40 Watt, 2:1 Wide Input DC/DC Converters Series DV402C

E357872

Features

- 25 - 40 Watt Isolated Output
- Regulated Outputs
- 2:1 Input Range
- 2”x 2” Six-Sided Shield Metal Case
- CE Mark Meets 2004/108/EC
- Continuous Short Circuit Protection
- High Efficiency Up to 93%
- Remote ON/OFF Control
- Fixed 350 KHz Switching Frequency
- UL60950-1 Available

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT MIN. [mA]	OUTPUT CURRENT MAX. [mA]	INPUT CURRENT NO LOAD [mA (TYP.)]	INPUT CURRENT FULL LOAD [mA (TYP.)]	EFF. [%]	CASE
DV9-18-2,5S10000C	9 – 18	2,5	0	10000	200	2354	88,5	C
DV9-18-3,3S10000C		3,3	0	10000	200	3090	89	
DV9-18-05S8000C		5	0	8000	200	3683	90,5	
DV9-18-12S3333C		12	0	3333	200	3643	91,5	
DV9-18-15S2666C		15	0	2666	200	3642	91,5	
DV9-18-12D1800C		±12	±90	±1800	100	4022	89,5	
DV9-18-15D1400C		±15	±70	±1400	100	3867	90,5	
DV9-18-3,3D05-40C		+3,3/+5	0	10000/7500	100	3727	89(3)	
DV9-18-3,3T12-40C		3,3/±12	600/±40	6000/±400	200	2768	88,5	
DV9-18-3,3T15-40C		3,3/±15	600/±30	6000/±300	200	2727	88,5	
DV9-18-05T12-40C		5,0/±12	600/±40	6000/±400	200	3729	88,5	
DV9-18-05T15-40C		5,0/±15	600/±30	6000/±300	200	3611	90	
DV18-36-2,5S10000C	18 – 36	2,5	0	10000	100	1157	90	C
DV18-36-3,3S10000C		3,3	0	10000	100	1519	90,5	
DV18-36-05S8000C		5	0	8000	100	1812	92	
DV18-36-12S3333C		12	0	3333	100	1792	93	
DV18-36-15S2666C		15	0	2666	100	1792	93	
DV18-36-12D1800C		±12	±90	±1800	100	1967	91,5	
DV18-36-15D1400C		±15	±70	±1400	100	1902	92	
DV18-36-3,3D05-40C		+3,3/+5	0	10000/7500	50	1853	90(3)	
DV18-36-3,3T12-40C		3,3/±12	600/±40	6000/±400	100	1361	90	
DV18-36-3,3T15-40C		3,3/±15	600/±30	6000/±300	100	1333	90	
DV18-36-05T12-40C		5,0/±12	600/±40	6000/±400	100	1813	91	
DV18-36-05T15-40C		5,0/±15	600/±30	6000/±300	100	1786	91	
DV36-75-2,5S10000C	36 – 75	2,5	0	10000	50	585	89	C
DV36-75-3,3S10000C		3,3	0	10000	50	764	90	
DV36-75-05S8000C		5	0	8000	60	906	92	
DV36-75-12S3333C		12	0	3333	60	896	93	
DV36-75-15S2666C		15	0	2666	60	906	92	
DV36-75-12D1800C		±12	±90	±1800	50	989	91	
DV36-75-15D1400C		±15	±70	±1400	50	962	91	
DV36-75-3,3D05-40C		+3,3/+5	0	10000/7500	50	926	89,5(3)	
DV36-75-3,3T12-40C		3,3/±12	600/±40	6000/±400	50	684	89,5	
DV36-75-3,3T15-40C		3,3/±15	600/±30	6000/±300	50	682	88	
DV36-75-05T12-40C		5,0/±12	600/±40	6000/±400	50	932	88,5	
DV36-75-05T15-40C		5,0/±15	600/±30	6000/±300	50	903	90	

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INPUT SPECIFICATIONS:

