



5000 Meter

EMI Optimized

-30°C
+70°C



CLASS I+II

94% ↑



FEATURES

- ✓ 300W convection cooling and 450W fan cooling.
- ✓ Peak Load 600W.
- ✓ Safety Class I or Class II.
- ✓ Design for BF application.
- ✓ High efficiency up to 94%.
- ✓ No load input power < 0.5W.
- ✓ Remote sense & built-in fan supply.
- ✓ Optional remote on/off and PG / PF signal.
- ✓ 5,000m operation altitude.
- ✓ Optional cover-kit.

Models & Ratings

Model Number	Wattage (Rated / Max)	Output Voltage	Min. Current	Rated Current	Max. Current	Typical Efficiency
MPM-K453	300 W / 400~450W	+12 V	0 A	25 A	37.5 A	94%
MPM-K455	300 W / 400~450W	+24 V	0 A	12.5 A	18.75 A	95%
MPM-K456	300 W / 400~450W	+48 V	0 A	6.25 A	9.38 A	95%
Dimensions	152.4 (L) x 101.6 (W) x 37.6/40.1 (H) mm, Tolerance +/- 0.5mm.					

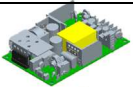
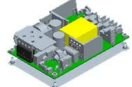
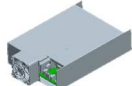

Total Output Power: Max. 300W convection cooled at 50°C environment temperature. Max. 450W with 16.3 CFM at 50°C environment temperature. 600W peak load with input 100VAC 10sec.

Model no. coding : M P M – K 4 5 0 – X – Y

1	X=	Output set
	blank	Single output
	SB	Dual output (with +5Vsb & remote on/off & PG/PF function)

1 2

2

Y=	Cover Type
1	No cover, open frame CLASS I 
2	Additional bottom plate CLASS II 
F	With cover and internal fan CLASS I, II 
C	With cover only CLASS I, II 

Input

Input Voltage	● 85 ~ 264VAC
Input Frequency	● 47 ~ 63 Hz
Input Current	● 6/3A
Inrush Current	● 30/60A
No-load power consumption	● <0.5W
Input Protection	● Fuse: 6.3A /250VAC * 2pc

General

Isolation	● IP to OP 4000 VAC IP to GND 1500 VAC OP to GND 1500 VAC
Switching Frequency	● 67 KHZ

Output

Output Voltage	● 12V, 24V, 48V
Minimum Load	● 0A
Hold up Time	● 25 / 16 mS
Line Regulation	● ±1.0
Load Regulation	● ±1.0
Ripple & Noise	● 120 ^(+12V) , 240 ^(+24V) , 240 ^(+48V)
Leakage Current	● 100/300 uA
Overvoltage Protection	● 110% _{MIN.} , 120% _{TYP.} , 140% _{MAX.}
Short Circuit Protection	● Automatic recovery mode.

EMC: Immunity

ESD	● IEC 61000-4-2
Radiated	● IEC 61000-4-3
EFT	● IEC 61000-4-4
Surges	● IEC 61000-4-5
Conducted	● IEC 61000-4-6
Power Magnetic	● IEC 61000-4-8
Dips and Interruptions	● IEC 61000-4-11

Environmental

Operating Temperature	● -30 ~ +70°C
Storage Temperature	● -40 ~ +85°C
Relative Humidity	● 5 ~ 95%RH
Cooling	● 16.3 CFM
Operating / Non-operating Altitude	● 5000m

