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PJA100F

100





Example recommended EMI/EMC filter NAC-04-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ①Series name ②Single output ③Output wattage ④Universal input
- ⑤Output voltage
- Optional *6
 C: with Coating
 R: Remote on/off
 - (Required external
- power source)
 J : Connector interface
- T : Vertical terminal block N2: with DIN rail

See 5.1 in Instruction Manual.

*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

SPECIFICATIONS

* Please consider "PBA100F-5-N" about 5V output with case cover.

				100F-5-N" about 5V outpu				
	MODEL		PJA100F-12	PJA100F-15	PJA100F-24	PJA100F-36	PJA100F-48	
	VOLTAGE[V]		AC85 - 264 1 φ (Outpu	t derating is required at a	AC85V - 115V. See 1.1 a	and 3.2 in Instruction Ma	nual)	
	ACIN 100V		1.2typ (lo=90%)					
	CURRENT[A]	ACIN 115V	1.1typ (lo=100%)					
		ACIN 230V	0.6typ (lo=100%)					
	FREQUENCY[Hz]		50 / 60 (47 - 63)					
		ACIN 100V	82typ (Io=90%)	83typ (Io=90%)	85typ (lo=90%)	86typ (lo=90%)	86typ (lo=90%)	
	EFFICIENCY[%]	ACIN 115V	82typ (lo=100%)	83typ (Io=100%)	85typ (lo=100%)	86typ (lo=100%)	86typ (lo=100%)	
NPUT		ACIN 230V	85typ (lo=100%)	86typ (Io=100%)	88typ (lo=100%)	89typ (lo=100%)	89typ (lo=100%)	
		ACIN 100V	0.98typ (lo=90%)					
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)					
		ACIN 230V	0.90typ (lo=100%) * F	Power factor correction is	stopped at AC250V or	more.		
		ACIN 100V	16typ (lo=90%) Ta=25°	C at cold start				
	INRUSH CURRENT[A]	ACIN 115V	16typ (lo=100%) Ta=25	°C at cold start				
		ACIN 230V	32typ (lo=100%) Ta=25	°C at cold start				
	LEAKAGE CURRENT	[mA]	0.75max (ACIN 240V, 6	60Hz, Io=100%, According	ng to IEC62368-1 and D	EN-AN)		
ĺ	VOLTAGE[V]		12	15	24	36	48	
	OUDDENT	ACIN 85-115V	Output derating is requ	ired at ACIN 115V or les	s (refer to instruction ma	anual 3.2)	•	
	CURRENT[A]	ACIN 115V-264V	8.4	6.7	4.3	2.8	2.1	
ľ	WATTA OFF	ACIN 85-115V	Output derating is requ	ired at ACIN 115V or les	s (refer to instruction ma	anual 3.2)		
	WATTAGE[W]	ACIN 115V-264V	100.8	100.5	103.2	100.8	100.8	
	LINE REGULATION[n	1V] *3	48max	60max	96max	144max	192max	
	LOAD REGULATION	lo=30 to 100%	100max	120max	150max	150max	300max	
	[mV] *3	lo=0 to 30%	Burst operation (Please	contact us about detail)			
	RIPPLE[mVp-p]	0 to +40°C	120max	120max	120max	150max	150max	
	*1	-10 to 0℃	160max	160max	160max	200max	400max	
UTPUT	lo: load factor	lo=0 to 30%	500max	500max	500max	500max	500max	
	RIPPLE NOISE[mVp-p]	0 to +40°C	150max	150max	150max	200max	200max	
	*1	-10 to 0℃	180max	180max	180max	240max	500max	
	lo: load factor		600max	600max	600max	600max	600max	
F		0 to +40°C	120max	150max	240max	360max	480max	
	TEMPERATURE REGULATION[mV]	-10 to +40°C	180max	180max	290max	440max	600max	
ŀ	DRIFT[mV]	*2	48max	60max	96max	144max	192max	
	START-UP TIME[ms]				Johnan	T T T T T T T T T T T T T T T T T T T	102.110.1	
F	HOLD-UP TIME[ms]		500typ (ACIN 115V, Io=100%) Ta=25°C 20typ (ACIN 115V, Io=100%)					
	OUTPUT VOLTAGE ADJUSTMEN	IT RANGEIVI	10.80 to 13.20	13.50 to 16.50	21.60 to 26.40	32.40 to 39.60	43.20 to 52.80	
F	OUTPUT VOLTAGE SETT		12.00 to 12.48	15.00 to 15.60	24.00 to 24.96	36.00 to 37.44	48.00 to 49.92	
	OVERCURRENT PROTE			ting and recovers autom		23.00 10 07.11	.0.00 10 10.02	
F	OVERVOLTAGE PROTE		13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	54.00 to 67.20	
	OPERATING INDICAT		LED (Green)		1 =		1 - 1.00 10 07 1.20	
	REMOTE SENSING		Not provided					
	REMOTE ON/OFF		Optional (Required external power source. Option -R)					
	INPUT-OUTPUT • RC	*8	<u> </u>			m temperature)		
	INPUT-FG		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature) AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature)					
ΟΙ ΔΤΙΟΝ ⊢	OUTPUT • RC-FG	*8						
	OUTPUT-RC	*8	() () () () ()					
	OPERATING TEMP.,HUMID.AND					ng), 3,000m (10,000 feet)	max	
ŀ	STORAGE TEMP., HUMID.AND		` '	RH (Non condensing), 9	•	3,		
JVIRONMENT ⊢	VIBRATION	ALITIODE		G), 3minutes period, 60n				
-	IMPACT	-		, once each X, Y and Z		una = unos		
	AGENCY APPROVAL	<u> </u>) Complies with DEN-AN		
	CONDUCTED NOISE			VCCI-B, CISPR22-B, EN	<u> </u>	, complice with DEN-AN		
	HARMONIC ATTENUA	ATOP ±7	Complies with IEC6100		1000 I I-D, LIN00022-D			
	TATINONIC ATTENUA	11011 11	Complies with IEC0100	70 0-2 01033 A				



