PLA15F

A 15 F 5







- 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)Universal input 5)Output voltage

 - Optional *7
 C: with Coating
 J: Connector interface
 - T : Vertical terminal block
 - N1: with DIN rail

See 5.1 in Instruction Manual.

	MODEL		PLA15F-5	PLA15F-12	PLA15F-15	PLA15F-24			
	VOLTAGE[V]		AC85 - 264 1 φ (Output dera	ating is required at AC85V - 11	5V. See 1.1 and 3.2 in Instr	uction Manual) *3			
		ACIN 100V	0.4typ (lo=90%)						
	CURRENT[A]	ACIN 115V	0.4typ (lo=100%)						
		ACIN 230V	0.25typ (Io=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 63)						
UDUT		ACIN 100V	72.5typ (Io=90%)	75.5typ (lo=90%)	77.0typ (Io=90%)	78.0typ (Io=90%)			
NPUT	EFFICIENCY[%]	ACIN 115V	73.5typ (Io=100%)	77.0typ (lo=100%)	78.5typ (lo=100%)	79.0typ (lo=100%)			
		ACIN 230V	75.5typ (Io=100%)	78.5typ (lo=100%)	79.5typ (lo=100%)	80.0typ (lo=100%)			
		ACIN 100V	16typ (lo=90%) Ta=25℃ at o	cold start	'	•			
	INRUSH CURRENT[A]	ACIN 115V	16typ (lo=100%) Ta=25℃ at	cold start					
		ACIN 230V	32typ (lo=100%) Ta=25℃ at	cold start					
	LEAKAGE CURRENT	[mA]	0.30max (ACIN 115V / 240V	, 60Hz, Io=100%, According to	IEC60950-1 and DEN-AN)			
	VOLTAGE[V]		5	12	15	24			
	CURRENT[A]		3	1.3	1	0.7			
		ACIN 85-115V	Output derating is required a	at ACIN 115V or less (refer to in	nstruction manual 3.2)				
	WATTAGE[W]	ACIN 115V-264V	15.0	15.6	15.0	16.8			
	LINE REGULATION[n	nV] *4	20max	48max	60max	96max			
	LOAD REGULATION		40max	100max	120max	150max			
		0 to +50℃	80max	120max	120max	120max			
	RIPPLE[mVp-p] *1		140max	160max	160max	160max			
		lo=0 to 35%	160max	240max	240max	280max			
UTPUT	RIPPLE NOISE[mVp-p] *1 TEMPERATURE REGULATION[mV]	0 to +50℃	120max	150max	150max	150max			
		-10 to 0℃	160max	180max	180max	180max			
		lo=0 to 35%	240max	300max	300max	320max			
		0 to +50°C	50max	120max	150max	240max			
		-10 to +50°C	60max	150max	180max	290max			
	DRIFT[mV] *2		20max	48max	60max	96max			
	START-UP TIME[ms]		200typ (ACIN 115V, Io=100%) *Start-up time is 700 ms typ for less than 1 minute of applying input again from turning off the input volta						
	HOLD-UP TIME[ms]		20typ (ACIN 115V, Io=100%)						
	OUTPUT VOLTAGE ADJUSTMEN	IT RANGE[V]	4.50 to 5.50	10.80 to 13.20	13.50 to 16.50	21.60 to 26.40			
	OUTPUT VOLTAGE SETT	ING[V]	5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96			
	OVERCURRENT PROTE	CTION	Works over 105% of rating a	and recovers automatically	-	'			
ROTECTION	OVERVOLTAGE PROTE	CTION[V]	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60			
IRCUIT AND	OPERATING INDICAT	ION	LED (Green)						
THERS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided						
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature)						
SOLATION	INPUT-FG	,	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature)						
	OUTPUT-FG			rent = 25mA, DC500V 50M Ω	· · · · · · · · · · · · · · · · · · ·				
	OPERATING TEMP., HUMID. AND	ALTITUDE *5		Non condensing), 3,000m (10,0					
	STORAGE TEMP.,HUMID.AND		'	Non condensing), 9,000m (30,0					
NVIRONMENT	VIBRATION			ninutes period, 60minutes each	,				
	IMPACT		196.1m/s² (20G), 11ms, onc						
AFETY AND	AGENCY APPROVAL	s		50-1), EN60950-1, EN50178, U	JL508 (Except option -J) Co	omplies with DEN-AN			
IOISE	CONDUCTED NOISE					,			
EGULATIONS			Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B Complies with IEC61000-3-2 class A						



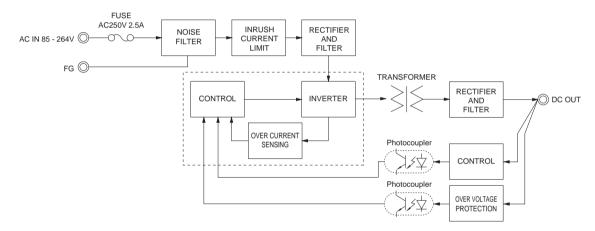
OTHERS	CASE SIZE/WEIGHT	38 X 80 X 73mm [1.50 X 3.15 X 2.87 inches] (Excluding terminal block and screw) (WXHXD) / 250g max
OTHERS	COOLING METHOD	Convection
WARRANTY	TY WARRANTY *6 5 years (subject to the operating conditions)	

- 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.
 - When the load factor is 0 35%, 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°C.
- Output power derating is required. As for DC input, consult us for advice.
- 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 35% load or less
- Output power derating is required. See 3.2 in Instruction Manual.
- See 3.3 in Instruction Manual for more detail
- Consult us about safety agency approvals for the models with optional functions
- 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 not possible with this mode.
- Sound noise may be heard from the power supply when used for pulse load.

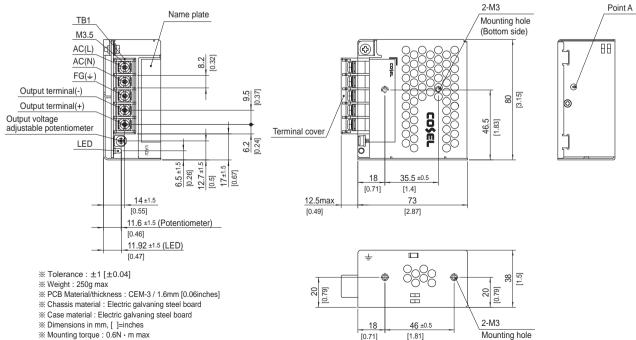
Features

- · Compact design (Depth: 73mm 2.87inches)
- · Low power consumption (1.0W typ AC240Vin, no load at standard model)
- · UL508 approved (Except option -J), and complies with SEMI F47
- · Various connection interface options (vertical terminal [-T], AMP connector [-J])

Block diagram



External view



- ※ Screw tightening torque: 1.0N ⋅ m max

PLA30F

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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)Universal input 5)Output voltage
- ®Optional *7
 C: with Coating
 J: Connector interface
- T : Vertical terminal block N1: with DIN rail

See 5.1 in Instruction Manual.

