SL POWER
MINT1065 SERIES

65 Watts Single Output
Medical & Industrial Grade

Medical

Industrial

Advanced Energy's SL Power MINT1065 medically-approved AC-DC power supplies are available with a nominal main output of 12 V, 13.2 V, 15 V, 18 V, 20V, 24 V or 48 V. MINT1065 power supplies provide up to 65 Watts convection. All models have output overvoltage, short circuit and overload protection and a small 2 x 4 x 1.2 inch form factor.

AT A GLANCE

Total Power

65 Watts

Input Voltage

90 to 264 VAC

# of Outputs

Single

SPECIAL FEATURES

- 65 Watts Convection
- Small 2" x 4" x 1.2" Form Factor
- Universal Input 90 to 264 VAC
- Less than 0.5W No Load Power Dissipation
- 2 x MOPP Isolation
- Rugged EMC Compliant Design
- Meets Efficiency Level IV
- 0°C To 70°C Operating Temperature Range
- 3 Years Warranty
- CE Compliant

SAFETY

- UL/EN/IEC60601-1, 2nd. Ed.
- UL/EN/IEC/CSA62368-1

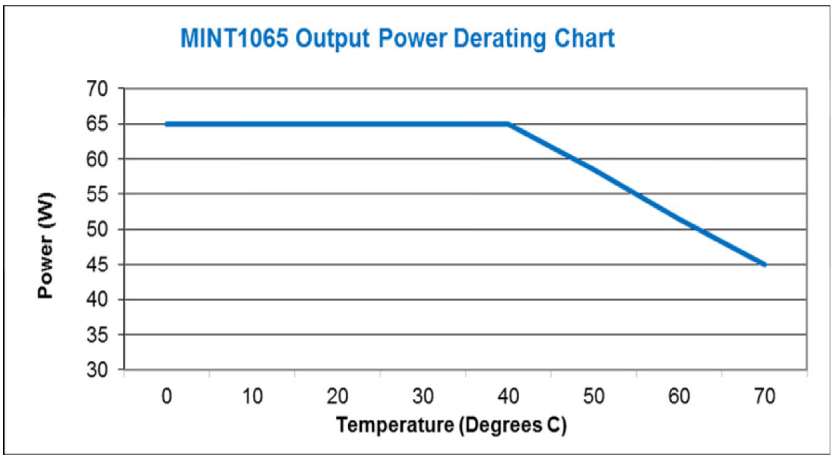
ELECTRICAL SPECIFICATIONS

Input	
Input range	90 to 264 VAC, 47 to 63 Hz, 1Ø
Input current	1.6A max at 115 VAC 0.7 A max at 230 VAC
Inrush current	40 A max., cold start @ 264 VAC input
Input fuses	F1,F2: 2.5 A, 250 VAC fuses (line & neutral lines) provided on all models
Earth Leakage current	<300 µA @ 264 VAC, 60 Hz, NC <500 µA @ 264 VAC, 60 Hz, SFC
Efficiency (typ. @ 25°C)	90% Typical
Isolation voltage	Input/Ground: 1800 VAC (1 MOPP) Input/Output: 4000 VAC (2 MOPP) Output/Ground: 500 VAC
Switching Frequency	Variable 50 to 75 kHz typical
Output	
Maximum power	Max of 65 Watts for convection cooled. See "Ordering information" section.
Output power derating	See derating chart
Ripple and noise	1% pk-pk for all models. (20 MHz bandwidth, differential mode. Measured with noise probe directly across output terminals, and load terminated with 0.1µF ceramic and 10µF low ESR capacitors)
Total regulation	±2% (Maximum deviation from nominal voltage for all loading conditions)
Minimum load	Not required
Voltage Adjustability	Voltage pre-set by fixed resistance
Transient response	500 µS response time for return to within 0.5% of final value for a 50% load step change, $\Delta i/\Delta t<0.2$ A/µS. Max.
Hold-up time	17 mS max from loss of AC input at 120 VAC
Turn on time	<1 s under all rated load conditions
Cooling	Convection (65 W Output max)
Reliability	
Warranty	3 years
Protection	
Overvoltage protection	Built-in
Short circuit protection	Short across the output terminals will not cause damage to the unit. Hiccup mode.
Overload protection	Hiccup mode

