



# CERTIFICATE

No. B 11 10 59743 059

**Holder of Certificate:** SL Power Electronics, Corp.

6050 King Drive Bldg A  
Ventura CA 93003  
USA

**Production Facility(ies):** 76079

**Certification Mark:**



**Product:** Switching power supply unit  
(AC-DC Switching Power Supplies)

**Model(s):** MINT1065DX75KZ Series (Class I type),  
MINT1065DX75CZ Series (Class II type) and  
MINT1065CX75KZ Series (Class I type).

**Parameters:**

Rated Input:	100-240 V~, 50-60 Hz, 1.3 A
Rated Output:	Model dependent, see attachment
Protection Class:	I or II (model dependent)

See attachment for further information.

The following have been excluded from the evaluation:

- 1) The risk management requirements of the standard were not addressed (refer to IEC60601-1:2006 Medical Electrical Equipment Task Force guidelines) and must be considered at end use.
- 2) EMC requirement must be addressed at end use.

**Tested according to:** EN 60601-1:2006

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

**Test report no.:** 095-1101815101-100

**Date,** 2011-10-07

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## ATTACHMENT TO CERTIFICATE NO. B 11 10 59743 059 FOR SL POWER ELECTRONICS CORP.

### General product information:

The MINT1065DX75KZ Series (Class I type), and MINT1065DX75CZ Series (Class II type) are open-frame AC/DC switch mode power supplies, designed for building-in to an end-product.

The MINT1065CX75KZ Series (Class I type) are AC/DC switch mode power supplies, provided with a top cover and bottom chassis, and are designed for building-in to an end-product.

### Model Differences

The power supplies in the MINT1065WX75YZ Series are similar to each other and differ only in minor component changes in the secondary circuit and the number for windings for T1 to accommodate for the different output voltage and amps. The MINT1065WX75YZ Series are Class I or Class II type, and are available with different types of input and output connectors.

MINT1065 Class II Series is identical to MINT1065 Class I Series except the following components have been removed: CYP1, CYP2, CYP3, CYS1, the ground terminal (quick connect tab on PWB adjacent to input connector "CON1"), and jumper wire W1.

MINT1065CX75KZ Series is identical to MINT1065DX75KZ Series, except it is provided with a Top Cover and Bottom Chassis.

All models have one dc output.

The following are additional differences between Model MINT1065WX75YZ, where W is C or D; where X is any number 12 through 48; where Y is C or K; where Z is any number 01 through 99.

MINT1065DX75KZ Series: D + K designates Class I type; X suffix designates output voltages from 12 to 48 Vdc; Z suffix designates additional configurations indicating non-safety related options.

MINT1065DX75CZ Series: D + C designates Class II type; X suffix designates output voltages from 12 to 48 Vdc; Z suffix designates additional configurations indicating non-safety related options.

MINT1065CX75KZ Series: C + K designates Class I type with a top cover and bottom chassis; X suffix designates output voltages from 12 to 48 Vdc; Z suffix designates additional configurations indicating non-safety related options.



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**Output ratings:**

Model No.	DC Output voltage (V)	Output current (A)	Model No.	DC Output voltage (V)	Output current (A)
MINT1065D1275K01, MINT1065D1275C01	12	5.25	MINT1065D4875K01, MINT1065D4875C01	48	1.35
MINT1065D1575K01, MINT1065D1575C01	15	4.33	MINT1065D2475K01, MINT1065D2475C01	24	2.7
MINT1065D1875K01, MINT1065D1875C01	18	3.5	MINT1065C1875K01	18	2.67
MINT1065C1275K01	12	4.0	MINT1065C2475K01	24	2.0
MINT1065C1575K01	15	3.2	MINT1065C4875K01	48	1.0

**Additional Information**

The schematics for these models are kept on file at the CB Testing Laboratory mentioned in the first page of this test report, and can be provided by the manufacturer upon request by an accepting NCB.



