

# LGA50A

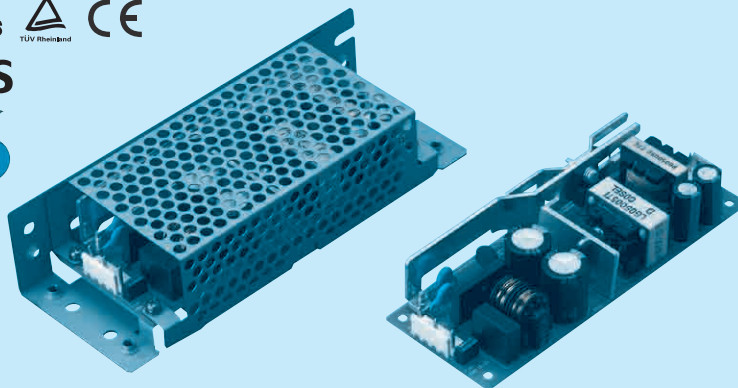
LG A 50 A -5 -□  
 ① ② ③ ④ ⑤ ⑥



RoHS



LGA



Recommended EMI/EMC Filter  
**NAC-06-472**



High voltage pulse noise type : NAP series  
 Low leakage current type : NAM series  
 \* The EMI/EMC Filter is recommended to connect with several devices.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ 100/120V input
- ⑤ Output voltage
- ⑥ Optional
- C : with Coating
- G : Low leakage current
- H : with the function to be acceptable to output peak current (only 24V)
- J1 : VH(J.S.T.)connector type
- S : with Chassis
- SN:with Chassis & cover
- Y : with Potentiometer

This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

MODEL	LGA50A-3R3-Y	LGA50A-5	LGA50A-12	LGA50A-15	LGA50A-24	LGA50A-24-H	LGA50A-48
MAX OUTPUT WATTAGE[W]	33	50	51.6	52.5	60	60	62.4
DC OUTPUT	3.3V 10A	5V 10A	12V 4.3A	15V 3.5A	24V 2.5A	24V 2.5 (Peak 3.2) A	48V 1.3A

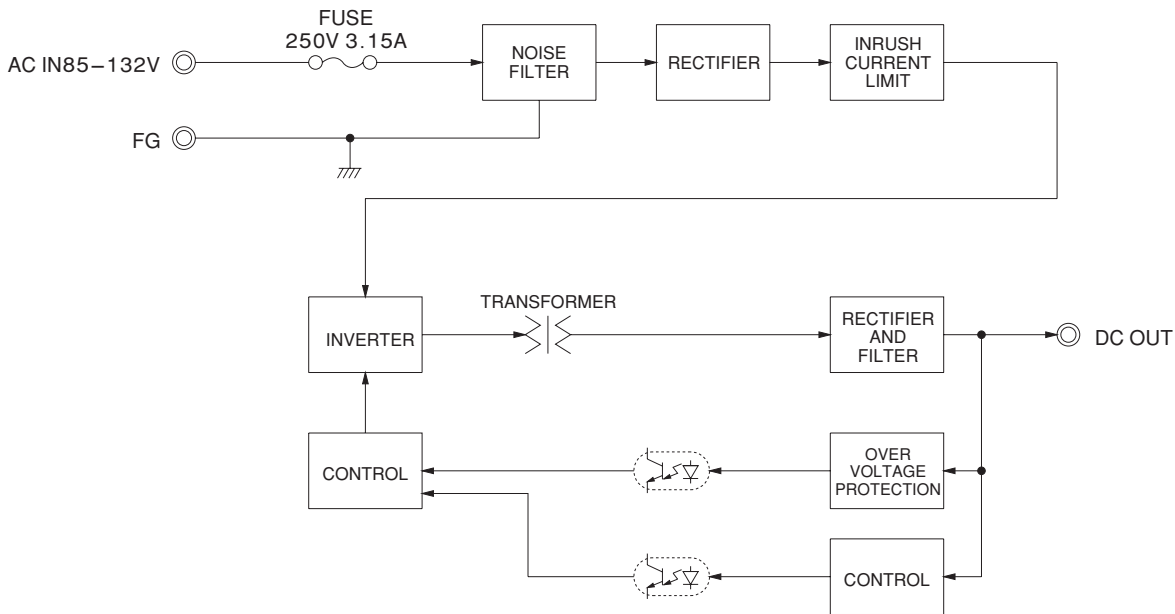
## SPECIFICATIONS

MODEL	LGA50A-3R3-Y	LGA50A-5	LGA50A-12	LGA50A-15	LGA50A-24	LGA50A-24-H	LGA50A-48											
INPUT	VOLTAGE[V]																	
	AC85 - 132 1 φ (Refer to Instruction Manual 1.1, and 3.2 Derating)																	
	CURRENT[A]		ACIN 100V		0.8typ (Io=100%)			1.3typ (Io=100%)										
	FREQUENCY[Hz]							47 - 440 (Refer to Instruction Manual 1.1)										
	EFFICIENCY[%]		ACIN 100V		74.0typ (Io=100%)		79.0typ (Io=100%)		82.0typ (Io=100%)		83.0typ (Io=100%)		85.0typ (Io=100%)		85.0typ (Io=100%)		85.0typ (Io=100%)	
	INRUSH CURRENT[A]		ACIN 100V		30typ (Io=100%), (At cold start), (Ta= 25°C)													
LEAKAGE CURRENT[ma]		0.5max (ACIN 100V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)																
OUTPUT	VOLTAGE[V]		3.3		5		12		15		24		24		48			
	CURRENT[A]		*3 10.0		10.0		4.3		3.5		2.5		2.5 (Peak 3.2)		1.3			
	LINE REGULATION[mV]		20max		20max		48max		60max		96max		96max		192max			
	LOAD REGULATION[mV]		40max		40max		100max		120max		150max		150max		300max			
	RIPPLE[mVp-p]		0 to +50°C *1		80max		80max		120max		120max		120max		240max		150max	
			-10 - 0°C *1		140max		140max		160max		160max		160max		320max		200max	
	RIPPLE NOISE[mVp-p]		0 to +50°C *1		120max		120max		150max		150max		150max		300max		350max	
			-10 - 0°C *1		160max		160max		180max		180max		180max		360max		400max	
	TEMPERATURE REGULATION[mV]		0 to +50°C *4		50max		50max		120max		150max		240max		240max		480max	
			-10 to +50°C *4		60max		60max		150max		180max		290max		290max		600max	
	DRIFT[mV]		*2 20max		20max		48max		60max		96max		96max		192max			
START-UP TIME[ms]		200max (ACIN 100V, Io=100%)																
HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)																
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.63		Fixed ("Y" which can be adjusted the output is available as optional ± 10%)														
OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40		4.90 - 5.30		11.50 - 12.50		14.40 - 15.60		23.00 - 25.00		23.00 - 25.00		46.00 - 50.00				
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically															
	OVERVOLTAGE PROTECTION		4.00 - 5.25		5.75 - 7.00		13.80 - 16.80		17.30 - 21.00		27.60 - 35.00		27.60 - 35.00		55.20 - 67.20			
	OPERATING INDICATION		Not provided															
	REMOTE SENSING		Not provided															
REMOTE ON/OFF		Not provided																
ISOLATION	INPUT-OUTPUT		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)															
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)															
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)															
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE		-10 to +60°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max															
	STORAGE TEMP., HUMID. AND ALTITUDE		-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max															
	VIBRATION		10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis															
	IMPACT		196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis															
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN															
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B															
OTHERS	CASE SIZE/WEIGHT		50 x 28.5 x 132mm [1.97 x 1.12 x 5.2 inches] (W x H x D) / 160g max (with chassis & cover : 320g max)															
	COOLING METHOD		Convection (Refer to Instruction Manual 3.2)															

\*1 This is the value that measured on measuring board with capacitor of 22 μF at 150mm from output terminal.  
 Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM-103).  
 \*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.  
 \*3 Peak loading for 10sec. And Duty 35% max. or less is acceptable if the total wattage is less than the rated wattage (24V:60W).  
 Refer to instruction Manual 5. In detail.