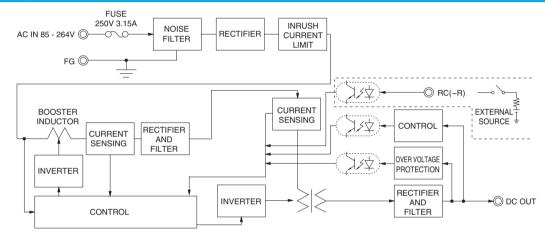
OTHERS	CASE SIZE/WEIGHT	41×97×109mm [1.61×3.82×4.29 inches] (Excluding terminal block and screw) (W×H×D) / 500g max
	COOLING METHOD	Convection
WARRANTY	WARRANTY	*5 5 years (subject to the operating conditions)

- *1 This is the result of measurement of the testing board with canacitors of 22 U.F. and 0.1 U.F. placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken RM103.
 - See 1.6 of Instruction Manual for more details. When the load factor is 0 - 30%, the switching power loss is reduced by burst operation, which will cause ripple and ripple noise to go beyond the specifications.
- Drift is the change in DC output for an eight hour period after a half-
- hour warm-up at 25℃.
- *3 Consult us about dynamic load and input response. Measure the output voltage by using the average mode of the tester to deal with the burst operation at 30% load or less.
- Output power derating is required. See 3.2 in Instruction Manual.
- See 3.3 in Instruction Manual for more details
- Consult us about safety agency approvals for the models with optional functions
- Consult us about other classes
- The RC terminal is added to option -R models. The RC terminal is isolated
- from input, output, and FG.
- Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be
- Parallel operation is not possible with this mode
- Sound noise may be heard from the power supply when used for

Features

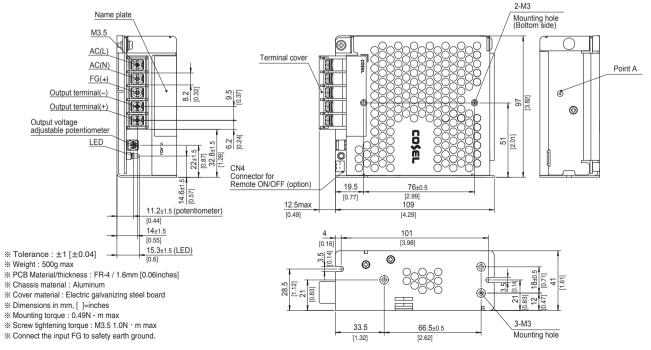
- · Compact design (Depth: 109mm 4.29inches)
- · High efficiency (88%typ PJA100F-24, AC230Vin, 100% load)
- · Low power consumption (1.5W typ AC240Vin, no load at standard model)
- · UL508 approved (Except option -J), and complies with SEMI F47 (see instruction manual 1.1)
- · Various connection interface options (vertical terminal [-T], AMP connector [-J])

Block diagram



External view

The external size of -R option, -J option, -N2 option and -T option models is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.



PJA150F

150





Example recommended EMI/EMC filter NAC-04-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ①Series name ②Single output ③Output wattage ④Universal input

 - ⑤Output voltage
 - Optional *6
 C: with Coating
 R: Remote on/off (Required external
 - power source)
 J : Connector interface
 - T : Vertical terminal block N2: with DIN rail

See 5.1 in Instruction Manual.

*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

SPECIFICATIONS

* Please consider "PBA150F-5-N" about 5V output with case cover.

