



**100 Watt, 43 – 160VDC Wide Input
DC/DC Converters
Series DV100Q4-110**



Features

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

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [A] MAX.	INPUT CURRENT NO LOAD [mA]	INPUT CURRENT FULL LOAD [A]	EFF. [%] (Note 2)	CAP. LOAD Max. [μ F]	CASE
DV100Q4-110S05	43 – 160	5	20	10	1,00	91	20000	Q
DV100Q4-110S12		12	8,4	10	1,00	92	8400	
DV100Q4-110S24		24	4,2	10	1,03	89	4200	
DV100Q4-110S28		28	3,6	10	1,04	88	3600	
DV100Q4-110S48		48	2,1	10	1,02	90	1000	

NOTE:

1. Nominal Input Voltage 110 VDC.
2. An external input capacitor 220uF for all models are Recommended to Reduce Input Ripple Voltage.

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 Nominal, Recover Time		<250µ sec.
External Trim Adj. Range.....		±10%
Ripple and Noise (Note 3), 20 MHz BW	5V	40mV RMS / 100mV pk-pk max.
	12V	60mV RMS / 150mV pk-pk max.
	24V	100mV RMS / 280mV pk-pk max.
	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)	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

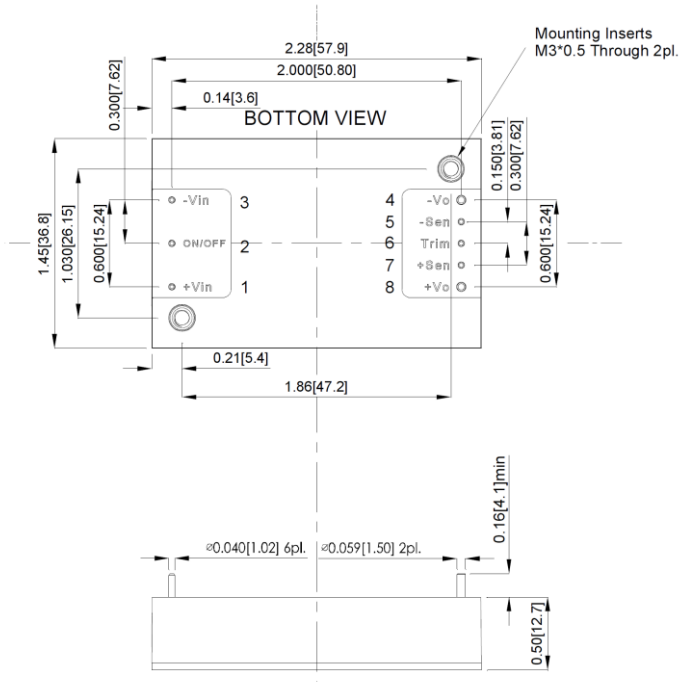
5. Suffix "N" to the model number with negative logic remote on/off

 - Module on 0 to < 1.2Vdc
 - Module off >3.5Vdc to 160Vdc or open circuit

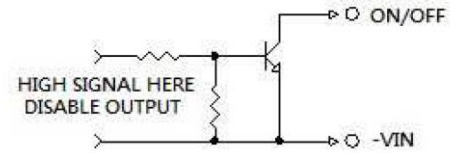
6. Suffix "-C" to the model number with clear mounting insert (3.2mm DIA.).
7. An external input capacitor 220uF for all models are recommended to reduce input ripple voltage.
8. For information about EN50155 and RIA12, refer to application note.
9. All Specifications Typical At Nominal Line, Full Load, 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



REMOTE ON/OFF CONTROL



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

EXTERNAL OUTPUT TRIM