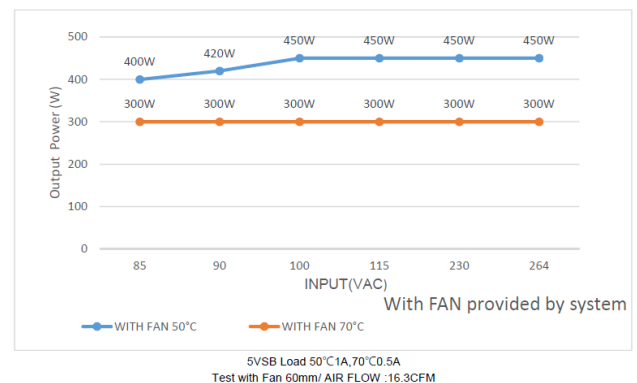
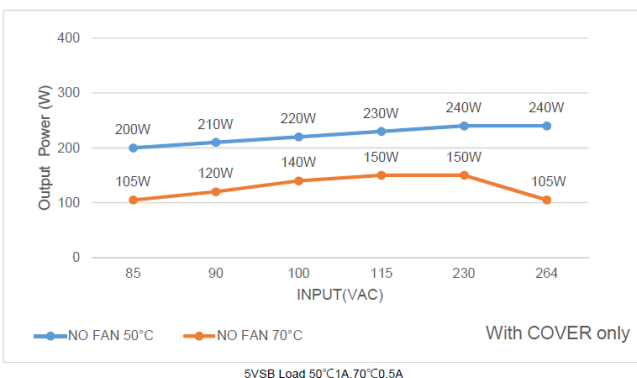
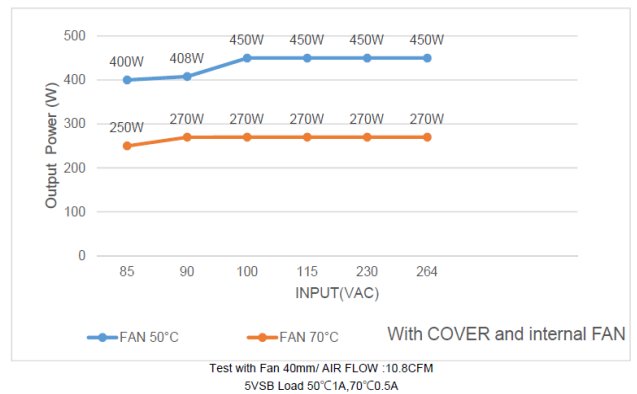
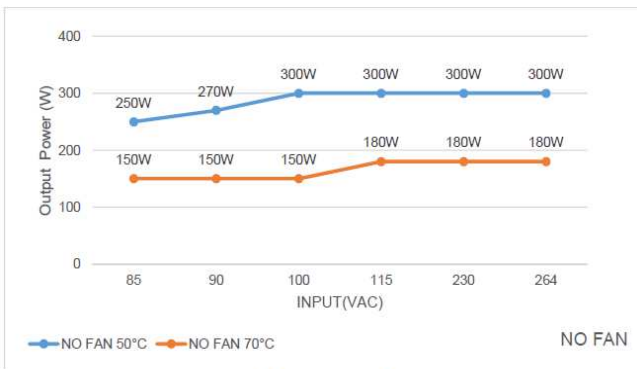
EMC: Emissions

Conducted	● EN 55011 / CISPR 11 & FCC Part 18
Radiated	● EN 55011 / CISPR 11 & FCC Part 18
Harmonic Current	● EN 61000-3-2
Voltage Fluctuations	● EN 61000-3-3

Safety Approvals

TUV	● EN 60601-1: 2006+A11+A1+A12,
CB	● IEC 60601-1: 2005+CORR.1:2006+CORR.2: 2007+A1:2012
UL/cUL	● ANSI/AAMI ES60601-1, CAN/CSA-C22. 2 No. 60601-1
CE	● EN 60601-1: 2006+A11+A1+A12

