



20 Watt, AC/DC Open Frame PCB mount & Connector Series DVC20-2



Preliminary



Features

- Universal Input Range 90 – 264Vac
- Size 60,50 x 33,02 (mm)
- No Load Power < 0,1W
- EN55032 Class B and CISPR/FCC Class B
- Meets IEC/EN60335-1
- Meets UL/IEC/EN62368-1
- Continuous Short Circuit Protection
- Over Voltage Protection
- High Efficiency up to 87%
- Operating Altitude 5000m
- Class II

MODEL NUMBER PIN	MODEL NUMBER CONNECTOR	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [mA] MAX.	VOLTAGE ACCURACY [%] Note 1	RIPPLE & NOISE [mV] MAX. Note 2	LOAD CAPACITANCE [μ F] MAX. Note 3	EFF. [%] TYP. Note 4
DVC20-2S05-P	DVC20-2S05	5	4000	± 2	100	4000	84
DVC20-2S12-P	DVC20-2S12	12	1670	± 2	120	1670	86
DVC20-2S15-P	DVC20-2S15	15	1340	± 2	150	1340	86
DVC20-2S24-P	DVC20-2S24	24	830	± 2	240	830	86
DVC20-2S48-P	DVC20-2S48	48	420	± 2	480	420	87

NOTE:

1. Voltage Accuracy is set of 100% rated load.
2. Add a 0,1 μ F ceramic capacitor and a 10 μ F E.L. capacitor to output for Ripple & Noise Measuring @ 20MHz BW.Voltage
3. Vin=115Vac and 230Vac. Output is 100% full load
4. Typical efficiency at 230 Vac and 100% full load
5. Connector Version with JST B3B-XH / B4B-XH and mate with JST housing XH series or equivalent

(All specifications are typical at nominal input, full load at 25°C unless otherwise noted.)

INPUT CHARACTERISTICS:

Input Voltage Range.....	Safety approvals only to the AC input.....	90-264Vac / 120-370 Vdc
Input Frequency.....		50 to 60Hz / DC
Input Current.....	100% full load, $V_{in}=100V_{ac}$	0,6A max.
Leakage Current.....		0,1 mA max.
Inrush Current.....	$V_{in}=240V_{ac}$, Cold start at 25°C.....	35A typ.

OUTPUT CHARACTERISTICS:

Voltage Accuracy.....		see table
Hold-up Time.....	$V_{in}=115V_{ac}$	8mS typ.
Line Regulation.....	V_{in} =High line to low line.....	$\pm 0,5\%$ max.
Load Regulation.....	10% load to 100% full load.....	$\pm 1,0\%$ max.
Over Current Protection.....	Hiccup mode (Auto recovery).....	110% – 180%
Short Circuit Protection.....		Auto recovery
Over Voltage Protection (Latch mode (AC recycle to restart).....	V_o 5V.....	8,0 Vdc max.
	V_o 12V.....	16,5 Vdc max.
	V_o 15V.....	19,6 Vdc max.
	V_o 24V.....	31,5 Vdc max.
	V_o 48V.....	60,0 Vdc max.

GENERAL CHARACTERISTICS:

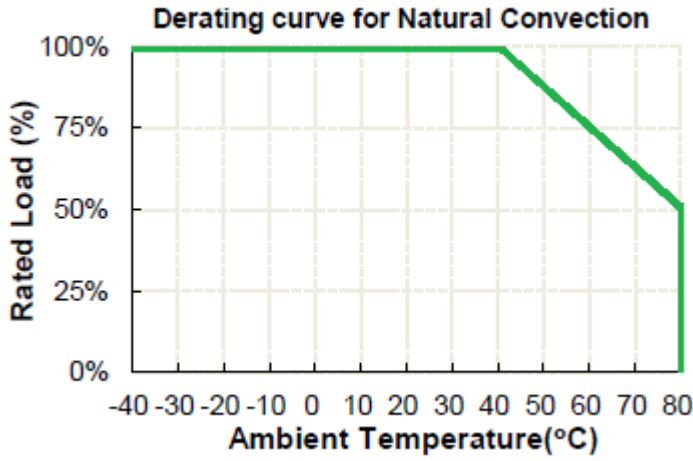
Efficiency.....		see table
Isolation.....	Input/Output (1minute).....	3000VAC max.
Isolation Resistance.....	Input/Output.....	100 M Ω min.
Switching Frequency.....	P_{out} =max. rated power.....	65KHz typ.
Operating Temperature Range.....		-40°C to +80°C
Derating above.....		see curve
Storage Temperature Range.....		-40°C to +85°C
Humidity.....	non condensing.....	93% RH max.
MTBF.....	$I_o=100\%$; $T_a=25^\circ C$ per MIL-HDBK-217F.....	1380K hrs min.
Operating Altitude.....	UL/IEC/EN62368-1.....	5000m max.
Shock.....	Meet MIL-STD-810F.....	75g typ.
Vibration.....	Meet MIL-STD-810F.....	4g typ.

