



Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for RANE VC 18. You'll find the answers to all your questions on the RANE VC 18 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual RANE VC 18
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RANE Professional Audio Products Data Sheet

VC 18 VOLTAGE CONVERTER

General Description
The Rane VC 18 UPS (Uninterruptible Power Supply) Voltage Converter is a special purpose DC-DC converter used to power Rane products equipped with red modular jacks and designed for external Remote AC Power, i.e., RAP units. The VC 18 provides inputs for simultaneous powering by AC and DC power. When the AC power fails, the VC 18 automatically switches to DC power, thus providing uninterrupted power. The AC power source may be either an RS 1, RS 2, FRS 8 or a RAP 10. The DC power is either a 12 volt or 24 volt battery, connected to the #6 terminals on the VC 18. (Special protection circuits provide safe operation of the VC 18 in harsh automotive and other mobile environments.)
The VC 18 may be used to provide emergency back-up power for all Rane products designed for remote power. See the Application Information on the back of this sheet for a complete discussion on which Rane units apply, and powering more than one unit at a time.

VC 18-2 Option
Ordering a VC 18-2 gets two 6W converters in one VC 18 chassis. Each drives a separate output jack. **The VC 18-2 requires powering by a Rane RS 2, 1.5 amp AC supply (or parallel FRS 8 or RAP 10 outputs); the smaller RS 1 supply will not work.**

Features

- UNINTERRUPTIBLE POWER SOURCE
- AC INPUT & 12/24VDC BATTERY INPUT
- ±18VDC/DC CONVERTER OUTPUT
- 6W OUTPUT, EXPANDABLE TO 2x6W
- FULLY REGULATED
- HIGH OUTPUT ALLOWS ±15 VOLT REGULATORS TO OPERATE
- REVERSE & OVERVOLTAGE PROTECTION
- TRANSIENT SPIKE PROTECTION
- SYSTEM POWER SWITCH
- IGNITION SWITCH TERMINAL
- OUTPUT GROUND ISOLATED FROM INPUT
- COMPLETE EM/RFI SHIELDING

Parameter	Specification	Limit	Units	Conditions/Comments
GENERAL SPECIFICATIONS				
Rated Output Power	6 (2x6 for VC 18-2)		W	
Efficiency	85	Min	%	7W (14W for VC 18-2) Input Power
Rated Output Voltage	±18	5%	VDC	
Rated Output Current	167 (2x167 for VC 18-2)	10%	mA	
Ripple and Noise	150		mVp-p	DC to 20Mhz
Rated Temperature	0 to +70	Min	°C	No Derating
DC BATTERY INPUT				
..... Input Voltage Range	12-24	10%	VDC	
..... Full Load Input Current	583/292 (1.2A/584 for VC 18-2)	Max	mA	12V/24V Input
AC INPUT				
..... Input Voltage Range	16-23		VAC	
..... No Load Input Current	60 (120 for VC 18-2)		mA	
..... Full Load Input Current	650 (1300 for VC 18-2)	Max	mA	
..... AC Isolation	80k @ 3kHz	10%	W	660pF Between Commons



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Manual abstract:

When the AC power fails, the VC 18 automatically switches to DC power, thus providing uninterruptible power. The AC power source may be either an RS 1, RS 2, FRS 8 or a RAP 10. The DC power is either a 12 volt or 24 volt battery, connected to the #6 terminals on the VC 18. (Special protection circuits provide safe operation of the VC 18 in harsh automotive and other mobile environments.) The VC 18 may be used to provide emergency back-up power for all Rane products designed for remote power. See the Application Information on the back of this sheet for a complete discussion on which Rane units apply, and powering more than one unit at a time. VC 18 VOLTAGE CONVERTER VC 18-2 Option Ordering a VC 18-2 gets two 6W converters in one VC 18 chassis. Each drives a separate output jack. The VC 18-2 requires powering by a Rane RS 2, 1.5 amp AC supply (or parallel FRS 8 or RAP 10 outputs); the smaller RS 1 supply will not work.

Features UNINTERRUPTIBLE POWER SOURCE AC INPUT & 12/24 VDC BATTERY INPUT ± 18 VDC DC/DC CONVERTER OUTPUT 6W OUTPUT; EXPANDABLE TO 2x6W FULLY REGULATED HIGH OUTPUT ALLOWS ± 15 VOLT REGULATORS TO OPERATE Specification 6 (2x6 for VC 18-2) 85 ± 18 167 (2x167 for VC 18-2) 150 0 to +70 12-24 583/292 (1.2A/584 for VC 18-2) 16-23 60 (120 for VC 18-2) 650 (1300 for VC 18-2) 80k @ 3kHz REVERSE & OVERVOLTAGE PROTECTION TRANSIENT SPIKE PROTECTION SYSTEM POWER SWITCH IGNITION SWITCH TERMINAL OUTPUT GROUND ISOLATED FROM INPUT COMPLETE EM/RFI SHIELDING Limit Units W % VDC mA Conditions/Comments Parameter GENERAL SPECIFICATIONS Rated Output Power Efficiency Rated Output Voltage Rated Output Current Ripple and Noise Rated Temperature DC BATTERY INPUT

.....
.....
.Input Voltage Range

.Full Load Input Current AC INPUT

.Input Voltage Range

.....
.No Load Input Current

.Full Load Input Current

.AC Isolation Min 5% 10% Min 10% Max 7W (14W for VC 18-2) Input Power mVp-p DC to 20Mhz °C No Derating VDC mAD VAC mAA mAA W 12V/24V Input Max 10% 660pF Between Commons VC 18 VOLTAGE CONVERTER Application Information Professional Audio Products Data Sheet Using the VC 18 as an uninterruptible power supply requires nothing more complicated than hooking up an RS 1, RS 2, FRS 8 or RAP 10 AC power source (NOTE: a VC 18-2 requires an RS-2 or two paralleled outputs from an FRS 8 or RAP 10), and a 12 or 24V DC battery. @@@@DO NOT EXCEED THE MAXIMUM CURRENT RATING. @@@@True worst case design. @@@@Just use common sense.

In general, if an RS 1 will power it, a VC 18 will power it. Dash-Two Differences. A VC 18 has one converter and drives both output jacks in parallel. @@In essence, two VC 18's in one box. Looked at another way, a VC 18 delivers a total of 167 mA from two jacks, while a VC 18-2 delivers 167 mA out of each jack.

Before you ask, NO, YOU CANNOT PARALLEL OUTPUTS. The output of the two converters will not add. Instead, each will go into short-circuit limit and shut down. Powering Two or More Units. Two output jacks implies the ability to drive two units, right? if you're careful. You can drive as many units as you want just so long as you do not exceed the 167 mA maximum. Looking at the Tables above shows you could drive three AC 22's, but you could only drive one PE 17 for example. For VC 18-2 use, you could power two PE 17's. ©Rane Corporation 10802 47th Ave. W.

, Mukilteo WA 98275-5098 TEL (206)355-6000 FAX (206)347-7757 WEB <http://www.rane.com> Printed in the U.S.A. .



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