Derating curve



Mechanical Details

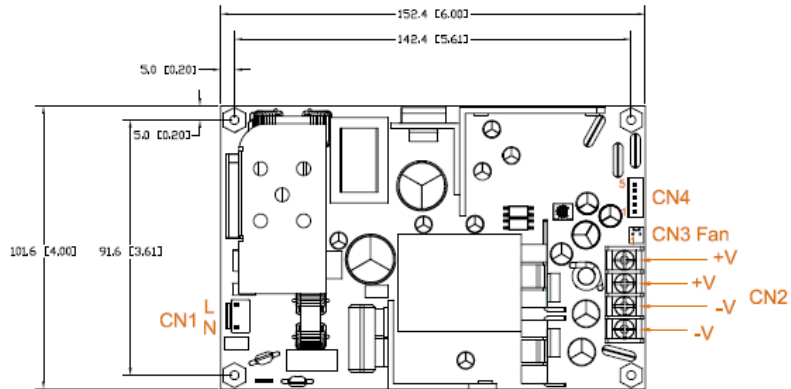
CLASS II

All dimensions are in Inches [mm] Tolerance ± 0.02 [± 0.5]

Ac Input Connector CN1
Mates with MOLEX
09-50-1031(5195-03) OR 09-52-4034(5239-03)
OR Equivalent
JST: VHR-3N OR Equivalent (Note)

PIN number	PIN assignment
1	AC In(L)
2	AC In(N)

Note: Exist with model no. suffixed -L, please see comparison in Model no. coding:



Signal Connector CN4
MOLEX5045-05A or Equivalent

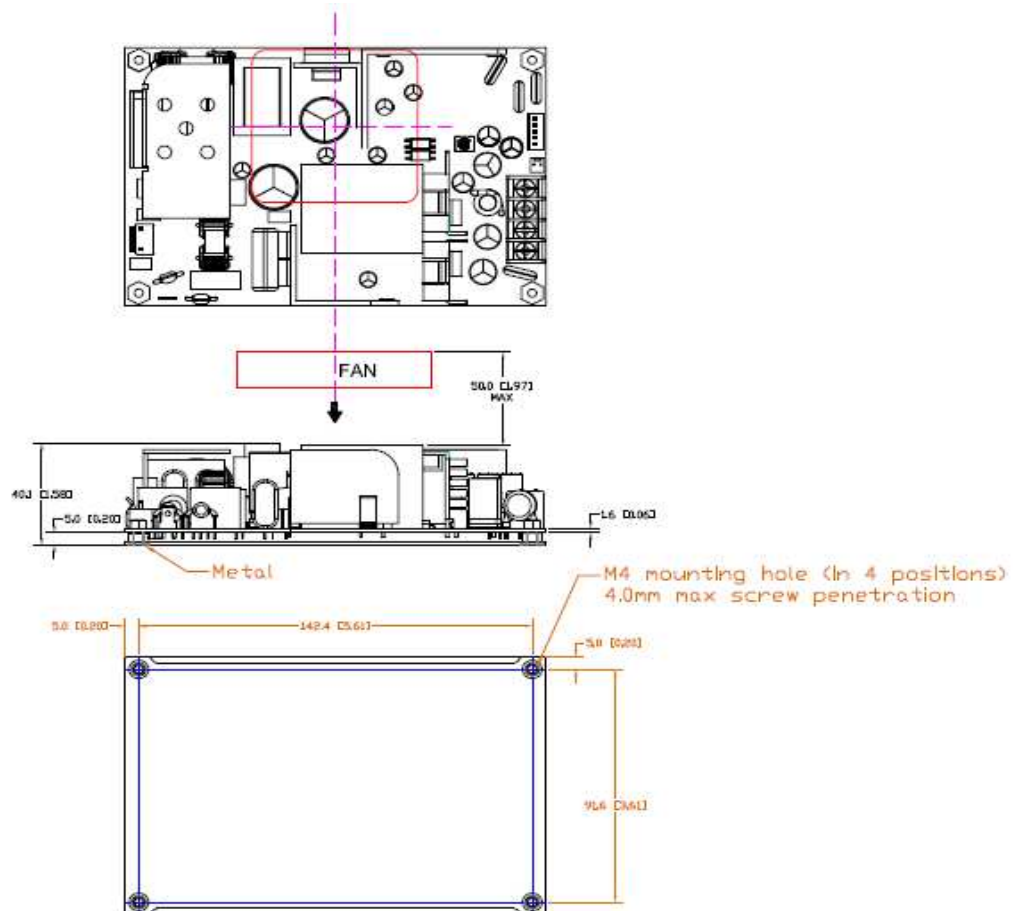
PIN number	PIN assignment
1	Fan 12V (V fan)
2	0V
3	+5VSB(V _s)
4	PG/PF
5	Remote

