



# 500 Watt Open Frame AC/DC Power Supply Series DVC500



## Features

- Single Output
- Universal Input 80 – 264Vac
- 390W with Natural Convection
- 470-500W with Conduction Convection
- No Load Input Power Consumption <0,5W
- 3"x5" Compact Size
- Meet IEC/EN62368-1 / Approved UL62368-1
- Meet EN55032 Class B
- High Efficiency up to 94,5% Typical
- PS Remote ON/OFF Control
- Power Good & Power Fail Signal
- Over Temperature Protection
- +5V Stand-by, 12V Fan Output
- Low Inrush Current
- Meet IEC/EN60335-1
- Meet Class I

MODEL NUMBER	OUTPUT VOLTAGE [ VDC ]	OUTPUT CURRENT WITH FAN (NOTE 1) [ A ]	OUTPUT CURRENT WITHOUT FAN COVER [ A ]	OUTPUT CURRENT WITHOUT FAN OPEN [ A ]	VOLTAGE ACCURACY [ % ] (NOTE 2)	OUTPUT VOLTAGE ADJ. RANGE [ VDC ]	LOAD CAP. MAX. (NOTE 3) [ $\mu$ F ]	EFF. [%] (TYP.)
DVC500S12	12	41,67	27,5	25	$\pm 1$	11,4-12,6	42900	91,5
DVC500S18	18	27,78	18,33	16,67	$\pm 1$	17,1-18,9	28600	92,5
DVC500S24	24	20,83	17,08	15,83	$\pm 1$	22,8-25,2	20800	93
DVC500S36	36	13,89	11,39	10,56	$\pm 1$	34,2-37,8	14000	94,5
DVC500S48	48	10,42	8,54	7,92	$\pm 1$	45,6-50,4	10800	94
<b>Stand-by Output Voltage</b>								
All	+5	1,0 (Note6)			$\pm 3$			
<b>Fan Output Voltage</b>								
All	+12	0,5 (Note6)						

### Note:

1. Forced air Convection with 21CFM Fan.
2. Voltage Accuracy is Set at Full Load and 25°C Ta.
3. Input Voltage is 115VAC and 230VAC. Output is max. Load.
4. Fan Output Can Only Operate Normal When the Stand-by Output is Above 0.5A.
5. Model Number Examples:  
DVC500S24: Open Frame  
DVC500S24-C: With Case

## INPUT CHARACTERISTICS:

Input Voltage Range.....	Safety approvals only to the AC input .....	80-264Vac
Input Frequency Range.....	.....	47 to 63Hz
Input Current.....	100% Load, $V_{in}=100Vac$ .....	6,0A max.
Inrush Current.....	$V_{in} 240Vac$ , Cold Start at 25°C .....	8,5A typ.
Leakage Current.....	.....	3,5mA max.

## OUTPUT CHARACTERISTICS:

Efficiency .....	.....	see table
Output Voltage Accuracy .....	.....	see table
Operating Output Current Range.....	.....	see table
Hold-up Time .....	$V_{in}=115Vac$ .....	16mS typ.
Line Regulation.....	$V_{in}$ =High Line to Low Line .....	±0,5% max.
Load Regulation .....	10% Load to Full Load .....	±1,0% max.
Short Circuit Protection .....	.....	Auto Recovery, continuous
Over Current Protection .....	.....	Auto Recovery 120-190%
Over Voltage Protection ( Latch Off (AC Recycle to Reset) ) .....	$V_o 12V$ .....	16Vdc max.
	$V_o 18V$ .....	30Vdc max.
	$V_o 24V$ .....	35Vdc max.
	$V_o 36V$ .....	50Vdc max.
	$V_o 48V$ .....	63Vdc max.
Output Ripple & Noise ( Note 1 ) .....	$V_o 12V$ .....	120mV max.
	$V_o 18V$ .....	150mV max.
	$V_o 24V$ .....	150mV max.
	$V_o 36V$ .....	200mV max.
	$V_o 48V$ .....	250mV max.
PS-ON Signal .....	Power on .....	0Vdc min / 2Vdc max.
	Power off (PS-ON and GND open) .....	4Vdc typ.
	Power on (PS-ON and GND short) .....	10mA typ.
	Power-off (PS-ON and GND open) .....	0mA typ.
Power Good ( PG ) .....	$V_{in} 90-264VAC$ . $V_{out}$ max. load. TTL goes high after power set up .....	100ms min. / 500ms max.
Power Fail ( PF ) .....	$V_{in} 90-264VAC$ . $V_{out}$ max. load. TTL goes low before $V_o$ below 90% rated value .....	1ms min. / 10ms typ.
Output Voltage Adjustment .....	.....	±5%

