



# 150 Watt, 3:1 Wide Input DC/DC Converters Series DV150H3-110



## Features

- 150 Watt Isolated Output
- Regulated Outputs
- 3 : 1 Input Range
- 200 KHz Switching Frequency
- Remote ON/OFF
- Shock & Vibration: EN50155 (EN61373)
- UL60950-1 Approval
- Efficiency to 92%
- Continuous Short Circuit Protection
- Over Temperature Protection
- Over Voltage/Current Protection
- Half-Brick Size Meet Industrial Standard
- Meet EN50155 with external filter
- Meets EN62368-1 / IEC62368-1

MODEL NUMBER	INPUT VOLTAGE [ VDC ]	OUTPUT VOLTAGE [ VDC ]	OUTPUT CURRENT [ A ]	INPUT CURRENT NO LOAD [ mA ]	INPUT CURRENT LOAD [ mA ]	EFF. [ % ]	CAP. LOAD [ $\mu$ F ] MAX.	CASE
DV150H3-110S05	66 – 160	5	30	40	1474	92	10000	H
DV150H3-110S12		12	12,5	40	1474	92	5600	
DV150H3-110S24		24	6,5	60	1541	92	2200	

Note: Nominal Input Voltage 110VDC

## INPUT SPECIFICATIONS:

Input Voltage Range.....	110VDC	66-160V
Input Surge Voltage (100ms max.).....		180Vdc max.
Undervoltage lockout:.....	power up	62V
	power down	56V
Positive Logic Remote ON/OFF:		
Logic Compatibility .....		Open Collector ref to -Input
Module ON .....		>3.5Vdc to 75Vdc or Open Circuit
Module OFF.....		0 to < 1.8Vdc
Input Filter .....		Pi Type

## OUTPUT SPECIFICATION:

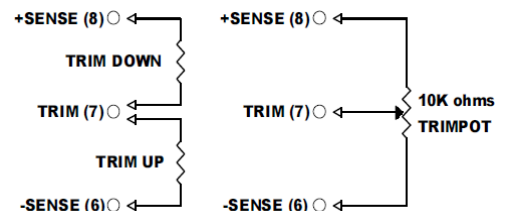
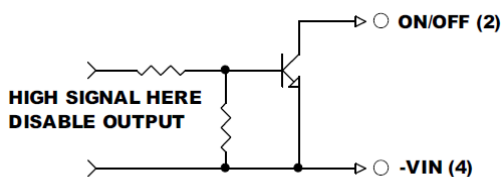
Voltage Accuracy.....		±1,0% max.
Transient Response: 25% Step Load Change		
Error Band .....		±5% Vout
Recover Time .....		<200µ sec.
External Trim Adj. Range .....		±10%
Ripple and Noise, 20 MHz BW ( Note 3 )		
5V .....	40mV RMS / 100mV pk-pk max	
12V .....	60mV RMS / 150mV pk-pk max	
24V .....	100mV RMS / 240mV pk-pk max	
Temperature Coefficient.....		±0,03%/°C max.
Short Circuit Protection .....		Continuous
Line Regulation ( Note 1 ) .....		±0,2% max.
Load Regulation ( Note 2 ) .....		±0,2% max.
Over Voltage Protection trip Range, % Vo nom .....		115-140%
Current Limit .....		110-180% Nominal Output
Start up time .....		45ms typ.

