



C.M. TECHNOLOGY

Designed and Manufactured in Australia

www.cmtechnology.com.au

PRODUCT SHORTFORM

Rev. A2

Tel: +61 (2) 9764 5655

Railway 19" Rackmount AC-DC Converter



NRS-E

The NRS-E is a 1RU high rated AC-DC Converter.

- Front access input fuse
- High Efficiency (89%) with built-in active PFC functionality (P.F >0.95)
- Universal Full-Range AC Input
- Short Circuit/Overload/Overvoltage/Over temperature protection
- Active AC Surge current limiting circuit



A Caspian Technology Company

© All materials presented are Trademarked and Copyright of C.M. TECHNOLOGY Pty Ltd



Specifications for NRS-E:

Output DC Voltage	110V
Output Rated Current	10A
Current Range	0-11A
Rated Power	960W
Peak Load (10 min.)	1056W
Voltage Tolerance	±1.0%
Line Regulation	±0.2%
Input Voltage Range	85-264V AC
Frequency Range	47-63 Hz
Efficiency (Typical)	89%
Power Factor (Typical)	PF>0.95 at full load
AC Current (Typical)	3.5A
Inrush Current (Typical)	40A/230V AC
Leakage Current	<2 mA
Overload Protection	Constant Current limiting, automatic recovery after conditions removed
Overvoltage Protection	Shut down Output voltage, re-power on to recover
Overtemperature Protection	Shut down Output voltage, automatic recovery after temp. decreases
EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN50082-2, EN61000-6-2, Light Industrial, Criteria A
EMC Emission	EN55022 (CISPR22) Class B, EN61000-3-2,-3
Isolation Resistance	Input-Output, Input-Ground, Output-Ground: 100 MΩ / 500V DC / 25°C / 70% Room Humidity
Withstand Voltage	Input-Output: 3KV DC, Input-Ground: 1.5KV DC, Output-Ground: Short
Safety Standards	UL60950-1, TUV EN60950-1
Vibration	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axis
Working Temperature	-20°C ~ +60°C
Working Humidity	20% ~ 90% Room Humidity Non-condensing
Storage Temperature & Humidity	-40°C ~ +85°C, 10% ~ 95% Room Humidity


C.M. TECHNOLOGY

Designed and Manufactured in Australia

www.cmtechnology.com.au

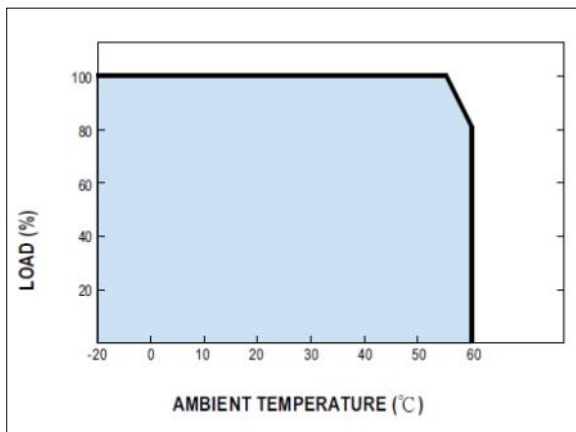
PRODUCT SHORTFORM

Rev. A2
Tel: +61 (2) 9764 5655

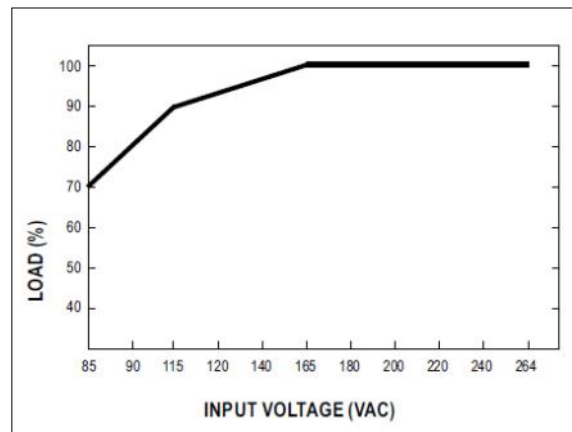
Overview:

The NRS-E has been designed to suit the unique requirements of AC-DC converters used in railway applications.

By utilising our years of technical knowledge and real-world applications gained from the proven PSTR series, the NRS-E has been designed for railway and heavy/light metro with AC supplies ranging from 85 to 264 volts, without any voltage selection being needed.



Derating Curve



Static Characteristics

The NRS-E is an example of a generic approach to railway power system design. Essentially the same circuit configuration is used for all switchmode railway supplies made by C.M. Technology. This approach minimises the circuit simulation required for a new design.

Manufactured using switchmode electronics, the NRS-E is designed for a high energy efficiency of >89%. This relatively high efficiency allows a maximum 60°C ambient working temperature. Our high quality components are housed in a 19" 1RU high case, a standardised frame form factor allowing for easy mounting of equipment modules.

The finished AC-DC converters are all burnt in at full load to provoke any infant mortality failures, with some products held on long term burn-in.

The NRS-E is compliant with the Australian C-Tick Standard.