SAFETY

EN/IEC/UL	EN/IEC/UL 60601-1, 2nd Edition
EN/CSA/IEC/UL	EN/CSA/IEC/UL 62368-1
CE Mark	Yes
Isolation type	Double/Reinforced between input and output

DERATING CURVES



EMI/EMC COMPLIANCE

Conducted emissions	EN55011 Class B, FCC Part 15, Class B
Radiated emissions	EN55011 Class A, FCC Part 15, Class A
Electro static discharge immunity	EN61000-4-2, 6kV contact, 8kV air
Radiated RF fields susceptibility	EN61000-4-3, 3V/m
Electrical fast transients / bursts	EN61000-4-4, 2kV/5kHz
Surge susceptibility	EN61000-4-5, 1kV diff. mode, 2kV common mode
Conducted RF susceptibility	EN61000-4-6, 3Vrms
Rated power frequency magnetic fields test	EN61000-4-8, 3A/m
Voltage Sags & Surges	EN61000-4-11, 240VAC, 0%/0.5 cycle, 40%/5 cycles, 70%/25 cycles

Notes:
Performance criteria are based on EN55024. According to the standards, performance criteria are decoded as following:
A. Normal performance during and after the test
B. Temporary degradation, self-recoverable
C. Temporary degradation, operator intervention required to recover the operation
D. Permanent damage

ENVIRONMENTAL SPECIFICATIONS

Vibration Operating Non-Operating	 0.003 g^2/Hz, 1.5 g_{rms} overall, 3 axes, 10 min./axis 0.026 g^2/Hz, 5.0 g_{rms} overall, 3 axes, 1 hr./axis
Shock Operating Non-Operating	 Half-sine, 20 g_{pk}, 10mS, 3 axes, 6 shocks total Half-sine, 40 g_{pk}, 10mS, 3 axes, 6 shocks total
Cooling	Convection
Operating temperature	0°C to +70°C (derate from full rated power above 40°C)
Storage temperature	-40°C to +85°C
Altitude Operating Non-Operating	 -500 to 10,000 ft -500 to 40,000 ft
Relative humidity	5% to 95%, non-condensing
Dimensions (W x L x H)	2.0" x 4.0" x 1.17"
Weight	150 grams

