



## 30 Watt, 4:1 Wide Input DC/DC Converters Series DV304A



### Features

- 30 Watt Isolated Output
- Regulated Outputs
- 4:1 Wide Input Range
- 1"x1" Shielded Metal Case
- Efficiency to 90%
- CE Mark Meets 2004/108/EC
- Remote On/Off
- I/O Isolation 1500 VDC
- Input Under Voltage Protection
- Continuous Short Circuit Protection
- Over Current Protection
- Without Tantalum Capacitors Inside
- Safety Meets UL60950-1, EN60950-1, IEC60950-1

MODEL NUMBER	INPUT VOLTAGE [ VDC ]	OUTPUT VOLTAGE [ VDC ]	OUT. CURR. Min. [ mA ]	OUTPUT CURRENT Max. [ mA ]	INPUT CURRENT NO LOAD [ mA ]	INPUT CURRENT FULL LOAD [ mA ]	EFF. [ % ]	CAP. LOAD Max. [ $\mu$ F ]	CASE
DV9-36-3,3S7500A	9 – 36	3,3	0	7500	10	1172	88	7500	A
DV9-36-05S6000A		5	0	6000	10	1389	90	6000	
DV9-36-12S2500A		12	0	2500	10	1404	89	2500	
DV9-36-15S2000A		15	0	2000	10	1404	89	2000	
DV9-36-12D1250A		$\pm 12$	0	$\pm 1250$	10	1404	88	1250	
DV9-36-15D1000A		$\pm 15$	0	$\pm 1000$	10	1404	88	1000	
DV18-75-3,3S7500A	18 – 75	3,3	0	7500	8	553	88	7500	
DV18-75-05S6000A		5	0	6000	8	694	90	6000	
DV18-75-12S2500A		12	0	2500	8	694	89	2500	
DV18-75-15S2000A		15	0	2000	8	687	89	2000	
DV18-75-12D1250A		$\pm 12$	0	$\pm 1250$	8	687	88	1250	
DV18-75-15D1000A		$\pm 15$	0	$\pm 1000$	8	679	89	1000	

Note:

1. Suffix "-K" for Heat Sink mounted, for example DV9-36-05S6000A-K

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dev-dorsch electronic vertriebs gmbh • Münchner Str. 123 • 85774 Unterföhring  
Fon +49 / 89 / 95 08 07 – 60 Fax – 77 Mail: contact@dev-electronic.de • www.dev-electronic.de

## INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9 – 36V
	48V.....	18 – 75V
Input Surge Voltage (100mS max.).....	24V.....	50Vdc max.
	48V.....	100Vdc max.
Under Voltage lockout .....	24Vin power up.....	8,8VDC typ.
	24Vin power down.....	8,0VDC typ.
	48Vin power up.....	17V typ.
	48Vin power down.....	16V typ.
Input Filter .....		PI Type
Positive Logic Remote ON/OFF Control:		
Logic Compatibility .....		CMOS or Open Collector TTL, ref. to -Vin
Module ON .....		>+3,5 to 75VDC or Open Circuit
Module OFF .....		<1,2VDC

## OUTPUT SPECIFICATIONS:

Voltage Accuracy .....		±1,5%max.
Voltage Balance Dual.....		±1,5%max.
Transient Response 75% - 100% Step Load Change.....	Error Band.....	±5% Vout nominal, Recovery Time <250µ sec.
Temperature Coefficient.....		0,03%/°C max.
Ripple and Noise, 20 MHz BW ( Note6 ).....	Vo=3,3 & 5V.....	75mV p-p max.
	Vo=12 & 15V.....	75mV p-p max.
Short Circuit Protection.....		continuous
Line Regulation ( Note 1 ).....	Single Output.....	±0,2% max.
	Dual Output.....	±0,5% max.
Load Regulation ( Note 2 ).....	Single Output.....	±0,2% max.
	Dual Output.....	±1,0% max.
Over Voltage Protection .....		Zener or TVS Clamp
External Trim Adj. Range ( Single Output only ).....		±10%
Current Limit.....		110% - 170% Nominal Output
Start up Time.....		20ms max.