				150F-5-N" about 5V outpu			1	
	MODEL		PJA150F-12	PJA150F-15	PJA150F-24	PJA150F-36	PJA150F-48	
	VOLTAGE[V]		AC85 - 264 1 φ (Outpu	t derating is required at	AC85V - 115V. See 1.1 a	and 3.2 in Instruction Ma	nual)	
	ACIN 100		1.7typ (lo=90%)					
	CURRENT[A]	ACIN 115V	1.6typ (lo=100%)					
		ACIN 230V	0.8typ (lo=100%)					
	FREQUENCY[Hz]		50 / 60 (47 - 63)					
		ACIN 100V	84typ (lo=90%)	84typ (lo=90%)	87typ (Io=90%)	87typ (lo=90%)	87typ (lo=90%)	
	EFFICIENCY[%]	ACIN 115V	84typ (lo=100%)	84typ (lo=100%)	87typ (lo=100%)	87typ (lo=100%)	87typ (lo=100%)	
PUT		ACIN 230V	87typ (lo=100%)	87typ (lo=100%)	90typ (lo=100%)	90typ (lo=100%)	90typ (lo=100%)	
		ACIN 100V	0.98typ (lo=90%)					
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)					
		ACIN 230V	0.93typ (lo=100%) * F	Power factor correction is	stopped at AC250V or	more.		
		ACIN 100V	16typ (lo=90%) Ta=25°	C at cold start				
	INRUSH CURRENT[A]	ACIN 115V	16typ (lo=100%) Ta=25	°C at cold start				
		ACIN 230V	32typ (lo=100%) Ta=25	°C at cold start				
	LEAKAGE CURRENT	[mA]	0.75max (ACIN 240V, 6	60Hz, Io=100%, According	ng to IEC62368-1 and D	EN-AN)		
	VOLTAGE[V]		12	15	24	36	48	
		ACIN 85-115V	Output derating is requi	ired at ACIN 115V or les	ss (refer to instruction ma	anual 3.2)		
	CURRENT[A]	ACIN 115V-264V	12.5	10	6.4	4.2	3.2	
ľ		ACIN 85-115V	Output derating is requi	ired at ACIN 115V or les	s (refer to instruction ma	anual 3.2)		
	WATTAGE[W]	ACIN 115V-264V	150.0	150.0	153.6	151.2	153.6	
	LINE REGULATION[n	ıV] *3	48max	60max	96max	144max	192max	
	LOAD REGULATION	lo=30 to 100%	100max	120max	150max	150max	300max	
	[mV] *3	lo=0 to 30%	Burst operation (Please	contact us about detail)			
- F	RIPPLE[mVp-p]	0 to +40°C	120max	120max	120max	150max	150max	
	*1	-10 to 0℃	160max	160max	160max	200max	400max	
UTPUT	lo: load factor	lo=0 to 30%	500max	500max	500max	500max	500max	
	RIPPLE NOISE[mVp-p]	0 to +40°C	150max	150max	150max	200max	200max	
	*1	-10 to 0℃	180max	180max	180max	240max	500max	
	lo: load factor	lo=0 to 30%	600max	600max	600max	600max	600max	
F		0 to +40°C	120max	150max	240max	360max	480max	
	TEMPERATURE REGULATION[mV]	-10 to +40°C	180max	180max	290max	440max	600max	
F	DRIFT[mV]	*2	48max	60max	96max	144max	192max	
	START-UP TIME[ms]		500typ (ACIN 115V, Io=		1001110111		1.0=	
F	HOLD-UP TIME[ms]		20typ (ACIN 115V, Io=100%)					
	OUTPUT VOLTAGE ADJUSTMEN	IT RANGEIVI	10.80 to 13.20	13.50 to 16.50	21.60 to 26.40	32.40 to 39.60	43.20 to 52.80	
F	OUTPUT VOLTAGE SETT		12.00 to 12.48	15.00 to 15.60	24.00 to 24.96	36.00 to 37.44	48.00 to 49.92	
	OVERCURRENT PROTE			ting and recovers autom			, 5.55.55 .0.02	
F	OVERVOLTAGE PROTE		13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	54.00 to 67.20	
	OPERATING INDICAT		LED (Green)					
	REMOTE SENSING		Not provided					
	REMOTE ON/OFF		Optional (Required external power source. Option -R)					
	INPUT-OUTPUT • RC	*8						
l l	INPUT-FG		AC2,000V Iminute, Outoff current = 10mA, DC500V 50M Ω min (At room temperature)					
OIATION ⊦	OUTPUT • RC-FG	*8						
<u> </u>	OUTPUT-RC	*8	() 11 () () () () () () () () (
	OPERATING TEMP., HUMID. AND						max	
l l	STORAGE TEMP., HUMID.AND		-20 to +70°C (Output derating is required), 20 - 90%RH (Non condensing), 3,000m (10,000 feet) max -20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max					
VIRONMENT -	VIBRATION			G), 3minutes period, 60n				
-	IMPACT			, once each X, Y and Z				
	AGENCY APPROVAL) Complies with DEN-AN	<u> </u>	
	CONDUCTED NOISE			VCCI-B, CISPR22-B, EN	<u> </u>	, complice with DEN-Alt	•	
	HARMONIC ATTENUA	NTOP ±7	Complies with IEC6100		1000 I I-D, LIN00022-D			
	TATINIONIC ATTENUA	11011 11	Complies with IEC0100	70 0-2 01033 A				



OTHERS	CASE SIZE/WEIGHT	41×97×129mm [1.61×3.82×5.08 inches] (Excluding terminal block and screw) (W×H×D) / 600g max
	COOLING METHOD	Convection
WARRANTY	WARRANTY	*5 5 years (subject to the operating conditions)

This is the result of measurement of the testing board with capacitors of 22 UE and 0.1 UE placed at 150 mm from the output terminals by a 20. MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken

See 1.6 of Instruction Manual for more details.

When the load factor is 0 - 30%, the switching power loss is reduced by burst operation, which will cause ripple and ripple noise to go beyond the specifications

Drift is the change in DC output for an eight hour period after a half-

hour warm-up at 25℃.

- *3 Consult us about dynamic load and input response Measure the output voltage by using the average mode of the tester to deal with the burst operation at 30% load or less.
- Output power derating is required. See 3.2 in Instruction Manual.
- See 3.3 in Instruction Manual for more details
- Consult us about safety agency approvals for the models with optional functions
- Consult us about other classes
- The RC terminal is added to option -R models. The RC terminal is

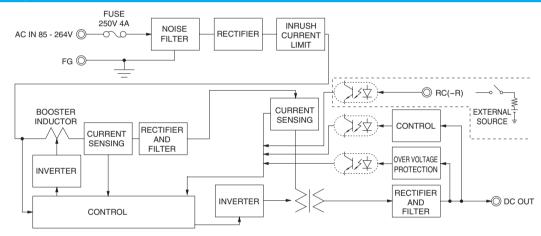
isolated from input, output, and FG.

- Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be
- Parallel operation is not possible with this mode
- Sound noise may be heard from the power supply when used for

Features

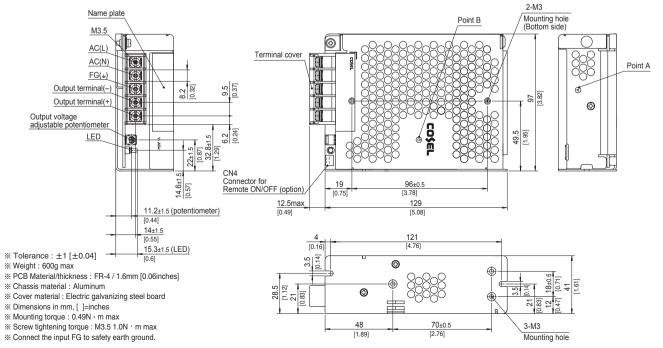
- · Compact design (Depth: 129mm 5.08inches)
- · High efficiency (90%typ PJA150F-24, AC230Vin, 100% load)
- · Low power consumption (1.5W typ AC240Vin, no load at standard model)
- · UL508 approved (Except option -J), and complies with SEMI F47 (see instruction manual 1.1)
- · Various connection interface options (vertical terminal [-T], AMP connector [-J])

Block diagram



External view

The external size of -R option, -J option, -N2 option and -T option models is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.



