



70 Watt, Regulated AC/DC Modules Half-Brick Series DVC70-H



Features

- Universal Input Range 90 – 264Vac
- Full Load with Baseplate Cooled
- No Load Input Power Consumption <150mW
- Built-in EN55032 Class B Filter
- No External Components Required
- Safety IEC/EN/UL62368-1 Approved
- 17mm Ultra Low Profile Half Brick Package
- Operating Temperature Range -40 to +85°C
- High Efficiency to 89%
- Over Voltage / Over Temperature Protection
- Continuous Short Circuit Protection
- Meets Class I

MODEL NUMBER	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [A] MAX.	OUTPUT VOLTAGE TRIM RANGE [VDC]	RIPPLE & NOISE [mV] MAX. NOTE 2	LOAD CAPACITANCE [μF] MAX.	EFF. [%] NOTE 5	CASE
DVC70-H-S12	12	5,83	10,8 – 13,2	120	5830	88	H
DVC70-H-S24	24	2,92	21,6 – 26,4	240	2920	88	
DVC70-H-S36	36	1,94	32,4 – 39,6	360	1940	89	
DVC70-H-S48	48	1,46	43,2 – 52,8	480	1460	89	

NOTE:

1. Voltage accuracy is set at 60% load.
2. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Line regulation is measured from 90Vac to 264Vac with full load.
4. Load regulation is measured from 60%±40% rated load.
5. Typical efficiency at 230Vac and full load at 25°C.
6. Power dissipation (Pd): $P_d = P_i - P_o = P_o(1-\eta)/\eta$.

INPUT CHARACTERISTICS:

Input Voltage Range.....	90-264Vac
Input Frequency.....	47 to 63Hz
Input Current.....	100% Load, $V_{in}=100V_{ac}$ 1,5A max.
Leakage Current.....	3,5mA max.
Inrush Current.....	V_{in} 240Vac, Cold start @ 25°C 100A max.
Under Voltage Protection.....	63 Vac min. / 77 Vac max.

OUTPUT CHARACTERISTICS:

Voltage Accuracy (NOTE 1) ... Set Point $V_{in}=\text{Nominal } V_{in}$, $I_o=60\% I_o \text{ max.}$	±1,0% max.
Line Regulation (NOTE 3)..... $V_{in}=\text{High line to low line}$	±0,5% max.
Load Regulation (NOTE 4)..... 60% to 100% load & 60% to 20% load.....	±1,0% max.
Hold-up Time..... V_{in} 115Vac.....	6ms typ.
Over Current Protection..... Hiccup mode, auto recovery.....	110% min. / 150% max.
Short Circuit Protection.....	Auto Recovery
Over Voltage Protection..... Auto recovery, V_{out} 12V.....	16 Vdc max.
	V_{out} 24V..... 35 Vdc max.
	V_{out} 36V..... 50 Vdc max.
	V_{out} 48V..... 63 Vdc max.

GENERAL CHARACTERISTICS:

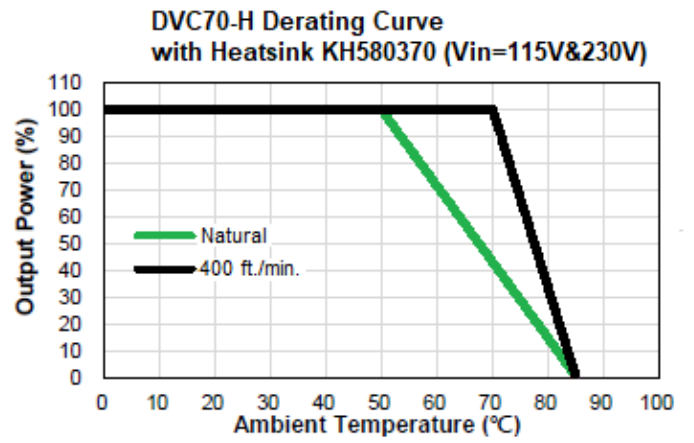
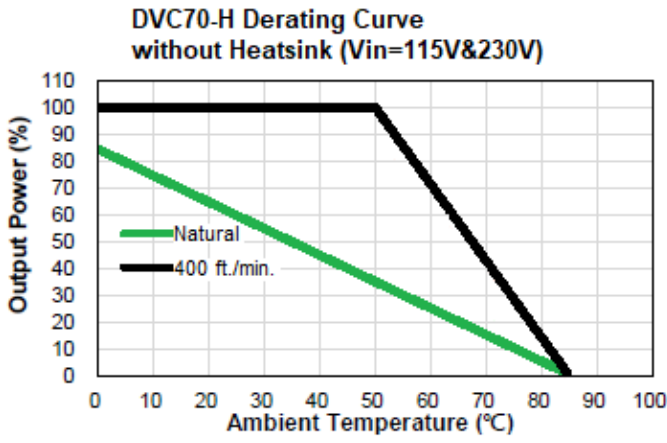
Efficiency.....	see table
Switching Frequency.....	65KHz typ.
Isolation (1 minute, without dielectric breakdown)..... Input / Output.....	3000VAC max.
	Input / Earth (Ground)..... 1800VAC max.
	Output / Earth (Ground)..... 500VAC max.
Isolation Resistance..... Input / Output.....	100 MΩ min.
Operating Temperature Range..... At the center of base plate.....	-40°C to +85°C
Derating.....	see curve
Storage Temperature Range.....	-40°C to +85°C
Humidity.....	93% RH max. non condensing
Shock.....	Meets MIL-STD-810F 75g typ.
Vibration.....	Meets MIL-STD-810F 4g typ.
MTBF..... $I_o=100\%$; $T_a=25^\circ\text{C}$ per MIL-HDBK-217F.....	550K hrs. min.
Operating Altitude.....	5000m max.