SAFETY & EMISSION:

Safety Meets.....	Class II, UL/IEC/EN62368-1
Safety Meets.....	IEC/EN 60335-1
EMC Emission.....	EN 55032 Class B, 47 CFR FCC Part 15 Subpart B, IEC-003 Issue7, EN 61204-3:2000, EN 61000-6-3:2007+A1:2011+AC:2012, EN 61000-3-2:2019, EN 61000-3-3:2013
Conducted Disturbance.....	EN 55032 Class B 47 CFR FCC Part 15 Subpart B, IEC-003 Issue7, EN 61204-3:2000, EN 61000-6-3:2007+A1:2011+AC:2012
Radiated Disturbance.....	EN 55032 Class B, 47 CFR FCC Part 15 Subpart B, IEC-003 Issue7, EN 61204-3:2000, EN 61000-6-3:2007+A1:2011+AC:2012
Harmonic Current Emissions.....	EN 61000-3-2:2019
Voltage Fluctuations & Flicker.....	EN 61000-3-3:2013
EMC Immunity.....	EN 55035:2017, EN 61204-3:2000, EN 61000-6-1:2019+CRGD:2019
Electrostatic Discharge (ESD).....	IEC 61000-4-2:2008, Air Discharge: $\pm 8kV$, Contact Discharge: $\pm 4kV$
Radio-Frequency, Continuous , Radiated Disturbance.....	IEC 61000-4-3:2020
Electrical Fast Transient (EFT).....	IEC 61000-4-4:2012, $\pm 1kV$, $\pm 2kV$
Surge.....	IEC 61000-4-5:2014+A1:2017, L-N: $\pm 0.5kV$, $\pm 1kV$
Conducted Disturbances, Induced by RF Fields.....	IEC 61000-4-6:2013+COR1:2015
Power Frequency Magnetic Field.....	IEC 61000-4-8:2009
Voltage Dips.....	IEC 61000-4-11:2004, Dip: 30% Reduction, Dip >95% Reduction
Voltage Interruptions.....	IEC 61000-4-11:2004, >95% Reduction

MECHANICAL SPECIFICATIONS:

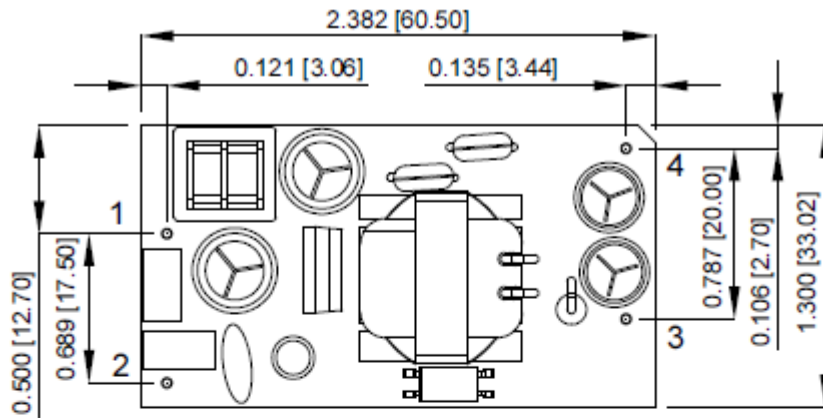
Dimensions PIN Version.....	60,50 x 33,02 x 23,00 (mm)
Dimensions CONNECTOR Version.....	76,20 x 33,02 x 21,10 (mm)
Weight PIN Version.....	35g typ.
Weight CONNECTOR Version.....	36g typ.



