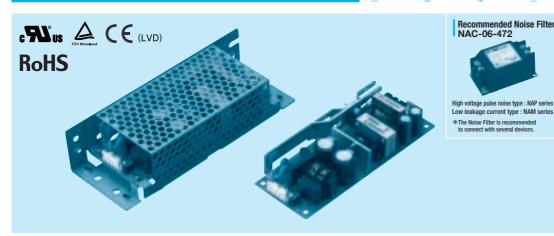
LGA50A-24



LGA50A-5

①Series name ②Single output Recommended Noise Filter NAC-06-472

3 Output wattage 4 100/120V input

⑤Output voltage ⑥Optional

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

LGA50A-24-H

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-5	LGA50A-12	LGA50A-24	LGA50A-24-H
MAX OUTPUT WATTAGE[W]	50	51.6	60	60
DC OUTPUT	5V 10A	12V 4.3A	24V 2.5A	24V 2.5 (Peak 3.2) A

LGA50A-12

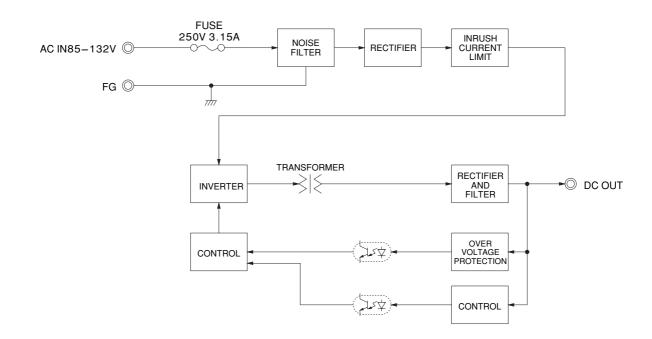
### **SPECIFICATIONS**

VOLTAGE[V]				Lancon	EGAGOA IZ	EGACOA E I	EGACOA ETTI		
FREQUENCY[Hz]		VOLTAGE[V]		AC85 - 132 1 φ or DC110 -	170 (Refer to Instruction Mar	ual 1.1, and 3.2 Derating)			
		CURRENT[A]	ACIN 100V	1.3typ (lo=100%)					
IRBNB CURRENT[A]   ACN 1001   79.0 typ (10=100%)   82.0 typ (10=100%)   85.0 typ (10=100%	INPLIT	FREQUENCY[Hz]		47 - 440 or DC (Refer to Instruction Manual 1.1)					
LEAKAGE CURRENT[ma]   0.5max (ACIN 100V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)	INPUT	EFFICIENCY[%]	ACIN 100V	79.0typ (lo=100%)	82.0typ (lo=100%)	85.0typ (Io=100%)	85.0typ (lo=100%)		
VOLTAGE[V]   5   12   24   24   24		INRUSH CURRENT[A]	ACIN 100V	30typ (Io=100%), (At cold st	art), (Ta= 25℃)				
CURRENT[A]   10.0   4.3   2.5   2.5 (Peak 3.2)		LEAKAGE CURRENT	Γ[mA]	0.5max (ACIN 100V, 60Hz, I	o=100%, According to IEC60	950-1 and DEN-AN)			
LINE REGULATION[mV]	_	VOLTAGE[V]		5	12	24	24		
COUTPUT   CO	A	CURRENT[A]	*3	10.0	4.3	2.5	2.5 (Peak 3.2)		
Note		LINE REGULATION[1	mV]	20max	48max	96max	96max		
Not provided   No		LOAD REGULATION	[mV]	40max	100max	150max	150max		
16.0 cs   140max   160max   320max		RIDDI F[mVn-n]	0 to +50°C * 1/4	80max	120max	120max	240max		
OUTPUT   TIME[ms]   10.00   16.00		nir r LL[iii v p-p]	-10 - 0℃ *1	140max	160max	160max	320max		
TEMPERATURE REGULATION[m]   10 - 9C *   160 max   180 max   240		RIDDI E NOISE[mVn-n]	0 to +50°C * 4		150max	150max	300max		
TEMPERATURE RESULATION(NI)   106-80°C+ 60 max   150 max   290 max   290 max   290 max   290 max   290 max   96 max	OUTPUT	HIFFEE NOISE[IIIVP-P]	-10 - 0℃ *1	160max	180max	180max	360max		
Comparison   Co		TEMPERATURE REGULATION(m)/I	0 to +50°C *4	50max	120max	240max	240max		
START-UP TIME[ms]   200max (ACIN 100V, Io=100%)		TEMPERATURE REGULATION[IIV]	-10 to +50°C*4	60max	150max	290max	290max		
HOLD-UP TIME[ms]   20typ (ACIN 100V, Io=100%)		DRIFT[mV] *2				96max	96max		
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]   Fixed ("Y"which can be adjusted the output is available as optional ± 10%)		START-UP TIME[ms]							
OUTPUT VOLTAGE SETTING[V]         4.90 - 5.30         11.50 - 12.50         23.00 - 25.00         23.00 - 25.00           PROTECTION OVERCURRENT PROTECTION         Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically           OVERVOLTAGE PROTECTION 5.75 - 7.00         13.80 - 16.80         27.60 - 35.00         27.60 - 35.00           OVERVOLTAGE PROTECTION 5.75 - 7.00         13.80 - 16.80         27.60 - 35.00         27.60 - 35.00           REMOTE SENSING REMOTE ON/OFF         Not provided           REMOTE ON/OFF         Not provided           INPUT-OUTPUT         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)           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 DERATING CURVE), 3.000m (10.000feet) max           STORAGE TEMP.HUMID.AND ALTITUDE         -10 to +60°C, 20 - 90%RH (Non condensing), 9.000m (30.000feet) max           VIBRATION         10 - 55Hz, 19.6m/s² (20G), 3minutes period. 60minutes each along X, Y and Z axis           MPACT         196.1m/s² (20G), 11ms, once each X, Y and Z axis		HOLD-UP TIME[ms]							
OVERCURRENT PROTECTION Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically OVERVOLTAGE PROTECTION 5.75 - 7.00   13.80 - 16.80   27.60 - 35.00   27.60 - 35.00 OPERATING INDICATION Not provided REMOTE SENSING Not provided REMOTE ON/OFF Not provided INPUT-OUTPUT AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) OUTPUT-FG AC2.000V 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 DERATING CURVE), 3.000m (10.000feet) max STORAGE TEMP,HUMID.AND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing), 9.000m (30,000feet) max STORAGE TEMP,HUMID.AND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing), 9.000m (30,000feet) max IMPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis IMPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis AGENCY APPROVALS UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN CE MARKING Low Voltage Directive CONDUCTED NOISE Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B  CASE SIZE/WEIGHT 50 × 28.5 × 132mm (W × H × D) / 160g max (without chassis and cover)		OUTPUT VOLTAGE ADJUSTMENT RANGE[V]							
