



400Hz MOBILE FREQUENCY CONVERTERS

Aircraft Ground power Units

SD 40 M Series

**40kVA to 180kVA with three phase 400Hz output
Combination GPU with 400Hz and 28V DC output**

The SD 40 M series of mobile frequency converters are designed to replace the traditional, noisy, air polluting diesel engine driven 400Hz GPU's with the latest design in solid state frequency converters. Our SD Series product can be simply plugged into the normal 50Hz or 60Hz mains power source and produces a high stability 400Hz output suitable for most types of passenger aircraft.

The SD 40M series of frequency converters will accept wide variation in input voltage and frequency and utilise the latest in IGBT power conversion PWM inverter switching technology to provide 400Hz power for all types of passenger aircraft, helicopters and military aircraft of all types with an extremely flexible, cost effective, energy efficient "point of use" aircraft ground power system for indoor and outdoor applications.

The users of the familiar, traditional diesel engine driven GPU's will recognise the obvious benefits of using an SD 40M series all electric frequency converter GPU: no combustion smells, smoke, fumes toxic emissions or air pollution. No fuel storage, spillage or bills, no engine start battery or engine maintenance costs.

The solid state GPU advantages:

- Little audible noise
- No vibration
- Maintenance inspection once a year
- Simple fault diagnostics
- Repairs can be made quickly by the user
- No mechanical parts to wear out
- 25 years design life
- Isolation from external power disturbances.
- Can be handled by one person
- Highly stable chassis mounted on large wheels
- Towable up to 20kMPH
- Large pneumatic tyred wheels
- Tow-bar actuated parking brake
- All weather IP54 high visibility enclosure
- Stowage for input and output flexible cables



The SD40M frequency converters have a high input power factor with a low harmonics input stage. The standard output of the system is via an interlocked contactor with electronic protection for outdoor use and can be delivered with a single output or dual output and supplied with one or two flexible cables fitted with standard aircraft power connectors.

The frequency converters are supplied in sizes 40kVA, 60kVA, 90kVA, 120kVA, 150kVA and 180kVA with three phase 400Hz output, the combination converter can be provided with an integral 28V DC module of 400A or 600A with separate cables and interlocking for aircraft engine starting up to 2000A peak and for battery charging.

The basic mechanical construction is a galvanised steel framed chassis with heavy duty wheels, a tow-bar and automatic parking brake. The frequency converter has a low centre of gravity, it is very stable for towing and is fitted with an all weather, high visibility coloured finish, lift-off rust proof enclosure with ingress protection IP54 for outdoors use. Cable stowage is provided for input and output cables on conveniently positioned frames. The small dimensions enable the GPU to turn within its own length and can be handled safely by one person.

The SD M40 series of frequency converters can be positioned at aircraft parking stands, in maintenance hangars, avionics workshops, aircraft manufacturing facilities and training simulators. This all electric GPU connects to normal mains power to provide "point of use aircraft power", 400Hz and 28V DC exactly at the place where the power is needed.

Features

- **Analogue metering**
- **50Hz or 60Hz input frequency**
- **10 metres flexible input cable**
- **Output contactor with interlock**
- **10 metres 400Hz flexible cable with aircraft connector**
- **No break power transfer to aircraft service**
- **Remote monitoring by interface PCB**
- **Fault event logging digital display**
- **RS485 remote monitoring by computer**
- **Second output contactor and interface**
- **Ingress protection IP54**
- **Line drop compensation**
- **Special paint colours and finish**



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