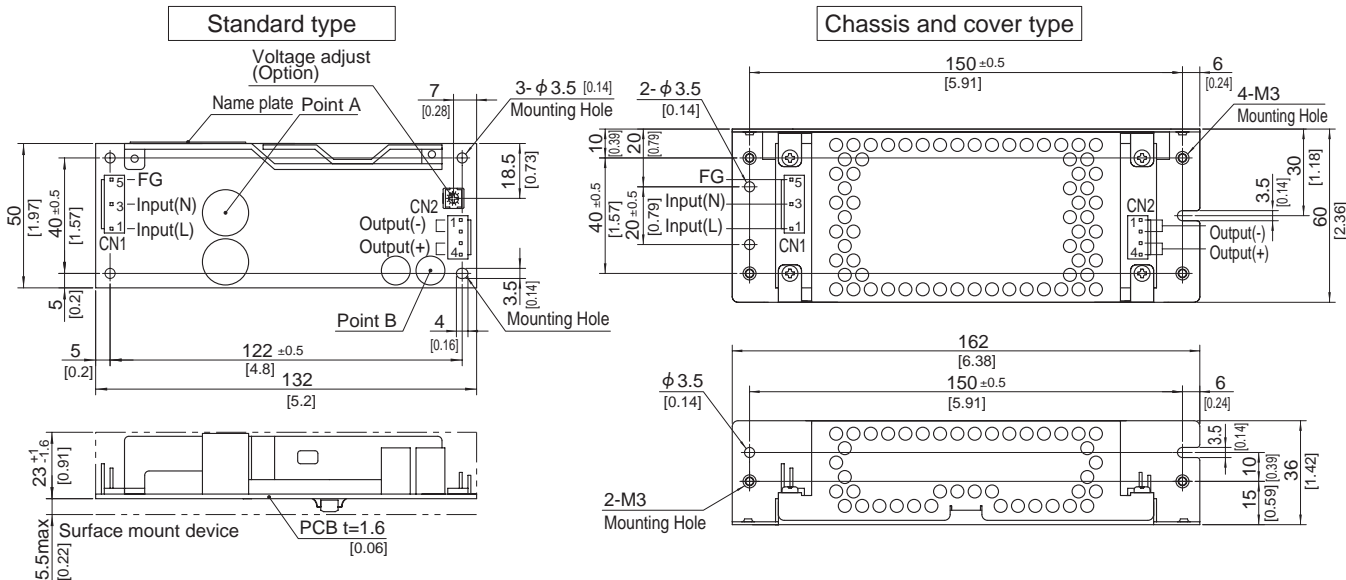
\*4 Only output 24V and 48V DC models are applied that the upper temperature limit is 45°C.  
 \* Avoid prolonged use under over - load.  
 \* Parallel operation with other model is not possible.  
 \* Derating is required when operated with chassis and cover.  
 \* A sound may occur from power supply at pulse loading.

Block diagram



LGA

External view



※ This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit,so handle the unit with care. Take care for SMD parts on the back to come in contact because of the vibration and not to break down.  
 ※ Use the spacer of 8mm length or more.  
 ※ 4 Mounting holes are existing.

※Mounting torque:0.6N.m(6.3kgf.cm)max

I/O Connector	Mating connector	Terminal	
CN1	1-1123724-3	1-1123722-5	Chain 1123721-1
			Loose 1318912-1
CN2	1-1123723-4	1-1123722-4	Chain 1123721-1
			Loose 1318912-1

(Mfr:Tyco Electronics AMP)

<PIN CONNECTION>

CN1		CN2	
Pin No.	Input	Pin No.	Output
1	AC(L)	1, 2	-V
2	AC(N)		
3	AC(N)	3, 4	+V
4	FG		
5	FG		

※Tolerance : ±1 [±0.04]  
 ※Weight : 160g max (with chassis & cover : 320g max)  
 ※PCB material / thickness : CEM3 / 1.6mm [0.06]  
 ※Optional chassis and cover material : Electric galvanizing steel board.  
 ※Dimensions in mm, [ ]=inches

※I/O Connector is Mfr Tyco Electronics AMP  
 ※Option:-J1:VH(J.S.T) connector type.  
 Refer to instruction Manual 5.  
 ※Keep drawing current per pin below 5A for CN2.

# LGA75A

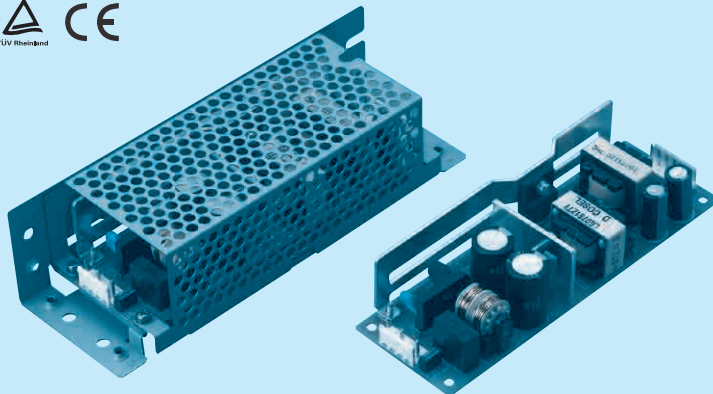
LG A 75 A -5 -□



RoHS



LGA



Recommended EMI/EMC Filter  
NAC-06-472



High voltage pulse noise type : NAP series  
Low leakage current type : NAM series  
\* The EMI/EMC Filter is recommended to connect with several devices.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ 100/120V input
- ⑤ Output voltage
- ⑥ Optional
- C : with Coating
- G : Low leakage current
- H : with the function to be acceptable to output peak current (only 24V)
- J1 : VH(J.S.T.)connector type
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

MODEL	LGA75A-3R3-Y	LGA75A-5	LGA75A-12	LGA75A-15	LGA75A-24	LGA75A-24-H	LGA75A-48
MAX OUTPUT WATTAGE[W]	49.5	75	75.6	75	76.8	76.8	76.8
DC OUTPUT	3.3V 15A	5V 15A	12V 6.3A	15V 5A	24V 3.2A	24V 3.2 (Peak 4.2) A	48V 1.6A