PROTECTION CIRCUIT AND CIRCUIT AND OPERATING INDICATION Not provided REMOTE SENSING Not provided REMOTE ON/OFF NOT PROVIDE ON/OFF		OUTPUT VOLTAGE SET	TING[V]	4.90 - 5.30	11.50 - 12.50	23.00 - 25.00	23.00 - 25.00		
CIRCUIT AND OTHERS  OPERATING INDICATION Not provided REMOTE SENSING Not provided 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) 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 DERATING CURVE), 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/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis IMPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis  SAFETY AND NOISE REGULATIONS REGULATIONS CE MARKING Low Voltage Directive CONDUCTED NOISE Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B  CASE SIZE/WEIGHT 50 × 28.5 × 132mm (W × H × D) / 160g max (without chassis and cover)		OVERCURRENT PROT	ECTION	Works over 105% of rating (	works over 101% of peak cu	rent at option -H) and recove	rs automatically		
REMOTE SENSING   Not provided	PROTECTION			5.75 - 7.00	13.80 - 16.80	27.60 - 35.00	27.60 - 35.00		
REMOTE ON/OFF   Not provided		OPERATING INDICATION		Not provided					
INPUT-OUTPUT   AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)	OTHERS	REMOTE SENSING		Not provided					
INPUT-FG OUTPUT-FG AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)  OPERATING TEMP,HUMID.AND ALTITUDE OPERATING TEMP,HUMID.AND ALTITUDE -10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 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 IMPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis  AGENCY APPROVALS UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN  NOISE REGULATIONS REGULATIONS CE MARKING Low Voltage Directive CONDUCTED NOISE COMPLIES CASE SIZE/WEIGHT 50 ×28.5 ×132mm (W×H×D) / 160g max (without chassis and cover)		REMOTE ON/OFF		Not provided					
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 DERATING CURVE), 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/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis  IMPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis  AGENCY APPROVALS UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN  CE MARKING CONDUCTED NOISE Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B  CASE SIZE/WEIGHT 50 × 28.5 × 132mm (W×H×D) / 160g max (without chassis and cover)									
ENVIRONMENT  ENVIR	ISOLATION			AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)					
ENVIRONMENT    STORAGE TEMP,HUMID.AND ALTITUDE   -20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max   VIBRATION   10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis   IMPACT   196.1m/s² (20G), 11ms, once each X, Y and Z axis   AGENCY APPROVALS   UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN     NOISE REGULATIONS   CONDUCTED NOISE   Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B   CASE SIZE/WEIGHT   50 × 28.5 × 132mm (W×H×D) / 160g max (without chassis and cover)									
VIBRATION  10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis  IMPACT  196.1m/s² (20G), 11ms, once each X, Y and Z axis  AGENCY APPROVALS  UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN  CE MARKING  CONDUCTED NOISE  CONDUCTED NOISE  CASE SIZE/WEIGHT  10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis  UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN  CE MARKING  CONDUCTED NOISE  CONDUCTED NOISE  CASE SIZE/WEIGHT  50 × 28.5 × 132mm (W×H×D) / 160g max (without chassis and cover)							10,000feet) max		
VIBRATION 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis  IMPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis  SAFETY AND NOISE REGULATIONS  CE MARKING Low Voltage Directive  CONDUCTED NOISE Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B  CASE SIZE/WEIGHT 50 x 28.5 x 132mm (Wx H x D) / 160g max (without chassis and cover)	ENVIRONMENT		ALTITUDE	9, 1					
SAFETY AND NOISE REGULATIONS  AGENCY APPROVALS  UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN  Low Voltage Directive  CONDUCTED NOISE  CASE SIZE/WEIGHT  OTHERS  UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN  Low Voltage Directive  CONDUCTED NOISE  CASE SIZE/WEIGHT  50 x 28.5 x 132mm (W x H x D) / 160g max (without chassis and cover)	2.11.11.0.11.11.2.11.			· · · · · · · · · · · · · · · · · · ·					
NOISE REGULATIONS  CE MARKING  CONDUCTED NOISE  CONDUCTED									
NOISE REGULATIONS  CONDUCTED NOISE  COND	SAFETY AND		-S		50-1), EN60950-1 Complies w	rith DEN-AN			
CONDUCTED NOISE Complies with FCC-B, VCCI-B, CISPR-B, ENSSU11-B, ENSSU22-B  CASE SIZE/WEIGHT 50 x 28.5 x 132mm (W x H x D) / 160g max (without chassis and cover)	NOISE			•					
OTHERS				·					
COOLING METHOD Convection	OTHERS			•	D) / 160g max (without chase	sis and cover)			
		COOLING METHOD		Convection					