PJA300F

300



Example recommended EMI/EMC filter NAC-06-472

- 1) Series name 2) Single output 3) Output wattage 4) Universal input 5) Output voltage
- (a) Output voltage
 (b) Optional *6
 (c) with Coating
 (c) Low leakage current
 (c) V: External potentiometer for output voltage adjustment
 - R : Remote on/off
- (Required external power source)
 F4: Low speed fan

See 5.1 in Instruction Manual.

*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

	MODEL		PJA300F-5	PJA300F-12	PJA300F-15	PJA300F-24	PJA300F-36	PJA300F-48	
	VOLTAGE[V]		AC85 - 264 1 φ (O	utput derating is requ	uired at AC85V - 100	V. See 1.1 and 3.2 ir	Instruction Manual)		
	ACIN 100V		3.5typ (lo=100%)	3.9typ (lo=100%)			•		
	CURRENT[A]	ACIN 115V	3.0typ (lo=100%)	3.3typ (lo=100%)					
		ACIN 230V	1.5typ (lo=100%)	1.7typ (lo=100%)		,			
	FREQUENCY[Hz]		50 / 60 (47 - 63)	, , ,					
		ACIN 100V	73typ (lo=100%)	79typ (Io=100%)	81typ (lo=100%)	82typ (lo=100%)	83typ (Io=100%)	82typ (lo=100%)	
	EFFICIENCY[%]	ACIN 115V	74typ (lo=100%)	80typ (lo=100%)	82typ (Io=100%)	83typ (lo=100%)	83typ (lo=100%)	83typ (lo=100%)	
NPUT		ACIN 230V	77typ (lo=100%)	82typ (lo=100%)	84typ (lo=100%)	86typ (lo=100%)	87typ (Io=100%)	86typ (lo=100%	
		ACIN 100V	0.99typ (lo=100%)	,	, ,	, , ,	, , , ,	71 (
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)						
		ACIN 230V	0.95typ (lo=100%)						
		ACIN 100V	20typ (lo=100%) Ta	=25°C at cold start					
	INRUSH CURRENT[A]	ACIN 115V	20typ (Io=100%) Ta						
		ACIN 230V	40typ (Io=100%) Ta						
	LEAKAGE CURRENT		, , ,		According to IEC623	68-1 and DEN-AN)			
	VOLTAGE[V]	ţ	5	12	15	24	36	48	
		ACIN 85-100V	1 -		OV or less (refer to ins	l .	1	-	
	CURRENT[A]	ACIN 100V-264V	50	25	20	12.5	8.4	6.3	
		ACIN 85-100V			OV or less (refer to ins			1 0.0	
	WATTAGE[W]	ACIN 100V-264V	250	300	300	300	302.4	302.4	
	LINE REGULATION[r		20max	48max	60max	96max	144max	192max	
	LOAD REGULATION		40max	100max	120max	150max	150max	300max	
		0 to +50°C	80max	120max	120max	120max	150max	150max	
	RIPPLE[mVp-p]	-10 to 0°C	140max	160max	160max	160max	160max	400max	
DUTPUT	DIDDLE NOICE[m/m m]	0 to +50°C	120max	150max	150max	150max	200max	200max	
	RIPPLE NOISE[mVp-p]	-10 to 0°C	160max	180max	180max	180max	240max	500max	
	*1	0 to +50°C	50max	120max	150max	240max	360max	480max	
	TEMPERATURE REGULATION[mV]	10 to +50 ℃					440max		
	DDIET\/I		75max 20max	180max	180max	290max	ł	600max	
	DRIFT[mV]			48max	60max	96max	144max	192max	
	START-UP TIME[ms]			300typ (ACIN 100V, Io=100%) 20typ (ACIN 100V, Io=100%)					
	HOLD-UP TIME[ms]	NT DANGERG	71 \		40.50 +- 40.50	04 00 1- 00 40	00 40 +- 00 00	40.00 +- 50.00	
	OUTPUT VOLTAGE ADJUSTME		4.50 to 5.50	10.80 to 13.20	13.50 to 16.50	21.60 to 26.40	32.40 to 39.60	43.20 to 52.80	
	OUTPUT VOLTAGE SETT		5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96	36.00 to 37.44	48.00 to 49.92	
	OVERCURRENT PROTE			of rating and recover		07.00 to 00.00	44 40 40 50 40	FF 00 to 07 00	
PROTECTION	OVERVOLTAGE PROTE		5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20	
CIRCUIT AND	OPERATING INDICAT	IION	LED (Green)						
JIHENS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF	4.5	Optional (Required external power source. Option -R) AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature)						
	INPUT-OUTPUT • RC	*9							
SOLATION	INPUT-FG	4.5			mA, DC500V 50MΩ				
	OUTPUT PC		,		mA, DC500V 50MΩ				
	OUTPUT-RC	*9			mA, DC500V 50MΩ				
	OPERATING TEMP.,HUMID.AND		` '		ed), 20 - 90%RH (Nor		um (10,000 feet) max		
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALIIIUDE	· · · · · · · · · · · · · · · · · · ·		nsing), 9,000m (30,00				
	VIBRATION				riod, 60minutes each	along X, Y and Z ax	es		
	IMPACT			1ms, once each X, Y					
SAFETY AND	AGENCY APPROVAL				2368-1 Complies with				
VOISE	CONDUCTED NOISE				22-B, EN55011-B, EN	N55022-B			
REGULATIONS	HARMONIC ATTENU	ATOR *8	Complies with IEC	61000-3-2 class A					



