

## UFC SERIES Super Flight Line Electrical Distribution System (SFLEDS) 400Hz & 28VDC



(Shown with standard dual obstruction lights  
and touch screen front panel)

### STANDARD FEATURES:

- IP55
- MIL-STD-704F, ARP 5015, DFS 400 and ISO 6858 Compliant
- Certified to UL 1012
- Single 3Ø Utility Power Outlet (Specify Type)
- Single Convenience Outlet (Specify Type)
- ETL Listed to ANSI/ UL Standard 1012
- Outdoor (Hangar/Ramp) Use
- Output Voltage and Current Monitoring
- Elapsed Time Meter
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Two, Red LED, Steady-Burning, Obstruction Lights (Contact Factory for Selection)
- Aluminum Fork Lift Tubes
- ≤ 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
- Input Frequency Monitoring
- 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:	45.0kVA = 1,188lbs. (539kg.) 60.0kVA = 1,325lbs. (601kg.) 75.0kVA = 1,444lbs. (655kg.) 90.0kVA = 1,564lbs. (709kg.)
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 innovative design, use of advanced self-diagnostic systems (BITE) and modular construction, Unitron products assure maximum power availability and minimal repair time.

Since the 1990's Unitron has been involved in developing superior solutions for the Super Flight Line Electrical Distribution System (SFLEDS) programs. In an effort to achieve military-established goals of decreasing pollution from exhaust emissions and hazardous waste, increasing operational efficiency, reducing costs and increasing worker safety, Unitron has developed a product line to support the SFLEDS program. The 400Hz & 28VDC UFC Series SFLEDS includes 400Hz and 28VDC units, a power distribution unit (PDU), 400Hz and 28VDC aircraft power cables, and obstruction lights designed specifically to support the U.S. military in replacing diesel powered Mobile Electric Power Plants (MEPPs). Each unit will support an aircraft power service point providing aircraft ground power for “low profile” applications, such as found on flight lines and ramps, where low clearances are required for both rotary and fixed-wing aircraft.

### OPTIONS:

- 28VDC Output
- Second 28VDC output
- Second 400Hz AC output
- Various Convenience Outlets (Specify Voltage and Frequency)
- AC or DC Output Power Cables with Aircraft Plug available in standard lengths of 30 or 60 foot, or longer (Specify Type and Length)
- Optional Cable Storage (4ea. attached side hangers or freestanding saddle hangar)
- Output 28VDC Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- External Communication Port - Ethernet
- Output Safety Disconnect
- Alternate 60 & 400Hz utility receptacles (specify type and qty - limit two)
- Two additional obstruction lights of type specified
- Two red LED, steady-burning obstruction lights IAW FAA AC 150/5345-43F, Type L-810, EB# 67B, with commercial grade photoelectric cell (PEC-C)
- Second Convenience Outlet (Specify Type)
- Second 3Ø Utility Power Outlet (Specify Type)
- 300% overload for 6 seconds or 425% overload for 1 second\* (Specify)
- No Break Power Transfer Compatible
- Ground Fault Monitor (Single or Dual)
- Custom Paint & Decals (Standard Color - White)
- Stainless Steel Forklift Tubes
- Bench Top Voltage Adjust
- Neutral Interrupt Protection (400HZ GPU Only)
- CSA Certified
- CE Mark Certified

\*IAW MIL-STD-704F and ISO 6858

### SPECIFICATIONS / STANDARDS (Meets or Exceeds):

NFPA 70 (NEC500)	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 - GPUs

### AC INPUT:

Input Current Distortion	≤ 5%, typically 3%
Voltage	380 - 480 volts, +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

### 400Hz GPU OUTPUT:

Power Rating	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
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	± 2° maximum
Harmonic Distortion	2.0% maximum
Protection	Overload, short circuit, over/under voltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	15%

### 28VDC GPU OUTPUT:

#### Model 420

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

#### Model 620

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

#### Model 420/620

Engine Start Capacity (10% duty cycle)	Adjustable up to 1600 amps for 35 seconds or 2000 amps for 30 seconds
Voltage	28 VDC, 2 wire, grounded negative
Voltage Regulation	
<ul style="list-style-type: none"> <li>■ 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>	± 0.5% ± 0.5% 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
Power Regulation	10%

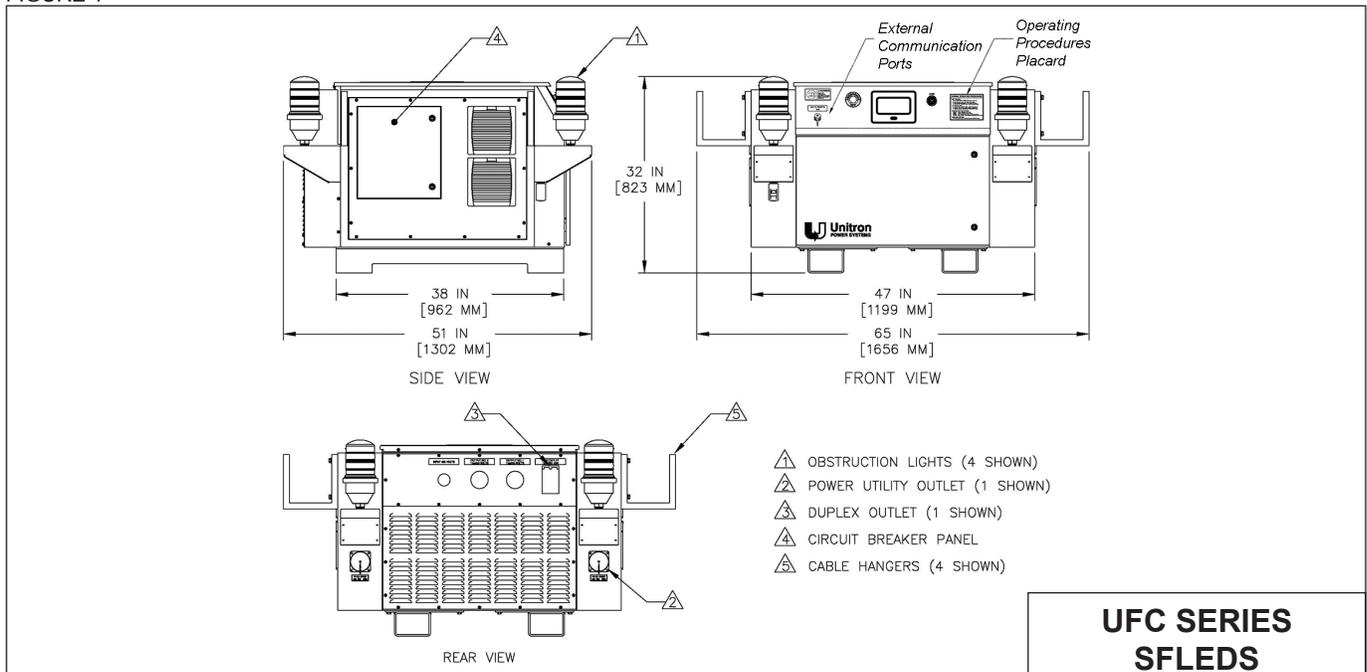
### ENVIRONMENTAL:

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

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

\*\*Use 28VDC output only during engine start mode

FIGURE 1



**UFC SERIES  
SFLEDS**