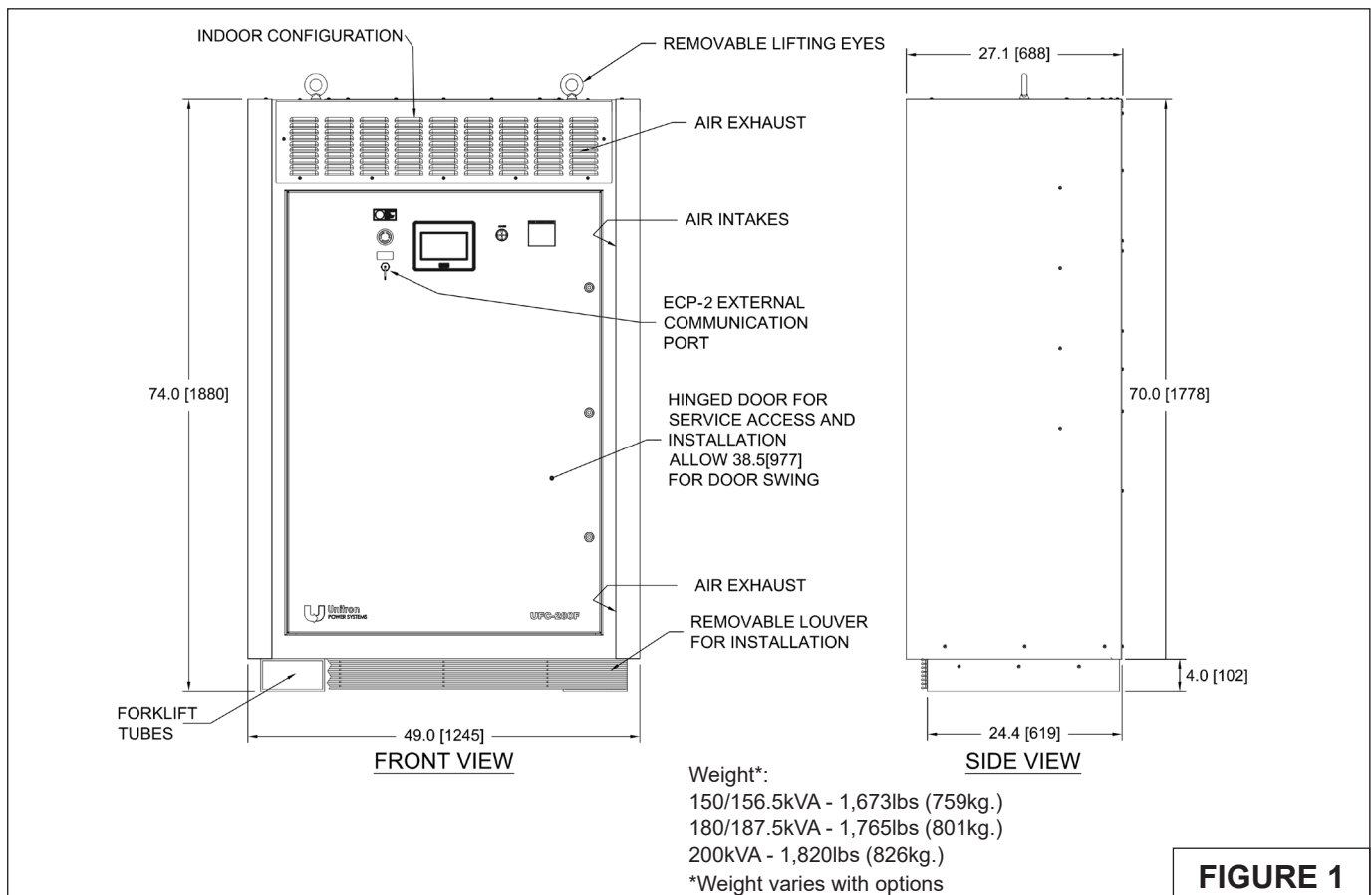
Harmonic Distortion 2.0% maximum

Protection Overload, short circuit, over/undervoltage and safety disconnect

Automatic Line Drop Compensation (ALDC) 15%

NOTE:

\*\*Alternate input and output voltages available when specified



**FIGURE 1**