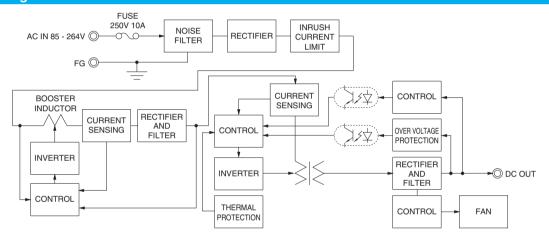
OTHERS	CASE SIZE/WEIGHT	102×41×190mm [4.02×1.61×7.48 inches] (Excluding terminal block and screw) (W×H×D) / 1.0kg max
OTHERS	COOLING METHOD *7	Forced cooling (internal fan)
WARRANTY	WARRANTY *5	5 years (subject to the operating conditions)

- This is the result of measurement of the testing board with capacitors of 22 UE and 0.1 UE placed at 150 mm from the output terminals by a 20. MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken
 - See 1.6 of Instruction Manual for more details. Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃
- Consult us about dynamic load and input response.
- Output power derating is required. See 3.2 in Instruction Manual. See 3.3 in Instruction Manual for more details.
- Consult us about safety agency approvals for the models with optional functions.
- The fan speed slows down at no load.
- Consult us about other classes.
- The RC terminal is added to option –R models. The RC terminal is
- isolated from input, output, and FG.
- Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be
- Parallel operation is not possible with this mode
- Sound noise may be heard from the power supply when used for

Features

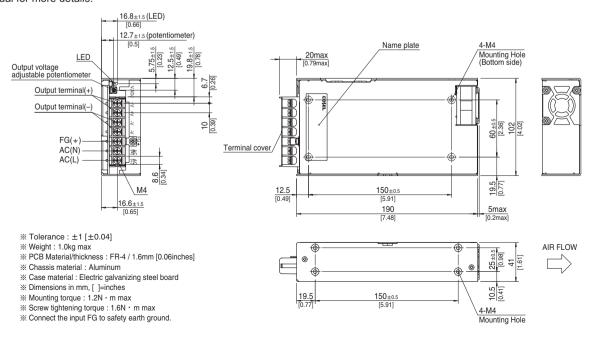
- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 1U height = 41 mm or 1.61 inches)
- · Wide operating temperature range (-20°C to +70°C see instruction manual)
- · Slow fan speed at no load
- · Complies with SEMI F-47
- · Many optional functions

Block diagram



External view

The external size of -V option and -R option models is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.



PJA600F

600



Example recommended EMI/EMC filter NAC-16-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ① Series name
 ② Single output
 ③ Output wattage
 ④ Universal input
 ⑤ Output voltage
 ⑥ Optional *6
 C : with Coating
 G : Low leakage current
 V : External potentiometer for output voltage adjustment
 W: Parallel operation,
 LV a

See 5.1 in Instruction Manual.

*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

	MODEL		PJA600F-5	PJA600F-12	PJA600F-15	PJA600F-24	PJA600F-36	PJA600F-48
	VOLTAGE[V]		AC85 - 264 1 φ (O	utput derating is req	uired at AC85V - 100	V. See 1.1 and 3.2 ir	Instruction Manual)	
	ACIN 100V		6.7typ (lo=100%)	7.5typ (lo=100%)			•	
	CURRENT[A]	ACIN 115V	5.7typ (lo=100%)	6.5typ (lo=100%)				
		ACIN 230V	2.8typ (lo=100%)	3.2typ (lo=100%)		,		
	FREQUENCY[Hz]		50 / 60 (47 - 63)	71 (
		ACIN 100V	76typ (lo=100%)	81typ (lo=100%)	82typ (lo=100%)	84typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%)
	EFFICIENCY[%]	ACIN 115V	77typ (lo=100%)	82typ (lo=100%)	82typ (Io=100%)	85typ (lo=100%)	86typ (lo=100%)	85typ (lo=100%
NPUT		ACIN 230V	79typ (lo=100%)	84typ (lo=100%)	85typ (lo=100%)	88typ (lo=100%)	88typ (lo=100%)	88typ (lo=100%
		ACIN 100V	0.99typ (lo=100%)	, , ,	, ,	, , ,	, , ,	71 (
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)					
		ACIN 230V	0.95typ (lo=100%)					
		ACIN 100V	71 \ /) (Primary inrush cu	rrent /Secondary inru	ish current) (More th	nan 3sec to re-start)	
	INRUSH CURRENT[A]	ACIN 115V	,,,	, , ,	rrent /Secondary inru			
		ACIN 230V	, ,	, , ,	rrent /Secondary inru			
	LEAKAGE CURRENT		* ' '	, , ,	ccording to IEC6236			
	VOLTAGE[V]	[]	5	12	15	24	36	48
		ACIN 85-100V	1 -		OV or less (refer to ins	l .		
	CURRENT[A]	ACIN 100V-264V	100	50	40	25	16.7	12.5
		ACIN 85-100V			OV or less (refer to ins			12.0
	WATTAGE[W]	ACIN 100V-264V	500	600	600	600	601.2	600
	LINE REGULATION[n		20max	48max	60max	96max	144max	192max
	LOAD REGULATION		40max	100max	120max	150max	150max	300max
		0 to +50°C	80max	120max	120max	120max	150max	150max
	RIPPLE[mVp-p]	-20 to 0°C	140max	160max	160max	160max	160max	400max
DUTPUT	*1				+		+	
	RIPPLE NOISE[mVp-p]	0 to +50°C -20 to 0°C	120max 160max	150max 180max	150max 180max	150max 180max	200max 240max	200max 500max
	*1	_			+			
	TEMPERATURE REGULATION[mV]	0 to +50°C	50max	120max	150max	240max	360max	480max
		-20 to +50°C	75max	180max	180max	290max	440max	600max
	DRIFT[mV] *2		20max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		300typ (ACIN 100V, Io=100%)					
	HOLD-UP TIME[ms]	UT DANIGERS	20typ (ACIN 100V,		10.501 10.50	04.001.0040	00.401.00.00	10.001 50.00
	OUTPUT VOLTAGE ADJUSTMEN		4.50 to 5.50	10.80 to 13.20	13.50 to 16.50	21.60 to 26.40	32.40 to 39.60	43.20 to 52.80
	OUTPUT VOLTAGE SETT		5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96	36.00 to 37.44	48.00 to 49.92
	OVERCURRENT PROTE			of rating and recover			1	I ·
PROTECTION	OVERVOLTAGE PROTE		5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20
CIRCUIT AND	OPERATING INDICAT	IION	LED (Green)					
לוחבתט	REMOTE SENSING		Optional (Option -W)					
	REMOTE ON/OFF		Optional (Required external power source. Option -R)					
	INPUT-OUTPUT • RC	*3	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature) AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature)					
SOLATION	INPUT-FG		· · · · · · · · · · · · · · · · · · ·					
	OUTPUT • RC-FG		,		mA, DC500V 50MΩ			
	OUTPUT-RC	*3	(((()					
	OPERATING TEMP.,HUMID.AND		` '				om (10,000 feet) max	(
NVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	· · · · · · · · · · · · · · · · · · ·		nsing), 9,000m (30,00			
	VIBRATION				riod, 60minutes each	along X, Y and Z ax	es	
	IMPACT			1ms, once each X, Y				
SAFETY AND	AGENCY APPROVAL				2368-1 Complies with			
NOISE	CONDUCTED NOISE		<u> </u>		22-B, EN55011-B, EN	N55022-B		
REGULATIONS	HARMONIC ATTENU	ATOR *9	Complies with IEC	61000-3-2 class A				



