



150 Watt, 43 – 160VDC Wide Input DC/DC Converters Series DV150Q4-110



Features

- 150 Watt Isolated Output
- Regulated Outputs
- 4 : 1 Wide Input Range
- Fixed Switching Frequency
- Remote ON/OFF
- Shock & Vibration: EN50155 (EN61373)
- Low No Load Power Consumption
- UL60950-1 2nd (Basic Insulation) Approval (Except 3,3&15Vout)
- Efficiency to 92%
- Continuous Short Circuit Protection
- Over Temperature Protection
- Over Voltage / Current Protection
- 3000m Operating Altitude
- Fire & Smoke Meet EN45545-2
- Meet EN50155 with External Circuits

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [A] MAX.	INPUT CURRENT NO LOAD [mA]	INPUT CURRENT FULL LOAD [A]	EFF. [%]	CAP. LOAD Max. [µF]	CASE
DV150Q4-110S3,3	43 – 160	3,3	30	10	1,50	89	30000	Q
DV150Q4-110S05		5	30	10	1,50	91	30000	
DV150Q4-110S12		12	12,5	10	1,48	92	12500	
DV150Q4-110S15		15	10	10	1,50	91	10000	
DV150Q4-110S24		24	6,3	10	1,54	89	6300	
DV150Q4-110S28		28	5,4	10	1,54	89	5400	
DV150Q4-110S48		48	3,2	10	1,54	90	1000	

NOTE:

1. Nominal Input Voltage 110 VDC.

INPUT SPECIFICATIONS:

Input Voltage Range.....	110V	43-160Vdc
Input Surge Voltage (100ms max.)	110V	200Vdc max.
Under Voltage Lockout	110Vin power up	41,5Vdc
	110Vin power down	38Vdc
Positive Logic Remote On/Off (Note 4 & 5)		
Input Filter (Note 7)		PI Filter

OUTPUT SPECIFICATION:

Output Current Min.		0 mA
Voltage Accuracy		±1,0%max.
Transient Response: 75%~100% Step Load Change		
	Error Band	±5% Vout
	Recovery Time	<250us
External Trim Adj. Range		±10%
	3,3V & 15V	+10%, -20%
Ripple and Noise (Note 3), 20 MHz BW.....	3,3V & 5V	40mV RMS / 100mV pk-pk max.
	12V & 15V	60mV RMS / 150mV pk-pk max.
	24V & 28V	100mV RMS / 280mV pk-pk max.
	48V	200mV RMS / 480mV pk-pk max.
Temperature Coefficient.....		±0,02%/°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%-160% Nominal Output
Start up Time.....		60ms typ.

GENERAL SPECIFICATIONS:

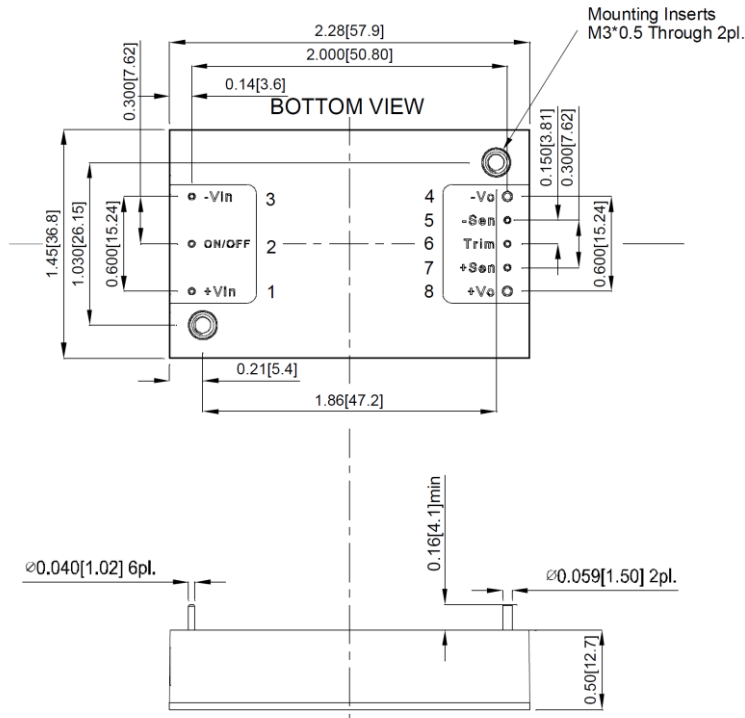
Efficiency.....		See Table
Isolation Voltage.....	Input/Output.....	3000 VDC min.
	Input/Case.....	2250 VDC min.
	Output/Case.....	500 VAC min.
Isolation Resistance		10 ⁸ Ohm min.
Isolation Capacitance		1500pF typ.
Switching Frequency		300 KHz typ.
Operating Case Temperature		-40°C to +105°C
Storage Temperature		-55°C to +125°C
Thermal Shutdown, Case Temp.		110°C typ.
Humidity		95% RH max. Non condensing
MTBF 25°C (MIL-HDBK-217F, GB, Full Load).....	3,3V/5V/12V	720Khrs typ.
	others	840Khrs typ.
Safety.....		UL60950-1 2 nd (Basic Insulation)
EMC (Note 8)		Meets EN50155 (EN50121-3-2) with External Filter
Shock/Vibration		Meet EN50155 (EN61373)
Environmental		Meet EN50155 (EN60068-2-1)
Dimensions		2.28x1.45x0.50 inches (57.9x36.8x12.7 mm)
Case Material		Aluminum Baseplate with Plastic Case
Weight.....		68g

NOTE:

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF aluminum and 1uF ceramic capacitor across output for 48Vout and with 10uF tantalum and 1uF ceramic capacitor for others.
4. Logic compatibility open collector ref to -Input
 - Module on >3.5Vdc to 160Vdc or open circuit
 - Module off 0 to < 1.2Vdc
5. Suffix "N" to the model number with negative logic remote on/off
 - Module on 0 to < 1.2Vdc
 - Module off >3.5Vdc to 160Vdc or open circuit
6. Suffix "-C" to the model number with clear mounting insert (3.2mm DIA.).
7. An external input capacitor 220uF for all models are recommended to reduce input ripple voltage.
8. For information about EN50155 and RIA12, refer to application note.
9. All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted.

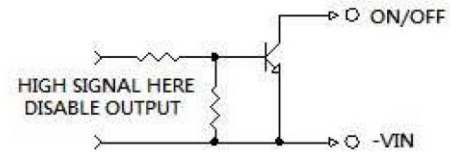
All Dimensions in Inches (mm)

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	-V Input
4	-V Output
5	-Sense
6	Trim
7	+Sense
8	+V Output

OTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM