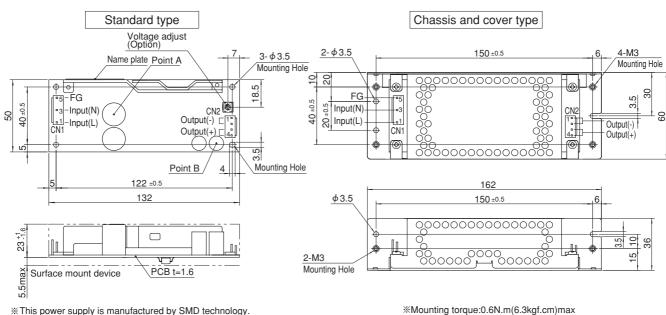
- \*1 This is the value that measured on measuring board with capacitor of 22 µ F at 150mm from
  - output terminal.

    Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN:
- \*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25  $^{\circ}$ C, with the input voltage held constant at the rated input/output.
- 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.
- Only output 24VDC model is applied that the upper temperature limit is  $45^{\circ}\text{C}$ .
- 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.



#### **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.

- **X** Use the spacer of 8mm length or more.
- **%4** Mounting holes are existing.

Refer to instruction Manual 5.

· · ··································								
I/O Connector		Mating connector	Terminal					
CNI	1 1100704 0	1 1100700 F	Chain	1123721-1				
CN1 1-1123724-3	1-1123/22-3	Loose	1318912-1					
0110	4 4400700 4	4 4400700 4	Chain	1123721-1				
CN2 1	1-1123723-4	1-1123722-4	Loose	1318912-1				
	CN1		CN1 1-1123724-3 1-1123722-5	CN1 1-1123724-3 1-1123722-5 Chain Loose Chain				

(Mfr:Tyco Electronics AMP)

%I/O Connector is Mfr Tyco Electronics AMP \*\*Option:-J1:VH(J.S.T) connector type

<PIN CONNECTION>

CN1		CN2	
Pin No.	Input	Pin No.	Output
1	AC(L)		
2		1, 2	-V
3	AC(N)		
4		3, 4	+V
5	FG	0, 4	

«Keep drawing current per pin below 5A for CN2

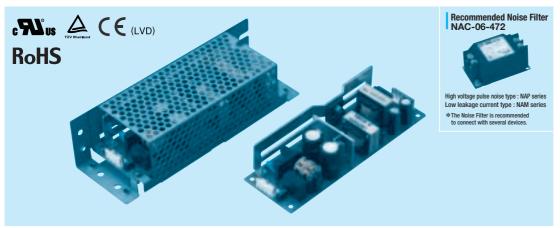
- %Tolerance: ±1
- Weight:160g max (without chassis and cover)
- %PCB material / thickness:CEM3 / 1.6mm
- \*Optional chassis and cover material: Electric galvanizing steel board.
- \*Dimensions is mm

E-83

LGA75A-5

LGA75A-24





①Series name ②Single output

3 Output wattage 4 100/120V input

⑤Output voltage ⑥Optional

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

LGA75A-24-H

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-5	LGA75A-12	LGA75A-24	LGA75A-24-H
MAX OUTPUT WATTAGE[W]	75	75.6	76.8	76.8
DC OUTPUT	5V 15A	12V 6.3A	24V 3.2A	24V 3.2 (Peak 4.2) A

LGA75A-12

# **SPECIFICATIONS**

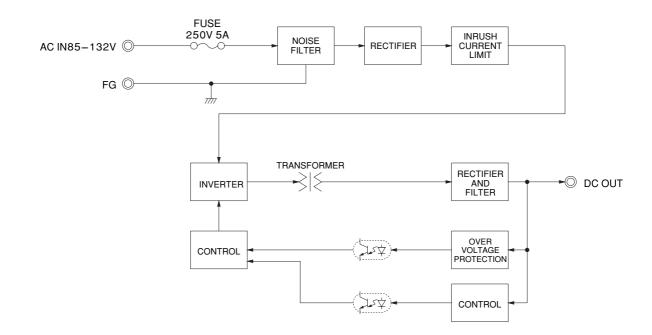
LGA

	VOLTAGE[V]		AC85 - 132 1 φ or DC110 -	- 170 (Refer to Instruction M	Manual 1.1, and 3.2 Derating)		
	CURRENT[A]	ACIN 100V	1.7typ (lo=100%)				
INPUT	FREQUENCY[Hz]		47 - 440 or DC (Refer to Instruction Manual 1.1)				
INFUI	EFFICIENCY[%]	ACIN 100V	79.0typ (lo=100%)	83.0typ (lo=100%)	86.0typ (lo=100%)	86.0typ (Io=100%)	
	INRUSH CURRENT[A]	ACIN 100V	30typ (lo=100%), (At cold s	start), (Ta= 25°C)			
	LEAKAGE CURREN	T[mA]	0.5max (ACIN 100V, 60Hz,	Io=100%, According to IEC	60950-1 and DEN-AN)		
_	VOLTAGE[V]		5	12	24	24	
	CURRENT[A]	*3	15.0	6.3	3.2	3.2 (Peak 4.2)	
	LINE REGULATION[I	mV]	20max	48max	96max	96max	
	LOAD REGULATION	[mV]	40max	100max	150max	150max	
	RIPPLE[mVp-p]	0 to +50°C *1	80max	120max	120max	240max	
	KIPPLE[IIIVP-P]	-10 - 0℃ *1	140max	160max	160max	320max	
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	150max	150max	300max	
OUTPUT	KIPPLE NOISE[IIIVP-P]	-10 - 0℃ *1	160max	180max	180max	360max	
	TEMPERATURE REGULATION(mV)	0 to +50℃	50max	120max	240max	240max	
	IEMPERATURE REGULATION[IIIV]	-10 to +50℃	60max	150max	290max	290max	
	DRIFT[mV]	*2	20max	48max	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 SET	TING[V]	4.90 - 5.30	11.50 - 12.50	23.00 - 25.00	23.00 - 25.00	
	OVERCURRENT PROT	ECTION	Works over 105% of rating	(works over 101% of peak	current at option -H) and rec	covers automatically	
PROTECTION	OVERVOLTAGE PROTECTION		5.75 - 7.00	13.80 - 16.80	27.60 - 35.00	27.60 - 35.00	
CIRCUIT AND	OPERATING INDICATION		Not provided				
OTHERS	REMOTE SENSING		Not provided				
	REMOTE ON/OFF		Not provided				
	INPUT-OUTPUT		AC2,000V 1minute, Cutoff of	current = 10mA, DC500V 5	0MΩ min (At Room Tempera	ature)	
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)				
	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 DERATING CURVE), 3,000m (10,000feet) max				
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max				
ENVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s² (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	AGENCY APPROVAL	_S	UL60950-1, C-UL (CSA609	50-1), EN60950-1 Complie	s with DEN-AN		
SAFETY AND NOISE	CE MARKING		Low Voltage Directive	· · ·			
REGULATIONS	CONDUCTED NOISE	:	Complies with FCC-B, VCC	CI-B, CISPR-B, EN55011-B	EN55022-B		
OTUEDO	CASE SIZE/WEIGHT		50 × 34.5 × 150mm (W × H >	(D) / 200g max (without ch	assis and cover)		
OTHERS	COOLING METHOD		Convection				

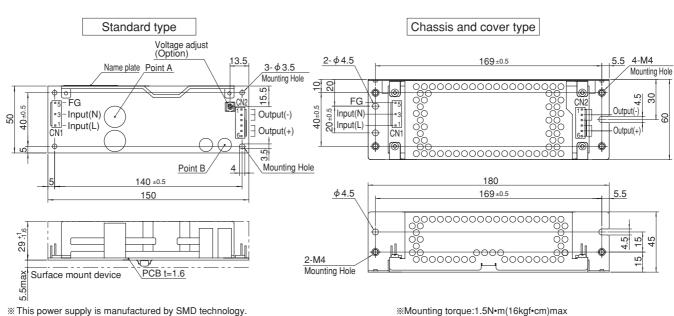
- This is the value that measured on measuring board with capacitor of 22  $\mu$ F at 150mm from output terminal.
- Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM-103).