	MODEL		PLA30F-5	PLA30F-12	PLA30F-15	PLA30F-24			
	VOLTAGE[V]		AC85 - 264 1 \$\phi\$ (Output derating is required at AC85V - 115V. See 1.1 and 3.2 in Instruction Manual) *3						
		ACIN 100V	0.7typ (lo=90%)						
	CURRENT[A]	ACIN 115V	0.7typ (lo=100%)						
		ACIN 230V	0.4typ (lo=100%)						
	FREQUENCY[Hz]	'	50 / 60 (47 - 63)						
INDUT		ACIN 100V	73.0typ (Io=90%)	80.0typ (Io=90%)	81.0typ (Io=90%)	82.5typ (Io=90%)			
INPUT	EFFICIENCY[%]	ACIN 115V	74.0typ (lo=100%)	80.5typ (Io=100%)	81.5typ (Io=100%)	83.0typ (Io=100%)			
		ACIN 230V	77.0typ (lo=100%)	81.0typ (Io=100%)	82.0typ (Io=100%)	83.5typ (lo=100%)			
		ACIN 100V	16typ (Io=90%) Ta=25℃ at o	cold start					
	INRUSH CURRENT[A]	ACIN 115V	16typ (Io=100%) Ta=25℃ at	cold start					
		ACIN 230V	32typ (Io=100%) Ta=25℃ at	cold start					
	LEAKAGE CURRENT	[mA]	0.65max (ACIN 115V / 240V	, 60Hz, Io=100%, According to	o IEC60950-1 and DEN-AN)	l .			
	VOLTAGE[V]		5	12	15	24			
	CURRENT[A]		6	2.5	2	1.3			
	WATTAGETMI	ACIN 85-115V	Output derating is required a	t ACIN 115V or less (refer to	instruction manual 3.2)				
	WATTAGE[W]	ACIN 115V-264V	30.0	30.0	30.0	31.2			
	LINE REGULATION[n	nV] *4	20max	48max	60max	96max			
	LOAD REGULATION[mV] *4	40max	100max	120max	150max			
	DIDDI Elm\/n n1	0 to +50°C	80max	120max	120max	120max			
	RIPPLE[mVp-p] *1	-10 to 0°C	140max	160max	160max	160max			
OUTPUT	RIPPLE NOISE[mVp-p] *1	0 to +50°C	120max	150max	150max	150max			
		-10 to 0°C	160max	180max	180max	180max			
	TEMPERATURE REGULATION[mV]	0 to +50°C	50max	120max	150max	240max			
		-10 to +50°C	60max	150max	180max	290max			
	DRIFT[mV] *2		20max	48max	60max	96max			
	START-UP TIME[ms]		150typ (ACIN 115V, Io=100%)						
	HOLD-UP TIME[ms]		20typ (ACIN 115V, Io=100%)						
	OUTPUT VOLTAGE ADJUSTMEN	NT RANGE[V]	4.50 to 5.50	10.80 to 13.20	13.50 to 16.50	21.60 to 26.40			
	OUTPUT VOLTAGE SETT	ING[V]	5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96			
	OVERCURRENT PROTE	CTION	Works over 105% of rating a	nd recovers automatically					
PROTECTION	OVERVOLTAGE PROTE	CTION[V]	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60			
CIRCUIT AND	OPERATING INDICAT	ION	LED (Green)						
OTHERS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided						
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature)						
ISOLATION	INPUT-FG			urrent = 10mA, DC500V 50M	· · · · · · · · · · · · · · · · · · ·)			
	OUTPUT-FG		· · · · · · · · · · · · · · · · · · ·	rent = 25mA, DC500V 50M Ω					
	OPERATING TEMP., HUMID.AND			Non condensing), 3,000m (10	· ,				
ENVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE	,	Non condensing), 9,000m (30					
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axes						
	IMPACT		196.1m/s² (20G), 11ms, once						
SAFETY AND	AGENCY APPROVAL	S		50-1), EN60950-1, EN50178,		mplies with DEN-AN			
NOISE	CONDUCTED NOISE		Complies with FCC-B, VCCI	-B, CISPR22-B, EN55011-B,	EN55022-B				
REGULATIONS	HARMONIC ATTENUA	ATOR *8	Complies with IEC61000-3-2	2 class A					



OTHERS	CASE SIZE/WEIGHT	38×80×88mm [1.50×3.15×3.46 inches] (Excluding terminal block and screw) (W×H×D) / 330g max
OTHERS	COOLING METHOD	Convection
WARRANTY	WARRANTY *6	5 years (subject to the operating conditions)

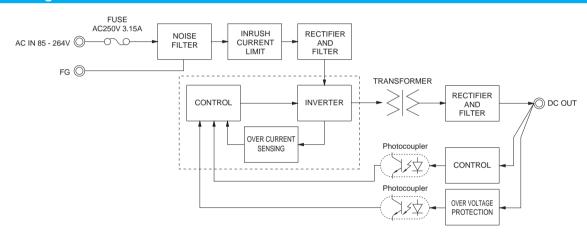
- This is the result of measurement of the testing board with capacitors of 22 μ F and 0.1 μ F placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken RM103.
 - See 1.6 of Instruction Manual for more details.
- *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
 *3 Output power derating is required. As for DC input, consult us for advice.
- Consult us about dynamic load and input response.
- Output power derating is required. See 3.2 in Instruction Manual
- *6 See 3.3 in Instruction Manual for more details.

- *7 Consult us about safety agency approvals for the models with optional functions. 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 not possible with this mode.
- Sound noise may be heard from the power supply when used for pulse load.

Features

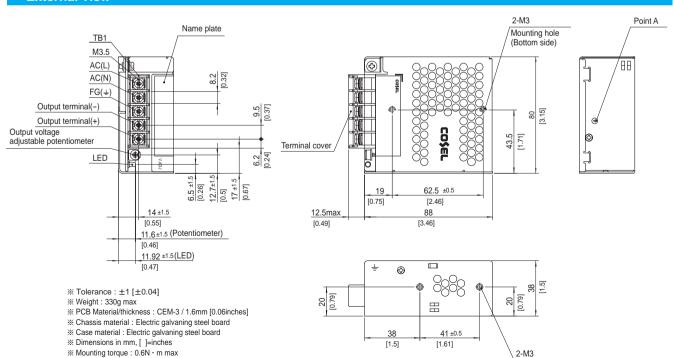
- · Compact design (Depth: 88mm 3.46inches)
- · UL508 approved (Except option -J), and complies with SEMI F47
- · Various connection interface options (vertical terminal [-T], AMP connector [-J])

Block diagram



External view

Screw tightening torque: 1.0N · m max



Mounting hole

eco

PLA50F

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Recommended EMI/EMC Filter NAC-04-472



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)Universal input 5)Output voltage

- Optional *7
 C: with Coating
 J: Connector interface
- T : Vertical terminal block
- N1: with DIN rail

See 5.1 in Instruction Manual.

	MODEL		PLA50F-5	PLA50F-12	PLA50F-15	PLA50F-24		
	VOLTAGE[V]			ting is required at AC85V - 11	5V. See 1.1 and 3.2 in Instruct	ion Manual) *3		
		ACIN 100V	0.6typ (lo=90%)	0.7typ (lo=90%)		,		
	CURRENT[A]	ACIN 115V	0.6typ (lo=100%)	0.7typ (lo=100%)				
		ACIN 230V	0.3typ (lo=100%)	0.4typ (lo=100%)				
	FREQUENCY[Hz]		50 / 60 (47 - 63)					
		ACIN 100V	74.5typ (lo=90%)	80.0typ (lo=90%)	80.0typ (Io=90%)	81.5typ (Io=90%)		
	EFFICIENCY[%]	ACIN 115V	75.0typ (lo=100%)	80.5typ (lo=100%)	80.5typ (Io=100%)	82.0typ (lo=100%)		
INPUT		ACIN 230V	76.5typ (lo=100%)	82.0typ (lo=100%)	82.0typ (Io=100%)	84.0typ (Io=100%)		
		ACIN 100V	0.97typ (lo=90%)	0.98typ (lo=90%)	1	1		
	POWER FACTOR	ACIN 115V	0.97typ (lo=100%)	0.98typ (lo=100%)				
		ACIN 230V	0.85typ (lo=100%)	0.87typ (lo=100%)				
		ACIN 100V	16typ (Io=90%) Ta=25°C at c	, , ,				
	INRUSH CURRENT[A]	ACIN 115V	16typ (Io=100%) Ta=25°C at					
		ACIN 230V	32typ (Io=100%) Ta=25℃ at					
	LEAKAGE CURRENT		7 ,	60Hz, Io=100%, According to	IFC60950-1 and DFN-AN)			
	VOLTAGE[V]	[]	5	12	15	24		
	CURRENT[A]		8	4.3	3.5	2.2		
		ACIN 85-115V		t ACIN 115V or less (refer to in	1 1 1	2.2		
	WATTAGE[W]	ACIN 115V-264V	40.0	51.6	52.5	52.8		
	LINE REGULATIONIN		20max	48max	60max	96max		
	LOAD REGULATION[mV] *4		40max	100max	120max	150max		
	RIPPLE[mVp-p] *1 RIPPLE NOISE[mVp-p] *1 TEMPERATURE REGULATION[mV]	0 to +45℃	80max	120max	120max	120max		
		-10 to 0°C	140max	160max	160max	160max		
OUTPUT		0 to +45℃	120max	150max	150max	150max		
JUIPUI		-10 to 0°C	160max	180max	180max	180max		
		0 to +45℃	50max	120max	150max	240max		
			60max		180max	290max		
		-10 to +45℃		150max				
	DRIFT[mV] *2		20max	48max	60max	96max		
	START-UP TIME[ms]		350typ (ACIN 115V, Io=100%)					
	HOLD-UP TIME[ms]	T DAMAERO	20typ (ACIN 115V, Io=100%)	1	10.50 / 10.50	04.004.0040		
	OUTPUT VOLTAGE ADJUSTMEN		4.50 to 5.50	10.80 to 13.20	13.50 to 16.50	21.60 to 26.40		
	OUTPUT VOLTAGE SETT		5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96		
	OVERCURRENT PROTE		Works over 105% of rating a		1===: =:=:	Tamas : ::		
PROTECTION	OVERVOLTAGE PROTE		5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60		
CIRCUIT AND	OPERATING INDICAT	ION	LED (Green)					
OTHERS	REMOTE SENSING		Not provided					
	REMOTE ON/OFF		Not provided					
	INPUT-OUTPUT	-		$Irrent = 10mA, DC500V 50M\Omega$				
ISOLATION	INPUT-FG			$Irrent = 10mA, DC500V 50M\Omega$				
	OUTPUT-FG			ent = 25mA, DC500V 50M Ω I				
	OPERATING TEMP., HUMID. AND		, , , , , , , , , , , , , , , , , , , ,	Ion condensing), 3,000m (10,0				
ENVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE		Ion condensing), 9,000m (30,0				
LITTIN CHINEITI	VIBRATION			ninutes period, 60minutes eacl	n along X, Y and Z axes			
	IMPACT		196.1m/s² (20G), 11ms, once	·				
SAFETY AND	AGENCY APPROVAL	S	UL60950-1, C-UL (CSA6095	0-1), EN60950-1, EN50178, U	JL508 (Except option -J) Comp	olies with DEN-AN		
NOISE	CONDUCTED NOISE		Complies with FCC-B, VCCI-	B, CISPR22-B, EN55011-B, E	N55022-B			
REGULATIONS	HARMONIC ATTENUA	ATOR *8	Complies with IEC61000-3-2 class A					