SAFETY & EMISSION:

Safety.....	Class I, IEC/EN/UL62368-1
EMC Emission.....	EN55032 Class B, EN61204-3, EN61000-6-3, EN61000-6-4, 47 CFR FCC Part 15 Subpart B EN61000-3-2, EN6100-3-3
Conducted Disturbance.....	EN55032 Class B, EN61204-3, EN61000-6-3, EN61000-6-4, 47 CFR FCC Part 15 Subpart B
Radiated Disturbance.....	EN55032 Class B, EN61204-3, EN61000-6-3, EN61000-6-4, 47 CFR FCC Part 15 Subpart B
Harmonic Current Emissions.....	EN61000-3-2
Voltage Fluctuations & Flicker.....	EN61000-3-3
EMC Immunity.....	EN55035, EN61204-3, EN61000-6-1, EN61000-6-2
Electrostatic Discharge (ESD).....	IEC 61000-4-2, Air Discharge: ±8KV, Contact Discharge: ±4KV, Criterion A
Radio-Frequency Electromagnetic Field.....	IEC 61000-4-3
Electrical Fast Transient (EFT).....	IEC 61000-4-4: ±1kv, ±2kv
Surge.....	IEC 61000-4-5: L-N: ±0.5kv, ±1kv, L/N-E(Earth): ±0.5kv, ±1kv, ±2kv
Radio-Frequency Continuous Conducted.....	IEC 61000-4-6
Power Frequency Magnetic Field.....	Field IEC 61000-4-8
Voltage Dips.....	IEC 61000-4-11, Dip: 30% Reduction, Dip >95% Reduction
Voltage Interruptions.....	IEC 61000-4-11, >95% Reduction

MECHANICAL SPECIFICATIONS:

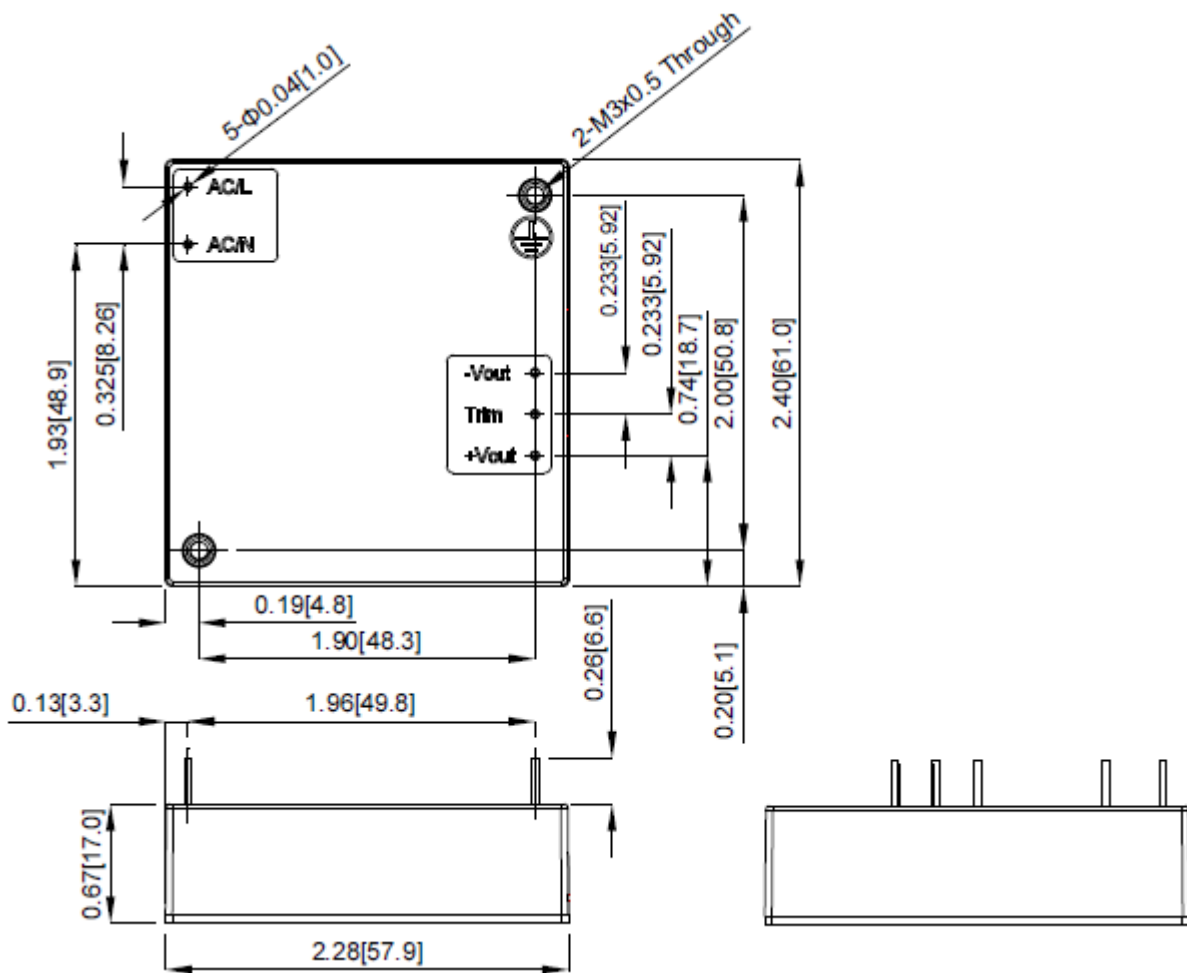
Dimensions.....	61.0 x 57.9 x 17.0 (mm)
Case Material.....	Plastic DAP UL 94V-0
Base Plate Material.....	Aluminum
Potting Material.....	UL 94V-0
Weight.....	135 g typ.