## SPECIFICATIONS

MODEL	LGA75A-3R3-Y	LGA75A-5	LGA75A-12	LGA75A-15	LGA75A-24	LGA75A-24-H	LGA75A-48											
INPUT	VOLTAGE[V]																	
	AC85 - 132 1 φ (Refer to Instruction Manual 1.1, and 3.2 Derating)																	
	CURRENT[A]		ACIN 100V															
			1.3typ (Io=100%)		1.7typ (Io=100%)													
	FREQUENCY[Hz]																	
	47 - 440 (Refer to Instruction Manual 1.1)																	
OUTPUT	EFFICIENCY[%]		ACIN 100V															
			75.0typ (Io=100%)		79.0typ (Io=100%)		83.0typ (Io=100%)		84.0typ (Io=100%)		86.0typ (Io=100%)		86.0typ (Io=100%)		86.0typ (Io=100%)			
	INRUSH CURRENT[A]		ACIN 100V		30typ (Io=100%), (At cold start), (Ta= 25°C)													
	LEAKAGE CURRENT[ma]		0.5max (ACIN 100V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)															
	VOLTAGE[V]		3.3		5		12		15		24		24		48			
	CURRENT[A]		*3 15.0		15.0		6.3		5.0		3.2		3.2 (Peak 4.2)		1.6			
	LINE REGULATION[mV]		20max		20max		48max		60max		96max		96max		192max			
	LOAD REGULATION[mV]		40max		40max		100max		120max		150max		150max		300max			
	RIPPLE[mVp-p]		0 to +50°C *1		80max		80max		120max		120max		120max		240max		150max	
			-10 - 0°C *1		140max		140max		160max		160max		160max		320max		200max	
RIPPLE NOISE[mVp-p]		0 to +50°C *1		120max		120max		150max		150max		150max		300max		350max		
		-10 - 0°C *1		160max		160max		180max		180max		180max		360max		400max		
TEMPERATURE REGULATION[mV]		0 to +50°C		50max		50max		120max		150max		240max		240max		480max		
		-10 to +50°C		60max		60max		150max		180max		290max		290max		600max		
DRIFT[mV]		*2 20max		20max		48max		60max		96max		96max		192max				
START-UP TIME[ms]		200max (ACIN 100V, Io=100%)																
HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)																
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.63		Fixed ("Y" which can be adjusted the output is available as optional ± 10%)														
OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40		4.90 - 5.30		11.50 - 12.50		14.40 - 15.60		23.00 - 25.00		23.00 - 25.00		46.00 - 50.00				
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically															
	OVERVOLTAGE PROTECTION		4.00 - 5.25		5.75 - 7.00		13.80 - 16.80		17.30 - 21.00		27.60 - 35.00		27.60 - 35.00		55.20 - 67.20			
	OPERATING INDICATION		Not provided															
	REMOTE SENSING		Not provided															
REMOTE ON/OFF		Not provided																
ISOLATION	INPUT-OUTPUT		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)															
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)															
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)															
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE		-10 to +60°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max															
	STORAGE TEMP., HUMID. AND ALTITUDE		-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max															
	VIBRATION		10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis															
	IMPACT		196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis															
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN															
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B															
	CASE SIZE/WEIGHT		50 x 34.5 x 150mm [1.97 x 1.36 x 5.91 inches] (W x H x D) / 200g max (with chassis & cover : 410g max)															
OTHERS	COOLING METHOD		Convection (Refer to Instruction Manual 3.2)															

\*1 This is the value that measured on measuring board with capacitor of 22 μF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM-103).

\*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

\*3 Peak loading for 10sec. And Duty 35% max. or less is acceptable if the total wattage is less than the rated wattage. Refer to instruction Manual 5. In detail.

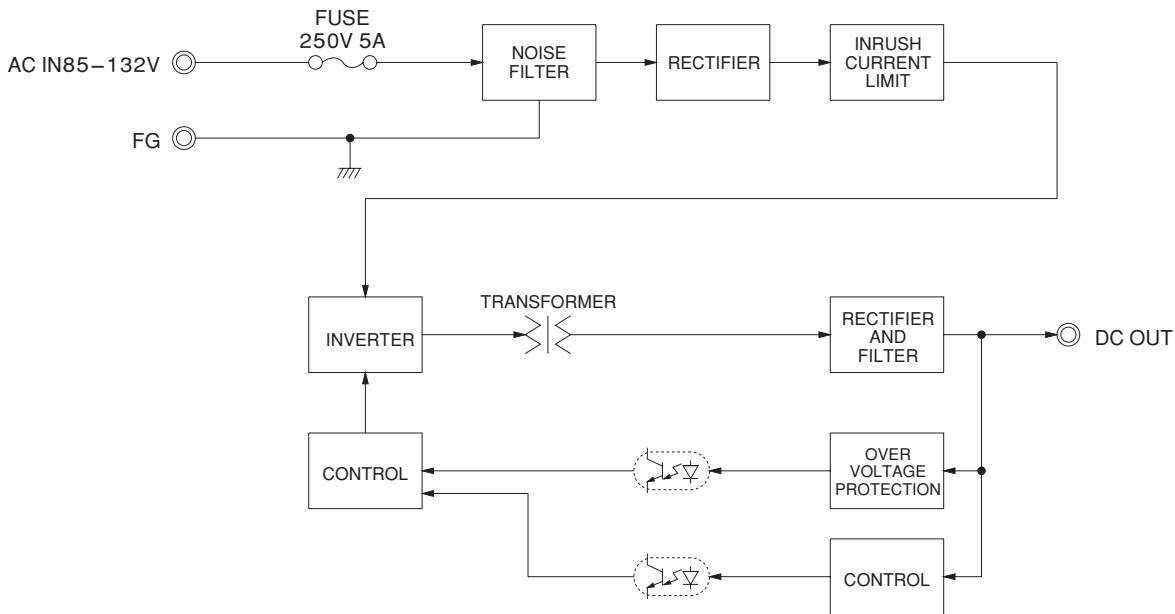
\* Avoid prolonged use under over - load.

\* Parallel operation with other model is not possible.

\* Derating is required when operated with chassis and cover.

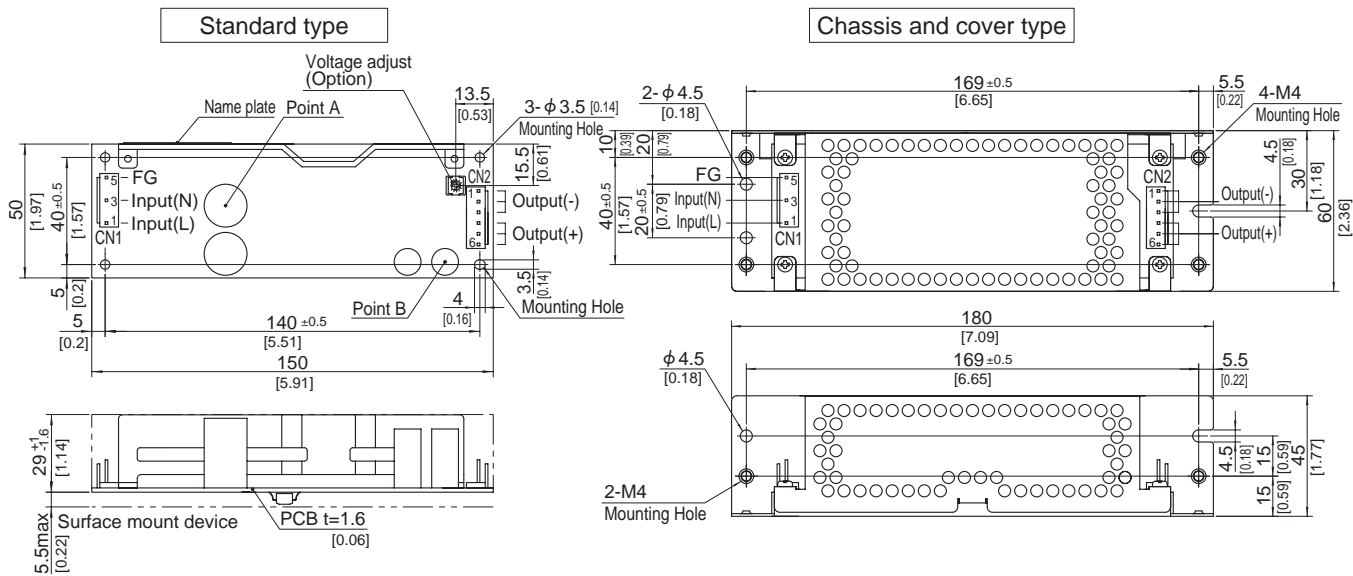
\* A sound may occur from power supply at pulse loading.