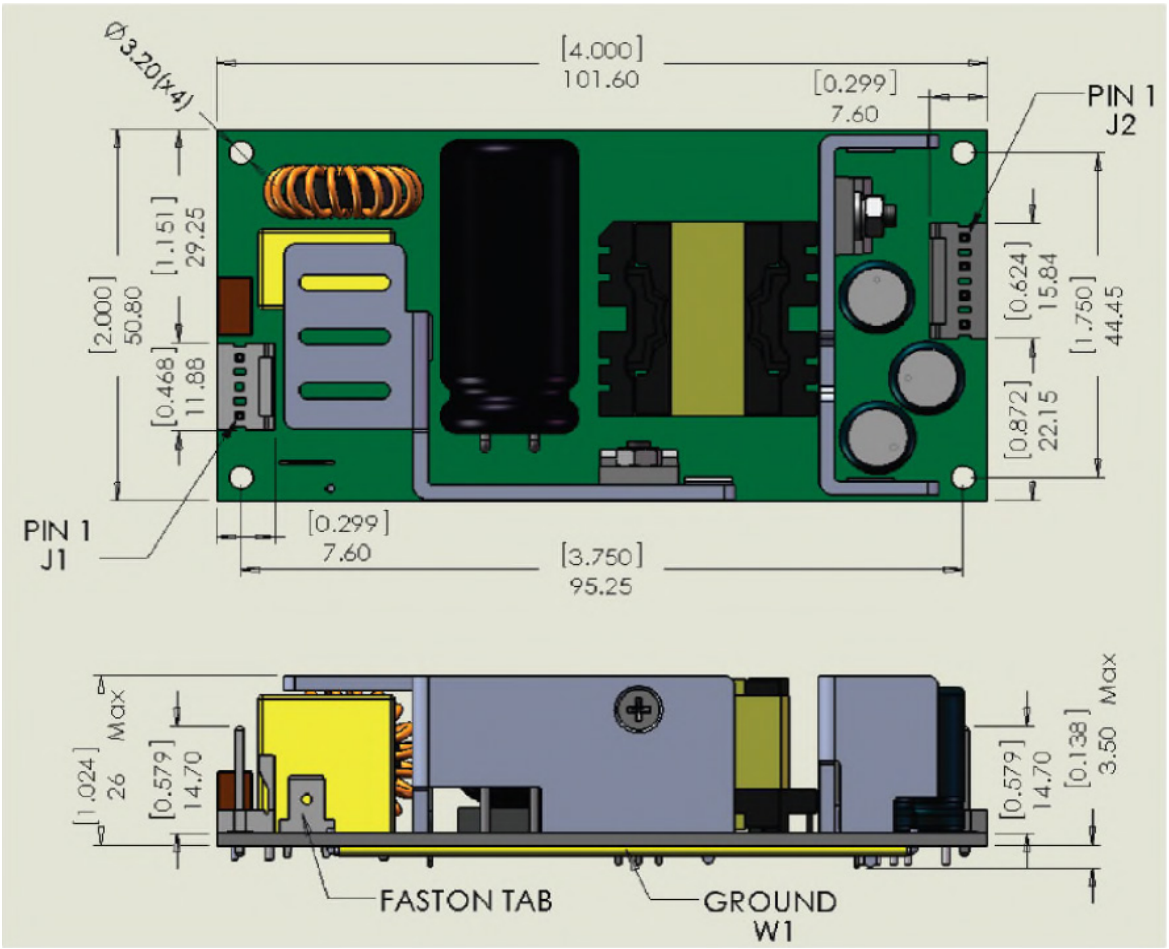
ORDERING INFORMATION TABLE 1

MINT	1	065	X	12	75	C	01
Product Family	# of Outputs	Output Power (Watts)	Model Configuration	Output Voltage	Output Connector	Input Connector	"01" = Standard Model, "02" and higher indicates a modified model
"M" = Medical		"065" = 65W	"A" = Class I (grounded)	"12" = 12V Output	"75" = 4 pin header	"C" = 2 pin header	
"I" = Internal			"B" = Class II (ungrounded)	"24" = 24V Output			
"NT" = New Technology			"C" = Chassis/Cover provided (Class I only)				

ORDERING INFORMATION TABLE 2

Model Number	Output Voltage	Output Current		Total Regulation	OVP Threshold	Ripple & Noise
		Open Frame	w/cover			
MINT1065X1275C01	12 V	5.25 A	4.00 A	±2%	15.0 ± 1.5V	120 mV
MINT1065X1375C01	13.2 V	4.80 A	3.63 A	±2%	16.0 ± 1.5V	140 mV
MINT1065X1575C01	15 V	4.33 A	3.20 A	±2%	18.0 ± 1.5V	150 mV
MINT1065X1875C01	18 V	3.50 A	2.66 A	±2%	21.0 ± 2.0V	180 mV
MINT1065X2075C01	20 V	3.25 A	2.40 A	±2%	23.0 ± 2.0V	200 mV
MINT1065X2475C01	24 V	2.70 A	2.00 A	±2%	27.0 ± 2.0V	240 mV
MINT1065X4875C01	48 V	1.35 A	1.00 A	±2%	55.0 ± 4.0V	480 mV

MECHANICAL DRAWING



Notes:
1. All dimensions in inches (mm).

PIN ASSIGNMENTS

Connector	MINT1065		Mating Connector	Mating Pin
J1 (Input connector) AMP: 641937-1	PIN 1	AC Line	Molex 09-50-3031	Molex 08-50-0105
	PIN 2	AC Neutral		
J2 (Output connector) AMP: 640445-3	PIN 1	+Vo	Molex 09-40-3041	Molex 08-50-0105
	PIN 2	+Vo		
	PIN 3	RTN		
	PIN 4	RTN		
GND Connection	-	-	0.187" FASTON TAB	

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE | TRUST

For international contact information,
visit advancedenergy.com.

powersales@aei.com (Sales Support)
productsupport.ep@aei.com (Technical Support)
+1 888 412 7832

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