## GENERAL SPECIFICATIONS:

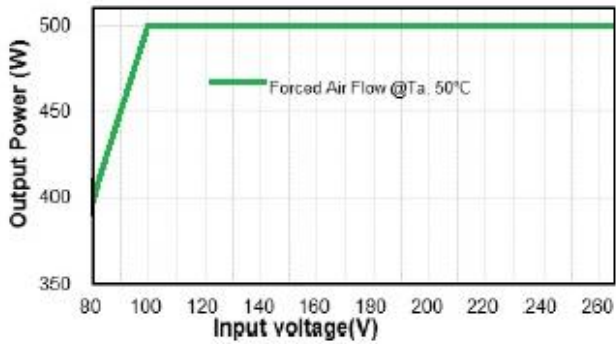
Isolation.....	Input/Output, 1 min. ....	4000 VAC max.
Isolation Resistance .....	Input to Output .....	100 MΩ min.
Switching Frequency .....	.....	65 kHz typ.
Operating Case Temperature Range .....	see Derating Curve .....	-40°C to +85°C
Storage Temperature Range .....	.....	-40°C to +85°C
Humidity .....	Non condensing .....	93% RH max.
Operating Altitude.....	.....	5000m
MTBF .....	MIL-HDBK-217F, $I_o=100%$ , $T_a=25°C$ .....	200Khrs min.
Shock .....	Meets MIL-STD-810F .....	75g typ.
Vibration.....	Meets MIL-STD-810F .....	4g typ.
Safety .....	.....	Class I, Meets IEC/EN62368-1 / Approved UL60950-1
EMC Emission .....	EN55032 Class B, EN61204-3, EN61000-6-3, EN61000-6-4, 47 CFR FCC Part 15 Subpart B .....	EN55032, 47 CFR FCC Part 15 Subpart B (Class B)
Conducted Disturbance.....	.....	EN55032, 47 CFR FCC Part 15 Subpart B (Class B)
Radiated Disturbance.....	.....	EN55032, 47 CFR FCC Part 15 Subpart B (Class B)
Harmonic Current Emissions .....	.....	EN61000-3-2
Voltage Fluctuations & Flicker .....	.....	EN61000-3-3
EMC Immunity .....	EN55035, EN61204-3, EN61000-6-1, EN61000-6-2 .....	EN55035, EN61204-3, EN61000-6-1, EN61000-6-2
Electrostatic Discharge (ESD) .....	IEC 61000-4-2, Air Discharge: ±8kV, Contact Discharge: ±4kV .....	IEC 61000-4-2, Air Discharge: ±8kV, Contact Discharge: ±4kV
Radio-Frequency, Continuous Radiated Disturbance .....	.....	IEC 61000-4-3
Electrical Fast Transient (EFT) .....	.....	IEC61000-4-4, ±1kV, ±2kV
Surge .....	IEC61000-4-5, L-N: ±0.5kV, ±1kV, L-E(Ground): ±0.5kV, ±1kV, ±2kV .....	IEC61000-4-5, L-N: ±0.5kV, ±1kV, L-E(Ground): ±0.5kV, ±1kV, ±2kV
Conducted Disturbances, Induced by RF Fields.....	.....	IEC 61000-4-6
Power Frequency Magnetic Field .....	.....	IEC 61000-4-8
Voltage Dips .....	IEC 61000-4-11, Dip: 30% Reduction, Dip >95% Reduction .....	IEC 61000-4-11, Dip: 30% Reduction, Dip >95% Reduction
Voltage Interruptions .....	.....	IEC 61000-4-11, >95% Reduction
Dimensions .....	Open frame .....	5.000x3.000x1.540 Inches (127.00x76.20x39.10mm)
	-C ( with Cover ) .....	5.354x3.425x1.673 Inches (136.00x87.00x42.50mm)
Weight .....	Open frame .....	515g typ.
	-C ( with Cover ) .....	635g typ.