Block diagram



LGA

External view



※ This power supply is manufactured by SMD technology.  
 The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.  
 Take care for SMD parts on the back to come in contact because of the vibration and not to break down.  
 ※ Use the spacer of 8mm length or more.  
 ※ 4 Mounting holes are existing.

※ Mounting torque: 1.5N•m (16kgf•cm) max

I/O Connector	Mating connector	Terminal
CN1	1-1123724-3	Chain 1123721-1
		Loose 1318912-1
CN2	1-1123723-6	Chain 1123721-1
		Loose 1318912-1

(Mfr: Tyco Electronics AMP)

※ I/O Connector is Mfr Tyco Electronics AMP  
 ※ Option: -J1: VH (J.S.T) connector type.  
 Refer to instruction Manual 5.

<PIN CONNECTION>

CN1		CN2	
Pin No.	Input	Pin No.	Output
1	AC(L)	1 to 3	-V
2		4 to 6	+V
3	AC(N)		
4			
5	FG		

※ Keep drawing current per pin below 5A for CN2.

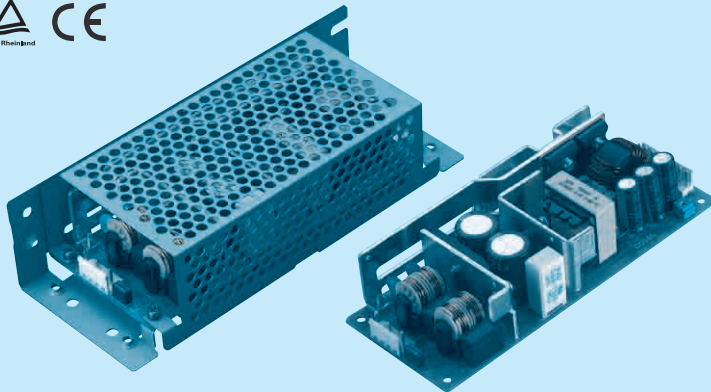
※ Tolerance : ±1 [±0.04]  
 ※ Weight : 200g max (with chassis & cover : 410g max)  
 ※ PCB material / thickness : CEM3 / 1.6mm [0.06]  
 ※ Optional chassis and cover material : Electric galvanizing steel board.  
 ※ Dimensions in mm, [ ] = inches

# LGA100A

LG A 100 A -5 -□



RoHS



Recommended EMI/EMC Filter  
NAC-06-472



High voltage pulse noise type : NAP series  
Low leakage current type : NAM series  
\* The EMI/EMC Filter is recommended to connect with several devices.

- ① Series name
  - ② Single output
  - ③ Output wattage
  - ④ 100/120V input
  - ⑤ Output voltage
  - ⑥ Optional
- C : with Coating  
G : Low leakage current  
H : with the function to be acceptable to output peak current (only 24V)  
J1 : VH(J.S.T.)connector type  
S : with Chassis  
SN : with Chassis & cover  
Y : with Potentiometer

This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

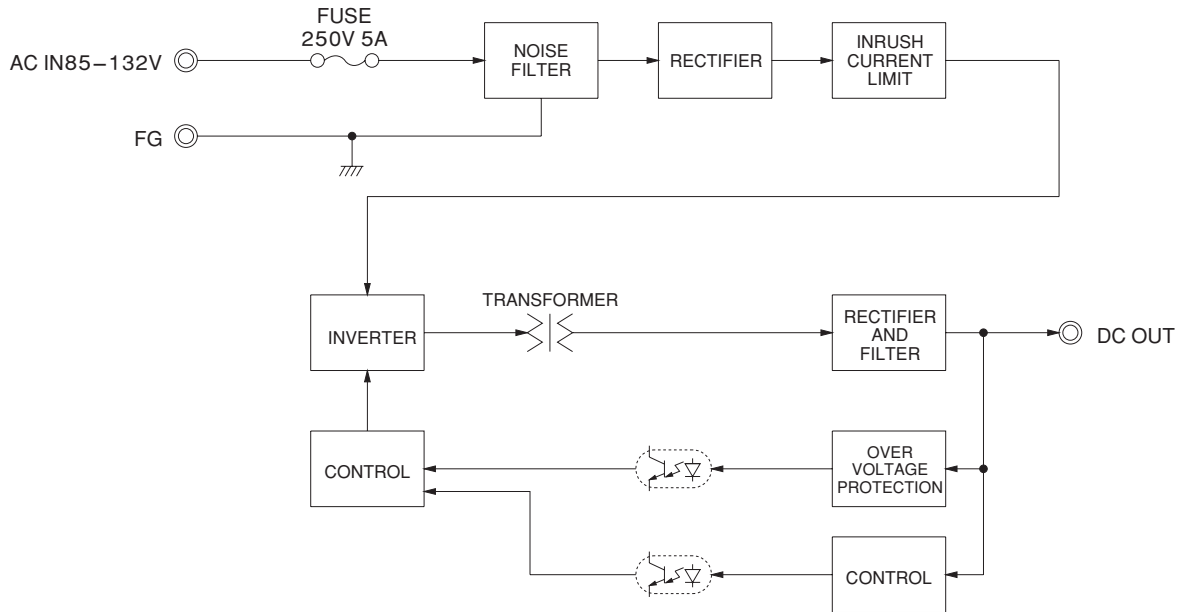
MODEL	LGA100A-3R3-Y	LGA100A-5-Y	LGA100A-12	LGA100A-15	LGA100A-24	LGA100A-24-H	LGA100A-48
MAX OUTPUT WATTAGE[W]	66	100	102	105	103.2	103.2	100.8
DC OUTPUT	3.3V 20A	5V 20A	12V 8.5A	15V 7A	24V 4.3A	24V 4.3 (Peak 5.4) A	48V 2.1A

