

MINT1180

180W Single Output Series

Medical & ITE Power Supply



3 Year Warranty

- 3" x 5" x 1.3" Package
- Up to 180 W of AC-DC Power
- Convection Cooled
- Universal Input 90-264 Vac
- Meets Class B EMI, Conducted & Radiated
- Fits 1U Applications
- Approved to EN/CSA/UL/IEC60601-1, 3rd Edition
- Approved to EN/CSA/UL/IEC60950-1, 2nd Edition
- Efficiency up to 90%
- CE Compliant (LVD, RoHS)
- Optional Chassis/Cover



Specifications

All Specifications are typical at nominal input, full load at 25°C unless otherwise stated.

AC Input	100-240Vac +/- 10%, 47-63 Hz single phase 120-370 Vdc	Turn On Time	Less than 3 sec. @115Vac & Full Load
Input Current	115Vac: 1.8A, 230Vac: 0.9A	Hold-up Time	>16.7 ms at 180 W, 120Vac/60 Hz
Inrush Current	264Vac, cold start: will not exceed 55A	Overload Protection	120 to 150% of rating, cycling type
Input Fuses	F1, F2: 3.15A, 250VAC fuses provided on all models	Short Circuit Protection	No damage to supply, auto recovery
Earth Leakage Current	<275µA@264V, 60Hz, NC; <400µA SFC	Overvoltage Protection	OVP latch at 110 to 130% of output voltage
Efficiency	88% typical for 12Vdc and 115Vac	Isolation	Input-Output: 4000Vac Input-Ground: 1800Vac, Output-Ground: 700Vdc
Output Power	180W convection cooled	Operating Temperature	-10 to +70°C convection Derate output power linearly to 50% between 50° and 70°C (derate from 40°C for UL/EN/IEC60950-1)
Transient Response	500µs typ. for return to within 0.5% of nominal, 50% load step. $\Delta i/\Delta t < 0.2A/\mu S$. Max Volt Deviation = 3%	Over Temperature Protection	Sensing transformer temperature, 165°C at full load, latching type, requires power cycling
Ripple and Noise	1% pk-pk, measured directly across output terminals, load terminated with 0.1µF ceramic and 10µF low ESR capacitors	Storage Temperature	-40 to +85°C
Output Voltage	See chart	Operating Altitude	-500 to 10,000 ft
Minimum Load	Not required	Non-operating Altitude	-500 to 40,000 ft
Total Regulation	+/- 3% combined line, load, and initial setting	Relative Humidity	5% to 95%, non-condensing
Vibration	Operating: 0.003g ² /Hz, 1.5g _{rms} overall, 3 axes, 10 min/axis Non-Operating: 0.026 g ² /Hz, 5.0g _{rms} overall, 3 axes, 1 hr/axis	Shock	Operating: Half-sine, 20 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total
Switching Frequency	PFC: Fixed at 65kHz Main converter: 50–120kHz, typical 70kHz at full load	Medical Safety Standards	EN/CSA/UL/IEC 60601-1, 3rd Edition
Dimensions	W: 3.0" x L: 5.0" x H: 1.3", Weight: 325g	ITE Safety Standards	EN/CSA/UL/IEC 60950-1, 2nd Edition

Model Number Key

MINT 1 180 X 12 75 K 01

Model:	"01" = Standard Model, 02 and higher indicates a modified model.
Input Connector:	"K" = 3 pin Header for class I input; C = 2 pin header for class II input.
Output Connector:	"75" = Output Connector, 4 pin header. Other options available, consult factory.
Output Voltage:	"12" = 12V, "24" = 24V, etc.
Configuration:	"A" = Model Configuration
Output Power:	"180" = 180W
# of Outputs:	"1" = Single output
Product Family:	"M" = Medical, "I" = Internal, "NT" = New Technology

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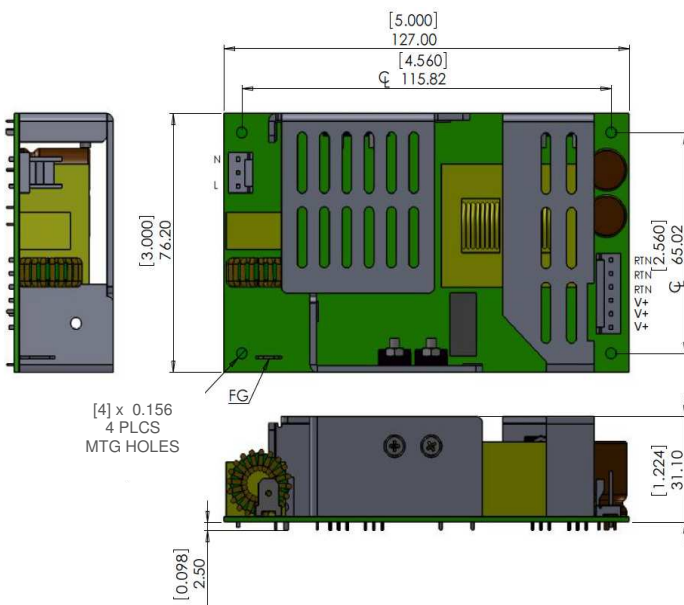
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Model Number	Volts (V)	Output Parameters		Total Regulation	OVP Threshold
		Minimum Load	Output Current Convection		
MINT1180A1275K01	12 V	0 A	15.0A	±3%	14.0 ± 1.1V
MINT1180A1575K01	15 V	0 A	12.0A	±3%	18.5 ± 1.2V
MINT1180A1875K01	18 V	0 A	10.0A	±3%	21.5 ± 2.0V
MINT1180A2475K01	24 V	0 A	7.50A	±3%	29.0 ± 2.5V
MINT1180A2875K01	28 V	0 A	6.40A	±3%	33.5 ± 2.5V
MINT1180A3275K01	32 V	0 A	5.62A	±3%	36.0 ± 3.0V
MINT1180A4875K01	48 V	0 A	3.75A	±3%	56.0 ± 3.0V

EMI/EMC Compliance

Conducted Emissions	EN55011/22 Class B, FCC Part 15, Subpart B, Class B
Radiated Emissions	EN55011/22 Class B, FCC Part 15, Subpart B, Class B
Static Discharge Immunity	EN61000-4-2, Criteria A, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m, Criteria A
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz, Criteria A
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common-mode, Criteria A
Conducted RF Immunity	EN61000-4-6, 3Vrms, Criteria A
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m, Criteria A
Voltage Dip Immunity	EN61000-4-11, 5% Vnom: 0.5cycle; 40% Vnom: 5 cycles, 70% Vnom: 25 cycles, Criteria A
Line Harmonic Emissions	EN61000-3-2, Class A, B, C & D
Flicker Test	EN61000-3-3, Complies (dmax<6%)

Mechanical Drawings and Connector Information



Input Connector – J100 (AMP 64137-1) Mating Connector Molex 90-50-3031 Pins: 08-50-0105

Pin 1	AC Line
Pin 2	N.C.
Pin 3	AC Neutral

Output Connector – J300 (AMP 640445) Mating Connector: Molex 90-50-3041 Pins: Molex 08-50-0105

Pin	Signals
1	RTN
2	RTN
3	RTN
4	+V1
5	+V1
6	+V1

Notes:

- Dimensions are in mm (inches with +/- 0.000 tolerance)
- Metal standoffs with 0.2" (5mm) height are required for mounting
- FG is ground connection
- Ground connector J101 P/N 1285 AMP