



## AUXILIARY POWER SUPPLY – MASS TRANSIT (MONORAIL)

40kVA / 10kW Scomi, Kuala Lumpur

### Key Technical Features

- ✓ Auxiliary Power Supply (APU) is self-contained unit powered from track supply
- ✓ Aluminium Enclosure
- ✓ An input filter and transient protection stage
- ✓ Pulse Width Modulated (PWM) Inverter for 3 phase output
- ✓ An AC inter-car power transfer stage for redundancy of 3 phase supply
- ✓ Single phase Inverter for utility supply
- ✓ Low voltage power supply (LVPS) stage for battery charging and vehicle control equipment
- ✓ Dead battery start provision
- ✓ Car communication interface via DeviceNet
- ✓ External hardware signal interface via MIL connectors
- ✓ IP55 standard. Tested for water / dust sealing
- ✓ Diagnostics, event and fault logging via proprietary portable test equipment (PTE) software

### Key Benefits to Transit Authorities

- ✓ Light weight and compact (150Kgs)
- ✓ Very high efficiency i.e. > 95%
- ✓ Designed, tested and validated for monorail platform
- ✓ 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	500 Vdc to 1200 Vdc at full load
Input isolation to earth	3kV rms 50Hz for 1 minute
Output Voltage 3 phase Inverter	415Vac +1% / - 5% line to line, 3 phase, 3 wire
Rated Power	40kVA (32.8 kW @ 0.82 pf))
Short term overload	1.2 times the maximum AC current (66A) output for 30s 1.6 times the maximum AC current (88A) output for 2s
Motor Starts	Direct on line (DOL) motor starts can be used
Single Phase Output	220 Vac ±5% line to line
Low Voltage DC Output	124.5 Vdc ±0.5V rated at 10kW
Protection	Electronic short-circuit, overload and transient protection
Battery Protection and Monitoring	Reverse battery protection and battery voltage monitoring
Efficiency	> 95% at full load
Weight	150 Kgs
Dimensions	1000mm (L) x 970mm (W) x 420mm (H)
Reliability	> 100,000 hrs MTBF
Design Life	30 years
Operating temperature and Humidity	-25 <sup>0</sup> C to +60 <sup>0</sup> C and relative humidity at maximum of 100%
Cooling	Forced air cooled from internal fan
Portable Test Equipment (PTE)	Diagnostics and fault monitoring
Car Communication	Yes via DeviceNet

TPS is a #1 supplier of power conversion equipment for various monorail platforms across the globe. There are more than 400 units successfully operating in Brazil, Saudi Arabia 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.

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) 0191 482 9288/9251/9278.



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