



POWER FOR OIL & GAS

Custom Engineered Industrial UPS Systems CEG Series

5kVA to 100kVA with single phase output and 10kVA to 200kVA with three phase output

This series of Industrial Uninterruptible Power Supply systems is a rugged custom engineered product based on a well proven design concept to which custom features are added to meet the specification of the purchaser. The control logic uses discrete section circuit boards dedicated for the rectifier, inverter and static bypass. The rectifier, inverter and bypass sections can be operated as individual elements, the inverter can also be started from the battery without the rectifier operating. The UPS is designed to start and run without a battery connected, the inverter output is via a static interrupter and not via a low cost electro-mechanical contactor as used by a number of competitors. The control logic is housed in a shielded "logic box" and enables the system to operate in the most contaminated environmental conditions. This product designed to operate continuously for 20 years in an environment where stray field harmonics and magnetic radiation in the metal processing industrial applications are well known to impact the stability and reliability of microprocessor logic controlled UPS system. The engineering standard, mechanical construction and ingress protection and thermal management and air flow control within the UPS enclosure enables the system to operate in high ambient temperatures, high humidity and in an environment where carbon dust and saline vapours are present in, for example the aluminium smelting process.

This CEG product range provide an exceptionally high quality reliable power source for the most critical load applications in all types of environmental conditions.

This industrial grade product is a True Active Online Double Conversion type UPS system with a pulse width modulation (PWM) inverter using IGBT power semiconductor devices. The use of PWM inverters ensures exceptional high efficiency performance an ability to handle high crest factor non-linear loads and is very quiet in operation.

The UPS systems have a galvanic isolation between the battery and the output, with optional galvanic isolation at the input. The DC bus voltage can be made according to the customer's specification and preferred battery type.

The rectifier has float, boost and equalise facilities and is designed for use with any type of lead acid battery or NiCd batteries.

This custom engineered grade (CEG) series of industrial UPS systems is available with three phase input and single phase output up to 100kVA (E21), and three phase input and three phase output in sizes up to 200kVA (E23). The standard single phase output is 230V AC 50Hz and the standard three phase output is 400V AC 50Hz, however, virtually any voltage is achievable.

Our inverter designs are all using the long established pulse width modulation (PWM) wave form generation technology using the latest IGBT power semiconductor devices. The use of PWM inverters ensures a precise ability to synchronise with the mains or with other inverters to operate in load sharing

parallel or in hot standby as well as providing good performance, with a high efficient use of energy handling high crest factor non-linear loads.

We avoid the use of high velocity and noisy fans mounted in the roof top of UPS enclosures. This principle of providing cooling air produces excessive air movement and unwanted dust into the enclosures. Our products have cooling air redundant fans fitted on the heat sinks exactly where the heat is generated.

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Metering, operational status, alarms and data logging is by a small display panel mounted on the front door and supplemented by direct reading analogue meters that operate without the control logic being energised.

The power flow is shown on an engraved aluminium mimic panel fixed to the front door of the UPS system. The mimic panel uses high brightness LED's to indicate the status of the rectifier, inverter and bypass and battery. Alarms are also shown on the mimic panel with audible as well as visual indication, there is also an emergency power off push button and alarm cancel and test facility on the mimic panel.

- **Features**

- **6 pulse or 12 pulse rectifiers**
- **Datalogger and battery test data**
- **Volt free contacts for remote alarms**
- **RS485 Port for remote data monitoring**
- **SNMP Adaptor for remote monitoring via LAN**
- **Battery earth leakage alarm**
- **Temperature compensation for battery charging**
- **Low battery voltage disconnect**
- **Rectifier input isolation**
- **Inverter output isolation transformer**
- **AC output earth leakage protection**
- **High IP rating – maximum IP55**
- **Analogue metering**
- **Engraved mimic panel with LED power flow status**



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