Note:

1. Add a 0.1uF Ceramic Capacitor and a 10uF E.L. Capacitor to Output for Ripple & Noise Measuring @20MHz BW

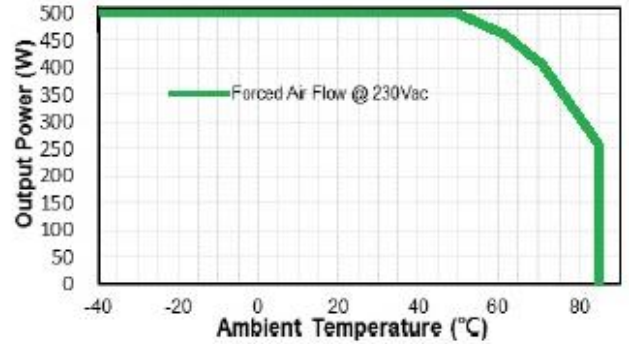
Forced Air Flow

Output power & Input voltage



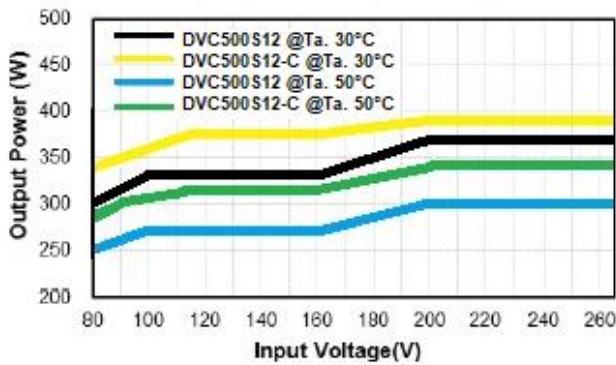
Forced Air Flow

Output power vs Ambient Temperature



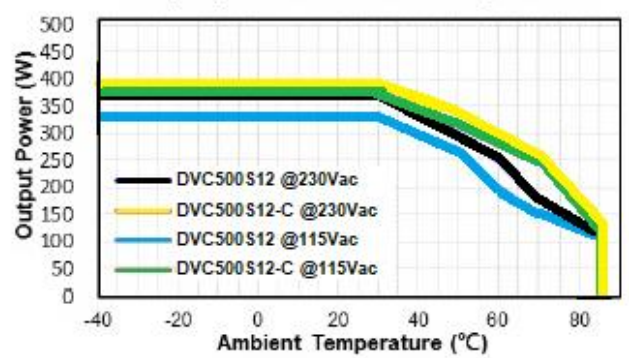
Natural Convection

Output power & Input Voltage

