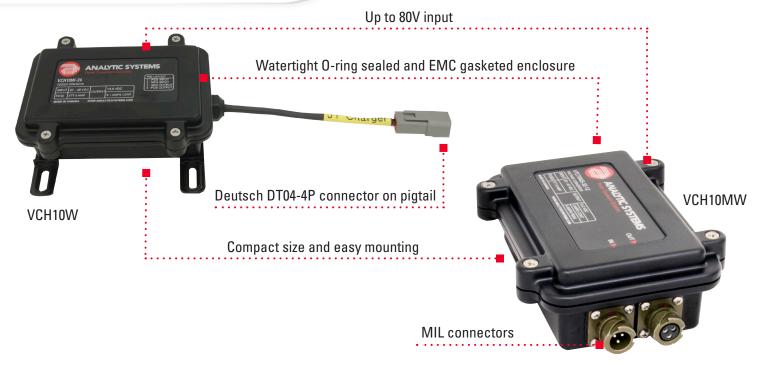


# **DC/DC**VOLTAGE CONVERTER

## VCH10W VCH10MW SERIES

ver Conversion Solutions Power Conversion Solutions



### VCH10W & VCH10MW

### DC/DC VOLTAGE CONVERTER

The VCH10 Step Down series of Voltage Converters supply up to 10 amps of output current at 12, 24, 36 or 48 volts from any higher voltage between 20 and 80 volts DC in an IP66 rated watertight and EMC shielded enclosure for use in rugged environments.

The standard VCH10W model offers a Deutsch connector on a pigtail input/output cable, and the military grade VCH10MW features separate bayonet style MIL connectors for input and output.

The all surface mount high frequency design offers higher reliability, higher efficiency (more than 92%), more power (up to 544 watts at 48 VDC Out) and minimum size

The VCH10MW is rated for operation from -40 to +55 degrees C and has been tested and confirmed to meet MIL-STD-461F for radiated and conducted emissions. It is designed to meet MIL-STD-810G for shock and vibration.

The unit has reverse input protection, output current limiting and output over-voltage protection.



### Available models

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20 - 80 | 30 - 80 | 40 - 80 | 45 - 80 | 60 - 80

### Output | Nominal (VDC)

**| 12 | | 24 | | 32 | | 36 | | 48** 

### Output | Actual (VDC)

13.6 27.2 36.3 40.8 54.4

### **Applications**













# VCH10W & VCH10MW | DC/DC VOLTAGE CONVERTER

### **INPUT**

Model	VCH10(M)W-12	VCH10-24	VCH10-32	VCH10-36	VCH10-48
Input Volts	20 - 80 VDC	30 - 80 VDC	40 - 80 VDC	45 - 80 VDC	60 - 80 VDC

#### **OUTPUT**

Nominal Volts	12 VDC	24 VDC	32 VDC	36 VDC	48 VDC
Actual Volts	13.6 VDC	27.2 VDC	36.3 VDC	40.8 VDC	54.4 VDC
Output Amps			10 Amps		
Dissipation			12 Watts		
Efficiency	91.9%	95.8%	96.8%	97.1%	97.8%

### **ELECTRICAL**

Input Ripple & Noise	< 100 mV Peak to Peak
Output Ripple & Noise	< 50 mV Peak to Peak
Transient Response	< 300 mV for 50% Load Step Change
Regulation (Line & Load)	< +/- 0.5%
Emissions	Meets MIL-STD-461F

### **MECHANICAL**

Dimensions	6.20 in / 15.8 cm Long x 4.91 in / 12.5 cm Wide x 2.15 in / 5.5 cm High
Clearance	1.0 in / 2.5 cm all around
Weight	0.62 lb / 0.28 kg
Material and Finish	Diecast Aluminum with O-Ring and EMC Gaskets, Black Powder Coat Finish
Mounting	Wall or shelf mount
Connections	VCHW - Deutsch DT04-4P on 15cm Pigtail; Mating Connector Included VCHMW - Input - GTC020R10SL-3P; Output - GTC020R10SL-3S; Mating connectors included
Shock and Vibration	Designed to meet MIL-STD-810G

### **ENVIRONMENTAL AND SAFETY**

Operating Temperature Range	-40°C to +55°C @ maximum output.
Humidity	0 - 95% Relative Humidity (non-condensing) with standard conformal coating
Audible Noise	NONE 0db @ 3ft
Typical Service Life	> 10 years (87,600 hrs)
Isolation	Any input or output to case (1500 VDC) Input to output - common negative
Warranty	Two years parts and labour
Safety	Built to meet CSA 22.2.107.1 & UL458

### **OPTIONS**

Paralleling diodes

Custom output voltages available

Custom connector arrangements

Industrial VCH10 model available

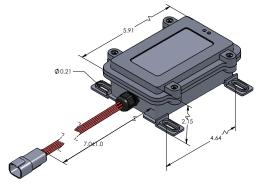
COTS - MIL461F and MIL810G in-house testing with report for each unit

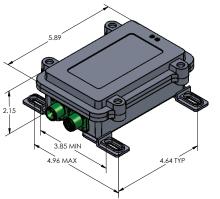
Stand alone MIL461F tested and report

Stand alone MIL810 tested and report

European ROHS compliant (Lead free manufactured)

#### **DIMENSIONS**







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analyticsystems.com

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