  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.
- 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.
- E-84



#### **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.
- ¾ 4 Mounting holes are existing

• \	+ Mounting notes are existing.							
	I/O Connector		Mating connector	Т	erminal			
	CNI	1 1100704 0	1-1123722-5	Chain	1123721-1			
	CN1 1-1123724-3	1-1123/24-3	1-1123722-5	Loose	1318912-1			
	CNIO	1-1123723-6	1-1123722-6	Chain	1123721-1			
	CINZ	1-1123723-6	1-1123722-0	Loose	1318912-1			

(Mfr:Tyco Electronics AMP)

<PIN CONNECTION>

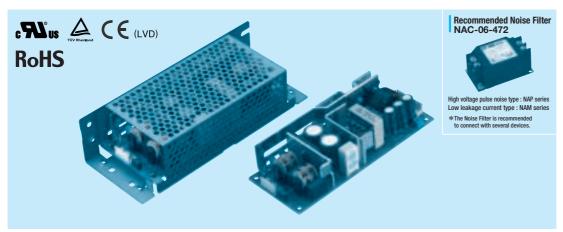
CN1		(	CN2		
Pin No.	Input		Pin No.	Output	
1	AC(L)				
2			1 to 3	-V	
3	AC(N)				
4			4 to 6	+V	
5	FG		4 10 0		

- \*Keep drawing current per pin below 5A for CN2.
- %Tolerance:±1
- \*Weight:200g max (without chassis and cover)
- %PCB material / thickness:CEM3 / 1.6mm
- \*Optional chassis and cover material: Electric galvanizing steel board.
- \*Dimensions is mm

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

LGA100A-24





①Series name ②Single output

3 Output wattage 4 100/120V input

⑤Output voltage ⑥Optional

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

LGA100A-24-H

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.

LGA100A-5-Y

MODEL	LGA100A-5-Y	LGA100A-12	LGA100A-24	LGA100A-24-H
MAX OUTPUT WATTAGE[W]	100	102	103.2	103.2
DC OUTPUT	5V 20A	12V 8.5A	24V 4.3A	24V 4.3 (Peak 5.4) A

LGA100A-12

### **SPECIFICATIONS**

LGA

	WODEL		EGATIOUA U I	EGATOUA IZ	EGITTOON ET	EGATIONA ETTI	
	VOLTAGE[V]		AC85 - 132 1 φ or DC110 -	170 (Refer to Instruction Ma	anual 1.1, and 3.2 Derating)		
	CURRENT[A]	ACIN 100V	2.4typ (lo=100%)				
INPUT	FREQUENCY[Hz]		47 - 440 or DC (Refer to Instruction Manual 1.1)				
INPUT	EFFICIENCY[%]	ACIN 100V	80.0typ (lo=100%)	83.0typ (lo=100%)	85.5typ (Io=100%)	85.5typ (Io=100%)	
	INRUSH CURRENT[A]	ACIN 100V	15typ (lo=100%, More than	10sec. to re-start)			
	LEAKAGE CURREN	T[mA]	0.5max (ACIN 100V, 60Hz,	lo=100%, According to IEC6	60950-1 and DEN-AN)		
	VOLTAGE[V]		5	12	24	24	
	CURRENT[A]	*3	20.0	8.5	4.3	4.3 (Peak 5.4)	
	LINE REGULATION[	mV]	20max	48max	96max	96max	
	LOAD REGULATION	[mV]	40max	100max	150max	150max	
	RIPPLE[mVp-p]	0 to +50°C *1	80max	120max	120max	240max	
	RIPPLE[IIIVP-p]	-10 - 0°C *1	140max	160max	160max	320max	
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	150max	150max	300max	
OUTPUT	RIPPLE NOISE[IIIVP-P]	-10 - 0°C *1	160max	180max	180max	360max	
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	240max	240max	
	TEMPERATURE REGULATION[IIIV]	-10 to +50℃	60max	150max	290max	290max	
	DRIFT[mV] *2		20max	48max	96max	96max	
	START-UP TIME[ms]		200max (ACIN 100V, lo=100%)				
	HOLD-UP TIME[ms]		20typ (ACIN 100V, lo=100%)				
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		4.5 - 5.5 Fixed ("Y"which can be adjusted the output is available as optional $\pm 10\%$ )				
	<b>OUTPUT VOLTAGE SET</b>	TING[V]	5.00 - 5.15	11.50 - 12.50	23.00 - 25.00	23.00 - 25.00	
	OVERCURRENT PROT	ECTION	Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically				
PROTECTION	OVERVOLTAGE PROTECTION		5.75 - 7.00	13.80 - 16.80	27.60 - 35.00	27.60 - 35.00	
<b>CIRCUIT AND</b>	OPERATING INDICATION		Not provided				
OTHERS	REMOTE SENSING		Not provided				
	REMOTE ON/OFF		Not provided				
	INPUT-OUTPUT		AC2,000V 1minute, Cutoff of	current = 10mA, DC500V 50	$M\Omega$ min (At Room Temperat	ure)	
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)				
	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 DERATING CURVE), 3,000m (10,000feet) max				
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max				
ENVIRONMENT	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, on	ce each X, Y and Z axis			
SAFETY AND	AGENCY APPROVAL	_S	UL60950-1, C-UL (CSA609	50-1), EN60950-1 Complies	with DEN-AN		
NOISE	CE MARKING		Low Voltage Directive				
REGULATIONS	CONDUCTED NOISE		Complies with FCC-B, VCC	I-B, CISPR-B, EN55011-B,	EN55022-B		
OTHERS	CASE SIZE/WEIGHT		62 x 35.5 x 155mm (W x H >	(D) / 300g max (without cha	ssis and cover)		
OTHERS	COOLING METHOD		Convection				
			Convection				