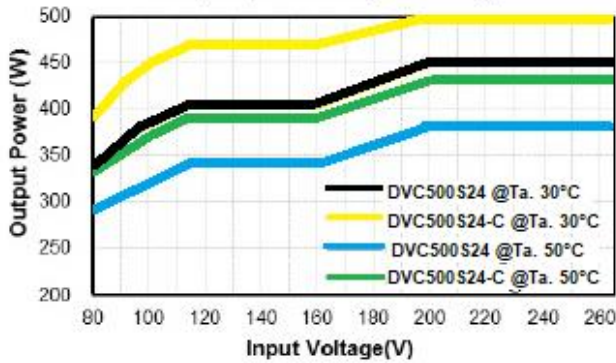


Natural Convection

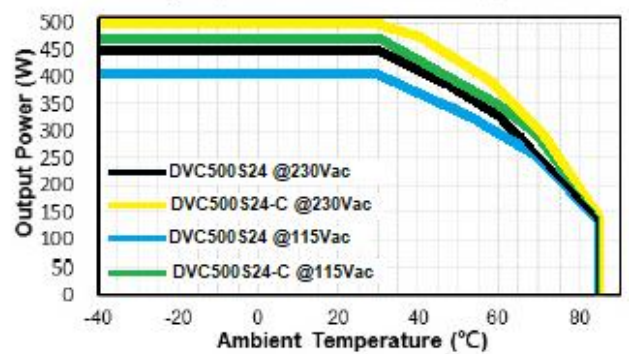
Output power vs Ambient Temperature



Output power & Input Voltage



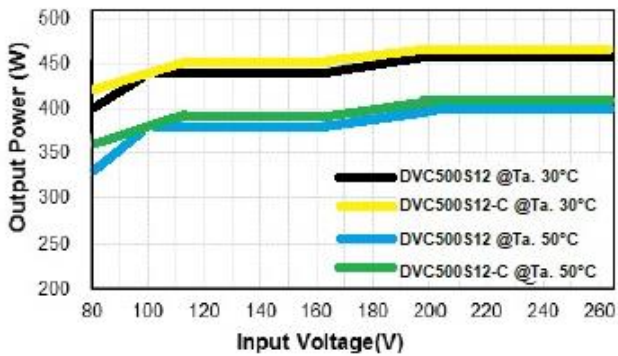
Output power vs Ambient Temperature



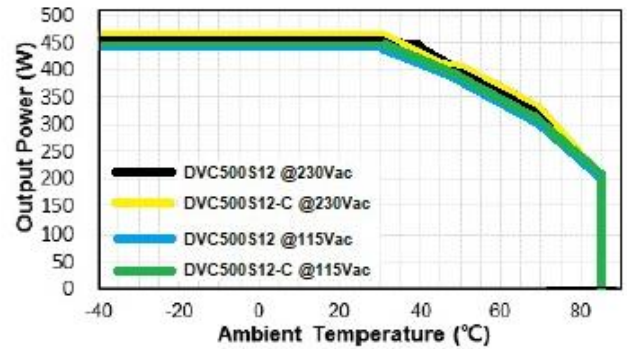
Conduction Convection with External Baseplate  
(48x24.8x0.12cm)

Conduction Convection with External Baseplate  
(48x24.8x0.12cm)