OTHERS	CASE SIZE/WEIGHT	38×80×99mm [1.50×3.15×3.90 inches] (Excluding terminal block and screw) (W×H×D) / 400g max
OTHERS	COOLING METHOD	Convection
WARRANTY	WARRANTY *6	5 years (subject to the operating conditions)

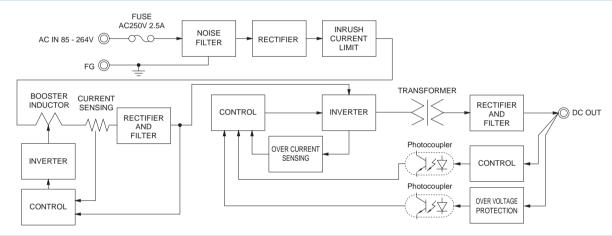
- This is the result of measurement of the testing board with capacitors of 22 μ F and 0.1 μ F placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken RM103.
 - See 1.6 of Instruction Manual for more details.
- *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- *3 Output power derating is required. As for DC input, consult us for advice.
- Consult us about dynamic load and input response.
- Output power derating is required. See 3.2 in Instruction Manual
- *6 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
- 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.

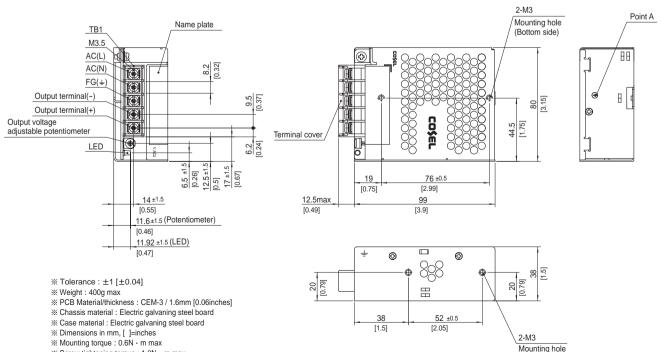
Features

- · Compact design (Depth: 99mm 3.90inches)
- · UL508 approved (Except option -J), and complies with SEMI F47
- · Various connection interface options (vertical terminal [-T], AMP connector [-J])

Block diagram



External view



eco

PLA100F

A 100 F 5









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

to connect with several devices.

*The EMI/EMC Filter is recommended

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

- Optional *7
 C: with Coating
 R: Remote on/off (Required external
- power source)
 J : Connector interface
- T : Vertical terminal block
 L : Lower power consumption
 (0.5W max at AC240Vin,
- no load, ErP-compliant) N1: with DIN rail

See 5.1 in Instruction Manual.

SPECIFICATIONS

* Please consider "PRA100F-5-N" about 5V output with case cover

N	MODEL		PLA100F-12	PLA100F-15	PLA100F-24	PLA100F-36	PLA100F-48	
\	VOLTAGE[V]		AC85 - 264 1 φ (Outp (DC input *3)	out derating is required a	at AC85V - 115V. See 1.	1 and 3.2 in Instruction M	fanual) *3	
	ACIN 100V		1.2typ (lo=90%)					
	CURRENT[A] ACIN 11		1.1typ (lo=100%)					
		ACIN 230V	0.6typ (lo=100%)					
F	FREQUENCY[Hz]		50 / 60 (47 - 63) (DC	input and 440Hz *3)				
		ACIN 100V	82typ (lo=90%)	83typ (Io=90%)	85typ (lo=90%)	86typ (Io=90%)	86typ (Io=90%)	
l E	EFFICIENCY[%]	ACIN 115V	82typ (lo=100%)	83typ (lo=100%)	85typ (lo=100%)	86typ (Io=100%)	86typ (lo=100%)	
NPUT		ACIN 230V	85typ (lo=100%)	86typ (Io=100%)	88typ (Io=100%)	89typ (Io=100%)	89typ (lo=100%)	
		ACIN 100V	0.98typ (lo=90%)	1	1	, (,	1 - 31 (
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)					
		ACIN 230V	, ,	Power factor correction	is stopped at AC250V of	or more.		
		ACIN 100V	16typ (Io=90%) Ta=25					
l I	NRUSH CURRENT[A]	ACIN 115V	16typ (lo=100%) Ta=2					
"		ACIN 230V	32typ (lo=100%) Ta=2					
ī	LEAKAGE CURRENT				, According to IEC60950)-1 and DEN-AN)		
	VOLTAGE[V]	rand d	12	15	24	36	48	
		ACIN 85-115V			ess (refer to instruction i	1.7.7	1	
0	CURRENT[A]	ACIN 115V-264V	<u> </u>	6.7	4.3	2.8	2.1	
		ACIN 85-115V			ess (refer to instruction i			
V	WATTAGE[W]	ACIN 115V-264V	100.8	100.5	103.2	100.8	100.8	
	LINE REGULATION[m		48max	60max	96max	144max	192max	
_	LOAD REGULATION	lo=30 to 100%		120max	150max	150max	300max	
	[mV] *4			se contact us about det		Toomax	ocomax	
F-	-		120max	120max	120max	150max	150max	
	RIPPLE[mVp-p]	-10 to 0°C		160max	160max	200max	400max	
DUTPUT	lo: load factor		500max	500max	500max	500max	500max	
<u> </u>		0 to +40°C		150max	150max	200max	200max	
"	RIPPLE NOISE[mVp-p]	-10 to 0°C	180max	180max	180max	240max	500max	
	lo: load factor		600max	600max	600max	600max	600max	
-		0 to +40°C	120max	150max	240max	360max	480max	
Т	TEMPERATURE REGULATION[mV]	-10 to +40°C	180max	180max	290max	440max	600max	
-			48max	60max	96max	144max	192max	
_	DRIFT[mV]	*2			Joillax	144IIIax	192IIIdx	
_	START-UP TIME[ms]		500typ (ACIN 115V, Io=100%) Ta=25°C 20typ (ACIN 115V, Io=100%)					
_	HOLD-UP TIME[ms] DUTPUT VOLTAGE ADJUSTMEN	T DANCERA	71 (13.50 to 16.50	24 00 to 20 40	22 40 42 20 00	42.20 to 52.00	
_					21.60 to 26.40	32.40 to 39.60	43.20 to 52.80	
	OUTPUT VOLTAGE SETTI		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			rating and recovers auto		44 40 to 50 40	E4 00 t- 07 00	
	OVERVOLTAGE PROTEC		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	ION	LED (Green)					
<u> </u>	REMOTE SENSING		Not provided	4	-ti D)			
	REMOTE ON/OFF			ternal power source. O				
_	NPUT-OUTPUT • RC	*9	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature)					
SOLATION \vdash	NPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At room temperature)					
_	OUTPUT • RC-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50M Ω min (At room temperature)					
	OUTPUT-RC	*9	,					
_	OPERATING TEMP.,HUMID.AND A				•	sing), 3,000m (10,000 fee	et) max	
NVIRONMENT —	STORAGE TEMP.,HUMID.AND	ALTITUDE			9,000m (30,000 feet) m			
	VIBRATION				Ominutes each along X,	Y and Z axes		
	MPACT			ns, once each X, Y and				
	AGENCY APPROVAL	S			· · · · · · · · · · · · · · · · · · ·	ept option -J) Complies	with DEN-AN	
NOISE	CONDUCTED NOISE		<u> </u>	<u> </u>	EN55011-B, EN55022-B			
REGULATIONS	HARMONIC ATTENUA		Complies with IEC610	000 0 0 alass A				



