





- · State of the art semiconductor technology (IGBT) Rectifier
- Power Factor Correction (PF=1)
- 95% efficiency
- 4 Quadrant Operation (better response of the system and safer operation for NBPT)
- Low input harmonics (<1.5% THDi), to comply with the strictest regulations @ anv load.



NORMS AND STANDARDS

- **AVIATON** ISO 6858 Aircraft ground support electric supplies
 - SAE ARP 5015 Ground equipment 400 Hz gound power performance requirement
- **MILITAR** MIL-STD-704 Aircraft electric power characteristics

EMC • EN61000-6-4 - Electromagnectic compatibility -Generic emission standard

• EN61000-6-2 - Generic immunity standard

- **SAFETY** IEC 60529 Degrees of protection provided by enclosures (IP Code)
 - IEC 62477-1 Safety requirements for power electronic converter systems and equipment

- **ENVIRONMENTAL** Dry heat test (steady state) IEC 60068-2-2 subclause 5.3
 - Damp heat test IEC 60068-2-78 subclause 6
 - Vibration test IEC 60068-2-6 subclause 6
 - Salt mist test IEC 60068-2-52 subclause 6
 - Dust and sand test Test Lc1 of IEC 60068-2-68



- Voltage compensation (Load Dependent or via Remote Feedback Real PLUG &PLAY. Connect GPU to aircraft and voltage compensation is done automatically, no user adjustment required or additional accessories)
- 4 Quadrant Operation (better response of the system and safer operation for NBPT)
- Vector control Inverter for better response and higher efficiency.



EFFICIENCY

- Up to 94% 180kVA @ load PF=0.8 to 1.0
- 90% < 30 kVA @ load PF=0.8 to 1.0
- · Green Standby Function losses: 20 W
- No load losses: <1%.



TECHNOLOGY

- Enclosure Protection class up to IP55
- Enclousre with C5-M coating
- No break power transfer compatibility (NBPT)
- Over/under voltage at output
- · Overload capability designed for:
 - Power stage 150% Continuous
 - Magnetics 120% Continuous
- Regulator Overload protections set at:
 - 120% for 600seconds
 - 150% for 60 seconds • 200% for 2 seconds
- Variable fan speed for internal temperature control
- Over temperature protection
- Short circuit proof by electric current limiting and shutdown
- 90% switch interlock

SPECIFICATIONS

180 KVA SOLID STATE 400H7 GROUND POWFR UNIT

INPUT

- 3 phase 400V/415V AC | ±10%*
- 50/60Hz | ±10%
- Input current harmonics | <2% @ Full Load

OUTPUT

- 3 phase 200V AC -400Hz | ±1%*
- Overall Efficiency | 90%-95%
- Max. Crest Factor | 1.4:1

RECTIFIER

- 4 Quadrant Operation
- AC Voltage Range | -25% +10%
- Efficiency | 95%-97%
- Input Frequency Deviation | 10%
- Overload Capacity | 120% Continuous
- Inrush Current | None
- Overall current limit | 150%
- * Other voltages and frequencies available on request
- * Other Electronic Overload limits available on request

INVERTER

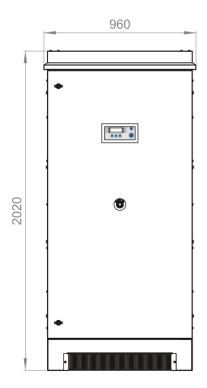
- Static Regulation 0 100% load | \pm 1%
- Dynamic regulation 100% | 10%, recovering to 1% within 20ms
- Total harmonic distortion | Better than 2% (Linear Load)
- Electronic Limit Overload | 120%@600s; 150%@60s; 200%@5s*
- Overload Capacity (IGBTs) | 150% Continuous
- Frequency stability | ±0.01% Crystal Controlled
- Load power factor | 0-1
- Efficiency | 95%-98%
- · Short circuit proof by electric current limiting and shutdown

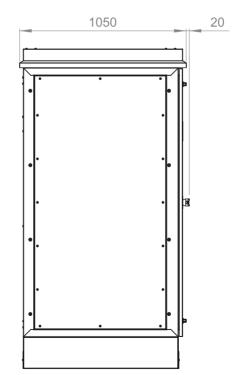
ENVIRONMENTAL CONDITIONS

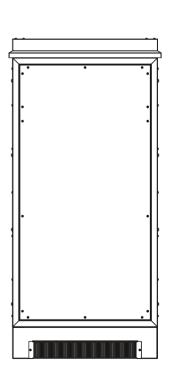
- Coolant temperature (max) | Forced air up to 40°C
- Ambient temperature (min/max) | -40°C to +40°C
- Relative humidity (min/max) | 0% to 90% without condensation
- Pollution degree | 2
- OVC (Overvoltage Category) | 3
- Altitude | Up to 2000m



TECHNICAL DRAWING









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