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Internet: www.slpower.com



**INSTALLATION INSTRUCTIONS  
MINT1065 Class I  
SINGLE OUTPUT SERIES**

**MODEL NUMBERS:** MINT1065WX75YZ Series. Sample Model # is MINT1065D1275K01 which breaks down as follows:

MINT 1 065 D 12 75 K 01  
1 2 3 4 5 6 7 8

- 1 – Medical Internal Model # Prefix
- 2 – Signifies # of outputs; i.e. 1, 2, 3, 4, etc.
- 3 – Output Wattage: 065 is 65 W
- 4 – Model Configuration: May be any Letter A-Z. D = EN 60601-1 3<sup>rd</sup> Edition Certified, C = Chassis/cover provided (Class I only).
- 5 – Output Voltage: Numeric indicator from 12 to 48. i.e. 12 = 12 Vdc
- 6 – Output Connector options: 75 = 4 pin Tyco/AMP MTA156 or equivalent
- 7 – Input Connector options: K = Class I, 2 pin Tyco/Amp MTA156 or equivalent and FastOn tab for Ground.
- 8 – Configuration: 01=Standard. 02-99 for modifications.

Unit is RoHS Compliant.

**RATINGS**

Input: 100-240 Vac. 1.3 A. 50-60 Hz

Output: 12 Vdc to 48 Vdc at 5.25 A to 1.0 A, or see below for standard output voltages.

Model	Watts	Output	Model	Watts	Output
MINT1065D1275K01	63	12 V/5.25 A	MINT1065C1275K01	48	12 V/4 A
MINT1065D1575K01	65	15 V/4.33 A	MINT1065C1575K01	48	15 V/3.2 A
MINT1065D1875K01	63	18 V/3.5 A	MINT1065C1875K01	48	18 V/2.67 A
MINT1065D2475K01	65	24 V/2.7 A	MINT1065C2475K01	48	24 V/2 A
MINT1065D4875K01	65	48 V/1.35 A	MINT1065C4875K01	48	48 V/1 A

**Notes:**

- 1. Maximum operating ambient is 40 °C.
- 2. Maximum Relative Humidity 96 %, no condensation.
- 3. Storage: -40 to +85 °C. Units should be allowed to warm-up under non-condensing conditions before application of power.

**CERTIFICATION:** All models are certified to be in compliance with the applicable requirements of ANSI AAMI ES 60601-1-2005, CSA C22.2 No. 60601-1-08, and EN/IEC 60601-1, 3<sup>rd</sup> Edition.

- CLASSIFICATION:**
- (6.2) Protection against electric shock = Class I
  - (In accordance with sub-clause 6 of IEC 60601-1) (6.3) Protection against harmful ingress of water or particulate matter = IPX0
  - (6.4) Method(s) of sterilization = Not applicable, to be evaluated in the end-product.
  - (6.5) Have not been evaluated for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide. This evaluation is to be made on the end equipment by the OEM.
  - (6.6) Mode of operation = Continuous



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## ATTACHMENT TO CERTIFICATE NO. B 11 10 59743 059 FOR SL POWER ELECTRONICS CORP.



**SAFETY DECLARATION:** SL Power Electronics Corp (SLPE) declares under our sole responsibility that all models listed above are in conformity with the applicable requirements of EN60950-1 following the provisions of the Low Voltage Directive 2006/95/EC.

**GROUNDING:** The Protective Earth (ground) terminal must be bonded to Protective Earth in the host equipment. Using the Protective Earth terminal on the supply for grounding the host equipment is not recommended. A separate dedicated grounding point should be used.

**OUTPUT:** The output is not acceptable for patient connection without additional isolation. The DC output is less than 42.4 Vpk or 60 Vdc under normal and single fault conditions and meets the Touch Current limits for Operator Accessible Part.

**OVERVOLTAGE PROTECTION:** The output is monitored for an overvoltage condition. In some applications where an overvoltage condition could result in a hazard as defined in applicable safety standards, redundant or additional overvoltage protection may be required. Consult factory for details.