## SPECIFICATIONS

MODEL	LGA100A-3R3-Y	LGA100A-5-Y	LGA100A-12	LGA100A-15	LGA100A-24	LGA100A-24-H	LGA100A-48											
INPUT	VOLTAGE[V]								AC85 - 132 1 φ (Refer to Instruction Manual 1.1, and 3.2 Derating)									
	CURRENT[A]		ACIN 100V		1.6typ (Io=100%)		2.4typ (Io=100%)											
	FREQUENCY[Hz]								47 - 440 (Refer to Instruction Manual 1.1)									
	EFFICIENCY[%]		ACIN 100V		76.0typ (Io=100%)		80.0typ (Io=100%)		83.0typ (Io=100%)		84.0typ (Io=100%)		85.5typ (Io=100%)		85.5typ (Io=100%)		85.5typ (Io=100%)	
	INRUSH CURRENT[A]		ACIN 100V		15typ (Io=100%, More than 10sec. to re-start)													
	LEAKAGE CURRENT[ma]								0.5max (ACIN 100V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)									
OUTPUT	VOLTAGE[V]		3.3		5		12		15		24		24		48			
	CURRENT[A]		*3 20.0		20.0		8.5		7.0		4.3		4.3 (Peak 5.4)		2.1			
	LINE REGULATION[mV]								20max 20max 48max 60max 96max 96max 192max									
	LOAD REGULATION[mV]								40max 40max 100max 120max 150max 150max 300max									
	RIPPLE[mVp-p]		0 to +50°C *1		80max		80max		120max		120max		120max		240max		150max	
			-10 - 0°C *1		140max		140max		160max		160max		160max		320max		200max	
	RIPPLE NOISE[mVp-p]		0 to +50°C *1		120max		120max		150max		150max		150max		300max		350max	
			-10 - 0°C *1		160max		160max		180max		180max		180max		360max		400max	
	TEMPERATURE REGULATION[mV]		0 to +50°C		50max		50max		120max		150max		240max		240max		480max	
			-10 to +50°C		60max		60max		150max		180max		290max		290max		600max	
	DRIFT[mV]		*2 20max		20max		48max		60max		96max		96max		192max			
START-UP TIME[ms]								200max (ACIN 100V, Io=100%)										
HOLD-UP TIME[ms]								20typ (ACIN 100V, Io=100%)										
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.63		4.50 - 5.50		Fixed ("Y" which can be adjusted the output is available as optional ± 10%)												
OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40		5.00 - 5.15		11.50 - 12.50		14.40 - 15.60		23.00 - 25.00		23.00 - 25.00		46.00 - 50.00				
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION								Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically									
	OVERVOLTAGE PROTECTION								4.00 - 5.25 5.75 - 7.00 13.80 - 16.80 17.30 - 21.00 27.60 - 35.00 27.60 - 35.00 55.20 - 67.20									
	OPERATING INDICATION								Not provided									
	REMOTE SENSING								Not provided									
REMOTE ON/OFF								Not provided										
ISOLATION	INPUT-OUTPUT								AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)									
	INPUT-FG								AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)									
	OUTPUT-FG								AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)									
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE								-10 to +60°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max									
	STORAGE TEMP., HUMID. AND ALTITUDE								-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max									
	VIBRATION								10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis									
IMPACT								196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis										
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS								UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN									
	CONDUCTED NOISE								Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B									
	CASE SIZE/WEIGHT								62 x 35.5 x 155mm [2.44 x 1.4 x 6.1 inches] (W x H x D) / 300g max (with chassis & cover : 530g max)									
OTHERS	COOLING METHOD								Convection (Refer to Instruction Manual 3.2)									

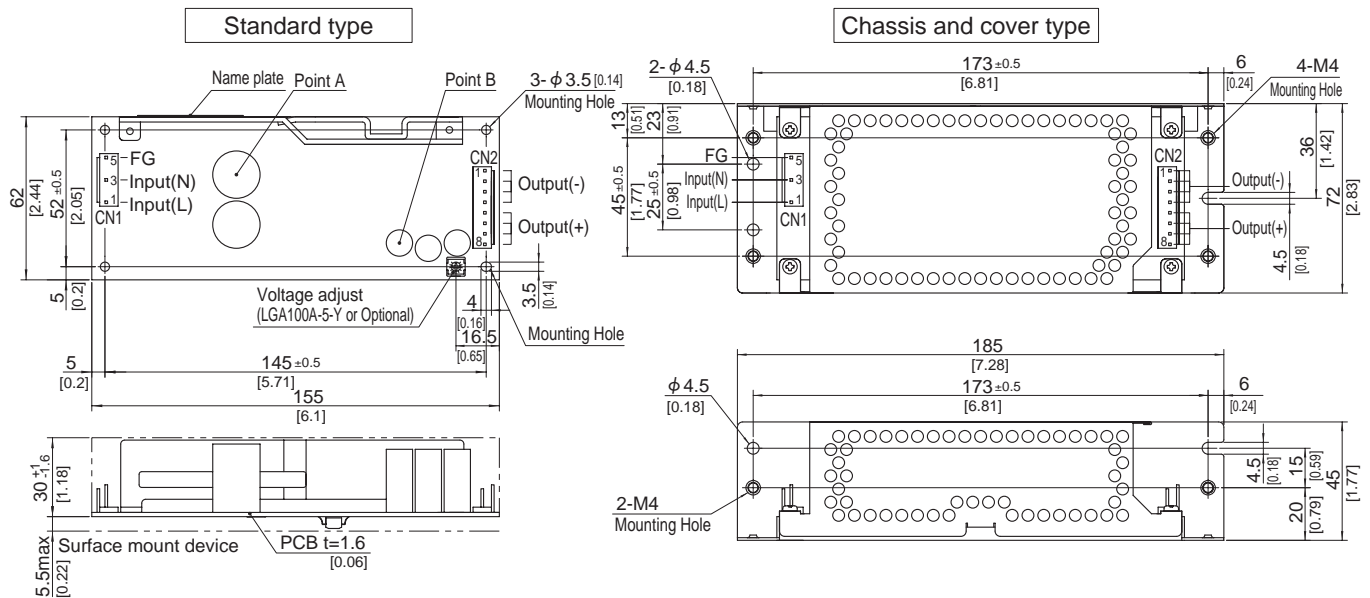
\*1 This is the value that measured on measuring board with capacitor of 22 μF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM-103).  
 \*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.  
 \*3 Peak loading for 10sec. And Duty 35% max. or less is acceptable if the total wattage is less than the rated wattage. Refer to instruction Manual 5. In detail.  
 \* Avoid prolonged use under over - load.  
 \* Parallel operation with other model is not possible.  
 \* Derating is required when operated with chassis and cover.  
 \* A sound may occur from power supply at pulse loading.

## Block diagram



LGA

## External view



- ※ This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care. Take care for SMD parts on the back to come in contact because of the vibration and not to break down.
- ※ Use the spacer of 8mm length or more.
- ※ 4 Mounting holes are existing.

※ Mounting torque: 1.5N·m (16kgf·cm) max

### <PIN CONNECTION>

CN1		CN2	
Pin No.	Input	Pin No.	Output
1	AC(L)	1 to 4	-V
2	AC(N)	5 to 8	+V
3	AC(N)		
4	AC(N)		
5	FG		

※ Tolerance : ±1 [±0.04]

※ Weight : 300g max (with chassis & cover : 530g max)

※ PCB material / thickness : CEM3 / 1.6mm [0.06]

※ Optional chassis and cover material : Electric galvanizing steel board.

※ Dimensions in mm, [ ] = inches

I/O Connector	Mating connector	Terminal
CN1	1-1123724-3	Chain 1123721-1
		Loose 1318912-1
CN2	1-1123723-8	Chain 1123721-1
		Loose 1318912-1

(Mfr: Tyco Electronics AMP)

※ I/O Connector is Mfr Tyco Electronics AMP

※ Option: -J1: VH(J.S.T) connector type.

Refer to instruction Manual 5.

※ Keep drawing current per pin below 5A for CN2.

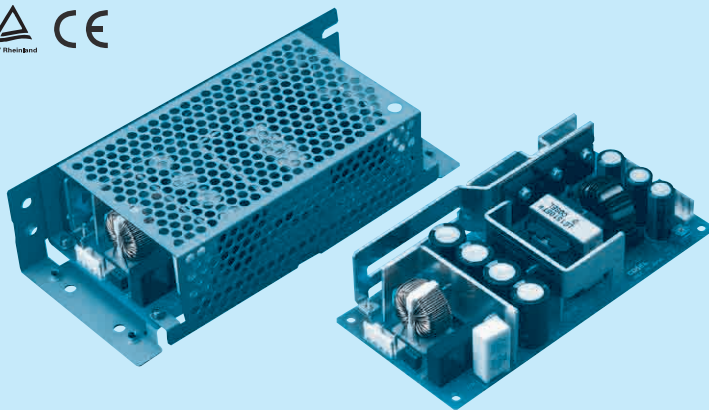
LGA-7

# LGA150A

LG A 150 A -5 -□



RoHS



Recommended EMI/EMC Filter  
NAC-06-472



High voltage pulse noise type : NAP series  
Low leakage current type : NAM series  
\* The EMI/EMC Filter is recommended to connect with several devices.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ 100/120V input
- ⑤ Output voltage
- ⑥ Optional
- C : with Coating
- G : Low leakage current
- H : with the function to be acceptable to output peak current (only 24V)
- J1 : VH(J.S.T.)connector type
- S : with Chassis
- SN : with Chassis & cover
- Y : with Potentiometer

