



**10 Watt, Regulated, MEDICAL
AC/DC Modules, PCB mounting
Series DVM10M-L47-A3**



Features

- Input: 85 – 305Vac (50/60Hz) & 100 – 430 VDC
- Regulated Output, Low Ripple & Noise
- Efficiency to 86%
- Low No-Load Power Consumption <0,1W
- Meets IEC/EN/CSA60601-1 (2x MOPP)
- IEC/EN/UL62368 approved
- Over Current Protection
- Over Voltage Protection
- Short Circuit Protection
- I/O Isolation 4000 VAC
- Meets EN60335 / EN61558
- Meets CISPR32 / EN55032 Class B / EN55014

MODEL NUMBER	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT MAX. [mA]	OUTPUT CURRENT MIN. [A]	EFF. [%]	OUTPUT POWER [W]	MAX. CAP. LOAD [μ F]	PACKAGE L47 [mm]
DVM10M-L47-S05-A3	5	2000	0	85	10	5000	47.60x26.80x23.50
DVM10M-L47-S12-A3	12	830		85		2000	
DVM10M-L47-S15-A3	15	660		85		1500	
DVM10M-L47-S24-A3	24	410		86		680	

Note:

1. Unless otherwise specified, all specifications above are measured at rated input voltage and rated output load TA=25°C, humidity <75%

INPUT SPECIFICATIONS:

Input Voltage Range.....	85 to 305VAC / 100 to 430VDC
Input Frequency.....	47 to 63Hz
Input Current.....	115VAC 450mA / 230VAC 300mA max.
Inrush Current.....	230VAC 60A typ.
Leakage Current (@277Vac/50Hz).....	0,1mA RMS max.

OUTPUT SPECIFICATIONS:

Voltage Accuracy.....	±2% typ.
Line Regulation (Full Load).....	±0,5% typ.
Load Regulation (0-100% Load).....	±1% typ.
Min. Load.....	0%
Ripple & Noise (20MHz Bandwidth).....	120mVp-p max.
Short Circuit Protection.....	Hiccup, Continuous, self-recovery
Over Current Protection.....	≥110%Io, self-recovery
Over Voltage Protection.....	5Vout ≤7,5Vdc 12Vout ≤20Vdc 15Vout ≤20Vdc 24Vout ≤30Vdc

GENERAL SPECIFICATIONS:

Isolation Voltage (Test for 1min., leakage current≤5mA).....	Input/Output.....	4000Vac min.
Hold-up Time.....	115Vac, 10ms typ. / 230Vac, 55ms typ.	
Operating Temperature Range.....		-40°C to +70°C
Derating.....		see Derating Curve
Input Voltage Derating.....		see Derating Curve
Storage Temperature Range.....		-40°C to +85°C
Humidity (non condensing).....		95%RH max.
Switching Frequency.....		65kHz typ.
Efficiency.....		see table
MTBF (MIL-HDBK-217 @25°C).....		>3.200.000 hrs

SAFETY:

EMI.....	CE/RE.....	EN55014-1 / CISPR32/EN55032/CISPR11/EN55011 Class B
Immunity.....		IEC/EN61000-4-2,3,4,5,6,11
Safety standards meets.....		EN/IEC/60601-1/ANSI/AAMI ES60601-1 (2x MOPP) & EN60335, EN61558
Safety approval.....		IEC/EN/UL62368-1
Safety Class.....		CLASS II

