

iTrac 600BS PBT Inverter for Railway Pantry Car

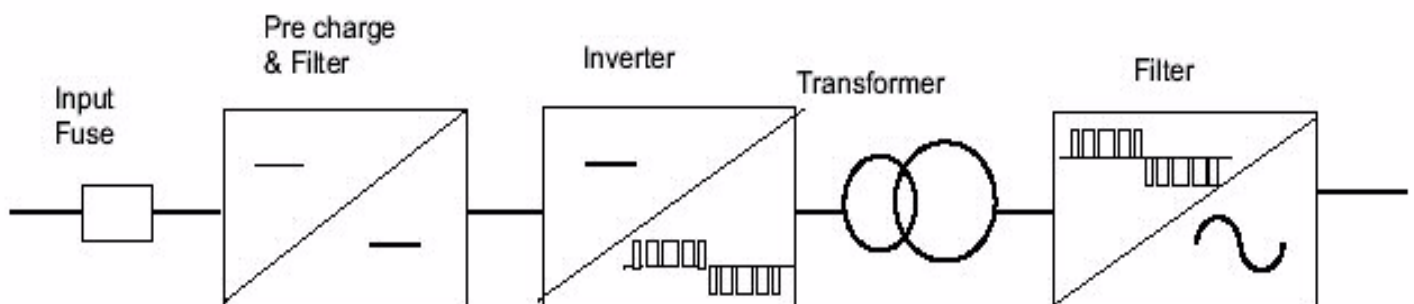
The new IGBT based iTrac 600BS inverter from Hi-Rel using latest technology 8-bit micro controller is successful development of power supply system for Railway Application. Under Slung power supply unit offered by Hi-Rel provides pure sinusoidal output for pantry car appliances operating on 1-phase, 230 V AC, 50Hz supply.

Unfiltered DC from battery is filtered to Smooth DC using I/P Filter capacitor. DC is converted to sine coded PWM output by the inverter. The output transformer steps up the Inverter AC voltage to the required voltage level. LC Filter converted the PWM output to Sine wave.



10 KVA Under slung Inverter supplied to ICF, Chennai

The 10 KVA Under Slung inverter has been specially developed for the Non Air Conditioned Janshatabdi Express trains. The design and development of these compact and rugged power supply units was carried out, in house at Hi-Rel. These units undergo rigorous test for vibration, damp heat and dry heat conditions and stand out for their extreme reliability under roughest environmental conditions.



Block Diagram of Power Supply unit

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Features

- Fully controlled, IGBT based inverter
- Efficiency 90%
- Digital display of inputs/outputs for current & voltages
- LED indications for faults
- On board display panel with IP 20 degree of protection and Fault Reset Push button to clear fault
- Under slung inverter panel have IP65 degree of protection and it contains pre charge, inverter, transformer and filter
- Input withstanding capacity up to 200 V DC without any damage
- Operating temperature up to 55° C
- Natural cooling

Specification

Input data

Input voltage : 90 -140VDC
 Max. Input current : 127 Amps.

Output data

Rated O/p Voltage : 230 VAC \pm 5%
 Frequency : 50Hz \pm 3%
 Continuous Output KVA : 10 KVA @ unity power factor)
 Overload Capacity : 120 % for 60 sec

Protections

- | | | |
|--------------------|---------------------|-----------------|
| ▪ Reverse Polarity | ▪ Over temperature | ▪ Input fuses |
| ▪ Over Voltage | ▪ Over load | ▪ Earth fault |
| ▪ Under Voltage | ▪ Auxiliary contact | ▪ Short Circuit |

Fault Auto Reset

- | | |
|--------------------------|-------------------------|
| ▪ Short circuit fault | ▪ Communication fault |
| ▪ Earth fault | ▪ Under voltage fault |
| ▪ Over temperature fault | ▪ Over voltage fault |
| ▪ Over current fault | ▪ Pre charge fail fault |

Advantages

- Fast response
- High reliability
- Reduced hardware and maintenance-friendly device design
- Excellent operator interface as well as fault storage