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

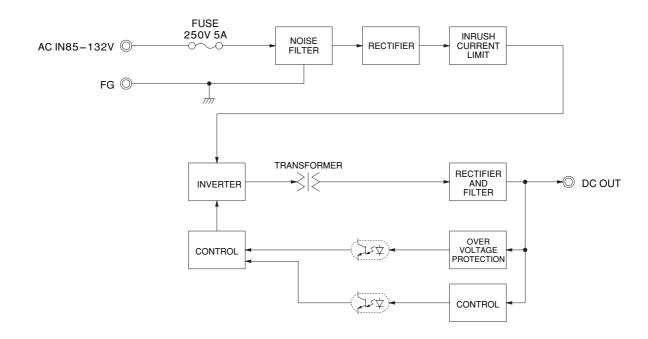
  Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.
- Peak loading for 10sec. And Duty 35% max.or less is acceptable if the total wattage is less than the rated wattage.
- Refer to instruction Manual 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.

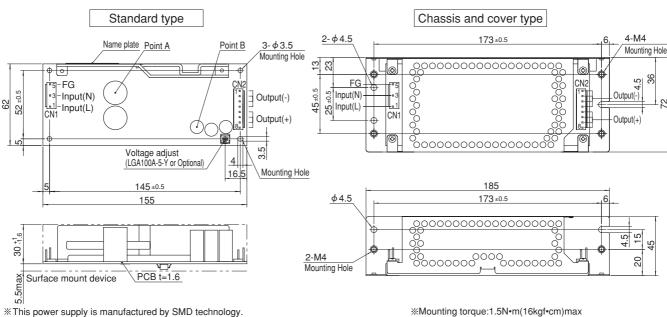
LGA



### **Block diagram**



#### **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.
- **X** Use the spacer of 8mm length or more.
- \*4 Mounting holes are existing.

I/O Connector		Mating connector	Terminal	
CNI	1 1100704 0	1-1123722-5	Chain	1123721-1
CNI	CN1 1-1123724-3	1-1123722-5	Loose	1318912-1
ONIO	1-1123723-8	1-1123722-8	Chain	1123721-1
CN2	1-1123723-8	1-1123722-8	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.

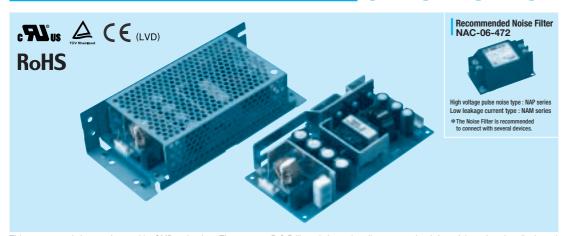
<PIN CONNECTION>

CN1 CN2					
Pin No.	Input		Pin No.	Output	
1	AC(L)				
2			1 to 4	-V	
3	AC(N)				
4			5 to 8	+V	
5	FG		0 10 0		

- \*Keep drawing current per pin below 5A for CN2.
- %Tolerance:±1
- Weight:300g max (without chassis and cover)
- %PCB material / thickness:CEM3 / 1.6mm
- \*Optional chassis and cover material: Electric galvanizing steel board.
- **%Dimensions** is mm

LGA150A-24





①Series name ②Single output

3 Output wattage 4 100/120V input

⑤Output voltage ⑥Optional

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

LGA150A-24-H

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.

LGA150A-5-Y

MODEL	LGA150A-5-Y	LGA150A-12	LGA150A-24	LGA150A-24-H
MAX OUTPUT WATTAGE[W]	150	150	151.2	151.2
DC OUTPUT	5V 30A	12V 12.5A	24V 6.3A	24V 6.3 (Peak 7.9) A