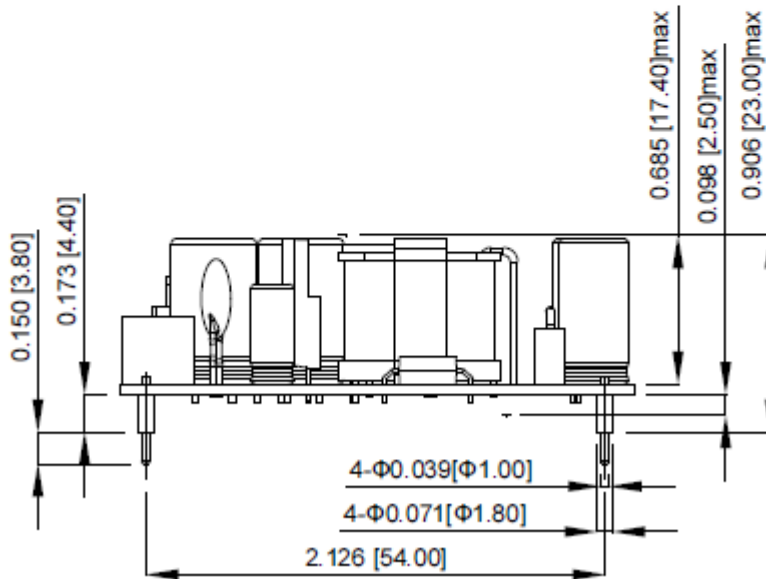
Mechanical Dimension (-P Pin Version)

All Dimensions In Inches[mm]

Tolerance Inches:x.xxx= ± 0.02, Millimeters: x.xx = ± 0.5



CONNECTION	
Pin	Function
1	ACN
2	ACL
3	+Vout
4	-Vout



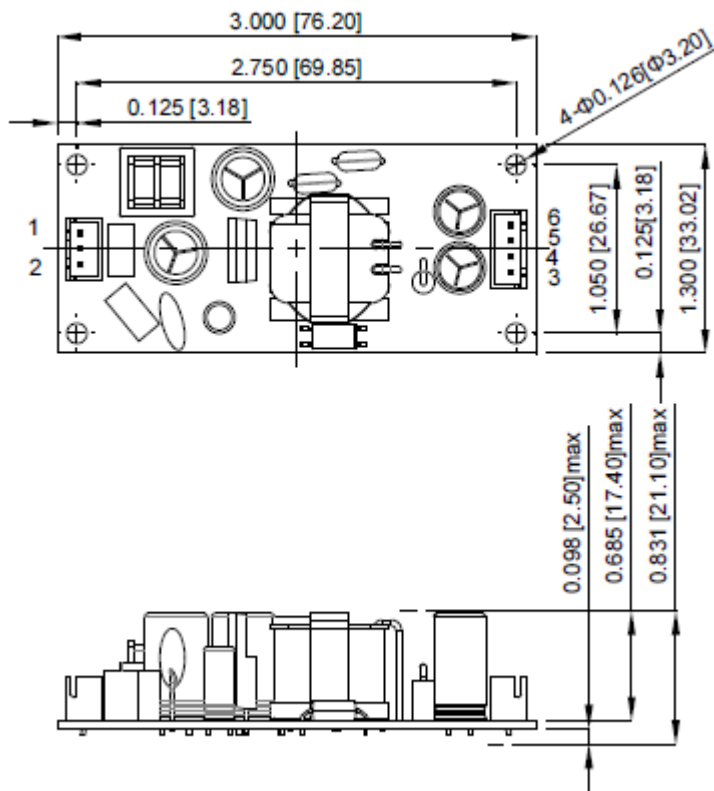
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Mechanical Dimension (CONNECTOR Version)

Series DVC20-2

All Dimensions In Inches[mm]

Tolerance Inches:x.xxx= ± 0.02, Millimeters: x.xx = ± 0.5



CONNECTION	
Pin	Function
1	ACN
2	ACL
3	+Vout
4	+Vout
5	-Vout
6	-Vout

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