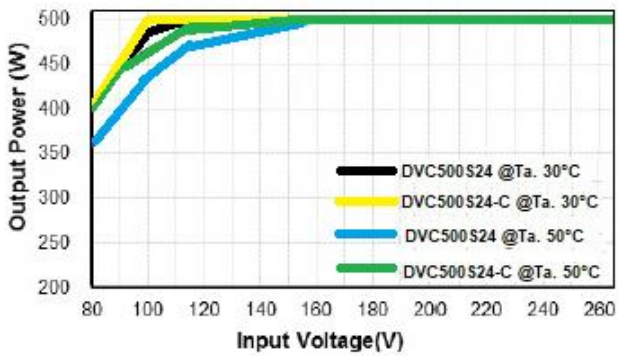
Output power & Input Voltage



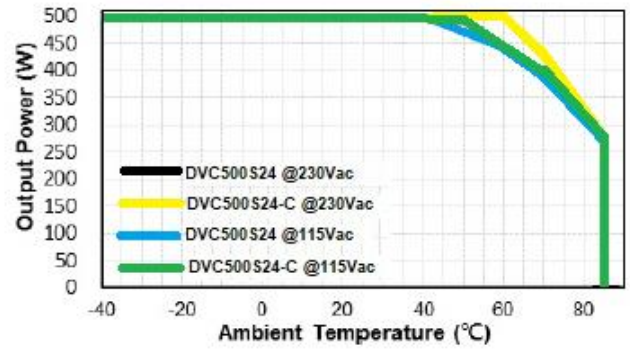
Output power vs Ambient Temperature



Output power & Input Voltage



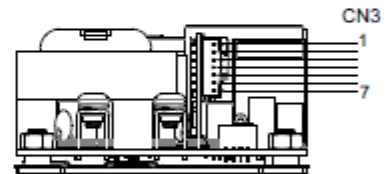
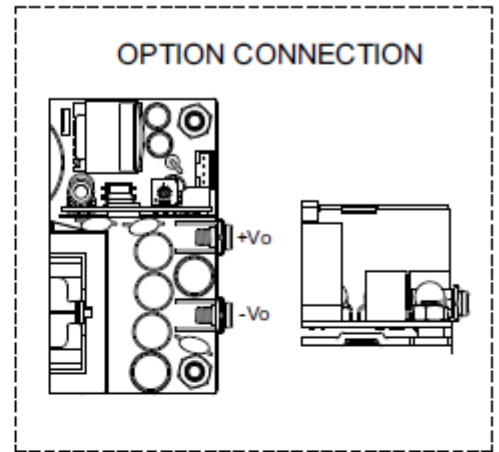
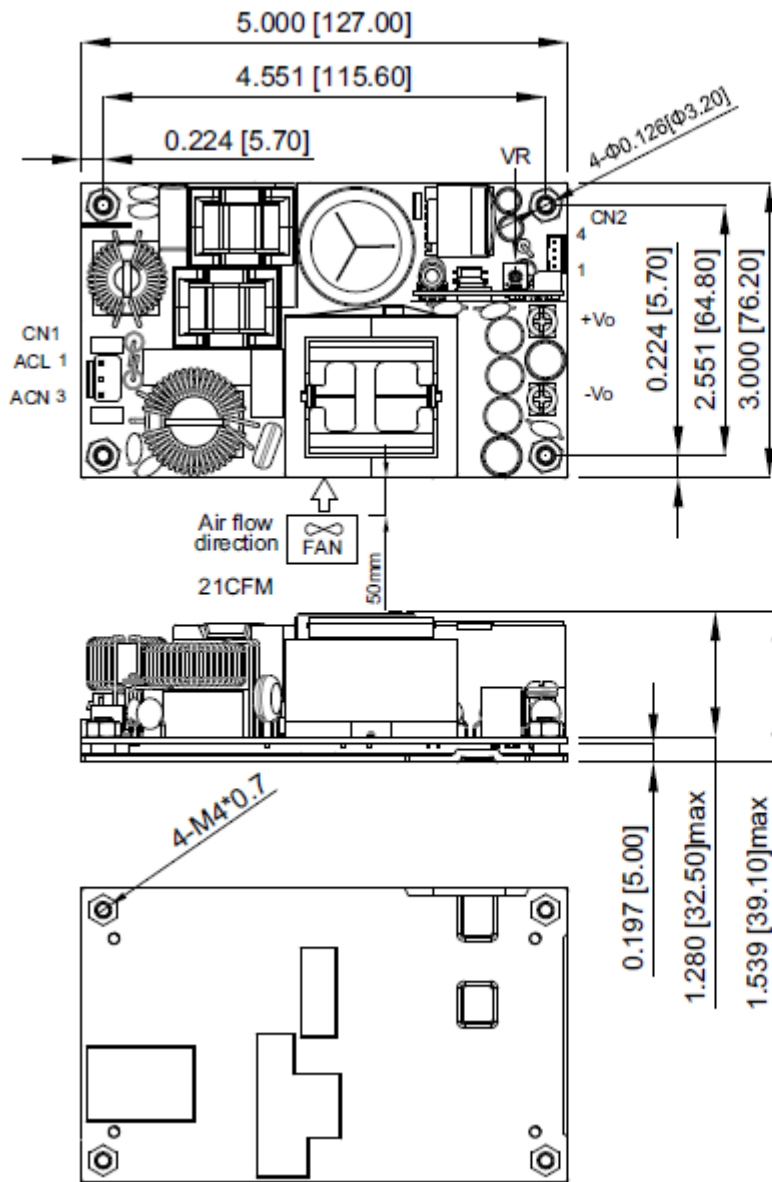
Output power vs Ambient Temperature