OTHERS	CASE SIZE/WEIGHT	120×61×215mm [4.72×2.40×8.46 inches] (Excluding terminal block and screw) (W×H×D) / 2.0kg max
OTHERS	COOLING METHOD	*8 Forced cooling (internal fan)
WARRANTY	WARRANTY	*5 5 years (subject to the operating conditions)

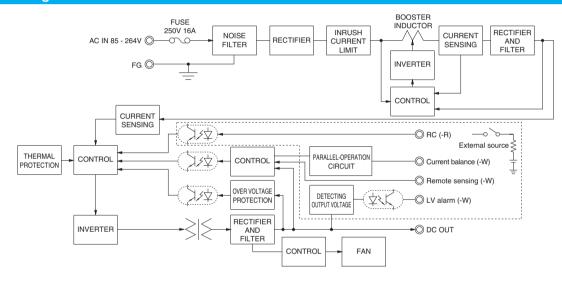
- This is the result of measurement of the testing board with capacitors of 22 μ F and 0.1 μ F placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken RM103
- See 1.6 of Instruction Manual for more details. Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25 °C.
- The BC terminal is added to option -B models. The BC terminal is
- isolated from input, output, and FG.
- Output power derating is required. See 3.2 in Instruction Manual. See 3.3 in Instruction Manual for more details.
- Consult us about safety agency approvals for the models with optional functions.
- Consult us about dynamic load and input response.
- *8 The fan speed slows down at no load

- Consult us about other classes
- Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be damaged.
- Parallel operation is allowed for PLA600FA models with the -W option only
- Sound noise may be heard from the power supply when used for pulse load.

Features

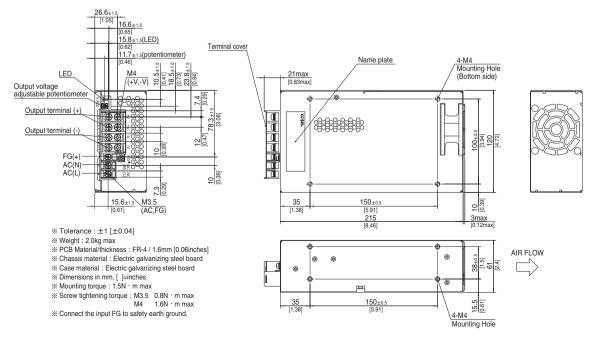
- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 2U height = 61 mm or 2.40 inches)
- · Wide operating temperature range (-20°C to +70°C see instruction manual)
- · Slow fan speed at no load
- · Complies with SEMI F-47
- · Many optional functions

Block diagram



External view

The external size of -V option, -W option and -R option models is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.