Signal Connector CN3
MOLEX5045-02A or Equivalent

PIN number	PIN assignment
1	Fan 12V (V Fan)
2	0V

Dc Output Terminal Blocks CN2
DINKLE DT-35
European type by request

PIN number	PIN assignment
1	+V
2	+V
3	-V
4	-V



Note:
If you want to use the metal plate beneath this PSU as class II, the metal plate should be treated as "floating" that both distances from human body and primary side to accessible metal part (plate) have to be at least 4mm of 1xMOPP to meet Class II (The metal plate should be kept 1XMOPP away from human body).

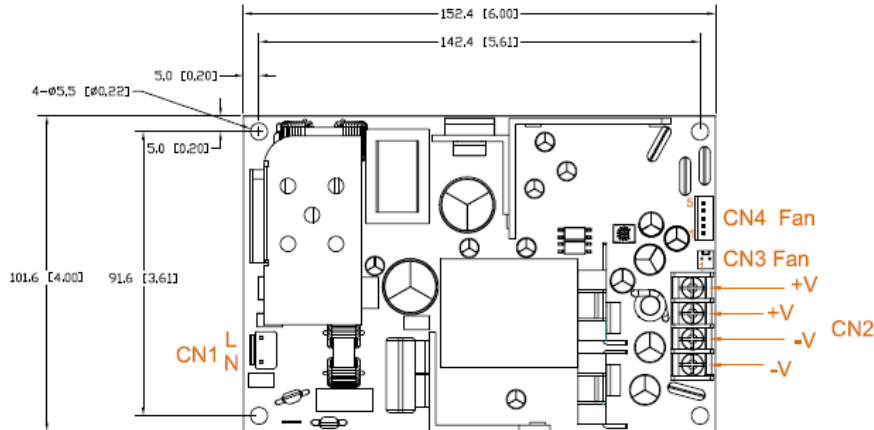
CLASS I

All dimensions are in Inches [mm] Tolerance ± 0.02 [± 0.5]

Ac Input Connector CN1
Meets with MOLEX
09-50-1031(5195-03) OR 09-52-4034(5239-03)
OR Equivalent
JST: VHR-3N OR Equivalent (Note)

PIN number	PIN assignment
1	AC In(L)
2	AC In(N)

Note: Exist with model no. suffixed -J,
please see comparison In Model no. coding:



Single Connector CN4
MOLEX5045-05A or Equivalent

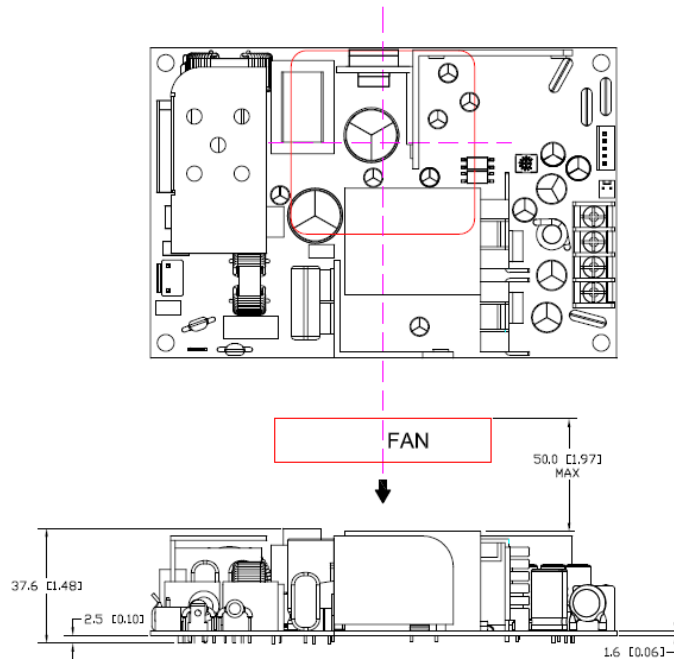
PIN number	PIN assignment
1	Fan 12V (V _{FAN})
2	0V
3	+5VSB(V ₂)
4	PG/PF
5	Remote

