



AIR CONDITIONING POWER SUPPLY - REGIONAL & COMMUTER

40 kVA Class 321 Electric Multiple Units (EMUs)

Key Technical Features

- ✓ Input filter
- ✓ Power factor corrected AC input
- ✓ IGBT based 415V AC 40kVA AC inverter
- ✓ Four wire output with neutral connected to car body
- ✓ Galvanically isolated outputs
- ✓ High quality low distortion sine wave output
- ✓ Output filters and electronic protection (all outputs)
- ✓ The outputs are configured for redundant operation with two systems
- ✓ Microprocessor control with fault diagnostics and annunciation
- ✓ Event and fault logging provision via proprietary software
- ✓ Design adaptable for third rail or loco hauled coaches

Key Benefits to Operators and Fleet Owners

- ✓ Highly efficient (>90%)
- ✓ Remote condition & fault monitoring
- ✓ Reduced life cycle maintenance cost – thanks to naturally cooled design
- ✓ Easy maintenance and installation
- ✓ Dedicated through life maintenance & support
- ✓ Designed for 30 year life time
- ✓ Full suite of diagnostics software included
- ✓ Proven to be reliable and efficient for over 100,000 hours MTBF





Input Voltage	Nominal 240Vac rms single phase
Input Voltage Range	120Vac rms to 279Vac rms
Input AC frequency	47.5 to 50.5Hz
Output Voltage 3phase Inverter	400Vac \pm 5%
Rated Power	40kVA continuous @ 0.8 pf lagging
Motor Starts	Direct on line (DOL) motor starts can be used
Overload	1.2 times the maximum rated output for 5 seconds
Single Phase Output	Not applicable
Low Voltage DC	110Vdc \pm 1V at 8kW
Protection	Electronic short-circuit and overload protection
Efficiency	91%
Environmental Protection	Magnetic components and enclosures rated at IP20 and IP65 respectively
Weight	763.5 Kgs
Dimensions	2316 (L) x 1136 (W) x 696 (H)
Reliability	> 100,000 hrs MTBF
Design Life	30 years
Operating temperature and Humidity	-25 ^o C to +40 ^o C and relative humidity at maximum of 100%
Cooling	Natural convection cooled
Portable Test Equipment (PTE)	Available – Data logging and fault monitoring via RS232 port
Remote Condition Monitoring	Yes. Communication to Train Management System via MODNET TCP

TPS prides itself in offering highly reliable, lighter and efficient power conversion solutions to the Global Rolling Stock Industry. Rail operators and fleet owners are always looking for ways to minimize maintenance costs, increase system efficiency, improve power density and increase fleet availability and reliability. TPS has developed a unique solution for the ageing UK rolling stock, which provides all the aforementioned benefits at a value added price. Our air conditioning power supply is also designed to last a fleets' life time.

Should you encounter any obsolescence issues our after sales support team is dedicated to sourcing these components and ensuring that your product will continue to operate at optimum efficiency.

With over 40 years rail pedigree, a team of highly skilled engineers and technicians and a track record in creating world-class power electronics products, 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) 0191 482 9288/9251/9278



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