

UFC SERIES Super Flight Line Electrical Distribution System (SFLEDS)



150 kVA
(Shown with 4 optional obstruction lights
and touch screen front panel)

STANDARD FEATURES:

- MIL-STD-704F, ARP 5015, DFS 400 and ISO 6858 Compliant
- Certified to UL 1012
- First 480V, 100 A, 4 pole power outlet IAW MS90553C44150S
- First Duplex Outlet – 20A, 115V 60Hz with GFCI
- 3 Phase, 380-480 VAC input
- ETL Listed to ANSI/ UL Standard 1012
- Indoor/Outdoor (Hangar/Ramp) Use
- Output Voltage and Current Monitoring
- Elapsed Time Meter
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- ≤ 5% Input Current Distortion at max load
- Aluminum Fork Lift Tubes
- Automatic Input Line Monitoring
- Advanced Integrated Display (AID™) Console
- 8000 Event Log / Diagnostics
- USB, ETHERNET, RS 485 (MODBUS/JBUS)
- 15% Automatic Line Drop Compensation (ALDC)
- Emergency Power “OFF” Switch (EPO)
- I/O Voltage, Current, & Frequency Monitoring
- Input High Voltage Transient Protection (Lightning Strikes) with Front Panel Preventative Maintenance Annunciation
- Multi Language (Romanization) Display - English, French, German, Italian, Portuguese, Russian and Spanish, Others - Specify

This product was manufactured in a plant
whose quality management system is
registered to ISO 9001:2015.



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 standard UFC Series SFLEDS includes 400 Hz converters, power distribution units (PDUs), 400 Hz 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.

Output power ratings for these 400 Hz SFLEDS GPUs range from 20 kVA to 90 kVA. Larger power ratings are available upon request.

In addition to 400 Hz SFLEDS, Unitron offers 28 VDC, 270 VDC and combination AC/DC systems.

OPTIONS:

- 28 or 270 VDC Output
- Second 400Hz AC output
- Various Convenience Outlets (Specify Voltage and Frequency)
- SAC Output Power Cables with Aircraft Plug available in standard lengths of 30 or 60 foot, or longer (Specify Type and Length)
- Option Cable Storage (4ea. attached side hangers or freestanding saddle hangar)
- 2 Each Obstruction Light (Includes Mounting Brackets), Steady Burning, Red LED, with L-810 Fixture/Globe and DFN A19 CW V2 120Bulb
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- 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)
- No Break Power Transfer Compatible
- External Communication Ports
- Stainless Steel Forklift Tubes

MECHANICAL SPECIFICATIONS:

Size: See Figure 1
Weight: 150.0 kVA = 2,135 lbs. (970 kg.)
Construction: NEMA 250, Type 3RX Corrosion Resistant
Cooling: Forced Convection

SPECIFICATIONS / STANDARDS (Meets of Exceeds):

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

**Defined Basis of CE Mark Certification

GENERAL SPECIFICATIONS

INPUT:

Input Current Distortion	≤ 5%, typically 3%
Voltage	380-480 volts, +10%, -15%, 3Ø, 3 or 4 wire plus ground (Alternate voltages - specify)
Frequency	60 Hz ± 10%
Phase Rotation	AB - BC - CA
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, IP54

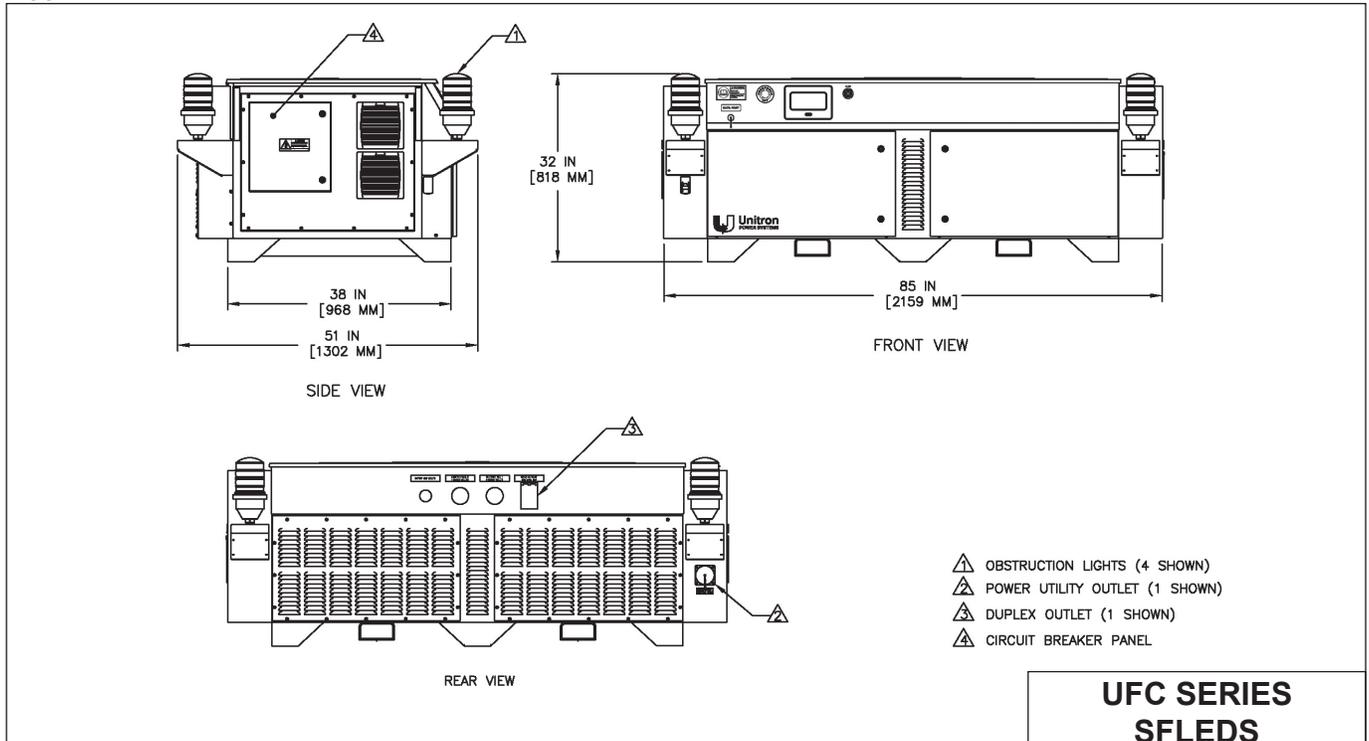
ENERGY FACTORS:

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

OUTPUT:

Power Rating	150 kVA
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%

FIGURE 1



**UFC SERIES
SFLEDs**