Single Connector CN3
MOLEX5045-02A or Equivalent

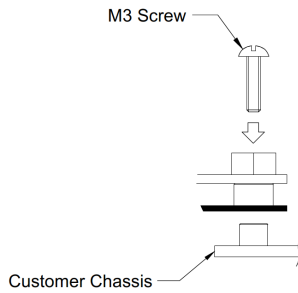
PIN number	PIN assignment
1	Fan 12V (V _{FAN})
2	0V

Dc Output Terminal Blocks CN2
DINKLE DT-35
European type by request

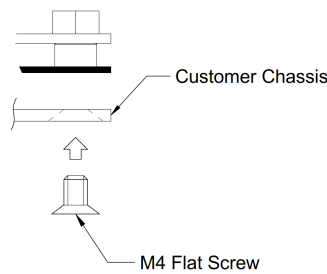
PIN number	PIN assignment
1	+V
2	+V
3	-V
4	-V



Application notes :
Application (1)



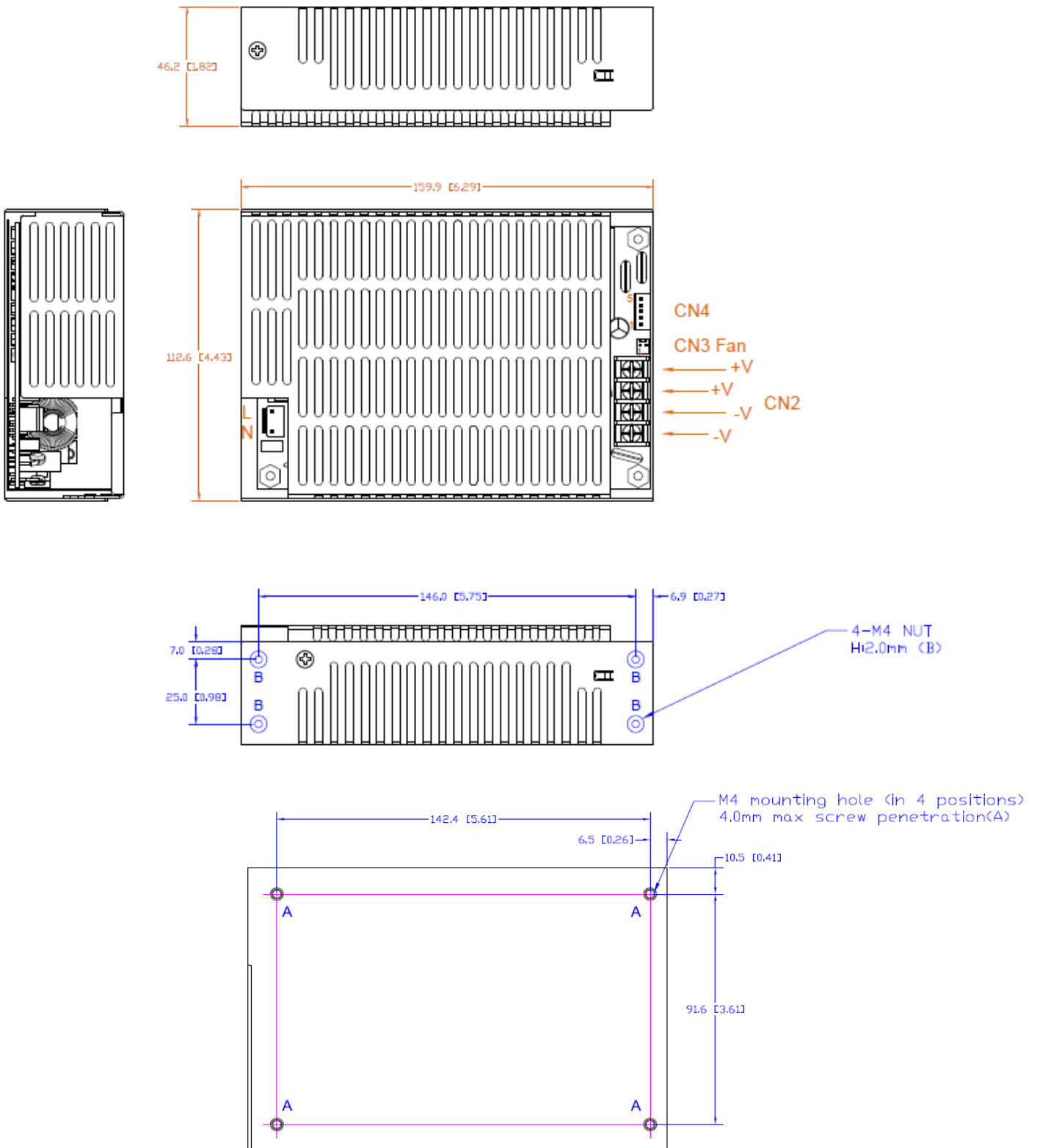
Application (2)