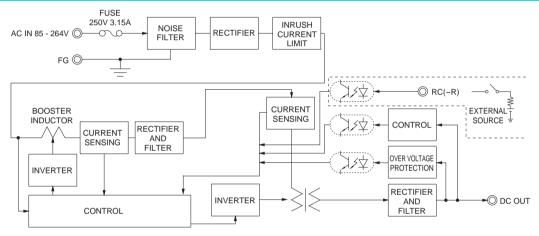
OTHERS	CASE SIZE/WEIGHT	41×97×109mm [1.61×3.82×4.29 inches] (Excluding terminal block and screw) (W×H×D) / 500g max		
OTHERS	COOLING METHOD	Convection		
WARRANTY	NTY WARRANTY			

- *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 Output power denating is required. As for DC input, consult us for advice
- 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.
- Consult us about safety agency approvals for the models with optional functions.
- *8 Consult us about other classes.
- The RC terminal is added to ontion -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 damaged.
- Parallel operation is not possible with this mode
- Sound noise may be heard from the power supply when used for pulse load.

Features

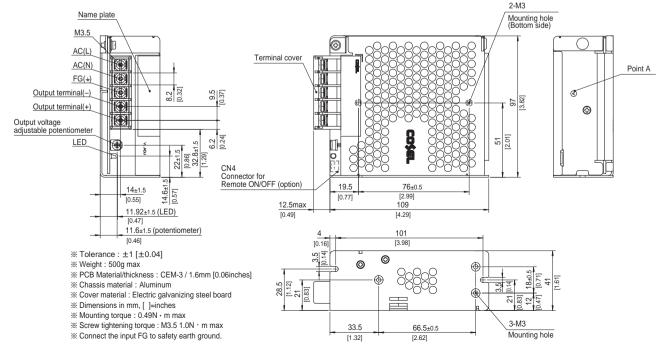
- · Compact design (Depth: 109mm 4.29inches)
- · High efficiency (88%typ PLA100F-24, AC230Vin, 100% load)
- · Low power consumption (1.5W typ AC240Vin, no load at standard model)
- · Lower power consumption (0.5Wmax AC240Vin, no load at option -L: see instruction manual)
- · UL508 approved (Except option -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, -N1 option and -T option models is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.



eco

PLA150F

A 150 F 5









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)Universal input 5)Output voltage

- Optional *7
 C: with Coating
 R: Remote on/off
 - (Required external power source)
 J : Connector interface

 - T : Vertical terminal block
 L : Lower power consumption
 (0.5W max at AC240Vin,
- no load, ErP-compliant) N1: with DIN rail

See 5.1 in Instruction Manual.

SPECIFICATIONS

* Please consider "PRA150F-5-N" about 5V output with case cover

M	IODEL		PLA150F-12	PLA150F-15	PLA150F-24	PLA150F-36	PLA150F-48	
V	OLTAGE[V]		AC85 - 264 1 φ (Outp (DC input *3)	ut derating is required a	t AC85V - 115V. See 1.	1 and 3.2 in Instruction M	fanual) *3	
	ACIN 100V		1.7typ (lo=90%)					
c	URRENT[A]	ACIN 115V	1.6typ (lo=100%)					
		ACIN 230V	0.8typ (lo=100%)					
FI	FREQUENCY[Hz]		50 / 60 (47 - 63) (DC i	input and 440Hz *3)				
		ACIN 100V	84typ (Io=90%)	84typ (Io=90%)	87typ (Io=90%)	87typ (Io=90%)	87typ (lo=90%)	
F	FFICIENCY[%]	ACIN 115V	84typ (Io=100%)	84typ (Io=100%)	87typ (Io=100%)	87typ (Io=100%)	87typ (Io=100%)	
NPUT -		ACIN 230V	87typ (Io=100%)	87typ (Io=100%)	90typ (Io=100%)	90typ (Io=100%)	90typ (Io=100%)	
		ACIN 100V	0.98typ (Io=90%)	0. typ (10 10070)	σοιγρ (10 10070)	000) (10 10070)	σοιγρ (ισσογο	
P	OWER FACTOR	ACIN 115V	0.98typ (lo=100%)					
-		ACIN 230V	, ,	Power factor correction	is stopped at AC250V of	or more		
		ACIN 100V	16typ (Io=90%) Ta=25		10 010pp0d dt /10200 v C	, moro.		
IN	IRUSH CURRENT[A]	ACIN 115V	16typ (Io=100%) Ta=2					
"	INCOM CONNENT [A]	ACIN 230V	32typ (lo=100%) Ta=2					
11	EAKAGE CURRENT				According to IEC60950)-1 and DEN-AN)		
	OLTAGE[V]	ויייען	12	15	24	36	48	
		ACIN 85-115V		_	ess (refer to instruction r	1.7.7	10	
C	URRENT[A]	ACIN 115V-264V	<u> </u>	10	6.4	4.2	3.2	
		ACIN 85-115V			ess (refer to instruction r		0.2	
l w	/ATTAGE[W]	ACIN 115V-264V	150.0	150.0	153.6	151.2	153.6	
11	INE REGULATION[m		48max	60max	96max	144max	192max	
	OAD REGULATION	lo=30 to 100%	100max	120max	150max	150max	300max	
	nV] *4			se contact us about deta		Toomax	Joonnax	
	-		120max	120max	120max	150max	150max	
K	RIPPLE[mVp-p]	-10 to 0°C	160max	160max	160max	200max	400max	
DUTPUT	lo: load factor	lo=0 to 30%		500max	500max	500max	500max	
H-		0 to +40°C		150max	150max	200max	200max	
RI	PPLE NOISE[mVp-p]	-10 to 0°C	180max	180max	180max	240max	500max	
	lo: load factor	lo=0 to 30%		600max	600max	600max	600max	
		0 to +40°C	120max	150max	240max	360max	480max	
TE	MPERATURE REGULATION[mV]	-10 to +40°C	180max	180max	290max	440max	600max	
D	DRIFT[mV] *2		48max	60max	96max	144max	192max	
_	TART-UP TIME[ms]	**2			Joinax	144IIIax	192IIIdx	
	OLD-UP TIME[ms]		500typ (ACIN 115V, Io=100%) Ta=25°C 20typ (ACIN 115V, Io=100%)					
	JTPUT VOLTAGE ADJUSTMEN	T DANGEIVI	***	13.50 to 16.50	21.60 to 26.40	32.40 to 39.60	43.20 to 52.80	
_	UTPUT VOLTAGE SETTI		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	
	VERCURRENT PROTE			ating and recovers auto		30.00 to 37.44	40.00 10 43.32	
	VERVOLTAGE PROTECT		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	
	PERATING INDICAT		LED (Green)	17.25 to 21.00	27.00 to 33.00	41.40 to 50.40	34.00 10 07.20	
	EMOTE SENSING	ION						
· · ·	EMOTE ON/OFF		Not provided					
	IPUT-OUTPUT • C	*0	Optional (Required external power source. Option -R) AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature)					
	IPUT-FG	*9	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature) AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature)					
SOLATION \vdash		*0			C500V 50M Ω min (At ro	· · · · · · · · · · · · · · · · · · ·		
_	UTPUT • RC-FG				,	· · · · · ·		
	UTPUT-RC	*9			C500V 50MΩ min (At ro		ot) may	
_	PERATING TEMP.,HUMID.AND				,	sing), 3,000m (10,000 fe	er) IIIdX	
NVIRONMENT —	FORAGE TEMP., HUMID.AND	ALIIIUUE	•		9,000m (30,000 feet) m			
	IBRATION ABACT				Ominutes each along X,	i ailū∠ axes		
1.	MPACT		. , , , , , , , , , , , , , , , , , , ,	s, once each X, Y and 2		ant antique IV O	with DENI AND	
	GENCY APPROVALS	5				ept option -J) Complies	WITH DEN-AN	
	ONDUCTED NOISE				EN55011-B, EN55022-B			
	ARMONIC ATTENUA	ATOR *8	Complies with IEC610	JUU-3-2 Class A				