This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

MODEL	LGA150A-3R3-Y	LGA150A-5-Y	LGA150A-12	LGA150A-15	LGA150A-24	LGA150A-24-H	LGA150A-48
MAX OUTPUT WATTAGE[W]	99	150	150	150	151.2	151.2	153.6
DC OUTPUT	3.3V 30A	5V 30A	12V 12.5A	15V 10A	24V 6.3A	24V 6.3 (Peak 7.9) A	48V 3.2A

## SPECIFICATIONS

MODEL	LGA150A-3R3-Y	LGA150A-5-Y	LGA150A-12	LGA150A-15	LGA150A-24	LGA150A-24-H	LGA150A-48											
INPUT	VOLTAGE[V]								AC85 - 132 1 φ (Refer to Instruction Manual 1.1, and 3.2 Derating)									
	CURRENT[A]		ACIN 100V		2.6typ (Io=100%)		3.6typ (Io=100%)											
	FREQUENCY[Hz]								47 - 440 (Refer to Instruction Manual 1.1)									
	EFFICIENCY[%]		ACIN 100V		76.0typ (Io=100%)		82.0typ (Io=100%)		84.5typ (Io=100%)		85.5typ (Io=100%)		87.0typ (Io=100%)		87.0typ (Io=100%)		87.0typ (Io=100%)	
	INRUSH CURRENT[A]		ACIN 100V		15 / 15 typ (Primary / Secondary Surge Current, Io=100%, More than 10sec. to re-start)													
LEAKAGE CURRENT[ma]								0.5max (ACIN 100V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)										
OUTPUT	VOLTAGE[V]		3.3		5		12		15		24		24		48			
	CURRENT[A]		*3 30.0		30.0		12.5		10.0		6.3		6.3 (Peak 7.9)		3.2			
	LINE REGULATION[mV]								20max 20max 48max 60max 96max 96max 192max									
	LOAD REGULATION[mV]								40max 40max 100max 120max 150max 150max 300max									
	RIPPLE[mVp-p]		0 to +40°C *1		80max		80max		120max		120max		120max		240max		150max	
			-10 - 0°C *1		140max		140max		160max		160max		160max		320max		200max	
	RIPPLE NOISE[mVp-p]		0 to +40°C *1		120max		120max		150max		150max		150max		300max		350max	
			-10 - 0°C *1		160max		160max		180max		180max		180max		360max		400max	
	TEMPERATURE REGULATION[mV]		0 to +40°C		50max		50max		120max		150max		240max		240max		480max	
			-10 to +40°C		60max		60max		150max		180max		290max		290max		600max	
DRIFT[mV]								*2 20max 20max 48max 60max 96max 96max 192max										
START-UP TIME[ms]								200max (ACIN 100V, Io=100%)										
HOLD-UP TIME[ms]								20typ (ACIN 100V, Io=100%)										
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.63		4.50 - 5.50		Fixed ("Y" which can be adjusted the output is available as optional ± 10%)												
OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40		5.00 - 5.15		11.50 - 12.50		14.40 - 15.60		23.00 - 25.00		23.00 - 25.00		46.00 - 50.00				
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION								Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically									
	OVERVOLTAGE PROTECTION								4.00 - 5.25 5.75 - 7.00 13.80 - 16.80 17.30 - 21.00 27.60 - 35.00 27.60 - 35.00 55.20 - 67.20									
	OPERATING INDICATION								Not provided									
	REMOTE SENSING								Not provided									
REMOTE ON/OFF								Not provided										
ISOLATION	INPUT-OUTPUT								AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)									
	INPUT-FG								AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)									
	OUTPUT-FG								AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)									
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE								-10 to +60°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max									
	STORAGE TEMP., HUMID. AND ALTITUDE								-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max									
	VIBRATION								10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis									
IMPACT								196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis										
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS								UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN									
	CONDUCTED NOISE								Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B									
OTHERS	CASE SIZE/WEIGHT								75 x 39 x 160mm [2.95 x 1.54 x 6.3 inches] (W x H x D) / 420g max (with chassis & cover : 650g max)									
	COOLING METHOD								Convection (Refer to Instruction Manual 3.2)									

\*1 This is the value that measured on measuring board with capacitor of 22 μF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM-103).

\*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

\*3 Peak loading for 10sec. And Duty 35% max. or less is acceptable if the total wattage is less than the rated wattage. Refer to instruction Manual 5. In detail.

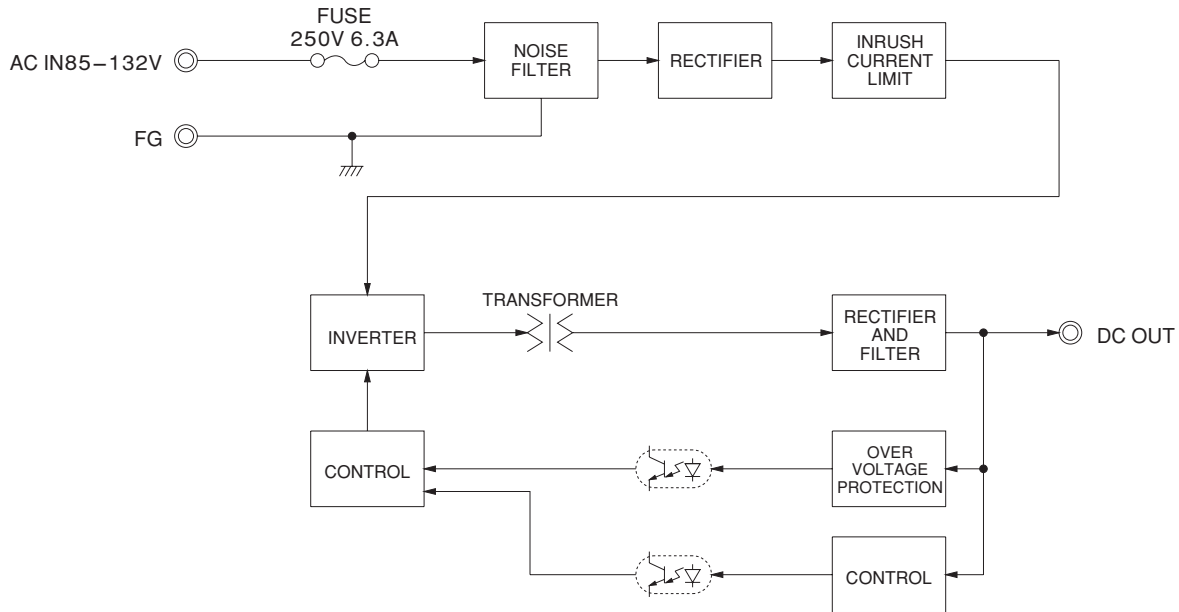
\* Avoid prolonged use under over - load.

\* Parallel operation with other model is not possible.

\* Derating is required when operated with chassis and cover.