PJA1000F

PJ A 1000 F -



①Series name ②Single output ③Output wattage ④Universal input ⑤Output voltage

*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

	MODEL		PJA1000F-24	PJA1000F-48			
	VOLTAGE[V]						
	ACIN 100V		AC85 - 264 1 \$\phi\$ (Output derating is required at AC85V - 115V. See 1.1 and 3.2 in Instruction Manual) 12.5typ (Io=90%)				
	CURRENT[A]	ACIN 100V					
	CORRENT[A]	ACIN 115V	11.0typ (lo=100%)				
			5.5typ (lo=100%) 50 / 60 (47 - 63)				
	FREQUENCY[Hz]	ACIN 100V	84typ (Io=90%)	84typ (Io=90%)			
	EEEIOIENOVIO/ 1	ACIN 100V	,	71 (/			
INPUT	EFFICIENCY[%]	ACIN 115V	85typ (lo=100%)	85typ (lo=100%) 88typ (lo=100%)			
INPUI			88typ (lo=100%)	88typ (10=100%)			
	DOWED EACTOR	ACIN 100V ACIN 115V	0.98typ (lo=90%)				
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)				
		ACIN 230V	0.95typ (lo=100%) 15/30typ (lo=90%) (Primary inrush current /Secondary inrush	About the state of			
	INDUCTI CUDDENITIAL		71 7 7				
	INRUSH CURRENT[A]	ACIN 115V ACIN 230V	15/30typ (Io=100%) (Primary inrush current /Secondary inru				
	LEAKACE CURRENT		30/30typ (Io=100%) (Primary inrush current /Secondary inru				
	LEAKAGE CURRENT VOLTAGE[V]	[mA]	1.5max (ACIN 240V, 60Hz, lo=100%, According to IEC6236	8-1 and DEN-AN) 48			
	VOLIAGE[V]	ACIN 85-115V		1.17			
	CURRENT[A]	ACIN 80-115V ACIN 115V-264V	Output derating is required at ACIN 115V or less (refer to in 42	21			
				I .			
	WATTAGE[W]	ACIN 85-115V ACIN 115V-264V	Output derating is required at ACIN 115V or less (refer to in 1008				
	LINE DECLU ATIONS			1008			
	LINE REGULATION[mV] *2		96max	192max			
	LOAD REGULATION		150max	300max			
	RIPPLE[mVp-p]	0 to +50°C		200max			
OUTPUT	RIPPLE NOISE[mVp-p] *1 TEMPERATURE REGULATION[mV]	-20 to 0°C 0 to +50°C	160max 150max	500max			
		-20 to 0°C	180max	600max			
			240max	480max			
	DDIET[\/]	-20 to +50°C *3	290max	600max			
	DRIFT[mV]	*3	To Emax				
	START-UP TIME[ms]		800typ (ACIN 115V, Io=100%)				
	HOLD-UP TIME[ms]	IT DANCERO	20typ (ACIN 115V, Io=100%)	40.00 to 55.00			
	OUTPUT VOLTAGE ADJUSTMEN			40.80 to 55.20 48.00 to 49.92			
PROTECTION	OUTPUT VOLTAGE SETT OVERCURRENT PROTE		24.00 to 24.96 Works over 105% of rating and recovers automatically	140.00 (0 43.32			
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTE		28.80 to 34.80	57.00 to 67.20			
OTHERS	OPERATING INDICAT		LED (Green)	37.00 to 07.20			
	INPUT-OUTPUT	IOIN	AC3,000V 1minute, Cutoff current = 25mA, DC500V 50M Ω	min (At room temperature)			
ISOLATION	INPUT-FG	-	AC2,000V 1minute, Cutoff current = 25mA, DC500V 50M Ω				
JOLATION	OUTPUT-FG			. ,			
	OPERATING TEMPHUMID.AND	AI TITLIDE ±4	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At room temperature) -20 to +70°C (Output derating is required), 20 - 90%RH (Non condensing), 3,000m (10,000 feet) max				
	STORAGE TEMP., HUMID.AND		-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,0)				
ENVIRONMENT	VIBRATION	ALITODE	10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each	· · · · · · · · · · · · · · · · · · ·			
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axes	along A, 1 alla 2 axes			
CAEETV AND	AGENCY APPROVAL	<u> </u>	UL62368-1, C-UL (CSA62368-1), EN62368-1 Complies with	DEN-AN			
SAFETY AND NOISE	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EI				
REGULATIONS	HARMONIC ATTENU	ATOD **		NOJULE-D			
	HARIMONIC ATTENU	AIUN *	Complies with IEC61000-3-2 class A				



OTHERS	CASE SIZE/WEIGHT	150×61×240mm [5.91×2.40×9.45 inches] (Excluding terminal block and screw) (W×H×D) / 2.8kg max
OTHERS	COOLING METHOD	*6 Forced cooling (internal fan)
WARRANTY	WARRANTY	*7 5 years (subject to the operating conditions)

- This is the result of measurement of the testing board with capacitors of 22 µF and 0.1 µF placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken RM103
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.

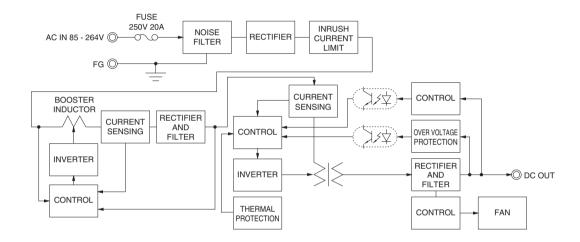
 Output power derating is required. See 3.2 in Instruction Manual.
- Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be damaged.
- Parallel operation is not possible with this mode.
 - Sound noise may be heard from the power supply when used for pulse load.

- See 1.6 of Instruction Manual for more details. *2 Consult us about dynamic load and input response.
- Consult us about other classes. The fan speed slows down or stops at no load.
- See 3.3 in Instruction Manual for more details.

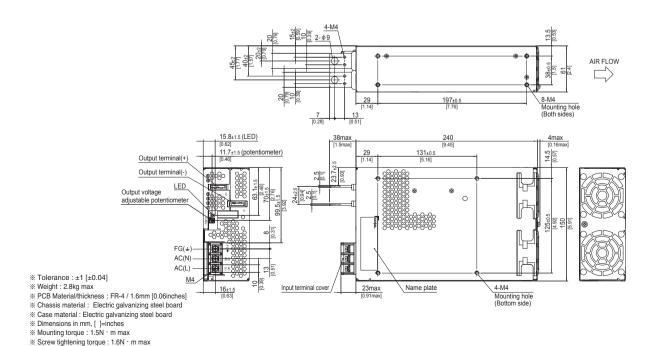
Features

- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 2U height = 61 mm or 2.4 inches)
- · Wide operating temperature range (-20°C to +70°C see instruction manual)
- · Stop or slow fan speed at no load

Block diagram



External view



- Output terminal M4 tightening torque : 1.2N · m max
- Connect the input FG to safety earth ground.