LGA150A-12

# **SPECIFICATIONS**

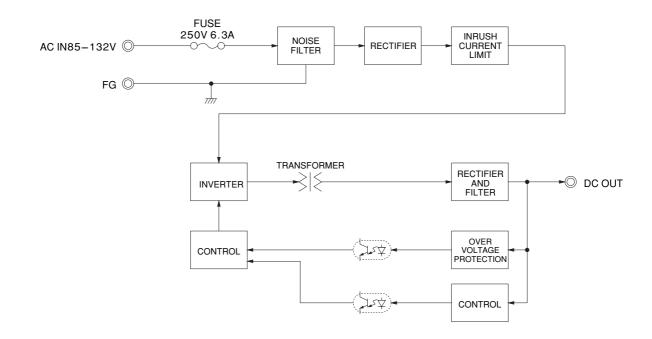
LGA

INPUT	VOLTAGE[V]		AC85 - 132 1 φ or DC110 - 170 (Refer to Instruction Manual 1.1, and 3.2 Derating)						
	CURRENT[A] ACIN 100V		3.6typ (lo=100%)						
	FREQUENCY[Hz]		47 - 440 or DC (Refer to Instruction Manual 1.1)						
	EFFICIENCY[%]	ACIN 100V	82.0typ (lo=100%)	84.5typ (lo=100%)	87.0typ (lo=100%)	87.0typ (lo=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)						
_	VOLTAGE[V]		5	12	24	24			
	CURRENT[A] *3		30.0	12.5	6.3	6.3 (Peak 7.9)			
	LINE REGULATION[I	mV]	20max	48max	96max	96max			
	LOAD REGULATION	[mV]	40max	100max	150max	150max			
	RIPPLE[mVp-p]	0 to +40°C *1	80max	120max	120max	240max			
	niPPLE[iiivp-p]	-10 - 0℃ *1	140max	160max	160max	320max			
	RIPPLE NOISE[mVp-p]	0 to +40°C *1	120max	150max	150max	300max			
OUTPUT	MIFFLE NOISE[IIIVP-P]	-10 - 0℃ *1	160max	180max	180max	360max			
	TEMPERATURE REGULATION[mV]	0 to +40℃	50max	120max	240max	240max			
	TEMPERATURE REGULATION[IIIV]	-10 to +40℃	60max	150max	290max	290max			
	DRIFT[mV]	*2	20max	48max	96max	96max			
	START-UP TIME[ms]		200max (ACIN 100V, Io=100%)						
	HOLD-UP TIME[ms]		20typ (ACIN 100V, lo=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		4.5 - 5.5 Fixed ("Y"which can be adjusted the output is available as optional $\pm 10\%$ )						
	OUTPUT VOLTAGE SETTING[V]		5.00 - 5.15	11.50 - 12.50	23.00 - 25.00	23.00 - 25.00			
	OVERCURRENT PROT	ECTION	Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically						
PROTECTION	OVERVOLTAGE PROTECTION		5.75 - 7.00	13.80 - 16.80	27.60 - 35.00	27.60 - 35.00			
CIRCUIT AND	OPERATING INDICA	TION	Not provided						
OTHERS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided						
	INPUT-OUTPUT		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)						
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)						
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50M $\Omega$ min (At Room Temperature)						
	OPERATING TEMP.,HUMID.AND	ALTITUDE	-10 to +60℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max						
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max						
ENVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis						
SAFFTY AND	AGENCY APPROVAL	_S	UL60950-1, C-UL (CSA6095	50-1), EN60950-1 Complies w	vith DEN-AN	<u> </u>			
SAFETY AND NOISE	CE MARKING		Low Voltage Directive						
REGULATIONS	CONDUCTED NOISE		Complies with FCC-B, VCC	I-B, CISPR-B, EN55011-B, E	N55022-B				
OTHERS	CASE SIZE/WEIGHT		75 x 39 x 160mm (W x H x D	) / 420g max (without chassis	s and cover)				
UINERS	COOLING METHOD		Convection						

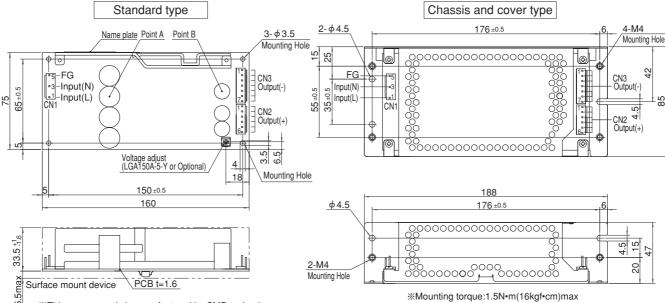
- This is the value that measured on measuring board with capacitor of 22  $\mu$ F at 150mm from output terminal.
- Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM-103).

  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.
- 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.
- E-88



#### **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		1-1123722-5	Chain 1123721				
CN1  1-1123	1-1123724-3	1-1123722-5	Loose	1318912-1			
CN2 1-1	4 4400700 0	1-1123722-6	Chain	1123721-1			
	1-1123723-6		Loose	1318912-1			
CN3 1-1123723-7		1-1123722-7	Chain	1123721-1			
CN3	1-1123723-7	1-1123722-7	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.

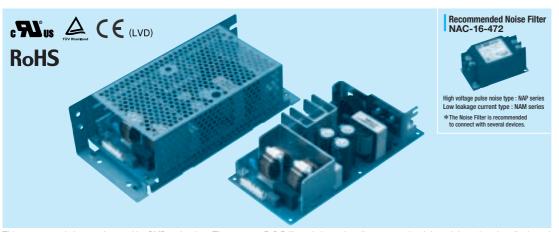
- <PIN CONNECTION>

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

- \*Keep drawing current per pin below 5A for CN2,CN3.
- %Tolerance:±1
- Weight:420g max (without chassis and cover)
- %PCB material / thickness:CEM3 / 1.6mm
- ※Optional chassis and cover material: Electric galvanizing steel board.
- ※Dimensions is mm

LGA240A-24-H





①Series name ②Single output

3 Output wattage 4 100/120V input

⑤Output voltage ⑥Optional

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.