OTHERS	CASE SIZE/WEIGHT	41×97×129mm [1.61×3.82×5.08 inches] (Excluding terminal block and screw) (WXHXD) / 600g max
OTHERS	COOLING METHOD	Convection
WARRANTY	WARRANTY *6	5 years (subject to the operating conditions)

This is the result of measurement of the testing board with capacitors of 22 LIF and 0.1 LIF 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-

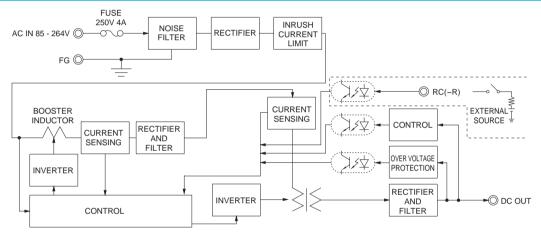
- hour warm-up at 25℃.
- Output power derating is required. As for DC input, consult us for advice Consult us about dynamic load and input response. Measure the output
- voltage by using the average mode of the tester to deal with the burst operation at 30% load or less.
- Output power derating is required. 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 damaged.
- Parallel operation is not possible with this mode
- pulse load.

Features

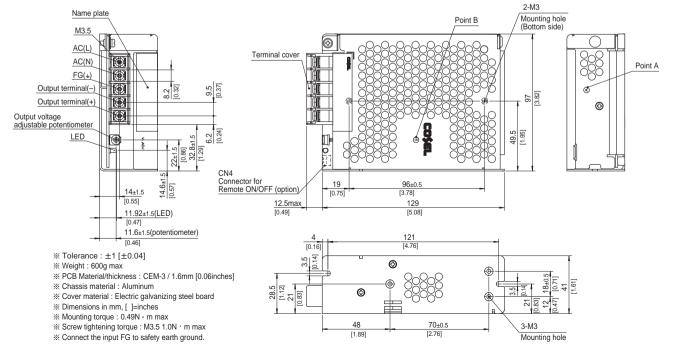
- · Compact design (Depth: 129mm 5.08inches)
- · High efficiency (90%typ PLA150F-24, AC230Vin, 100% load)
- · Low power consumption (1.5W typ AC240Vin, no load at standard model)
- · Lower power consumption (0.5Wmax AC240Vin, no load at option -L: see instruction manual)
- · UL508 approved (Except option -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, -N1 option and -T option models is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.



PLA300F

300





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)Universal input 5)Output voltage
- - output voltage adjustment
 - U: Low input voltage stop (Complies with SEMI F-47) R: Remote on/off

 - (Required external power source)
 - F4: Low speed fan
- T2: Horizontal terminal block (non-screw-hold type)

See 5.1 in Instruction Manual.

	MODEL		PLA300F-5	PLA300F-12	PLA300F-15	PLA300F-24	PLA300F-36	PLA300F-48	
,	VOLTAGE[V]				uired at AC85V - 115	V. See 1.1 and 3.2 i	n Instruction Manual) *3	
			(DC input and AC265 - 277V input *3)						
	ACIN 100\		3.1typ (lo=90%)	3.4typ (Io=90%)					
(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) (D	C input and 440Hz	*3)				
		ACIN 100V	73typ (lo=90%)	78typ (Io=90%)	80typ (lo=90%)	84typ (lo=90%)	84typ (lo=90%)	84typ (lo=90%)	
NPUT	EFFICIENCY[%]	ACIN 115V	74typ (lo=100%)	78typ (Io=100%)	80typ (lo=100%)	84typ (lo=100%)	84typ (Io=100%)	84typ (lo=100%	
NFUI		ACIN 230V	77typ (lo=100%)	81typ (lo=100%)	83typ (lo=100%)	87typ (lo=100%)	87typ (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	20typ (lo=90%) Ta=	=25℃ at cold start					
	INRUSH CURRENT[A]	ACIN 115V	20typ (lo=100%) Ta	a=25°C at cold start					
		ACIN 230V	40typ (Io=100%) Ta	a=25°C at cold start					
1	LEAKAGE CURRENT	[mA]	0.75max (ACIN 11	5V / 240V, 60Hz, lo=	100%, According to	IEC60950-1 and DE	N-AN)		
	VOLTAGE[V]		5	12	15	24	36	48	
	CURRENT[A]	ACIN 85-115V	Output derating is a	equired at ACIN 115	5V or less (refer to in	struction manual 3.2	2)		
	CONNENT[A]	ACIN 115V-264V	50	25	20	12.5	8.4	6.3	
Ι,	WATTAGE[W]	ACIN 85-115V	Output derating is a	equired at ACIN 115	5V or less (refer to in	struction manual 3.2	2)		
	WATTAGE[W]	ACIN 115V-264V	250	300	300	300	302.4	302.4	
L	LINE REGULATION[n	nV] *4	20max	48max	60max	96max	144max	192max	
L	LOAD REGULATION[mV] *4	40max	100max	120max	150max	150max	300max	
1	RIPPLE[mVp-p]	0 to +50°C	80max	120max	120max	120max	150max	150max	
DUTPUT	*1	-10 to 0℃	140max	160max	160max	160max	160max	400max	
	RIPPLE NOISE[mVp-p] *1 TEMPERATURE REGULATION[mV]	0 to +50°C	120max	150max	150max	150max	200max	200max	
		-10 to 0℃	160max	180max	180max	180max	240max	500max	
١,		0 to +50°C	50max	120max	150max	240max	360max	480max	
		-10 to +50°C	75max	180max	180max	290max	440max	600max	
L	DRIFT[mV]	*2	20max	48max	60max	96max	144max	192max	
:	START-UP TIME[ms]		300typ (ACIN 115V, Io=100%)						
	HOLD-UP TIME[ms]		20typ (ACIN 115V,	lo=100%)					
(OUTPUT VOLTAGE ADJUSTMEN	IT RANGE[V]	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	ING[V]	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	CTION	Works over 105% of	of rating and recover	s automatically				
PROTECTION	OVERVOLTAGE PROTE	CTION[V]	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	
_	OPERATING INDICAT	ION	LED (Green)						
OTHERS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Optional (Required external power source. Option -R)						
<u> </u>	INPUT-OUTPUT • RC	*10		<u>' </u>	mA, DC500V 50M Ω				
SOLATION	INPUT-FG	_	AC2,000V 1minute	, Cutoff current = 10	mA, DC500V 50M Ω	min (At room tempe	erature)		
SOLATION	OUTPUT • RC-FG	*10	AC500V 1minute, Cutoff current = 100mA, DC500V 50M Ω min (At room temperature)						
	OUTPUT-RC	*10	AC500V 1minute, 0	Cutoff current = 100r	mA, DC500V 50M Ω	min (At room tempe	rature)		
	OPERATING TEMP.,HUMID.AND	ALTITUDE *5	-20 to +70°C (Outp	ut derating is require	ed), 20 - 90%RH (No	n condensing), 3,00	0m (10,000 feet) ma	х	
NVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75°C, 20 - 9	00%RH (Non conder	nsing), 9,000m (30,0	00 feet) max			
TIAAILOIAMIENI	VIBRATION		10 - 55Hz, 19.6m/s	² (2G), 3minutes per	iod, 60minutes each	along X, Y and Z ax	es		
	IMPACT		196.1m/s² (20G), 1	1ms, once each X, Y	and Z axes				
SAFETY AND	AGENCY APPROVAL	s	UL60950-1, C-UL (CSA60950-1), EN60	0950-1, EN50178 Co	mplies with DEN-AN	N		
NOISE	CONDUCTED NOISE		Complies with FCC	-B, VCCI-B, CISPR	22-B, EN55011-B, EI	N55022-B			
REGULATIONS	HARMONIC ATTENUA	ATOR *9	Complies with IEC	61000-3-2 class A					