Input Voltage Range		See Table
Under Voltage lockout	12Vin power up	8,8V
	12Vin power down	8,0V
	24Vin power up	17V
	24Vin power down	16V
	48Vin power up	34V
	48Vin power down	32V
Positive/Negative Logic Remote ON/OFF (see note 4 & 5)		
Input Filter		Pi Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy	Single/Dual Output	±1,5% max.
	Dual Positive	3,3V±1,5% max.; 5V±3% max.
	Triple Main / Auxiliary	±1,5% max. / ±5,0% max.
Voltage Balance	Dual	±2,0% max.
Transient Response:		
75% - 100% Step Load Change (Main Output)	Error Band	±5% Vout nominal
	Recovery Time	<300 µs
Output Voltage Adjustment Range	Single / Dual	Vo±10%
	Dual Positive	Vo±5%
Ripple & Noise, 20 MHz BW	2,5V & 3,3V & 5V	20mV RMS max. / 50mV p-p max.
	12V & 15V	75mV p-p max.
	Dual ±12V	120mV p-p max.
	Dual ±15V	150mV p-p max.
	Dual Positive +3,3V/+5V	100mV p-p max.
Temperature Coefficient		±0,02%/°C
Line Regulation (From High Line to Low Line)	Single / Dual	±0,5% max.
	Triple Main / Auxiliary	±1,0% max. / ±3,0% max.
Load Regulation (From Full Load to 10% Load)	Single	±0,5% max.
	Dual	±1,0% max.
	Dual Positive	3,3V±1,5% max. / 5V±4,0% max.
	Triple Main / Auxiliary	±1,0% max. / ±4,0% max.
Cross regulation		3,3V±1,0% max. / 5V±4,0% max.
Over Voltage Protection (Zener Diode Clamp)	2,5V	3,6V typ.
	3,3V	3,9V typ.
	5V	6,2V typ.
	12V	15V typ.
	15V	18V typ.
Output Current Limit, % Nominal Output		110% - 140%
Output Short Circuit Protection		Continuous (hiccup mode)
Start up Time		10ms typ.

GENERAL SPECIFICATIONS:

Efficiency		See Table
Isolation Voltage I/O		1500VDC min.
Isolation Resistance		10^9 ohms min.
Isolation Capacitance		1000pF typ.
Switching Frequency		350KHz, typ.
Operating Ambient Temperature Range		-40°C to +85°C
Derating, above 60°C		Linearly to Zero Power at 100°C
Case Temperature		100°C max.
Storage Temperature Range		-55°C to +125°C
Thermal Shutdown, Case Temperature		110°C typ.
MTBF (MIL-STD-217F,GB,25°C, Full Load	DVx-x-3,3D05-40C	500Khrs typ.
	Others	700Khrs typ.
Dimensions		2 x 2 x 0,4 inches (50,8 x 50,8 x 10,2 mm)
Case Material		Black Coated Copper with Non-Conductive Base
Weight		65 g

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

NOTE:

4. Logic Compatibility CMOS or Open Collector TTL, ref. to –Vin
Module ON ..... >3,5VDC to 75Vdc or Open Circuit
Module OFF ..... <1,8VDC
5. Suffix “N”
to the Model Number with Negative Logic Remote ON/OFF
Module ON ..... <1,8VDC
Module OFF ..... >3,5VDC to 75Vdc or Open Circuit
6. +/-Sense:
If +/- Sense is not being used, the +Sense should be connected to +Vout and likewise the –Sense should be connected to –Vout

Note: Nominal Input Voltage 12,24 and 48VDC
The total power of DV9-18-3,3D05-40C, DV18-36-3,3D05-40C and DV36-75-3,3D05-40C should not exceed 40W.
The effeciency is measured with rated output (3,3V/6A ; 5V/4A)