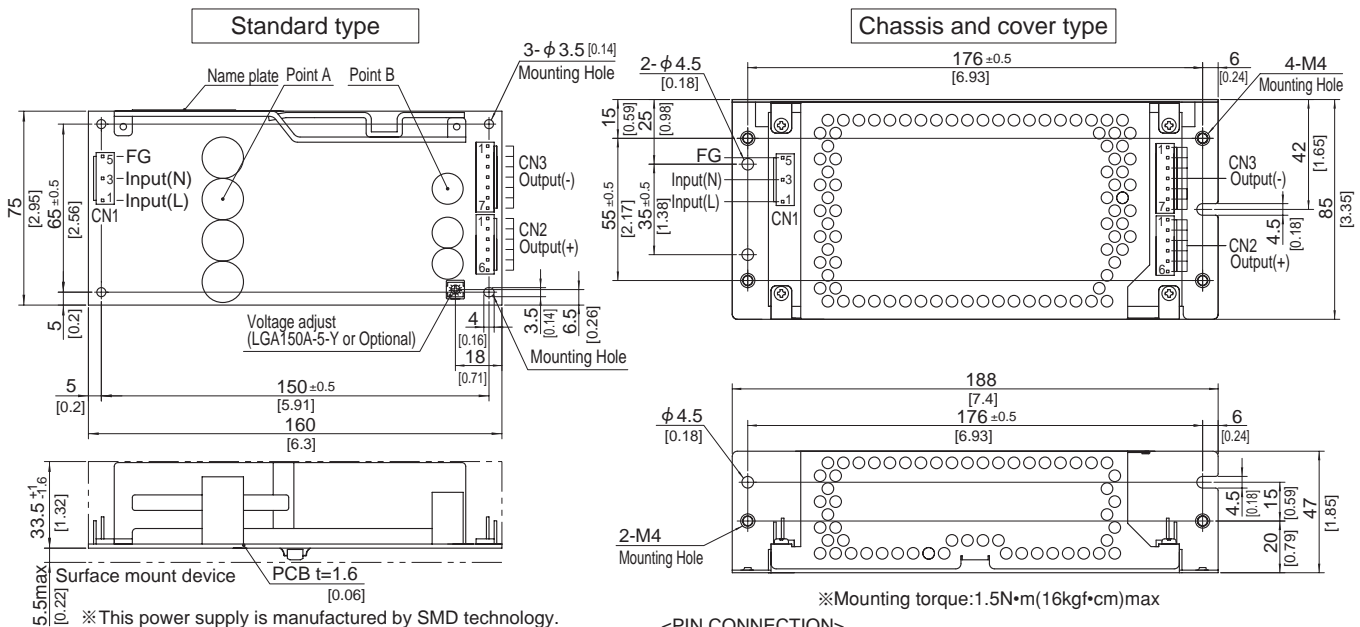
\* A sound may occur from power supply at pulse loading.

## Block diagram



LGA

## External view



- ※ This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care. Take care for SMD parts on the back to come in contact because of the vibration and not to break down.
- ※ Use the spacer of 8mm length or more.
- ※ 4 Mounting holes are existing.

I/O Connector	Mating connector	Terminal
CN1	1-1123724-3	Chain 1123721-1
		Loose 1318912-1
CN2	1-1123723-6	Chain 1123721-1
		Loose 1318912-1
CN3	1-1123722-7	Chain 1123721-1
		Loose 1318912-1

(Mfr: Tyco Electronics AMP)

- ※ I/O Connector is Mfr Tyco Electronics AMP
- ※ Option: -J1: VH(J.S.T) connector type. Refer to instruction Manual 5.

### <PIN CONNECTION>

CN1		CN2		CN3	
Pin No.	Input	Pin No.	Output	Pin No.	Output
1	AC(L)	1 to 6	+V	1 to 7	-V
2					
3	AC(N)				
4					
5	FG				

※ Keep drawing current per pin below 5A for CN2, CN3.

- ※ Tolerance :  $\pm 1$  [ $\pm 0.04$ ]
- ※ Weight : 420g max (with chassis & cover : 650g max)
- ※ PCB material / thickness : CEM3 / 1.6mm [0.06]
- ※ Optional chassis and cover material : Electric galvanizing steel board.
- ※ Dimensions in mm, [ ]=inches

LGA-9



# LGA240A

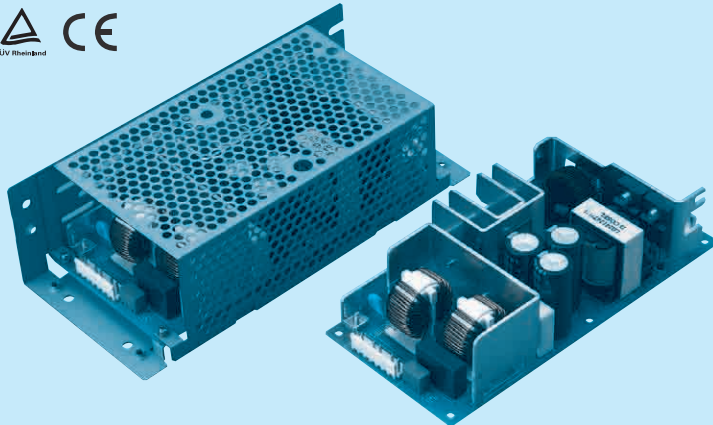
LG A 240 A -5 -□  
 ① ② ③ ④ ⑤ ⑥



RoHS



LGA



Recommended EMI/EMC Filter  
**NAC-16-472**



High voltage pulse noise type : NAP series  
 Low leakage current type : NAM series  
 \*The EMI/EMC Filter is recommended to connect with several devices.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ 100/120V input
- ⑤ Output voltage
- ⑥ Optional
- C :with Coating
- G :Low leakage current
- H :with the function to be acceptable to output peak current (only 24V)
- J1 :VH(J.S.T.)connector type
- S :with Chassis
- SN:with Chassis & cover
- T :Vertical terminal block
- Y :with Potentiometer

This power supply is manufactured by SMD technology.The stress to P.C.B like twisting or bending causes the defect of the unit,so handle the unit with care.

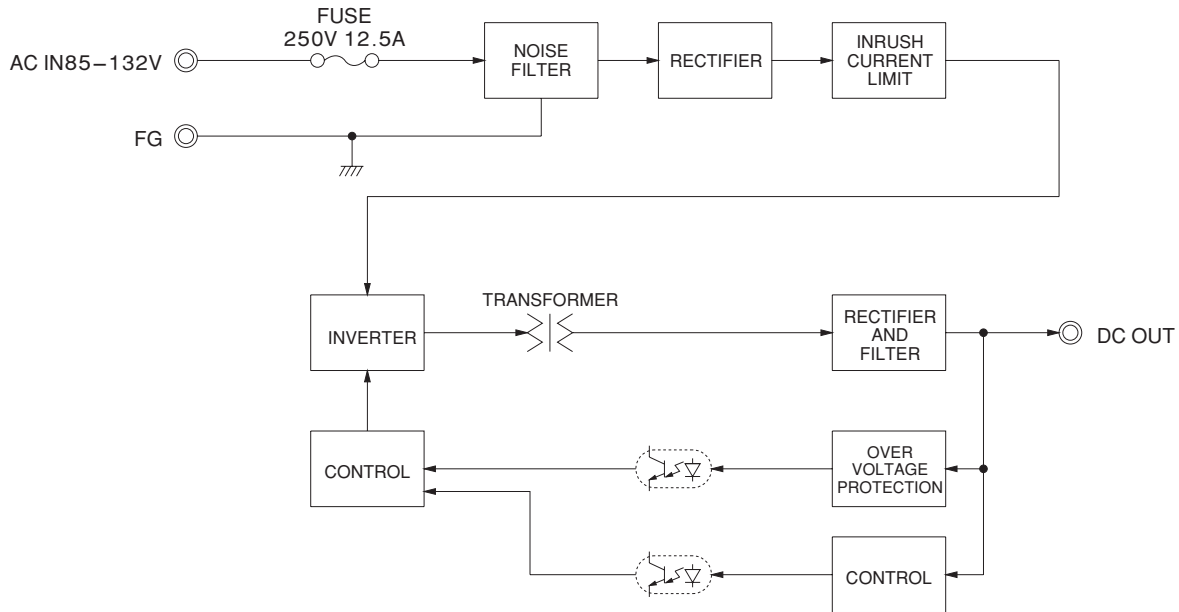
MODEL	LGA240A-24	LGA240A-24-H
MAX OUTPUT WATTAGE[W]	240	240
DC OUTPUT	24V 10A	24V 10 (Peak 12.5) A

