HITACHI
Inspire the Next

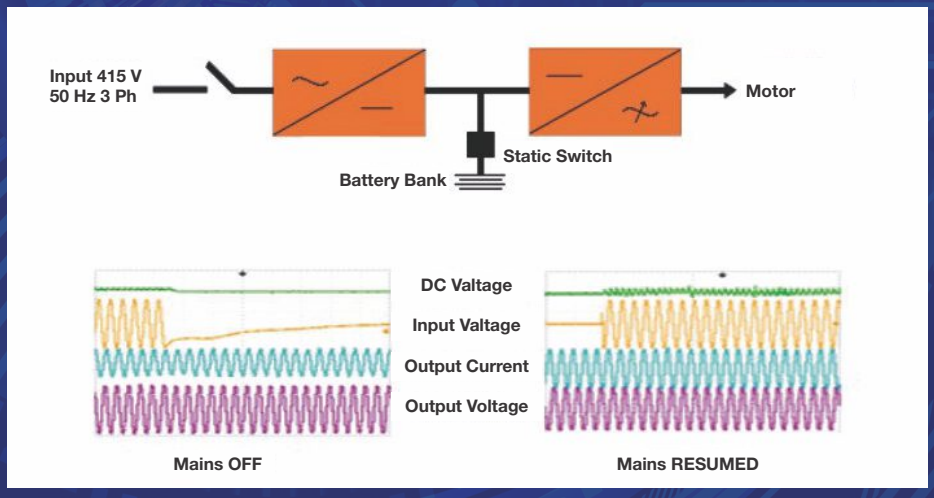
Uninterrupted Motive Power Supply

Hitachi Hi-Rel Power Electronics offers different solutions for industrial power problems. The product basket includes Industrial duty 1Ph UPS, 3Ph UPS, Rotary UPS, UMPS & iDip. Power problems can be either total power failure or voltage dips of various levels, Hitachi Hi-Rel offers a uinque solution for each of these problem.

During black out solutions are provided by UPS systems. UPSs are used for control load as well as motive load. It is observed that for supporting motive load, UPS rating is decided by considering cold start current requirement of the motor. It is obvious that UPSs are always oversized due to such characteristics.

Hitachi Hi-Rel has developed a unique solution called UMPS (Uninterrupted Motive Power Supply) which carries out the function of providing power to load in case of blackout while at the same time does not require to be oversized in its rating. This is also an energy efficient solution as compared to conventional UPS.

Uninterrupted Motive Power Supply (UMPS) is the most reliable concept of providing Uninterrupted power backup to 3ph motor loads. In case of normal power availability, the UMPS continues to give on-line 3ph power to critical motor loads with double conversion of power (the output frequency/speed remains constant irrespective of input voltage or frequency variations) and the batteries are also charged. In case of power failure, the charged battery continues to feed the motor through controlled inverter without any interruption to the load. The backup time is decided by the load and AH capacity of the battery.



Benefits of UMPS

- Over sizing of the unit is not required.
- Provides unniterrupted power operation to the motor during brownout and blackout of the input supply. The backup time during loss of input will vary with the size of the battery bank installed.
- The motor starting current is limited to 110% to 150% of FLA depending on the application.
- Smooth starting of the load avoids jerk to mechanical parts, reducing maintenance.
- Motor speed remains constant even if input frequency or voltage changes.
- Motor speed remains constant, improving quality of output process and throughput.
- Huge energy savings potential can be exploited by varying the motor speed.
- Static switch permits use of battery power only when required. This ensures longer back up time & extended cyclic life of the batteries. It also protects the batteries from deep discharge.
- Cold start of the load is possible even in the absence of grid power. (optional)
- In the event, the input voltage does not revert to normal limits the system provides an alarm after a pre-determine time. In case the situation continues the system will go into the safe shut down mode after the lapse of pre-determine back up time.
- Normally the batteries will be fully charged again, within a maximum of 8 to 10 hours to provide designed power backup. However, battery sizing can provide additional cycle of power backup, under power loss conditions, within 8 to 10 hours also. Actual recharge is lower incase of lesser backup time or lower load condition.
- 12 pulse configuration is available.
- No need for separate hardware for motor protection.

Display Parameters

Front panel indications along with alpha numeric display unit shows the backup and motor related parameters

- Output voltage
- Output current
- Output frequency
- DC link voltage
- Motor RPM

Battery Charger Functions

- The system consists of 3 PH. Input charger depending on the size of the battery.
- Charger operates in constant voltage current limit mode.
- It is compatible with all types of batteries.
- Charger provides various options for float/equalize/boost/first time charging requirements.
- Charger efficiency is >95%, including transformer losses in the input.
- 12 pulse charger option available.

Battery Compatibility

- SMFB
- LATB
- Ni-Cad
- VRLA

Protections

- Output short circuit
- Motor overload
- Single phase at motor end
- Under voltage at input
- Over temperature in the motor (optional)
- Deep discharge of the battery

Hitachi Hi-Rel Power Electronics Private Limited

Registered Office: B-52, Corporate House, Near Judges Bunglow, Bodakdev, Ahmedabad-380054, Gujarat, India.
Tel: +91-79-6604 6200, Fax: +91-79-6604 6243

Manufacturing Works: Plot No. SM 3 & 4, Sanand GIDC II, Industrial Estate, Bol Village, Sanand-382 110, Gujarat, India.
Tel: +91-2717-678 777, Fax: +91-2717-678 700

Gandhinagar Facility: B-14/1 & 171, GIDC Electronics Zone, Sector - 25, Gandhinagar - 382 028, Gujarat, India.
Tel: +91-79-6170 0500

Helpline No.: (080) 6112 0800 (For Sales & Service Support) contact@hitachi-hirel.com www.hitachi-hirel.com

e-gallery

/company/hitachihirel

/hitachihirelindia

/hitachihirel