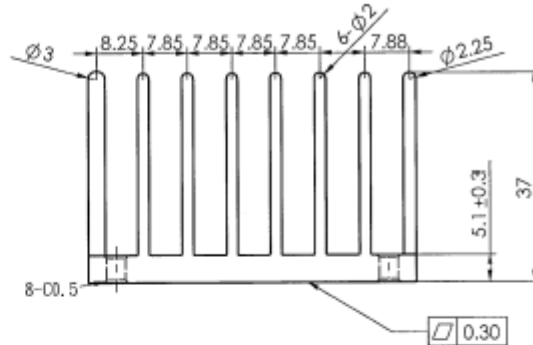
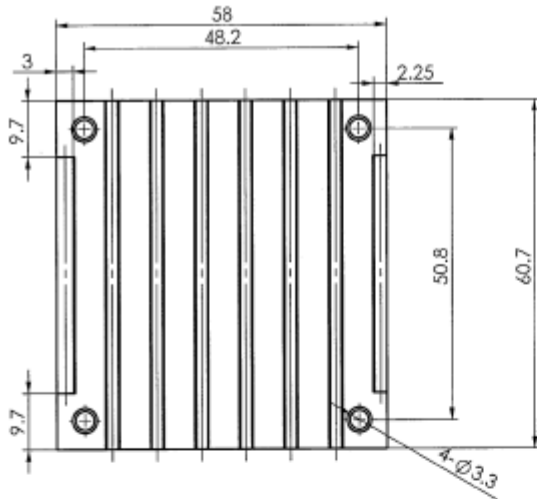


CASE H

Series DVC70-H

Unit: mm [inch]
 Tolerance: Inches: x.xx±0.02, x.xxx±0.010
 Millimeters: x.x±0.5, x.xx±0.25





All Dimensions in mm

KH580370 Heat Sink 60.7*58*37mm

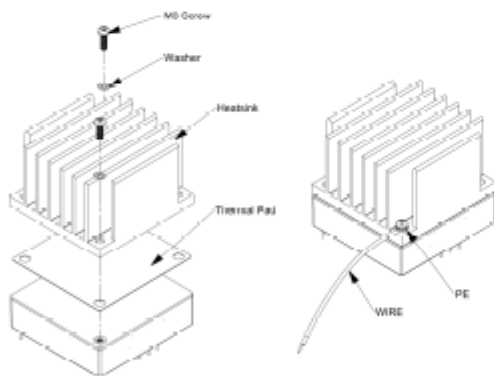
Rca: 2.91° C/W (typ.), At natural convection

2.08° C/W (typ.), At 100LFM

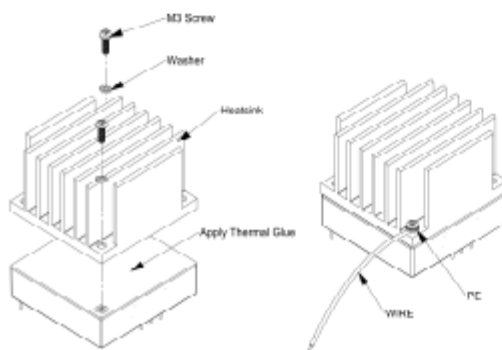
1.67° C/W (typ.), At 200LFM

1.50° C/W (typ.), At 300LFM

1.25° C/W (typ.), At 400LFM



Heat Sink KH580370: 60.7*58*37mm
 Thermal Pad: 56.9*60*0.25mm
 Screw: K310W SMP+WS M3*0.5 10mm



Heat Sink KH580370: 60.7*58*37mm
 Thermal Glue: Thermal Conductivity 3.5W/(m*K)
 Screw: K310W SMP+WS M3*0.5 10mm