LGA240A-24

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

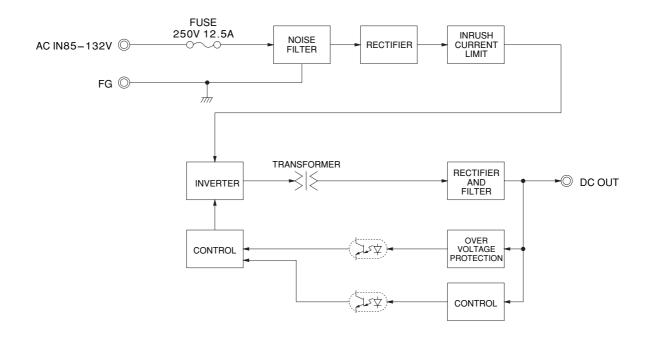
# **SPECIFICATIONS**

INPUT	VOLTAGE[V]		AC85 - 132 1 φ or DC110 - 170 (Refer to Instruction Manual 1.1, and 3.2 Derating)				
	CURRENT[A] ACIN 100V		5.0typ (lo=100%)				
	FREQUENCY[Hz]		47 - 440 or DC (Refer to Instruction Manual 1.1)				
	EFFICIENCY[%]	ACIN 100V	86.5typ (lo=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)				
	VOLTAGE[V]		24	24			
4	CURRENT[A]	*3	10.0	10.0 (Peak 12.5)			
	LINE REGULATION[1	mV]	96max	96max			
	LOAD REGULATION	[mV]	150max	150max			
	RIPPLE[mVp-p]	0 to +40°C <b>*</b> 1	120max	240max			
	nirrec[iiivp-p]	-10 - 0℃ *1	160max	320max			
	RIPPLE NOISE[mVp-p]	0 to +40°C <b>*</b> 1	150max	300max			
OUTPUT	HIPPLE NOISE[IIIVP-P]	-10 - 0℃ *1	180max	360max			
	TEMPERATURE REGULATION[mV]	0 to +40℃	240max	240max			
	TEMPERATURE REGULATION[IIV]	-10 to +40℃	290max	290max			
	DRIFT[mV]	*2	96max	96max			
	START-UP TIME[ms]		200max (ACIN 100V, lo=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 SET	TING[V]	23.00 - 25.00	23.00 - 25.00			
	OVERCURRENT PROTECTION		Works over 105% of rating (works over 101% of peak cur	rent at option -H) and recovers automatically			
PROTECTION			27.60 - 35.00 27.60 - 35.00				
CIRCUIT AND	OPERATING INDICATION		Not provided				
OTHERS	REMOTE SENSING		Not provided				
	REMOTE ON/OFF		Not provided				
	INPUT-OUTPUT		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)				
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (At Room Temperature)				
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50M $\Omega$ min (At Room Temperature)				
	OPERATING TEMP.,HUMID.AND		-10 to +60°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max				
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max				
LIVITIONIMENT	VIBRATION		10 - 55Hz, 19.6m/s² (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	AGENCY APPROVAL	_S	UL60950-1, C-UL (CSA60950-1), EN60950-1 Complies with DEN-AN				
SAFETY AND NOISE REGULATIONS	CE MARKING		Low Voltage Directive				
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B				
OTHERS	CASE SIZE/WEIGHT		84 x 48.5 x 180mm (W x H x D) / 590g max (without chassis and cover)				
	COOLING METHOD		Convection				
OTHERS				sis and cover)			

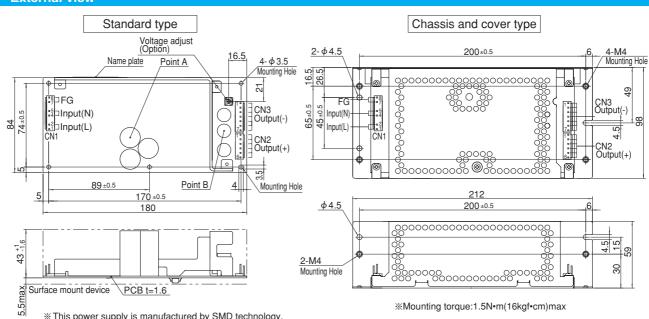
- This is the value that measured on measuring board with capacitor of 22  $\mu$ F at 150mm from output terminal.
- Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM-103).

  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.
- 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.
- E-90



#### **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		
CNI	7-1565036-6	1-1123722-8	Chain	1123721-1	
CIVI	7-1363036-6	1-1123/22-8	Loose	1318912-1	
CNIO	1-1123723-6	1-1123722-6	Chain	1123721-1	
CINZ			Loose	1318912-1	
ONIO	4 4400700 7	1-1123722-7	Chain	1123721-1	
CIN3	1-1123723-7	1-1123/22-/	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 C			CN2		CN3	
Pin No.	Input		Pin No.	Output	Pin No.	Output
1, 2	AC(L)					
3						
4, 5	AC(N)		1 to 6	+V	1 to 7	-V
6						
7, 8	FG					

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

- Weight:590g max (without chassis and cover)
- %PCB material / thickness:CEM3 / 1.6mm
- \*Optional chassis and cover material: Electric galvanizing steel board.
- ※Dimensions is mm

LGA