COMPACT & EFFICIENT LIGHT RAIL SOLUTIONS

TURBO POWER SYSTEMS
Powering Intelligent Solutions

AUXILIARY POWER SUPPLY (APU) – LIGHT RAIL

65kVA /16kW Beijing Airport Express

Key Technical Features

- ✓ Enclosure - formed and welded Corten A Steel
- ✓ Auxiliary control power supply circuits
- ✓ HV input and filter
- ✓ HV parallel (Jumper) for continuous seamless supply
- ✓ Shore supply connections via MIL-C-5015
- ✓ Floor heater supply
- ✓ 3 phase Inverter
- ✓ 3 phase redundancy available for essential AC loads via power transfer system
- ✓ 3 phase AC distribution
- ✓ Standby operation when propulsion system is turned off
- ✓ Single phase supply for utility applications
- ✓ LVPS/ Battery Charger
- ✓ External indication via illuminating LED panel
- ✓ Interface to train system via CANbus
- ✓ Event monitoring and fault logging via proprietary portable test equipment (PTE) software
- ✓ Designed to BS EN 60529 IP65, with the exception of the air duct, which is IP20

Key Benefits to Transit Authorities

- ✓ Light weight and compact
- ✓ High efficiency i.e. > 93%
- ✓ Designed, tested and validated for light rail
- ✓ Reliable operation under extreme environments – Thanks to forced air cooled design
- ✓ Modular approach to component placement for efficient maintenance and minimal downtime
- ✓ Battery voltage, temperature and reverse polarity monitoring

Input Voltage	750 Vdc
Input Voltage Range	630 Vdc to 900 Vdc at full load
Input isolation to earth	2.5kV rms 50Hz for 1 minute
Output Voltage 3phase Inverter	380 Vac ±5% at 50Hz ±1%
Rated Power	65kVA
Short term overload	150% for 10 seconds
Motor Starts	The Inverter is rated to provide 125% of the HVAC compressor motor load for 15 minutes every 4 hours and will be capable of starting all motor loads
Single Phase Output	220 Vac ±5% rated at 5 kVA
Low Voltage DC Output	56.5 Vdc ±0.5V rated at 16kW
Protection	Electronic short-circuit, overload and transient protection
Battery Temperature Compensation	Yes
Battery Protection and Monitoring	Yes, reverse battery temperature, polarity and voltage monitoring
Efficiency	> 93% at full load
Weight	511 Kgs
Dimensions	1315mm (L) x 1477mm (W) x 600mm (H)
Design Life	30 years
Operating temperature and Humidity	-20^0 C to $+45^0$ C and relative humidity at maximum of 100%
Cooling	Forced air cooled
Portable Test Equipment (PTE)	Remote condition and fault monitoring
Car Communication	Yes via CANbus

TPS is a leading supplier of power conversion equipment for various light rail platforms across the globe. There are more than 200 units successfully operating in China, USA and Malaysia. TPS was chosen for this project due to its long standing pedigree in delivering compact, efficient, reliable and light weight power electronic solutions. Beijing is exposed to extreme weather patterns and all rail systems are expected to perform reliably under varying weather conditions. TPS products successfully operate in Saudi Arabia, Chicago and Toronto where weather conditions are considered extreme.

With over 40 years rail pedigree, a team of highly skilled engineers and technicians, and a track record in creating world-class power electronics, why go anywhere else for your auxiliary power supply?

To discuss your project or for any further information please contact our marketing department at marketing@turbopowersystems.com or +44 (0) 191 482 9288/9251/9278.

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