

Technical Data Sheet

CAR120A Car/Truck/Air Power Adapter



120 Watt automobile power adapter

Features:

- Wide input voltage range
- Max. output power 150 Watt
- For use in cars, trucks and aircrafts
- Automatic power reduction in aircraft thanks to IFPL™ (In Flight Power Limiting) technology

Applications:

- Suitable for use with all notebooks

Specification

Input	
Voltage range	11 - 32VDC
Standby current	Typical 85mA @ 11V input Typical 75mA @ 32V input
Input fuse	15A
Protection	<ul style="list-style-type: none"> - Reverse polarity (input fuse) - Under / Over voltage protection (Transient suppression circuit) - Over temperature protection - Automatic power limitation for aircraft (75W) & thermal management (cigarette lighter adapter)

Output	
Voltage range	5 - 24V nominal
Power	120W cont. 150W max.
Initial set tolerance	±3% max.
Load regulation ⁽¹⁾	- 80mV max. / A
Line regulation	±1% max.
Ripple & noise ⁽²⁾	< 90mV _{pk-pk}
Current limit	Constant current, 8A max.
Protection	<ul style="list-style-type: none"> Short circuit Over temperature protection Over voltage protection

Environmental	
Cooling	Convection cooled
Temperature	Operating: -20°C to 40°C Non-operating -40°C to 85°C
Pressure & altitude	Operating: 1200hPa to 570hPa, max. 4600m above sea level Non-operating: 1200hPa to 115hPa, max. 15000m above sea level
Humidity	5 to 95% r.H., non-condensing

General	
Input connector	Cigarette lighter adapter with IFPL™ System
Output connector	Customer-specific
Efficiency ⁽³⁾	typical 96% at 100% load
MTBF	> 100000h @ 25°C ambient temperature and G _B per MIL-HDBK217F
Green procurement	WEEE RoHS
Indicator	Green LED: OK/Status Red LED: Failure
Ingress protection rating	IEC60529, IP40

Technical Data Sheet

CAR120A Car/Truck/Air Power Adapter



Safety & EMC		
Regulatory approvals	Europe International USA/Canada Australia	CE CB Report IEC 60950-1 UL60950-1 RCM
Electromagnetic emissions	Europe USA Airborne equipment	EN55011/EN55022 class B, EN55014-2, EN55024 FCC15 class B RTCA/DO-160E, Section 21
Electromagnetic immunity	ESD immunity Electromagnetic field immunity Electrical fast transient/burst immunity test Surge immunity test Conducted Immunity ISO-Impulses Airborne equipment UNECE vehicle regulation	IEC61000-4-2, 4kV contact / 8kV air IEC61000-4-3, 80-2500MHz, 10V/m, AM 80%/1kHz IEC61000-4-4, +/-2kV, 5/50ns IEC61000-4-5, +/-2kV DM, 1.2/50(8/20) μ s IEC61000-4-6, 0.15-80MHz, 10V, 80%, 1KHz, AM, with CDN ISO7637-2, pulses 1, 2, 3a, 3b, 5 RTCA/DO-160E Section 20 E13 ECE Reg. 10

- other approvals on request

Mechanical Details	
Housing dimensions (LxWxH)	140 x 62 x 19mm, without cables and connectors
Input cable length	100cm \pm 5%
Output cable length	100cm \pm 5%
Weight	approx. 360g, without cables and connectors

Notes

1. Load regulation is measured at the output connector and includes the voltage drop across the output cable.
2. Measured with a 0.1 μ F ceramic and a 10 μ F electrolytic capacitors across the output terminals. The oscilloscope bandwidth is set at 20MHz a co-axial cable will be used to measure it. The test condition is maximum load.
3. Power losses of input and output cables are not considered here.

Germany/Headquarters	USA	Hong Kong	China
RRC power solutions GmbH Technologiepark 1 D-66424 Homburg / Saar	RRC power solutions Inc. 18340 Yorba Linda Blvd., Suite 107-437 Yorba Linda, CA 92886-4104	RRC power solutions Ltd. S-V,6/F, Valiant Industrial Centre 2-12 Au Pui Wan Street Fo Tan, N.T., Hong Kong	RRC power solutions Ltd. Room 520, Yuanlin Building, Aiguo Road No. 3066, Luohu District, Shenzhen 518021
Tel.: +49 6841 98090 Fax: +49 6841 9809280 Email: sales@rrc-ps.de Web: www.rrc-ps.de	Tel.: +1 714 777 3604 Fax: +1 714 777 3658 Email: usa@rrc-ps.com Web: www.rrc-ps.com	Tel.: +852 2376 0106 Fax: +852 2375 0107 Email: hkrrc@rrc-ps.cn Web: www.rrc-ps.com	Tel.: +86 755 8374 1908 Fax: +86 755 8374 1861 Email: hkrrc@rrc-ps.cn Web: www.rrc-ps.com