# Mechanical Specification DVC500Sxx

# Series DVC500

All Dimensions in inches[mm], Tolerances : Inches : x.xxx=±0.02, Millimeters : x.xx=±0.5

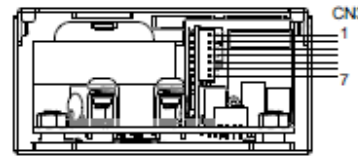
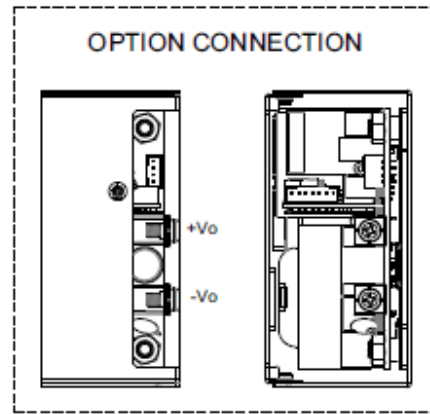
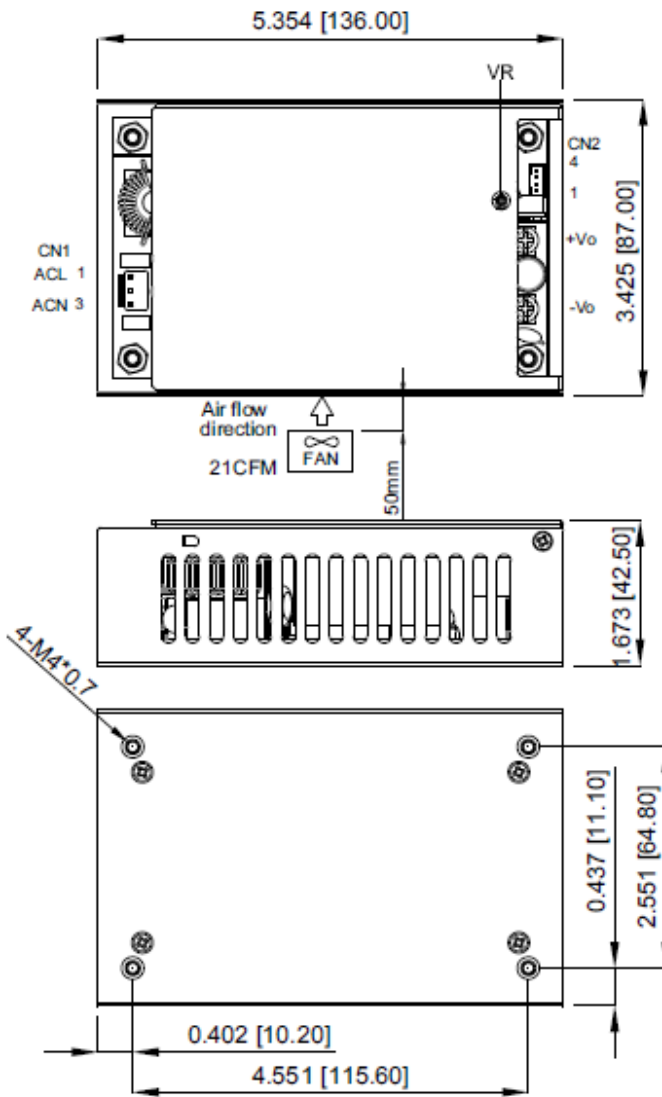


Technische Änderungen vorbehalten / Specifications are subject to change without notice

# Mechanical Specification DVC500Sxx-C

# Series DVC500

All Dimensions in inches[mm], Tolerances : Inches : x.xxx=±0.02, Millimeters : x.xx=±0.5



### CN1: PIN CONNECTION

Pin	Function
1	ACL
2	-
3	ACN

### CN2: PIN CONNECTION

Pin	Function
1	GND
2	+5VSB
3	GND
4	+12V-FAN

### CN3: PIN CONNECTION

Pin	Function
1	GND
2	PF
3	FAN-EN
4	PS-ON
5	-Sense
6	+Sense
7	OPTION

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