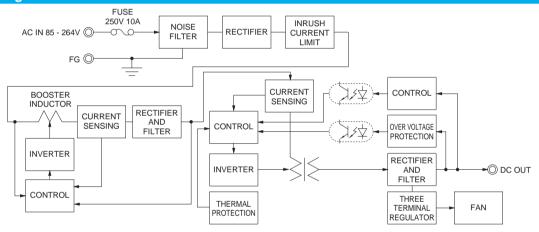
OTHERS	CASE SIZE/WEIGHT	102×41×190mm [4.02×1.61×7.48 inches] (Excluding terminal block and screw) (W×H×D) / 1.0kg max
OTHERS	COOLING METHOD *8	Forced cooling (internal fan)
WARRANTY	WARRANTY *6	5 years (subject to the operating conditions)

- This is the result of measurement of the testing board with capacitors of 22 LIF and 0.1 LIF 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.
- *2 Drift is the change in DC output for an eight hour period after a half-hour arm-up at 25℃
- Output power derating is required. Consult us if the power supply needs
- to be used for DC input, 440Hz input or AC265-277V input.
- 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
- *10 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

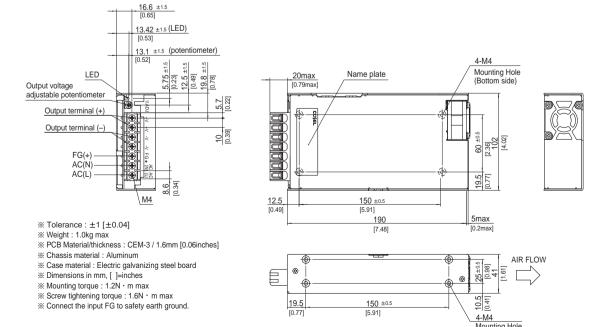
- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 1U height = 41 mm or 1.61 inches)
- ·Wide operating temperature range (-20°C to +70°C see instruction manual)
- · Screw hold type terminal block
- · Slow fan speed at no load
- · Many optional functions
- · Complies with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

Block diagram



External view

The external size of -V option, -R option, and -T2 option models is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.



PLA600F

600



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) Universal input
 (5) Output voltage
 (6) Optional *7
 C: with Coating
 G: Low leakage current
 V: External potentiometer for output voltage adjustment
 U: Low input voltage stop
 (Complies with SEMI F-47)
 W: Parallel operation,
 LV alarm Remote sensing
 R: Remote on/off
 (Required external power source)
 F4: Low speed fan

 - F4: Low speed fan
 T2: Horizontal terminal block (non-screw-hold type)

See 5.1 in Instruction Manual.

	MODEL		PLA600F-5	PLA600F-12	PLA600F-15	PLA600F-24	PLA600F-36	PLA600F-48		
	VOLTAGE[V]		AC85 - 264 1 φ (O	utput derating is requ	uired at AC85V - 115	V. See 1.1 and 3.2 in	n Instruction Manual	*4		
			(DC input and AC265 - 277V input *4)							
		ACIN 100V	6.2typ (Io=90%) 6.7typ (Io=90%)							
	CURRENT[A]	ACIN 115V	6.0typ (lo=100%) 6.5typ (lo=100%)							
		ACIN 230V	3.0typ (lo=100%)	3.2typ (lo=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 63) (DC input and 440Hz *4)							
		ACIN 100V	74typ (lo=90%)	81typ (lo=90%)	81typ (Io=90%)	84typ (lo=90%)	85typ (lo=90%)	85typ (lo=90%)		
NO.IT	EFFICIENCY[%]	ACIN 115V	75typ (lo=100%)	81typ (lo=100%)	81typ (lo=100%)	84typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%		
NPUT		ACIN 230V	77typ (lo=100%)	84typ (lo=100%)	84typ (lo=100%)	88typ (lo=100%)	88typ (lo=100%)	88typ (lo=100%		
		ACIN 100V	0.98typ (lo=90%)							
	POWER FACTOR	ACIN 115V	0.98typ (Io=100%)							
		ACIN 230V	0.95typ (lo=100%)							
		ACIN 100V	20/40typ (Io=90%) (Primary inrush current /Secondary inrush current) (More than 3sec to re-start)							
	INRUSH CURRENT[A]	ACIN 115V	20/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 3sec to re-start)							
		ACIN 230V	40/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 3sec to re-start)							
	LEAKAGE CURRENT	[mA]			00%, According to II					
	VOLTAGE[V]		5	12	15	24	36	48		
		ACIN 85-115V	Output derating is r	equired at ACIN 115	V or less (refer to in	struction manual 3.2)			
	CURRENT[A]	ACIN 115V-264V	100	50	40	25	16.7	12.5		
		ACIN 85-115V			V or less (refer to in			1		
	WATTAGE[W]	ACIN 115V-264V	500	600	600	600	601.2	600		
	LINE REGULATION[m		20max	48max	60max	96max	144max	192max		
	LOAD REGULATION[mV] *8		40max	100max	120max	150max	150max	300max		
		0 to +50℃		120max	120max	120max	150max	150max		
	RIPPLE[mVp-p]	-20 to 0°C	140max	160max	160max	160max	160max	400max		
OUTPUT	RIPPLE NOISE[mVp-p]	0 to +50°C	120max	150max	150max	150max	200max	200max		
		-20 to 0°C	160max	180max	180max	180max	240max	500max		
-		0 to +50°C	50max	120max	150max	240max	360max	480max		
	TEMPERATURE REGULATION[mV]	-20 to +50°C	75max	180max	180max	290max	440max	600max		
	DRIFT[mV]	*2	20max	48max	60max	96max	144max	192max		
	START-UP TIME[ms]		20max							
	HOLD-UP TIME[ms]		20typ (ACIN 115V,	·						
F		IT DANCEIVI		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 ADJUSTMENT RANGE[V] OUTPUT VOLTAGE SETTING[V]		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					24.00 to 24.90	30.00 10 37.44	40.00 10 49.92		
-			5.75 to 7.00	of rating and recover	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20		
	OVERVOLTAGE PROTECTION[V]			13.00 10 10.00	17.25 to 21.00	27.60 to 33.60	41.40 10 50.40	35.20 10 67.20		
	OPERATING INDICATION		LED (Green)							
	REMOTE SENSING	-	Optional (Option -W)							
	REMOTE ON/OFF		Optional (Required external power source. Option -R)							
	INPUT-OUTPUT • RC	*3								
OLATION ⊢	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature)							
			The state of the s							
	OUTPUT-RC	*3	Theodor Thimsand, eaten carrein Tooling Decoor Com Time (Tairein Composition)							
	OPERATING TEMP., HUMID. AND ALTITUDE *5									
NVIRONMENT ⊢	STORAGE TEMP.,HUMID.AND ALTITUDE		2 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axes							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axes							
	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
EGULATIONS	HARMONIC ATTENUA	ATOR *10	Complies with IEC61000-3-2 class A							



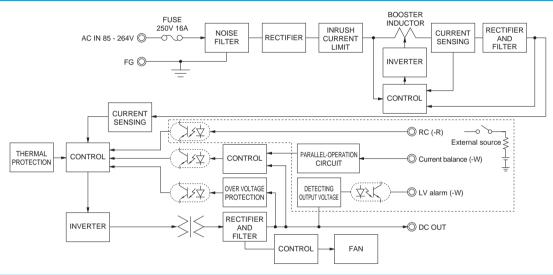
OTHERS	CASE SIZE/WEIGHT	120 X 61 X 215mm [4.72 X 2.40 X 8.46 inches] (Excluding terminal block and screw) (W X H X D) / 2.0kg max				
OTHERS	COOLING METHOD *9	Forced cooling (internal fan)				
WARRANTY	NTY WARRANTY					

- 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
- 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 RC terminal is added to option -R models. The RC terminal is isolated from input, output, and FG.
- Output power derating is required. Consult us if the power supply needs to be used for DC input, 440Hz input or AC265-277V input. Output power derating is required. See 3.2 in Instruction Manual.
- See 3.3 in Instruction Manual for more details
- *7 Consult us about safety agency approvals for the models with optional functions.
- Consult us about dynamic load and input response
- The fan speed slows down at no load *10 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 PLA600F models with the –W option only.
- Sound noise may be heard from the power supply when used for pulse load.

