



## AUXILIARY POWER SUPPLY (APU) – LIGHT RAIL

2 x 27kVA /16kW John F. Kennedy Airport - Air Train

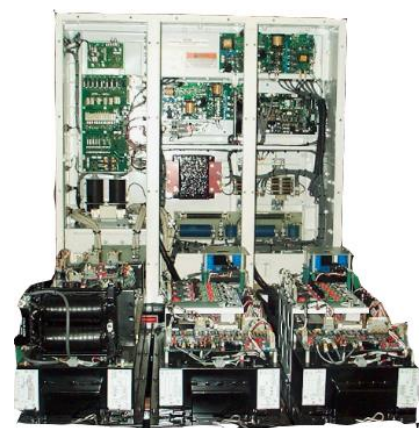
### Key Technical Features

- ✓ Enclosure - formed and welded Corten A Steel
- ✓ High frequency IGBT based LVPS
- ✓ High frequency IGBT based PWM inverters
- ✓ Transformer less AC outputs
- ✓ LVPS output paralleling to increase availability
- ✓ Dual switched 3 phase outputs to increase availability
- ✓ No requirement for intermediate voltage power supply (IVPS)
- ✓ Event monitoring and fault logging via TPS proprietary portable test equipment (PTE) software



### Key Benefits to Transit Authorities

- ✓ High reliability
- ✓ Immune to supply fluctuations
- ✓ Immune to large supply transients 3kV,1.2kJ for 1msec
- ✓ Fully EMC type tested
- ✓ No routine maintenance required
- ✓ Modular design, mean time to restore 1.5 hours
- ✓ Forced air cooled design for compact and light weight configuration





Input Voltage	750 Vdc
Input Voltage Range	525 Vdc to 900 Vdc at full load
Input isolation to earth	2.5kV rms 50Hz for 1 minute
Output Voltage 3phase Inverter	2 x 480 Vac ±5% at 60Hz ±1%
Rated Power	2x 27 kVA
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	120 Vac ±5% rated at 3 kVA
Low Voltage DC Output	56.0 Vdc ±0.25V rated at 15kW
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	95% at full load
Weight	473 Kgs
Dimensions	1450mm (L) x 1292mm (W) x 581mm (H)
Design Life	30 years
Operating temperature and Humidity	-20° C to +45° 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. The City of New York 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, China 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](mailto:marketing@turbopowersystems.com) or +44 (0) 191 482 9288/9251/9278.



Turbo Power Systems Ltd

1 Queens Park | Queensway North | Team Valley Trading Estate | Gateshead | NE11 0QD | United Kingdom

T: +44 (0) 191 482 9200 | F: +44 (0) 191 482 9201

E: [marketing@turbopowersystems.com](mailto:marketing@turbopowersystems.com) | W: [www.turbopowersystems.com](http://www.turbopowersystems.com)