

NA-VC1

NOCTUA NA-VC1 VOLTAGE CONVERTER



The NA-VC1 is a sophisticated, premium grade 24V DC to 12V DC step-down voltage converter that allows running standard 12V fans in 24V environments such as 3D printers or industrial and automotive applications. Its neat, ultra-compact and lightweight design makes it easy to integrate in to virtually any environment. Compatible with both 4-pin PWM and 3-pin fans, the NA-VC1 passes through RPM and PWM signals for speed monitoring and PWM-based speed control (4-pin fans only). At the same time, it adjusts output with input voltage for voltage-based speed control. Supporting a total output power of 9W, the NA-VC1 can run multiple fans using the optional NA-SYC1 splitter cables or NA-FH1 fan hub. For speed controlling PWM fans, it can be nicely combined with the optional NA-FC1 fan controller. With a maximum operating temperature of up to 60°C, integrated protection against short-circuits, reverse polarity, overcurrent and overheating (automatic shutdown) as well as a safety fuse that protects other components in case the unit is mechanically compromised, the NA-VC1 is as bulletproof as a voltage converter can be. Topped off with CE, UKCA and UL certifications, full compliance with all applicable safety standards as well as Noctua's 6-year manufacturer's warranty, it is the first choice for quality-conscious customers who seek a safe, dependable solution for powering 12V fans in 24V applications.

Ultra-compact and lightweight

The NA-VC1 is barely larger than a standard 4-pin fan connector (31x16x8.5mm) and weighs only 6g. As a result, it can simply be interconnected between the fan cable and the power source, with no need for extra fixation in most applications.

Ideal for 3D printing

Many 3D printers are 24V-based (e.g. Creality Ender 3 and CR-10, Anycubic Mega) and use 40 or 60mm fans for cooling the hot-end or the printed part. The NA-VC1 makes it possible to use standard 12V fans such as the NF-A4x10 PWM, NF-A4x20 PWM or NF-A6x25 PWM in order to achieve quiet, efficient cooling on such printers.

Up to 9W output

Supporting a total output power of 9W, the NA-VC1 is fit to run single fans with high power draw or multiple lower power fans that are connected to the device using optional splitter cables (NA-SYC1 or NA-SYC2) or fan hubs like the NA-FH1.

PWM and voltage-based speed control

The NA-VC1 supports both PWM- and voltage-based speed control. PWM signals are passed through and the output voltage scales with the input voltage, e.g. if the input is 12V, the output will be ~7.5V, allowing a 12V fan to run at a reduced speed.

RPM monitoring

The NA-VC1 features 4-pin connectors and only adjusts the voltage on the +12V line. PWM and RPM signals are passed through for PWM control and RPM speed monitoring. This makes it easy to implement control, monitoring and watchdog applications in industrial environments.

Advanced protection

Designed to operate in challenging environments, the NA-VC1 is internally protected against short-circuits, reverse polarity, overcurrent, and overheating by a resettable fuse. It will shut down automatically for protection and can be easily reset by disconnecting it from the power source for one minute in a safe operating temperature (<60°C).

Safety certifications

Unlike many cheap voltage converters, the NA-VC1 has been carefully tested for product safety and EMC compliance. Carrying CE, UKCA and UL certifications and meeting all applicable standards (EN 62368-1, EN 55035 and EN 55032), it is a safe, quality device through and through.

6-year manufacturer's warranty

Noctua products are renowned for their impeccable quality and outstanding longevity. Like Noctua's fans and heatsinks, the NA-VC1 is a robust, dependable product that has been carefully engineered to stand the test of time.

SPECIFICATIONS

Output connectors	1x 4-pin PWM
Input connectors	1x 4-pin PWM
Max. power	9 W
Input voltage	12-24 V
Max. input current	0.375 A
Output voltage	7-12 V
Max. output current	0.75 A
Fan compatibility	all Noctua 12V fans, many third party fans
Operating temperature	-20°C to +60°C
Safety standards	EN 62368-1, EN 55035, EN 55032
Certifications	CE, UKCA, UL
Protection features	<ul style="list-style-type: none">• Short-circuit protection• Reverse polarity protection• Overcurrent protection• Overheating protection
Scope of delivery	NA-VC1
Size	31x16x8.5 mm
Weight	6 g
Warranty	6 years

Designed in Austria, Noctua's premium cooling components are internationally renowned for their superb quietness, exceptional performance and thoroughgoing quality. Having received more than 6000 awards and recommendations from leading hardware websites and magazines, Noctua's fans and heatsinks are serving hundreds of thousands of satisfied customers around the globe.

www.noctua.at

LOGISTIC DATA

Product name

Noctua NA-VC1

EAN

9010018201390

UPC

841501121395

Packaging dimensions (HxWxD)

470x450x160 mm

Weight incl. packaging

7 g

Warranty

6 years

Packaging unit

200 pcs

Packaging dimensions / unit (HxWxD)

263x210x205 mm

Weight incl. packaging / unit

2.54 kg

SCOPE OF DELIVERY

NA-VC1 voltage converter