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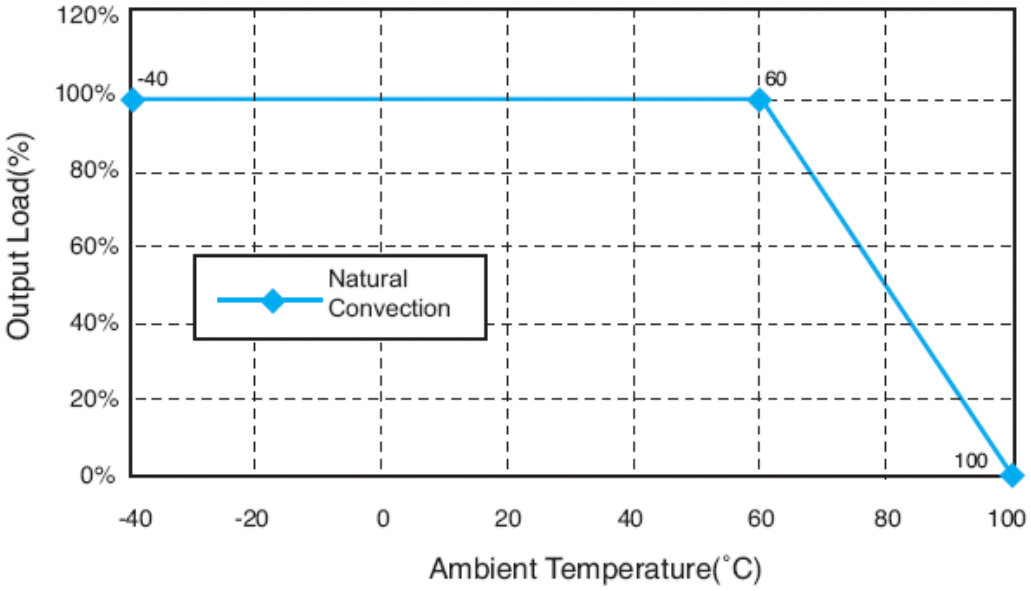
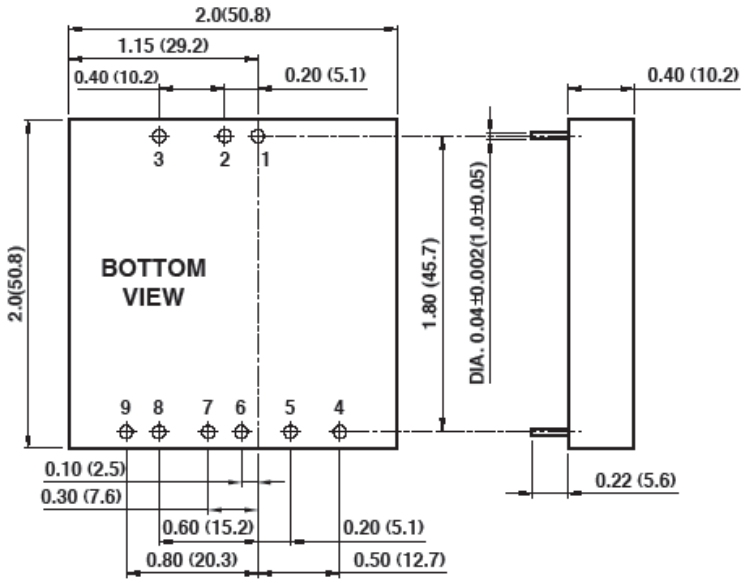


CASE C

All dimensions in inches (mm);
Toleranz: Inches: x.xx=±0.02, x.xxx±0.010, Millimeters: x.x=±0.5,xxx=±0.25
Pin Diameter: 1.0 ±0.05mm



PIN CONNECTION				
Pin	Single Output	Dual Output	Dual Positive	Triple Output
1	+Vin	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin	-Vin
3	ON/OFF	ON/OFF	ON/OFF	ON/OFF
4	NC	No Pin	+3,3Vout	+Aux. Vout
5	-SENSE (Note4)	+Vout	Com(3,3V RTN)	Common
6	+SENSE (Note4)	Common	Trim	-Aux. Vout
7	+Vout	Common	NC	+Vout
8	-Vout	-Vout	+5Vout	-Vout (Common)
9	Trim	Trim	Com(5V RTN)	NC

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