Features

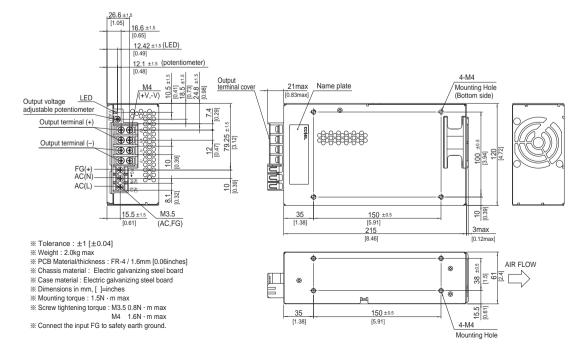
- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 2U height = 61 mm or 2.40 inches)
- · Wide operating temperature range (-20°C to +70°C see instruction manual)
- · Screw hold type terminal block
- · Slow fan speed at no load
- · Many optional functions
- · Complies with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

Block diagram



External view

The external size of -V option, -W option, -R option, and -T2 option is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.



PLA1000F

1000





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

See 5.1 in Instruction Manual.

	MODEL		PLA1000F-5	PLA1000F-12	PLA1000F-15	PLA1000F-24	PLA1000F-36	PLA1000F-48		
	VOLTAGE[V]		AC85 - 264 1 \$\phi\$ (Output derating is required at AC85V - 115V. See 1.1 and 3.2 in Instruction Manual) *4 (DC input and AC265 - 277V input *4)							
		ACIN 100V	8.5typ (lo=90%)	12.5typ (lo=90%)						
	CURRENT[A]	ACIN 115V	8.0typ (lo=100%)	11.0typ (lo=100%)						
	ACIN 230V		4.0typ (lo=100%)	5.5typ (lo=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 63) (DC input and 440Hz *4)							
		ACIN 100V	78typ (lo=90%)	82typ (lo=90%)	82typ (lo=90%)	85typ (lo=90%)	85typ (lo=90%)	84typ (lo=90%)		
NDUT	EFFICIENCY[%]	ACIN 115V	78typ (lo=100%)	82typ (lo=100%)	82typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%)	84typ (lo=100%		
NPUT		ACIN 230V	81typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%)	88typ (lo=100%)	88typ (lo=100%)	87typ (lo=100%		
		ACIN 100V	0.98typ (lo=90%)							
	POWER FACTOR	ACIN 115V	0.98typ (Io=100%)							
		ACIN 230V	0.95typ (Io=100%)							
		ACIN 100V	15/30typ (Io=90%) (Primary inrush current /Secondary inrush current) (More than 10sec to re-start)							
	INRUSH CURRENT[A]	ACIN 115V	15/30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10sec to re-start)							
		ACIN 230V	30/30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10sec to re-start)							
	LEAKAGE CURRENT	[mA]	1.5max (ACIN 115)	/ / 240V, 60Hz, lo=1	00%, According to II	EC60950-1 and DEN	I-AN)	,		
	VOLTAGE[V]		5	12	15	24	36	48		
		ACIN 85-115V	Output derating is	equired at ACIN 11	5V or less (refer to in	struction manual 3.2)			
	CURRENT[A]	ACIN 115V-264V	140	84	67	42	28	21		
		ACIN 85-115V	Output derating is	equired at ACIN 11	5V or less (refer to in	struction manual 3.2)			
	WATTAGE[W]	ACIN 115V-264V	700	1008	1005	1008	1008	1008		
	LINE REGULATION[n		20max	48max	60max	96max	144max	192max		
	LOAD REGULATION		40max	100max	120max	150max	150max	300max		
	RIPPLE[mVp-p]	0 to +50℃	80max	120max	120max	120max	150max	150max		
	*1	-20 to 0°C	140max	160max	160max	160max	160max	400max		
DUTPUT	RIPPLE NOISE[mVp-p]	0 to +50°C	120max	150max	150max	150max	200max	200max		
	*1	-20 to 0°C	160max	180max	180max	180max	240max	500max		
		0 to +50°C	50max	120max	150max	240max	360max	480max		
	TEMPERATURE REGULATION[mV]	-20 to +50°C	75max	180max	180max	290max	440max	600max		
	DRIFT[mV]	*2	20max	48max	60max	96max	144max	192max		
	START-UP TIME[ms]		2 20max 48max 60max 96max 144max 192max 700typ (ACIN 115V, Io=100%)							
	HOLD-UP TIME[ms]		700typ (ACIN 115V, Io=100%) 20typ (ACIN 115V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMEN	NT RANGEIVI	4.25 to 6.00	10.20 to 13.50	13.50 to 17.30	20.40 to 28.50	30.60 to 40.80	40.80 to 55.20		
			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		
	OUTPUT VOLTAGE SETTING[V] OVERCURRENT PROTECTION			of rating and recover		2 7.00 to 24.30	1 00.00 10 07.44	70.00 10 43.32		
	OVERVOLTAGE PROTE		6.25 to 7.25	14.40 to 17.40	18.00 to 21.80	28.80 to 34.80	43.20 to 52.20	57.00 to 67.20		
PROTECTION	OPERATING INDICAT		LED (Green)	1 1.10 10 17.70	10.00 to 21.00	20.00 to 04.00	10.20 10 02.20	07.00 to 07.20		
CIRCUIT AND	AUXILIARY OUTPUT	.5.4	Optional (Option -Z)							
THERS	REMOTE SENSING		Optional (Option -W)							
	REMOTE SENSING REMOTE ON/OFF		Optional (Option -W) Optional (Option -R) Required external power source or auxiliary output (Option -Z□).							
	INPUT-OUTPUT • RC	*3								
	INPUT-FG	*3	AC2,000V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At room temperature) AC2,000V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At room temperature)							
SOLATION		-G **								
	OUTPUT • RC • AUX-FG *3 OUTPUT-RC • AUX *3									
	OPERATING TEMP., HUMID. AND ALTITUDE *5									
NVIRONMENT	STORAGE TEMP., HUMID. AND ALTITUDE		-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axes							
A ====\(A \ I =	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axes							
SAFETY AND	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN							
NOISE	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
REGULATIONS	HARMONIC ATTENU	ATOR *10	Complies with IEC61000-3-2 class A							



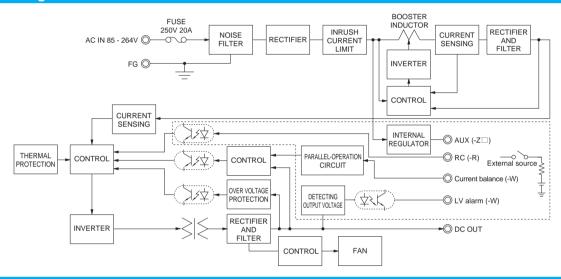
OTHERS	CASE SIZE/WEIGHT	150×61×240mm [5.91×2.40×9.45 inches] (Excluding terminal block and screw) (W×H×D) / 2.8kg max				
OTHERS	COOLING METHOD *9	Forced cooling (internal fan)				
WARRANTY	WARRANTY *6	5 years (subject to the operating conditions)				

- 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 RC/AUX terminal are added to option -R/-Z models. The RC/AUX terminals are isolated from input, output, and FG.
- Output power derating is required. Consult us if the power supply needs to be used for DC input, 440Hz input or AC265-277V input. Output power derating is required. See 3.2 in Instruction Manual.
- See 3.3 in Instruction Manual for more details
- *7 Consult us about safety agency approvals for the models with optional functions.
- Consult us about dynamic load and input response
- The fan speed slows down at no load 10 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 PLA600F models with the –W option only.
 - Sound noise may be heard from the power supply when used for pulse load.

Features

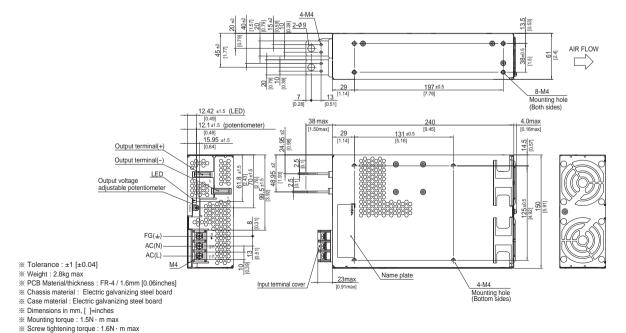
- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 2U height = 61 mm or 2.4 inches)
- · Wide operating temperature range (-20°C to +70°C see instruction manual)
- · Slow fan speed at no load
- · Many optional functions
- · Complies with SEMI F-47 (see instruction manual 1.1)

Block diagram



External view

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



※ Connect the input FG to safety earth ground.