## GENERAL SPECIFICATIONS:

Efficiency .....		See Table
Isolation Voltage.....	Input/Output.....	2250 VDC min.
	Input/Case.....	2250 VDC min.
	Output/Case.....	1500 VDC min.
Isolation Resistance .....		10 <sup>7</sup> Ohm min.
Isolation Capacitance .....		1000pF typ.
Switching Frequency .....		200KHz typ.
Operating Case Temperature Range .....		-40°C to +100°C
Storage Temperature Range .....		-55°C to +105°C
Humidity .....		95% RH max. Non condensing
MTBF .....	MIL-HDBK-217F, GB, 25°C, Full Load .....	5V Output: 240Khrs typ.
		Other Outputs: 320Khrs typ.
Thermal Shutdown, Case Temp. ....		105°C typ.
Safety Standard .....		UL60950-1 2 <sup>nd</sup> (Basic insulation), Approval meet EN/IEC62368-1
EMC ( Note 7 ) .....		Meet EN50155 (EN50121-3-2) with External filter
Shock/Vibration .....		Meet EN50155 (EN61373)
Environmental .....		Meet EN50155 (EN60068-2-1)
Dimensions .....		2,28 x 2,40 x 0,50 inches ( 57,9 x 61,0 x 12,7 mm )
Weight .....		90 g
Case Material .....		Aluminum Baseplate with Plastic Case

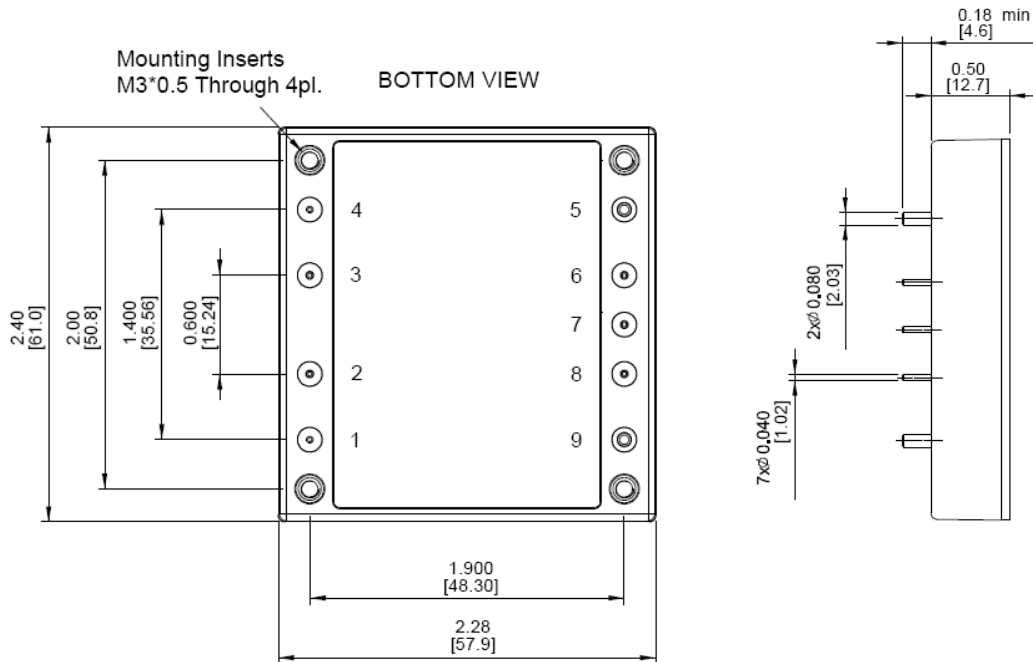
## NOTE:

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10 uF tantalum and 1uF ceramic capacitor across output.
4. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF.
5. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF.....0 to < 1,8Vdc
6. Suffix "C" to the Model Number with Clear Mounting Insert (3.2mm DIA).....>3,5Vdc to 75Vdc or Open Circuit
7. Design meet EN50155 and RIA12 refer to Application Note.
8. All Specifications Typical at Nominal Line, Full Load, and 25°C Unless Otherwise Noted.