**CAUTION:** When performing Dielectric Strength Tests, catastrophic failure of the unit may result if a Dielectric Strength test voltage greater than 1800 V ac is applied between primary and secondary circuits. The components providing isolation from primary to secondary cannot be tested while installed in the power supply without overstressing basic (primary to ground) insulation. All isolating components are individually 100 % tested at 4800 V ac prior to installation.

**ISOLATION / MEANS OF PROTECTION (MOP):** The creepage distance between primary and ground is 4 mm minimum (1 MOOP); between primary and secondary circuits is 8 mm minimum (2 MOOP). Secondary to ground creepage is not defined or controlled. The output common is bypassed to ground using a 1000 pF 400V Y2 Type capacitor. The required creepage and clearance distances from primary circuits to ground and secondary circuits must be maintained after installation to preserve the intended safety.

**TEMPERATURES:** The maximum operating temperatures of certain safety components, as defined in the applicable safety standards, must not be exceeded after installation to preserve the intended safety. The output power, ambient air temperature and the availability, amount, direction and/or restriction of airflow influence the temperatures of these components.

**OVERCURRENT PROTECTION:** The MINT1065 series have dual internal fusing as required by ANSI AAMI ES/CSA/EN/IEC 60601-1.

**WARNING! RISK OF FIRE!** A blown internal fuse is an indication of catastrophic failure of circuit component(s). Refer to fuse marking on the supply for rating. Repair must be performed by SLPE authorized personnel.

**WARNING! SHOCK HAZARD!** Dangerous voltages are present on some components, printed wiring traces and heatsinks.

### CONNECTIONS

EXPLANATION OF SYMBOLS	
	Alternating Current
	Direct Current
	Attention, Consult Accompanying Documents
	Attention, Dangerous Voltages
	Protective Earth (Ground)

J1 Pin	AC Input	J2 Pin	DC Output
1	Line	1	Output #1 (+)
3	Neutral	2	Output #1 (+)
		3	Return
		4	Return

Fast-on Tab: Ground

RECOMMENDED MATING CONNECTORS	
J1	AMP 640250-3 (center pin not used)
J2	AMP 640250-4

#### CAUTION

Do not exceed 5 Amps per contact

SLPE will not be liable for the safety, reliability or performance of these power supplies if a) any changes, modifications or repairs are carried out by other than authorized agents of SLPE, or b) the installation of the supply is not in accordance with these installation instructions and the applicable ANSI AAMI ES, CSA and EN/IEC safety standards.

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Internet: www.slpower.com



**INSTALLATION INSTRUCTIONS  
MINT1065 Class II  
SINGLE OUTPUT SERIES**

**MODEL NUMBERS:** MINT1065WX75YZ Series. Sample Model # is MINT1065D1275C01 which breaks down as follows:

MINT 1 065 D 12 75 C 01  
1 2 3 4 5 6 7 8

- 1 – Medical Internal Model # Prefix
- 2 – Signifies # of outputs: i.e. 1, 2, 3, 4, etc.
- 3 – Output Wattage: 065 is 65 W
- 4 – Model Configuration: May be any Letter A-Z. D = EN 60601-1 3<sup>rd</sup> Edition Certified.
- 5 – Output Voltage: Numeric indicator from 12 to 48. i.e. 12 = 12 Vdc
- 6 – Output Connector options: 75 = 4 pin Tyco/AMP MTA156 or equivalent
- 7 – Input Connector options: C = Class II, 2 pin Tyco/Amp MTA156 or equivalent.
- 8 – Configuration: 01=Standard. 02-99 for modifications.

Unit is RoHS Compliant.

**RATINGS**

Input: 100-240 Vac, 1.3 A, 50-60 Hz

Output: 12 Vdc to 48 Vdc at 5.25 A to 1.35 A, or see below for standard output voltages.

Model	Watts	Output
MINT1065D1275C01	63	12 V/5.25 A
MINT1065D1575C01	65	15 V/4.33 A
MINT1065D1875C01	63	18 V/3.5 A
MINT1065D2475C01	65	24 V/2.7 A
MINT1065D4875D01	65	48 V/1.35 A

**Notes:**

- 1. Maximum operating ambient is 40 °C.
- 2. Maximum Relative Humidity 96 %, no condensation.
- 3. Storage: -40 to +85 °C. Units should be allowed to warm-up under non-condensing conditions before application of power.