## GENERAL SPECIFICATIONS:

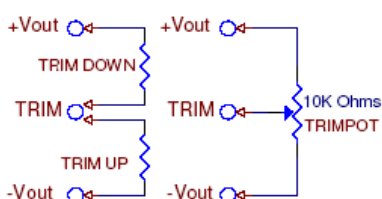
Efficiency.....		See Table
Isolation Voltage I/O .....		1500 VDC min.
Isolation Resistance .....		10 <sup>9</sup> Ω min.
Isolation Capacitance .....		1500pF typ.
Switching Frequency .....	Vo = 3,3V & 5V.....	270KHz typ.
	Others.....	330KHz typ.
Operating Ambient Temperature Range .....		-40°C to +85°C
Derating, above 55°C .....		Linearly to Zero Power at 105°C
Case Temperature ( Note 5 ) .....		105°C
Cooling.....		Natural Convection
Storage Temperature Range .....		-55°C to +125°C
Thermal Shutdown, Case Temp. ....		110°C typ.
Humidity .....		95% RH max. Non condensing
Dimensions .....		1,00 x 1,00 x 0,40 inches ( 25,4 x 25,4 x 10,2 mm )
Case Material .....		Black Coated Copper with Non-Conductive Base
Weight.....		18 g

Note:

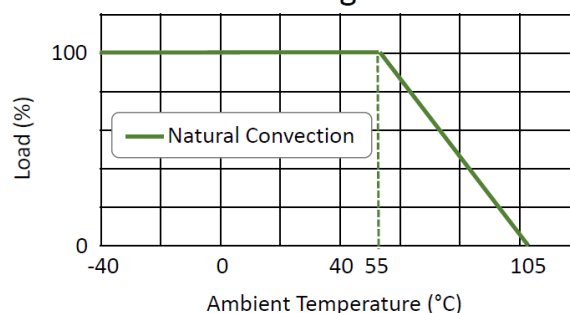
1. Measured from high line to low line.
2. Measured from full load to min. load.
3. The output ripple and noise is measured with 10µF tantalum and 1µF ceramic capacitor across output.
4. Suffix "N" to the model number with negative logic remote On/Off.  
 Module On.....<1,2VDC  
 Module Off.....>3,5VDC to 75VDC or open circuit.
5. Max. case temperature under any operating condition should not be exceeded 105°C.

All Specifications Typical at Nominal Line, Full Load and 25°C. Unless Otherwise Noted

## EXTERNAL OUTPUT TRIM



Derating Curve



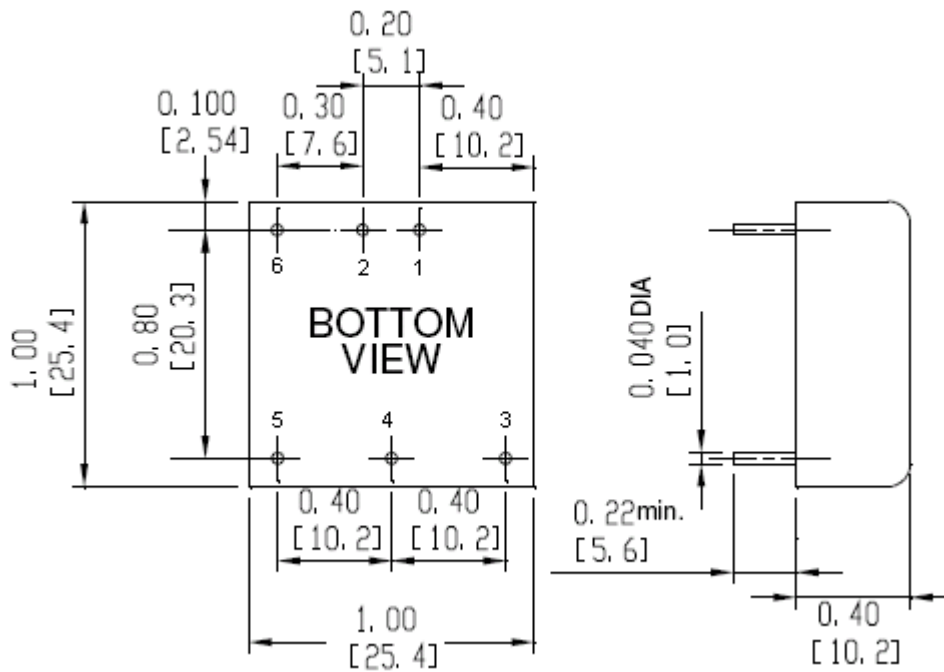
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# CASE A

# Series DV304A

All Dimensions in Inches ( mm )

Tolerance x.xx=±0.04(x.x = ±1.0mm) ; x.xxx=±0.010(x.xx = ±0.25mm)



PIN CONNECTION DV304A		
Pin	Single Output	Dual Output
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	Trim	Common
5	-V Output	-V Output
6	Remote ON/OFF	Remote ON/OFF

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