



30-50 Watt, 14–160VDC Wide Input DC/DC Converters Series DV5012-72Q



Features

- 30-50 Watt Isolated Output
- Regulated Outputs
- 12:1 Wide Input Range
- Low No Load Power Consumption
- Safety Meet UL60950-1 (Basic Insulation)
- EMC: EN50155 with External Circuits
- 3000m Operating Altitude
- Efficiency to 89%
- Remote ON/OFF
- Continuous Short Circuit Protection
- Over Temperature/Voltage/Current Protection
- Industry Standard Quarter-Brick Package
- Shock & Vibration: EN50155 (EN61373)

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [A]	INPUT CURRENT NO LOAD [mA]	INPUT CURRENT FULL LOAD [mA]	EFF. [%] Vin 72V	EFF. [%] Vin 110V	CAP. LOAD Max. [μ F]	CASE
DV14-160-05SA6Q	14 – 160	5	6,0	5	530	79	79	4700	Q
DV14-160-12SA4,2Q		12	4,2	5	810	87	85	3300	
DV14-160-24SA2,1Q		24	2,1	5	810	89	87	1200	
DV14-160-48SA1,05Q		48	1,05	8	810	89	87	680	

INPUT SPECIFICATIONS:

Input Voltage Range.....	72V	14-160V
Input Surge Voltage.....	(100ms max.)	200Vdc max.
Under Voltage Lockout:.....	Power up.....	13,7V
	Power down.....	12,2V
Input Filter.....		Pi Type
Positive Logic Remote ON/OFF (Note 1 & 2)		

OUTPUT SPECIFICATION:

Output Current Min.....		0 mA
Voltage Accuracy.....		±1,0% max.
Transient Response: 25% Step Load Change.....		<250µ sec.
External Trim Adj. Range.....		-20%,+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
48V.....		200mV RMS / 480mV pk-pk max
Temperature Coefficient.....		±0,02%/°C max.
Short Circuit Protection.....		Continuous
Line Regulation (From High Line to Low Line).....		±0,5% max.
Load Regulation (From Full Load to Zero Load).....		±0,2% max.
Over Voltage Protection trip Range, % Vo nom.....		115-140%
Current Limit.....		110-200% Nominal Output
Start up time.....		15ms typ.

GENERAL SPECIFICATIONS:

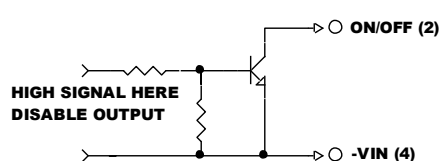
Efficiency.....		See Table
Isolation Voltage.....	Input/Output.....	3000 VDC min.
	Input/Case.....	2500 VDC min.
	Output/Case.....	500 VAC min.
Isolation Resistance.....		10 ⁷ Ohm min.
Isolation Capacitance.....		1000pF typ.
Switching Frequency.....		240 KHz typ.
Operating Case Temperature Range.....		-40°C to +100°C
Storage Temperature Range.....		-55°C to +105°C
Humidity.....		95% RH max. Non condensing
Thermal Shutdown, Case Temp.....		110°C typ.
Operating Altitude.....		3000m
Safety.....		meet UL60950-1 2 nd (Basic insulation)
EMC (Note 6).....		meet EN50155 (EN50121-3-2) with external filter
Shock/Vibration.....		meet EN50155 (EN61373)
Fire & Smoke.....		meet EN45545-2
Dimensions.....		57,9 x 36,8 x 12,7 mm (2,28 x 1,45 x 0,50 inches)
Case Material.....		Aluminum Baseplate with Plastic Case
Weight.....		g

NOTE:

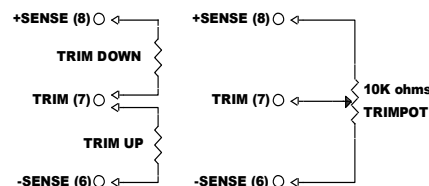
- Positive Logic Remote ON/OFF:
 Logic Compatibility..... Open Collector Ref. to -Inut
 Module ON..... >3,5Vdc to 160Vdc or Open Circuit
 Module OFF..... 0 to < 1,2Vdc
- Suffix "N" to the Model Number with Negative Logic Remote ON/OFF.
 Module ON..... 0 to < 0,8Vdc
 Module OFF..... >4,0Vdc to 160Vdc or Open Circuit
- Output Ripple and Noise measured with 10µF aluminium solid capacitor and 1µF Ceramic capacitor across output.
- Suffix "-C" to the Model Number with Clear Mounting Insert (3.2mm DIA)
- An external input capacitor 68µF for all models are recommended to reduce input ripple voltage.
- Design meet EN50155 and RIA12 refer to Application Note.

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

REMOTE ON/OFF CONTROL



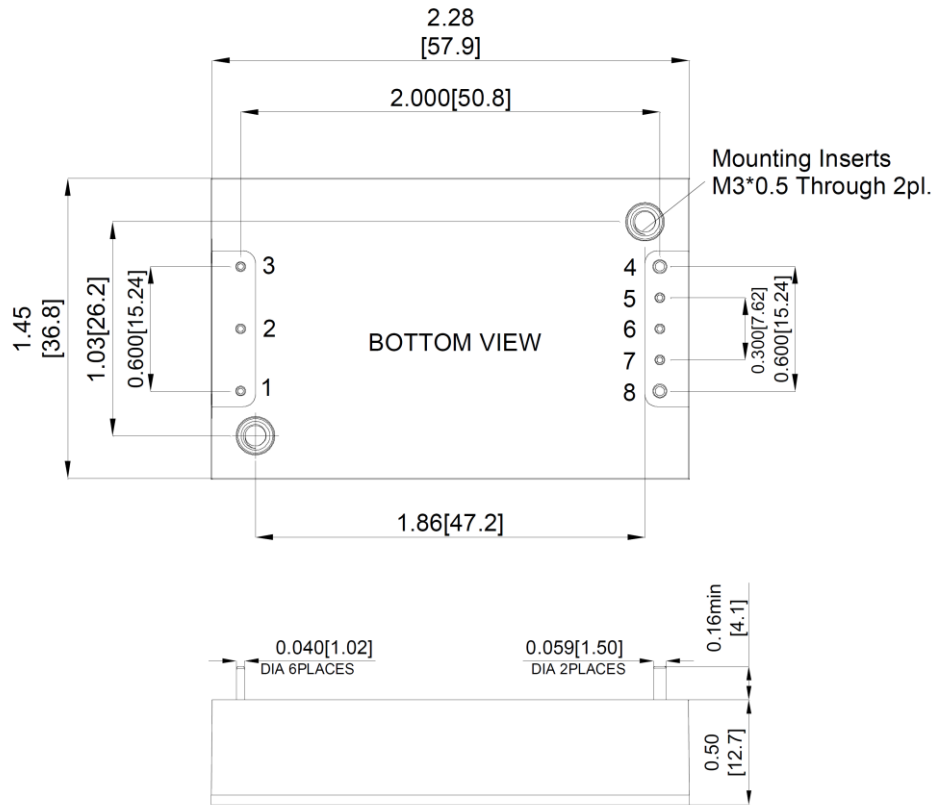
EXTERNAL OUTPUT TRIM



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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	Remote ON/OFF
3	-V Input
4	-V Output
5	-Sense
6	Trim
7	+Sense
8	+Vout