## SPECIFICATIONS

	MODEL	LGA240A-24	LGA240A-24-H	
INPUT	VOLTAGE[V]	AC85 - 132 1 φ (Refer to Instruction Manual 1.1, and 3.2 Derating)		
	CURRENT[A]	ACIN 100V	5.0typ (Io=100%)	
	FREQUENCY[Hz]	47 - 440 (Refer to Instruction Manual 1.1)		
	EFFICIENCY[%]	ACIN 100V	86.5typ (Io=100%)	86.5typ (Io=100%)
	INRUSH CURRENT[A]	ACIN 100V	15 / 20 typ (Primary / Secondary Surge Current, Io=100%, More than 10sec. to re-start)	
	LEAKAGE CURRENT[ma]	0.5max (ACIN 100V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)		
OUTPUT	VOLTAGE[V]	24		
	CURRENT[A]	*3	10.0	10.0 (Peak 12.5)
	LINE REGULATION[mV]	96max		
	LOAD REGULATION[mV]	150max		
	RIPPLE[mVp-p]	0 to +40°C *1	120max	240max
		-10 - 0°C *1	160max	320max
	RIPPLE NOISE[mVp-p]	0 to +40°C *1	150max	300max
		-10 - 0°C *1	180max	360max
	TEMPERATURE REGULATION[mV]	0 to +40°C	240max	240max
		-10 to +40°C	290max	290max
	DRIFT[mV]	*2	96max	96max
	START-UP TIME[ms]	200max (ACIN 100V, Io=100%)		
	HOLD-UP TIME[ms]	20typ (ACIN 100V, Io=100%)		
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	Fixed ("Y" which can be adjusted the output is available as optional ± 10%)			
OUTPUT VOLTAGE SETTING[V]	23.00 - 25.00	23.00 - 25.00		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically		
	OVERVOLTAGE PROTECTION	27.60 - 35.00	27.60 - 35.00	
	OPERATING INDICATION	Not provided		
	REMOTE SENSING	Not provided		
ISOLATION	REMOTE ON/OFF	Not provided		
	INPUT-OUTPUT	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
ENVIRONMENT	OUTPUT-FG	AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)		
	OPERATING TEMP.,HUMID.AND ALTITUDE	-10 to +60°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max		
	STORAGE TEMP.,HUMID.AND ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max		
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis		
SAFETY AND NOISE REGULATIONS	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis		
	AGENCY APPROVALS	UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN		
	CONDUCTED NOISE	Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B		
OTHERS	CASE SIZE/WEIGHT	84 x 48.5 x 180mm [3.31 x 1.91 x 7.09 inches] (W x H x D) / 590g max (with chassis & cover : 880g max)		
	COOLING METHOD	Convection (Refer to Instruction Manual 3.2)		

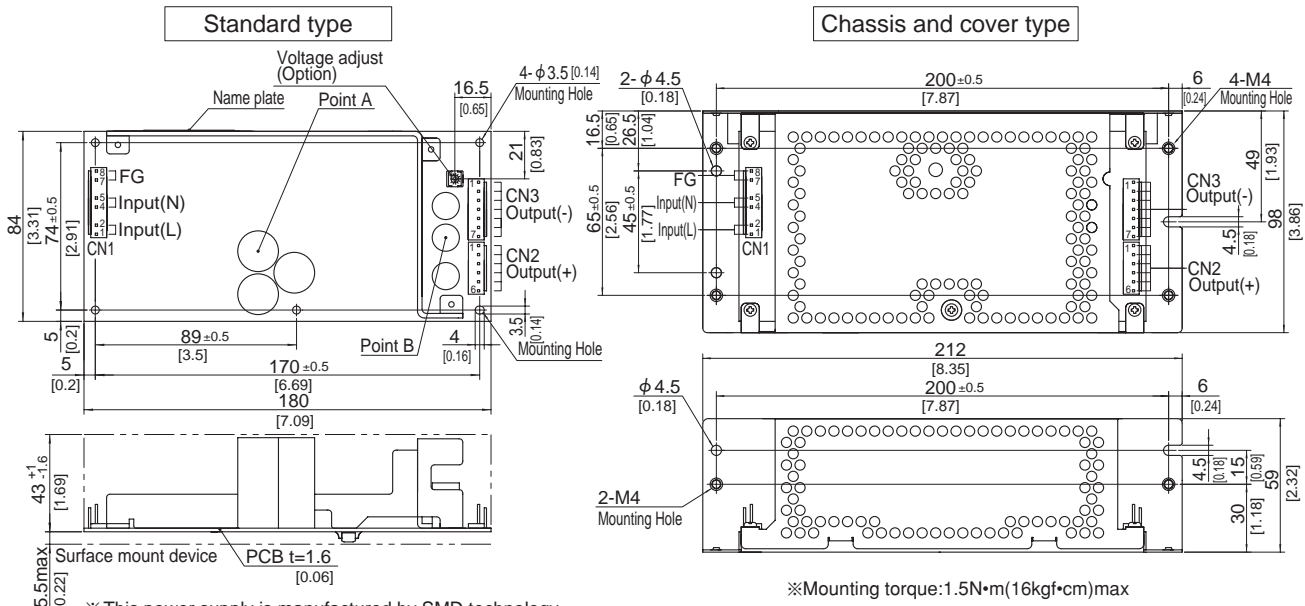
\*1 This is the value that measured on measuring board with capacitor of 22 μF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM-103).  
 \*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.  
 \*3 Peak loading for 10sec.And Duty 35% max.or less is acceptable if the total wattage is less than the rated wattage. Refer to instruction Manual 5. In detail.  
 \* Avoid prolonged use under over - load.  
 \* Parallel operation with other model is not possible.  
 \* Derating is required when operated with chassis and cover.  
 \* A sound may occur from power supply at pulse loading.

## Block diagram



LGA

## External view



- ※ This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care. Take care for SMD parts on the back to come in contact because of the vibration and not to break down.
- ※ Use the spacer of 8mm length or more.
- ※ 5 Mounting holes are existing.

I/O Connector	Mating connector	Terminal
CN1	7-1565036-6	Chain 1123721-1
		Loose 1318912-1
CN2	1-1123723-6	Chain 1123721-1
		Loose 1318912-1
CN3	1-1123722-7	Chain 1123721-1
		Loose 1318912-1

(Mfr:Tyco Electronics AMP)

- ※ I/O Connector is Mfr Tyco Electronics AMP
- ※ Option: -J1: VH(J.S.T) connector type. Refer to instruction Manual 5.

### <PIN CONNECTION>

CN1		CN2		CN3	
Pin No.	Input	Pin No.	Output	Pin No.	Output
1, 2	AC(L)	1 to 6	+V	1 to 7	-V
3					
4, 5	AC(N)				
6					
7, 8	FG				

※ Keep drawing current per pin below 5A for CN1, CN2 and CN3.

- ※ Tolerance : ±1 [±0.04]
- ※ Weight : 590g max (with chassis & cover : 880g max)
- ※ PCB material / thickness : CEM3 / 1.6mm [0.06]
- ※ Optional chassis and cover material : Electric galvanizing steel board.
- ※ Dimensions in mm, [ ]=inches

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