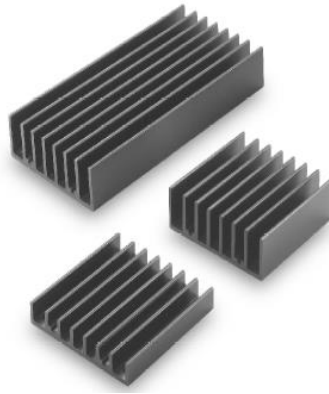


All Dimensions in Inches (mm)

Tolerance	Inches	x.xx±0.02	x.xxx±0.010
	Millimeters	x.x±0.5	x.xx±0.25



PIN CONNECTION	
Pin	Function
1	+V Input
2	ON/OFF
3	Case
4	-V Input
5	-V Output
6	-Sense
7	Trim
8	+Sense
9	+V Output



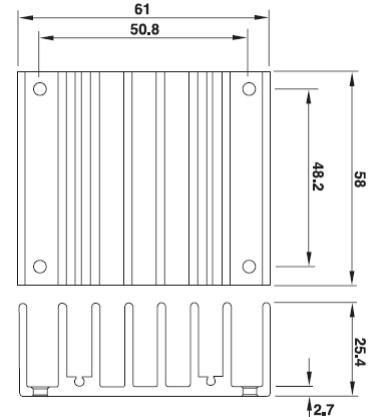
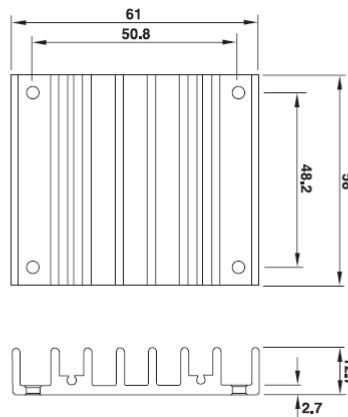
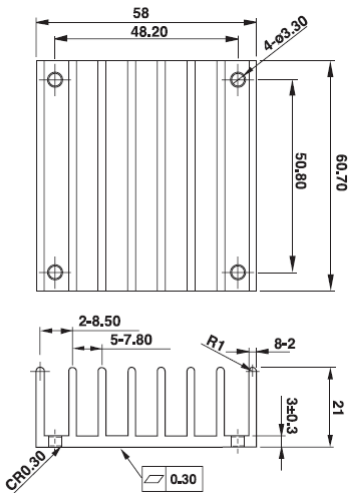
**CASE H: HEAT SINK**

Longitudinal Fin  
Order No. 17.079.201  
Model No. M-C308

Transverse Fin  
Order No. 17.079.202  
Model No. M-C091

Transverse Fin  
Order No. 17.079.203  
Model No. M-C092

All dimensions in mm

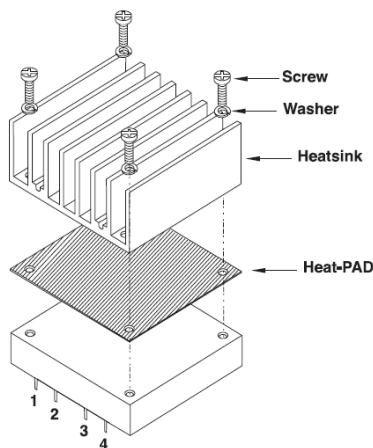


Rca: 3,9°C/W (typ.), At natural convection  
1,74°C/W (typ.), At 100LFM  
1,33°C/W (typ.), At 200LFM  
1,12°C/W (typ.), At 300LFM  
0,97°C/W (typ.), At 400LFM

Rca: 4,7°C/W (typ.), At natural convection  
2,89°C/W (typ.), At 100LFM  
2,30°C/W (typ.), At 200LFM  
1,88°C/W (typ.), At 300LFM  
1,59°C/W (typ.), At 400LFM

Rca: 3°C/W (typ.), At natural convection  
1,44°C/W (typ.), At 100LFM  
1,17°C/W (typ.), At 200LFM  
1,04°C/W (typ.), At 300LFM  
0,95°C/W (typ.), At 400LFM

Heat Sink Assembly  
example



Screw SMP+SW M3x8L

Thermal pad SZ56,9x60x0,25