PLA-17

PLA1500F

1500





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

See 5.1 in Instruction Manual.

	MODEL		PLA1500F-5	PLA1500F-12	PLA1500F-15	PLA1500F-24	PLA1500F-36	PLA1500F-48		
	VOLTAGE[V]		AC85 - 264 1 \$\phi\$ (Output derating is required at AC85V - 115V. See 1.1 and 3.2 in Instruction Manual) *4 (DC input and AC265 - 277V input *4)							
		ACIN 100V	12.5typ (lo=90%)	18typ (Io=90%)						
	CURRENT[A]	ACIN 115V	11.0typ (lo=100%)	16typ (lo=100%)						
	ACIN 230V		5.5typ (lo=100%) 8typ (lo=100%)							
	FREQUENCY[Hz]		50 / 60 (47 - 63) (DC input and 440Hz *4)							
		ACIN 100V	78typ (lo=90%)	82typ (lo=90%)	82typ (lo=90%)	85typ (lo=90%)	85typ (lo=90%)	84typ (lo=90%)		
NEUT	EFFICIENCY[%]	ACIN 115V	78typ (lo=100%)	82typ (lo=100%)	82typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%)	84typ (lo=100%)		
NPUT		ACIN 230V	81typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%)	88typ (lo=100%)	88typ (lo=100%)	87typ (lo=100%		
		ACIN 100V	0.98typ (lo=90%)							
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)							
		ACIN 230V	0.95typ (Io=100%)							
		ACIN 100V	15/30typ (Io=90%)	(Primary inrush cur	rent /Secondary inrus	sh current) (More tha	an 10sec to re-start)			
	INRUSH CURRENT[A]	ACIN 115V	15/30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10sec to re-start)							
		ACIN 230V	30/30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10sec to re-start)							
	LEAKAGE CURRENT	[mA]	1.5max (ACIN 115)	/ / 240V, 60Hz, lo=1	00%, According to IE	C60950-1 and DEN	I-AN)	,		
	VOLTAGE[V]		5	12	15	24	36	48		
		ACIN 85-115V	Output derating is r	equired at ACIN 11	5V or less (refer to in	struction manual 3.2)			
	CURRENT[A]	ACIN 115V-264V	200	125	100	64	42	32		
		ACIN 85-115V	Output derating is r	equired at ACIN 11	5V or less (refer to in	struction manual 3.2)			
	WATTAGE[W]	ACIN 115V-264V	1000	1500	1500	1536	1512	1536		
	LINE REGULATION[n		20max	48max	60max	96max	144max	192max		
	LOAD REGULATION		40max	100max	120max	150max	150max	300max		
	RIPPLE[mVp-p]	0 to +50℃	80max	120max	120max	120max	150max	150max		
	*1	-20 to 0°C	140max	160max	160max	160max	160max	400max		
UTPUT	RIPPLE NOISE[mVp-p]	0 to +50°C	120max	150max	150max	150max	200max	200max		
	*1	-20 to 0°C	160max	180max	180max	180max	240max	500max		
		0 to +50°C	50max	120max	150max	240max	360max	480max		
	TEMPERATURE REGULATION[mV]	-20 to +50°C	75max	180max	180max	290max	440max	600max		
	DRIFT[mV]	*2	20max	48max	60max	96max	144max	192max		
	START-UP TIME[ms]		2 20max							
	HOLD-UP TIME[ms]		700typ (ACIN 115V, Io=100%) 20typ (ACIN 115V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMEN	NT RANGEIVI	4.50 to 6.00	10.20 to 13.50	13.50 to 17.30	20.40 to 28.50	30.60 to 40.80	40.80 to 55.20		
			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		
	OUTPUT VOLTAGE SETTING[V] OVERCURRENT PROTECTION		Works over 105% o			2 1.00 to 24.30	1 00.00 10 07.44	70.00 10 43.32		
	OVERVOLTAGE PROTE		6.25 to 7.25	14.40 to 17.40	18.00 to 21.80	28.80 to 34.80	43.20 to 52.20	57.00 to 67.20		
ROTECTION	OPERATING INDICAT		LED (Green)	1 . 7. 01 01 77.70	10.00 to 21.00	25.00 to 54.00	10.20 10 02.20	07.00 10 07.20		
IRCUIT AND	AUXILIARY OUTPUT		Optional (Option -Z)							
THERS	REMOTE SENSING		Optional (Option -W)							
	REMOTE SENSING REMOTE ON/OFF		Optional (Option -W) Optional (Option -R) Required external power source or auxiliary output (Option -Z□).							
		*3								
	INPUT-OUTPUT • RC *3 INPUT-FG		AC2,000V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At room temperature) AC2,000V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At room temperature)							
SOLATION		**								
	OUTPUT • RC-FG *3 OUTPUT-RC *3									
	OPERATING TEMP.,HUMID.AND ALTITUDE *5		-20 to +70°C (Output derating is required), 20 - 90%RH (Non condensing), 3,000m (10,000 feet) max							
NVIRONMENT	STORAGE TEMP., HUMID. AND ALTITUDE		-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axes							
A ====\(A \)	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axes							
SAFETY AND	AGENCY APPROVAL	.5	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN Complies with FCC Part15 classA, VCCI-A, CISPR22-A, EN55011-A, EN55022-A, additional EMI/EMC Filter required for meeting class B							
IOISE	CONDUCTED NOISE				JISPKZZ-A, EN55011-A	, EINOOUZZ-A, additiona	ai Eivii/EiviC Fiiter requii	ed for meeting class		
EGULATIONS	HARMONIC ATTENU	AFOR *10	Complies with IEC6	1000-3-2 class A						



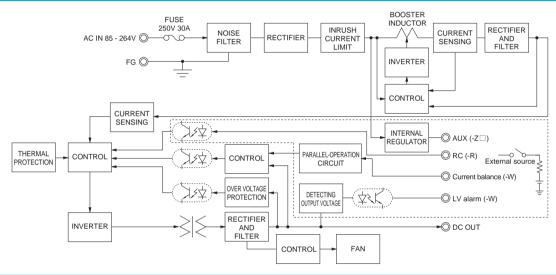
OTHERS	CASE SIZE/WEIGHT	178 X 61 X 268mm [7.01 X 2.40 X 10.55 inches] (Excluding terminal block and screw) (W X H X D) / 3.5kg max				
OTHERS	COOLING METHOD *9	Forced cooling (internal fan)				
WARRANTY	NTY WARRANTY *6 5 years (subject to the operating conditions)					

- 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
- 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 RC/AUX terminal are added to option -R/-Z models. The RC/AUX terminals are isolated from input, output, and FG.
- Output power derating is required. Consult us if the power supply needs to be used for DC input, 440Hz input or AC265-277V input. Output power derating is required. See 3.2 in Instruction Manual.
- See 3.3 in Instruction Manual for more details
- *7 Consult us about safety agency approvals for the models with optional functions.
- Consult us about dynamic load and input response
- The fan speed slows down at no load 10 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 PLA600F models with the –W option only.
 - Sound noise may be heard from the power supply when used for pulse load.

Features

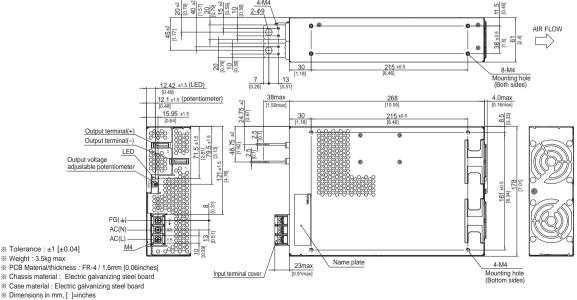
- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 2U height = 61 mm or 2.4 inches)
- · Wide operating temperature range (-20°C to +70°C see instruction manual)
- · Slow fan speed at no load
- · Many optional functions
- · Complies with SEMI F-47 (see instruction manual 1.1)

Block diagram



External view

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



- Mounting torque : 1.5N · m max
 Screw tightening torque : 1.6N · m max
- Connect the input FG to safety earth ground.