PJA1500F

PJ A 1500 F -



①Series name ②Single output ③Output wattage ④Universal input ⑤Output voltage

*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

	MODEL		PJA1500F-24	PJA1500F-48			
	VOLTAGE[V]		AC85 - 264 1 φ (Output derating is required at AC85V - 115V. See 1.1 and 3.2 in Instruction Manual)				
		ACIN 100V	18typ (lo=90%)				
	CURRENT[A]	ACIN 115V	16typ (lo=100%)				
		ACIN 230V	8typ (Io=100%)				
	FREQUENCY[Hz]		50 / 60 (47 - 63)				
		ACIN 100V	84typ (Io=90%)	84typ (lo=90%)			
	EFFICIENCY[%]	ACIN 115V	85typ (Io=100%)	84typ (lo=100%)			
INPUT		ACIN 230V	88typ (Io=100%)	87typ (lo=100%)			
		ACIN 100V	0.98typ (lo=90%)				
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)				
		ACIN 230V	0.95typ (lo=100%)				
		ACIN 100V	15/30typ (Io=90%) (Primary inrush current /Secondary inrush	sh current) (More than 10sec to re-start)			
	INRUSH CURRENT[A]	ACIN 115V	15/30typ (Io=100%) (Primary inrush current /Secondary inrush	· · · · · · · · · · · · · · · · · · ·			
		ACIN 230V	30/30typ (Io=100%) (Primary inrush current /Secondary inrush	, , , , , , , , , , , , , , , , , , , ,			
	LEAKAGE CURRENT		1.5max (ACIN 240V, 60Hz, Io=100%, According to IEC6236				
	VOLTAGE[V]	, ··· ·)	24	48			
		ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to in	1 12			
	CURRENT[A]	ACIN 115V-264V	1 0 1	32			
		ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to in	1.5			
	WATTAGE[W]	ACIN 115V-264V	1 1	1536			
	LINE REGULATION[n			192max			
	LOAD REGULATION[mV] *2			300max			
			120max	200max			
	RIPPLE[mVp-p]	-20 to 0°C		500max			
OUTPUT	DIDDLE NOICEIV1		150max	300max			
	RIPPLE NOISE[mVp-p]	-20 to 0°C		600max			
	*1		240max	480max			
	TEMPERATURE REGULATION[mV]	-20 to +50°C		600max			
	DRIFT[mV]	*3		192max			
	START-UP TIME[ms]	***		19211ldx			
	HOLD-UP TIME[ms]		800typ (ACIN 115V, Io=100%) 20typ (ACIN 115V, Io=100%)				
	OUTPUT VOLTAGE ADJUSTMEN	IT DANCER/I	7	40.80 to 55.20			
	OUTPUT VOLTAGE SETT		24.00 to 24.96	48.00 to 49.92			
PROTECTION	OVERCURRENT PROTE		Works over 105% of rating and recovers automatically	10.00 10 10.02			
CIRCUIT AND	OVERVOLTAGE PROTE		9 7	57.00 to 67.20			
OTHERS	OPERATING INDICAT		LED (Green)	01.00 to 01.20			
JE.10	INPUT-OUTPUT	ION	` '	min (At room temperature)			
ISOLATION	INPUT-FG		AC3,000V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At room temperature)				
ISOLATION	OUTPUT-FG		AC2,000V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At room temperature)				
	OPERATING TEMPHUMID.AND	ALTITUDE *4	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At room temperature)				
	. , .		-20 to +70°C (Output derating is required), 20 - 90%RH (Non condensing), 3,000m (10,000 feet) max				
ENVIRONMENT	STORAGE TEMP., HUMID. AND	ALIIIUUE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,0	· ·			
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each	i along ∧, r and ∠ axes			
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axes	H- DENI ANI			
SAFETY AND	AGENCY APPROVAL		UL62368-1, C-UL (CSA62368-1), EN62368-1, Complies with				
NOISE	CONDUCTED NOISE			5022-A, additional EMI/EMC Filter required for meeting class B			
REGULATIONS	HARMONIC ATTENU	ATOR *5	Complies with IEC61000-3-2 class A				



OTHERS	CASE SIZE/WEIGHT		178×61×268mm [7.01×2.40×10.55 inches] (Excluding terminal block and screw) (W×H×D) / 3.5kg max
OTHERS	COOLING METHOD	*6	Forced cooling (internal fan)
WARRANTY	WARRANTY	*7	5 years (subject to the operating conditions)

*3 Drift is the change in DC output for an eight hour period after a half-hour

- This is the result of measurement of the testing board with capacitors of $22\,\mu\,\text{F}$ and 0.1 $\mu\,\text{F}$ placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken RM103
- warm-up at 25°C.

 Output power derating is required. See 3.2 in Instruction Manual. Consult us about other classes.

*6 The fan speed slows down or stops at no load. *7 See 3.3 in Instruction Manual for more details.

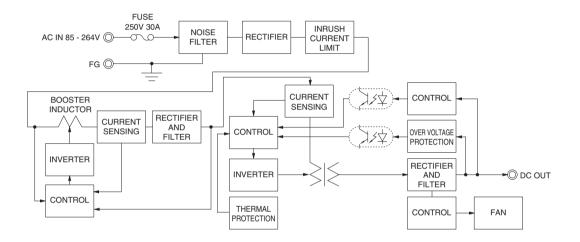
- Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be damaged.
- Parallel operation is not possible with this mode.
- Sound noise may be heard from the power supply when used for pulse load.

- See 1.6 of Instruction Manual for more details.
- *2 Consult us about dynamic load and input response.

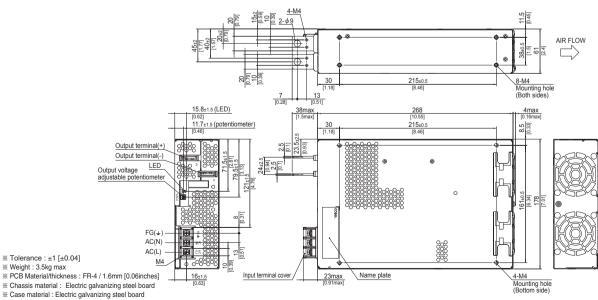
Features

- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 2U height = 61 mm or 2.4 inches)
- · Wide operating temperature range (-20°C to +70°C see instruction manual)
- · Stop or slow fan speed at no load

Block diagram



External view



- Dimensions in mm, []=inches
 Mounting torque: 1.5N · m max
- Screw tightening torque: 1.6N · m max
- Output terminal M4 tightening torque: 1.2N · m max
 Connect the input FG to safety earth ground.