Note:
The safety GND should be connected to the customer's enclosure.

With cover

All dimensions are in Inches [mm] Tolerance: +/- 0.5mm

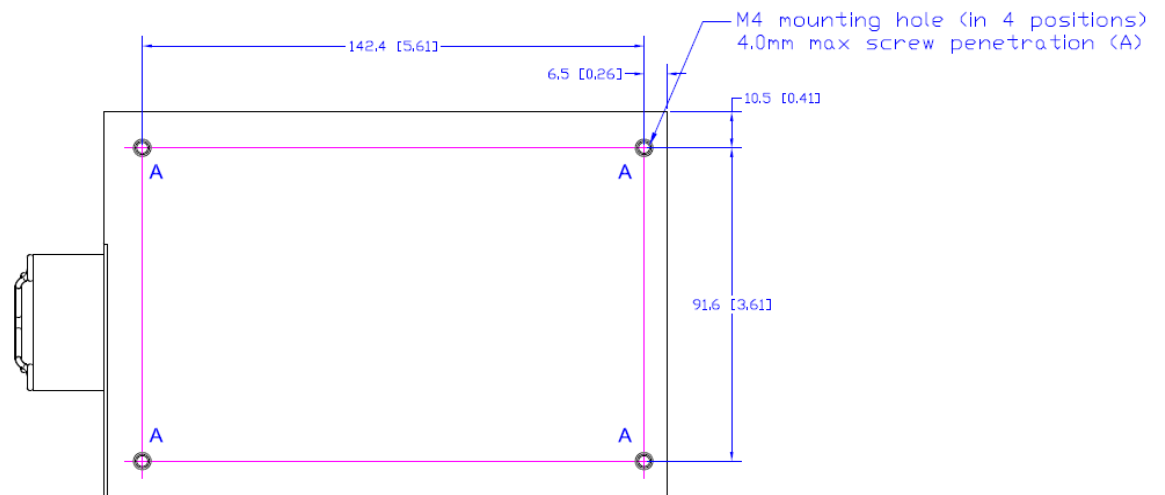
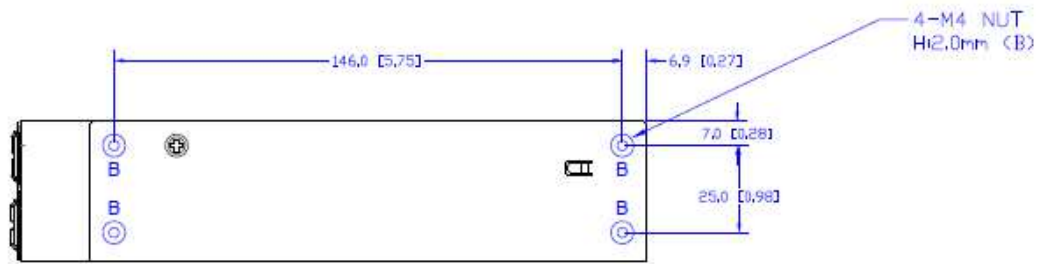
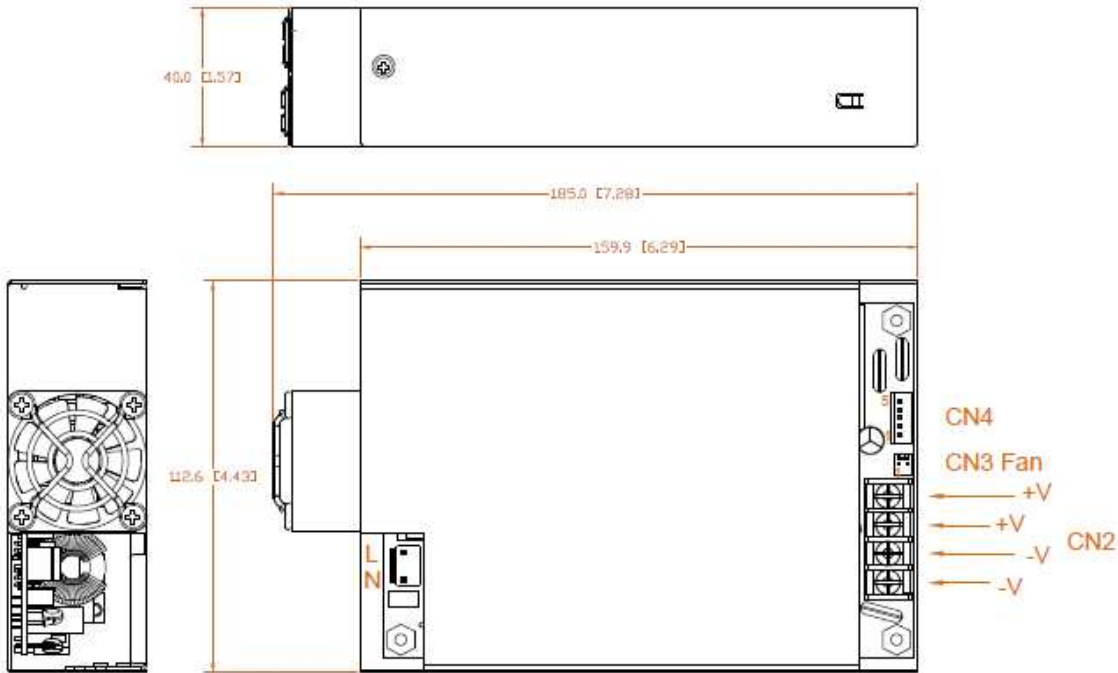


Note:

If you want to use the metal plate beneath this PSU as class II, the metal plate should be treated as "floating" that both distances from human body and primary side to accessible metal part (plate) have to be at least 4mm of 1xMOPP to meet Class II (The metal plate should be kept 1XMOFF away from human body).

With fan

All dimensions are in Inches [mm] Tolerance: +/- 0.5mm



Note:

If you want to use the metal plate beneath this PSU as class II, the metal plate should be treated as "floating" that both distances from human body and primary side to accessible metal part (plate) have to be at least 4mm of 1xMOPP to meet Class II (The metal plate should be kept 1XMOFF away from human body).