

# DC Ground Power Unit

## MrG-400 Series

The MrG-400 series is one of the most popular static frequency converters. Each GPU in the series is designed to change the power at 50Hz or 60Hz to aircraft quality power at 400Hz.

It integrates IGBT made by Mitsubishi, Siemens and Infineon with PWM switching technology, and combines microcontroller (digital signal control) design for quick response and higher reliability.

Each GPU in the MrG-400 series can be used as a power source to develop aircraft quality 400hz Power. It is mostly used in aircraft production manufacturing, aviation R&D, military/ civil hangar, maintenance plant, aerospace equipment, military airport tarmac and wells, aviation factories.

### ● Main Features

- ✧ Automatically voltage compensation system, ideal voltage at aircraft connector
- ✧ Self diagnose system which would show error code/ faulty explanation on the VFD screen
- ✧ Memory stores 20 events.
- ✧ Galvanically isolated, low harmonic distortion
- ✧ Thoroughly proven advanced SPWM and IGBT technology
- ✧ Pure sine wave output
- ✧ Eco-friendly, high efficiency, low noise
- ✧ 28VDC military interlock

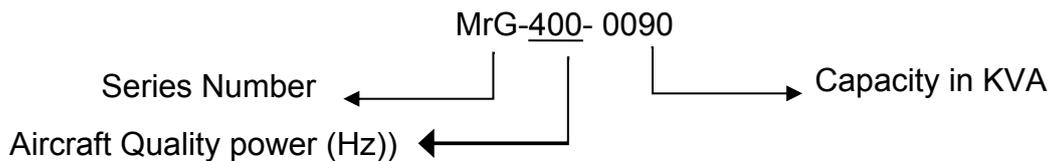


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### Models Selection

The MrG-450 series power supply model designation is shown below:



### Specifications

#### ● Capacity

- ✧ 20KVA to 450KVA

#### ● Input

- ✧ Voltage: 1 phase 120V +/- 20%, 1 phase 220V +/- 15% or 3 x 127V/220V +/- 15%, 3 x 220V/380V +/- 15%
- Or as per your specific requirement (select one individual voltage)
- ✧ Frequency: 40-70Hz
- ✧ Power Factor:
  - ≥ 0.8 (Standard type)
  - ≥ 0.9 (12 pulse type, optional item)
- ✧ Inrush current: None, soft start

#### ● Output

- ✧ 3x115/200V(L-N/L-L), 3x120/208V(L-N/L-L)
- Or select one individual voltage
- ✧ Frequency: 400Hz
- ✧ Interface: RS232/485 communication port
- ✧ Voltage regulation: +/- 1%
- ✧ Frequency regulation: +/- 0.1%
- ✧ Crest: 1.414 +/- 0.05
- ✧ Distortion: THD < 3% @ linear load
- ✧ Phase angle:
  - 120° +/- 2° (No Load / Balance Load)
  - 120° +/- 3° (33% unbalance Load)
  - 120° +/- 3° (100% unbalance Load)



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### ● Overload

125% for 5 min; 150% for 1  
min; 200% for 10 sec; 300%

for 1 sec;

### ● Protection

- ✧ Over/under voltage,
- ✧ Over current, Over load,
- ✧ Over temperature,
- ✧ Phase loss , Short circuit,
- ✧ Self diagnose and alarm
- ✧ Voltage difference between each phase<2V

### ● VFD display and control

- ✧ Output voltage, Current, Frequency
- ✧ Start/Stop,On/off each output
- ✧ Line drop compensation status
- ✧ EF interlock status
- ✧ Input power/running/fault status lamp

### ● Available Options

- ✧ 28 VDC, 300-3000 A (45-90KVA only)
- ✧ Additional output contactor
- ✧ Remote control box
- ✧ Terminal extension for 2 PCS of 7 core cable
- ✧ Parallel system

### ● Working Condition

- ✧ Temperature:-40 to 60°C
- ✧ Humidity:0~95% non condensing
- ✧ Noise:< 65dB within 1 meter
- ✧ IP20 / IP32 / IP54
- ✧ Altitude<1800m

### ● Reliability

- ✧ Mean Time Between Failure (MTBF) 50,000H
- ✧ Mean Time To Restoration (MTTR)< 30 min

### ● Standards

- ✧ DFS400
- ✧ MH/T6018
- ✧ ISO 6858
- ✧ MIL-STD-704
- ✧ EN62040-1-1
- ✧ GJB572
- ✧ EN61000