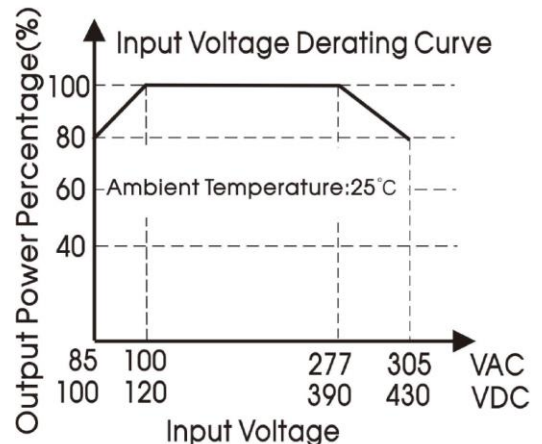
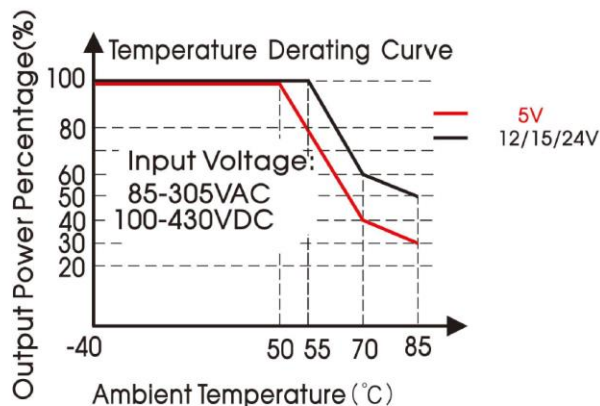
MECHANICAL SPECIFICATIONS:

Case Material.....	Plastic UL94V-0
Dimension.....	47.60 x 26.80 x 23.50 mm
Weight.....	48g typ.

Note:

1. External input FUSE is recommended to use 3.15A/300V, slow blow.
2. External MOV S14K350 is recommended between AC(L) and AC(N).
3. Ripple and Noise are measured by the method of parallel lines

DERATING CURVE



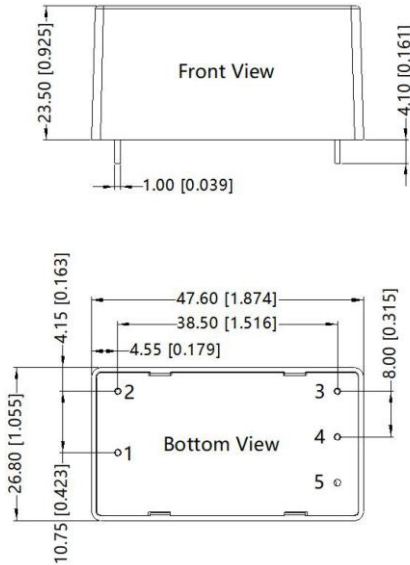
Technische Änderungen vorbehalten / Specifications are subject to change without notice

Note:

Unit: mm [inch]

Pin diameter tolerances: $\pm 0.10\text{mm}$ [± 0.004]

General tolerances: $\pm 0.50\text{mm}$ [± 0.020]



Pin	Single Output
1	AC (L)
2	AC (N)
3	-Vo
4	+Vo
5	NP

NP=No Pin

TYPICAL APPLICATION

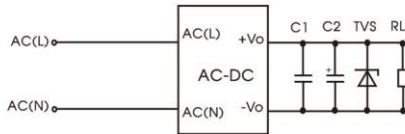


Fig. 1: Typical circuit diagram

Part No.	C1	C2	TVS
DV10M-L47-S05-A3	1 μ F/50V	220 μ F/16V	SMBJ7.0A
DV10M-L47-S12-A3		100 μ F/25V	SMBJ20A
DV10M-L47-S15-A3		100 μ F/25V	SMBJ20A
DV10M-L47-S24-A3		100 μ F/35V	SMBJ30A

Output Filter Components:

We recommend using an electrolytic capacitor with high frequency, and low ESR rating for C2 (refer to manufacture's datasheet). Choose a capacitor voltage rating with at least 20% margin, in other words not exceeding 80%. C1 is a ceramic capacitor used for filtering high-frequency noise and TVS is a recommended suppressor diode to protect the application in case of a converter failure.

EMC compliance recommended circuit

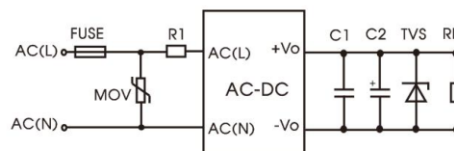


Fig 2: EMC application circuit with higher requirements

Component	Recommended value
FUSE	3.15A/300V, slow-blow, required
MOV	S14K350
R1	6.8 Ω /3W