C.M.TECHNOLOGY

Designed and Manufactured in Australia

www.cmtechnology.com.au

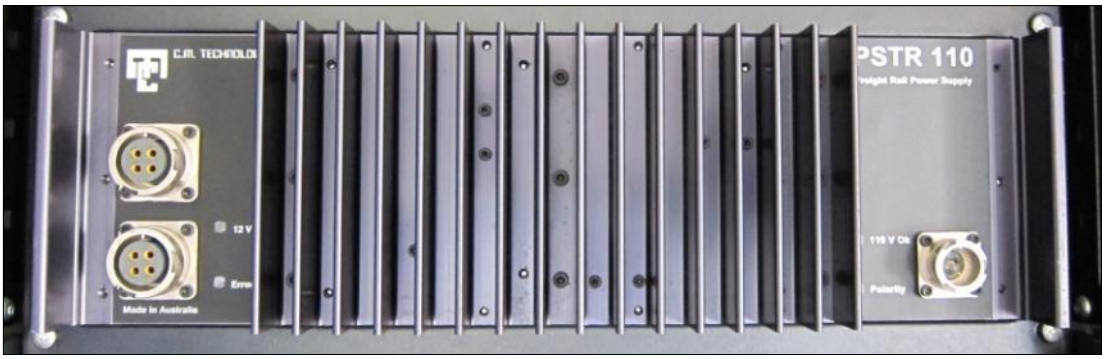
PRODUCT SHORTFORM

Rev. A2

Tel: +61 (2) 9764 5655

PSTR 110

Isolated, regulated, overvoltage & transient protected 13.8V DC source for radio & ancillary equipment, powered from a train DC supply.



SPECIFICATION	
DC Nominal Input Voltage	110V (V_{DC} Min. 70V - V_{DC} Max. 150V)
Transient Protection	Peak Voltage 5000V
	Rise Time < 0.1µs
	Fall time to 2000V 160µs , RC type time constant
	Energy in Spike < 100J
Isolation Resistance	Input-to-Case > 1000 V_{RMS} AC 50 Hz for 1 min.
	Input-to-Output > 1000 V_{RMS} AC 50 Hz for 1 min.
	Output-to-Case > 1000 V_{RMS} AC 50 Hz for 1 min.
Input Noise Immunity	Not affected by 200 mV_{RMS} (50Ω source) at any freq. from DC to 50MHz
Reverse Polarity Protection	Yes, not affected indefinite reverse power within 0 to 150V_{DC}
Output Voltage (Nominal)	13.8 V DC at 16A
Output Voltage Regulation	Overload 0 - 16A (Input Nominal) < ±1%
	Over Input Range (Load 16A) < ±1%
	Over Temperature (Input Nominal, Load 16 A) < ±1%
Rated Output Current	16A_{RMS}, Max. continuous at 60ºC (22A_{RMS} at 50ºC in free airflow > 1m/s)
Output Current Limit	22A
Output Voltage Ripple & Transients	< 100mV (for any load)
Output Noise	< 100 mV peak to peak , DC to 100 MHz
Efficiency	> 84% typically (at 75% Load - 16A)
MTBF (calculated)	> 60,000 hrs, MIL-HDBK-217F
Temperature Rating	-10ºC to +60ºC
Ingress Rating	IP50 (Dust protected)
Standards	AS3548, C-Tick (N2672)
Dimensions	19” 3RU - 133.35 mm x 482.6 mm x 110 mm (w x h x d)

A Caspian Technology Company

C.M.TECHNOLOGY

Designed and Manufactured in Australia

www.cmtechnology.com.au

PRODUCT SHORTFORM

Rev. A2

Tel: +61 (2) 9764 5655

- *20 Amp 13.8 Volt output with 1% overall voltage regulation and high energy conversion efficiency.*
- *1000 Volts Input-to-Output isolation and internationally acceptable levels (AS3548) of conducted RFI.*
- *Standard 19" rack mounting (3RU), convection cooled units designed for high electrical and mechanical reliability (MTBF>60,000 hrs) with an operating temperature range of -10 to +60ºC.*
- *Anodized custom extrusions, polycarbonate front panels, extruded handles and the provision to rack mount.*
- *Features MIL-C Bayonet Lock Connectors*
- *IEC384-4 Electrolytics, Long Life Grade, climatic category IEC68 (-40°C to +85°C)*
- *The daylight visible annunciator LEDS shine through the label, giving a simple field diagnosis for a failed supply.*
- *Laser cut stainless steel safety cage allows free air circulation around the control electronics to keep temperatures low and raise the MTBF.*
- *Strong internal construction allows in excess of 100 hours NATA tested resonance vibration tests.*
- *16 hours of slow sweep vibration and mechanical resonance testing to SRA / Freight Rail specs, 16 hours under full load at 70°C and cycling between –10°C and +70°C.*
- *Infant mortality is eliminated with a full load burn in at final test (8 hours) before dispatch.*
- *Designed and Manufactured in Australia*

C.M.TECHNOLOGY

Designed and Manufactured in Australia

www.cmtechnology.com.au

PRODUCT SHORTFORM

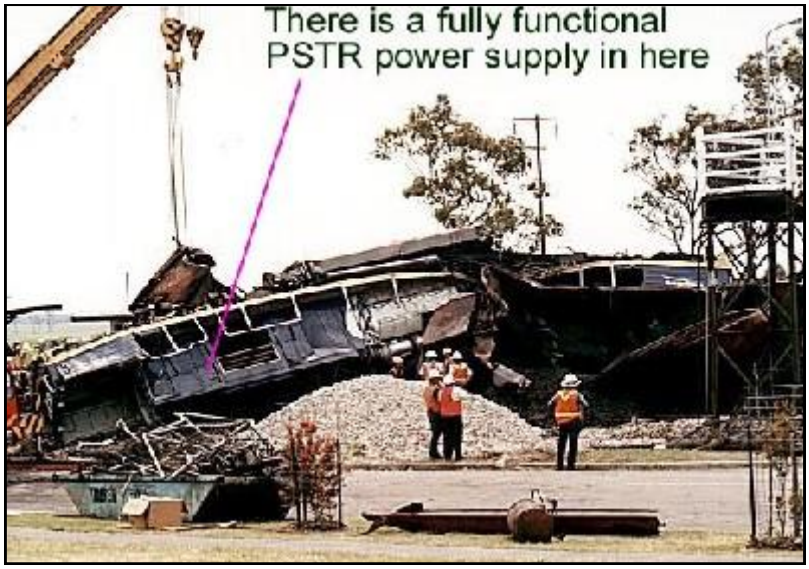
Rev. A2

Tel: +61 (2) 9764 5655

An exemplary testament to the PSTR power supply series from C.M. Technology, a train crash in 23 October, 1997 at Beresfield, NSW, Australia:

Although not a recommended test we are also quite pleased that three (out of three) power supplies survived the Beresfield collision which caused locomotives 8219, 8246 & 8247 to be written off.

Photos shows locomotive 8219 upside-down in the wreckage as cranes work to clear the train line.



Original Photo taken by David Johnson, 25 Oct 1997 used with permission.

Original Photo taken by New South Wales Department of Transport, 1997