**CERTIFICATION:** All models are certified to be in compliance with the applicable requirements of ANSI AAMI ES 60601-1-2005, CSA C22.2 No. 60601-1-08, and EN/IEC 60601-1, 3<sup>rd</sup> Edition.

**CLASSIFICATION:** (6.2) Protection against electric shock = Class II  
(In accordance with sub-clause 6 of IEC 60601-1) (6.3) Protection against harmful ingress of water or particulate matter = IPX0  
(6.4) Method(s) of sterilization = Not applicable, to be evaluated in the end-product.  
(6.5) Have not been evaluated for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide. This evaluation is to be made on the end equipment by the OEM.  
(6.6) Mode of operation = Continuous



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## ATTACHMENT TO CERTIFICATE NO. B 11 10 59743 059 FOR SL POWER ELECTRONICS CORP.

**CE SAFETY DECLARATION:** SL Power Electronics Corp (SLPE) declares under our sole responsibility that all models listed above are in conformity with the applicable requirements of EN60950-1 following the provisions of the Low Voltage Directive 2006/95/EC.

**GROUNDING:** Protection Class II requires that the Input remains ungrounded in the end application.

**OUTPUT:** The output is not acceptable for patient connection without additional isolation. The DC output is less than 42.4 Vpk or 60 Vdc under normal and single fault conditions and meets the Touch Current limits for Operator Accessible Part.

**OVERVOLTAGE PROTECTION:** The output is monitored for an overvoltage condition. In some applications where an overvoltage condition could result in a hazard as defined in applicable safety standards, redundant or additional overvoltage protection may be required. Consult factory for details.

**CAUTION:** When performing Dielectric Strength Tests, catastrophic failure of the unit may result if a Dielectric Strength test voltage greater than 1800 V ac is applied between primary and secondary circuits. All isolating components are individually 100 % tested at 4800 V ac prior to installation.

**ISOLATION / MEANS OF PROTECTION (MOP):** The creepage distance between primary and ground is 4 mm minimum (1 MOOP); between primary and secondary circuits is 8 mm minimum (2 MOOP). The required creepage and clearance distances from primary circuits to secondary circuits must be maintained after installation to preserve the intended safety. This may require the use of plastic attaching hardware and standoff's in the end application. The use of an insulator between the PWB Bottom and a metal chassis should be considered.

**TEMPERATURES:** The maximum operating temperatures of certain safety components, as defined in the applicable safety standards, must not be exceeded after installation to preserve the intended safety. The output power, ambient air temperature and the availability, amount, direction and/or restriction of airflow influence the temperatures of these components.

**OVERCURRENT PROTECTION:** The MINT1065 series have dual internal fusing as required by ANSI AAMI ES/CSA/EN/IEC 60601-1.

**WARNING! RISK OF FIRE!** A blown internal fuse is an indication of catastrophic failure of circuit component(s). Refer to fuse marking on the supply for rating. Repair must be performed by SLPE authorized personnel.

**WARNING! SHOCK HAZARD!** Dangerous voltages are present on some components, printed wiring traces and heatsinks.

EXPLANATION OF SYMBOLS	
	Alternating Current
	Direct Current
	Attention, Consult Accompanying Documents
	Attention, Dangerous Voltages
	Class II

### CONNECTIONS

J1 Pin	AC Input	J2 Pin	DC Output
1	Line	1	Output #1 (+)
3	Neutral	2	Output #1 (+)
		3	Return
		4	Return

RECOMMENDED MATING CONNECTORS	
J1	AMP 640250-3 (center pin not used)
J2	AMP 640250-4

### CAUTION

Do not exceed 5 Amps per contact



SLPE will not be liable for the safety, reliability or performance of these power supplies if a) any changes, modifications or repairs are carried out by other than authorized agents of SLPE, or b) the installation of the supply is not in accordance with these installation instructions and the applicable ANSI AAMI ES, CSA and EN/IEC safety standards.

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