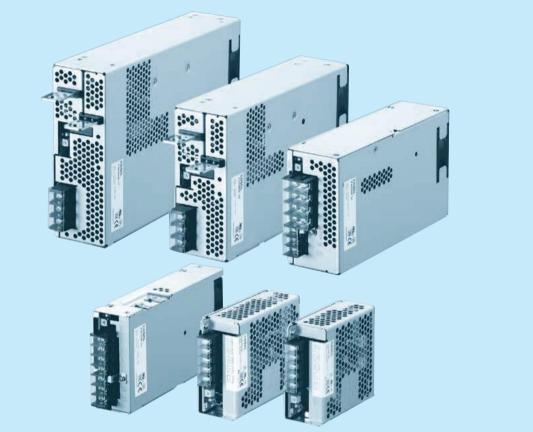




# **PJA-series**



#### Feature

Low Profile (PJA100F, 150F, 300F : 1U size) (PJA600F, 1000F, 1500F : 2U size) Wide temperature range (-20°C to +70°C, Derating is required) Harmonic attenuator (Complies with IEC61000-3-2 class A) Universal input (AC85 - 264V, Derating is required) Low power consumption at no load Complies with SEMI F-47 (PJA1000F, 1500F can meet at 200V input range only) Many optional functions

#### Safety agency approvals

UL62368-1, C-UL (CSA62368-1), EN62368-1 UL508 (PJA100F, 150F) Complies with DEN-AN



#### CE marking

Low Voltage Directive RoHS Directive

#### UKCA marking

Electrical Equipment Safety Regulations RoHS Regulations

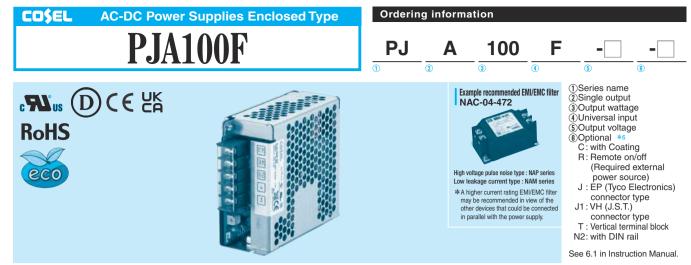
#### EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

(PJA1500F: Class A. In conducted noise, it can meet class B by additional EMI/EMC filter.)

**EMS Compliance** : EN61204-3, EN61000-6-2

EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-8 EN61000-4-11



	MODEL		PJA100F-12	PJA100F-15	PJA100F-24	PJA100F-36	PJA100F-48			
	VOLTAGE[V]		AC85 - 264 1 φ (Outr	out derating is required	at AC85V - 115V. Refer t					
		ACIN 100V	1.2typ (lo=90%)	3 1 1		y	, , ,			
	CURRENT[A]	ACIN 115V	1.1typ (lo=100%)							
NPUT		ACIN 230V	0.6typ (lo=100%)							
	FREQUENCY[Hz]		50 / 60 (47 - 63)							
		ACIN 100V	82typ (lo=90%)	83typ (Io=90%)	85typ (lo=90%)	"Derating" and instruction man         "Derating" and instruction man         86typ (lo=90%)       86t         86typ (lo=100%)       86t         89typ (lo=100%)       86t         99typ (lo=100%)       89t         more.       9         100.8       100         144max       192         150max       100         150max       100         150max       200         200max       400         500max       500         200max       400         500max       500         240max       500         600max       480         440max       600         144max       192         32.40 to 39.60       43.         36.00 to 37.44       48.         41.40 to 50.40       54.         om temperature)       m temperature)         m temperature) </td <td>86tyn (lo=90%)</td>	86tyn (lo=90%)			
	EFFICIENCY[%]	ACIN 115V	82typ (lo=100%)	83typ (lo=100%)	85typ (lo=100%)	,	, , ,			
		ACIN 230V	85typ (lo=100%)	86typ (lo=100%)	88typ (lo=100%)					
		ACIN 100V	0.98typ (lo=90%)			00000 (10-10070)				
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)							
		ACIN 230V		Power factor correction	is stopped at AC250V	or more				
		ACIN 100V	16typ (Io=90%) Ta=2							
	INRUSH CURRENT[A]	ACIN 115V	16typ (lo=100%) Ta=							
		ACIN 230V	32typ (lo=100%) Ta=			- 115V. Refer to "Derating" and instruction manual 1.1, 3)         (lo=90%)       86typ (lo=90%)       86typ (lo=90%)         (lo=100%)       86typ (lo=100%)       86typ (lo=100%)         (lo=100%)       89typ (lo=100%)       89typ (lo=100%)         (d at AC250V or more.       36       48         C62368-1 and DEN-AN)       36       48         r to "Derating")       2.8       2.1         r to "Derating")       100.8       100.8         x       144max       192max         ax       150max       300max         ax       150max       300max         ax       150max       500max         ax       200max       400max         ax       200max       400max         ax       200max       400max         ax       200max       600max         ax       200max       400max         ax       440max       600max         ax       144max       192max         to 26.40       32.40 to 39.60       43.20 to 52.80         to 26.40       32.40 to 39.60       43.20 to 52.80         to 33.60       41.40 to 50.40       54.00 to 67.20         DMΩ min (At room temperature)       <				
	LEAKAGE CURRENT				ding to IEC62368-1 and					
	VOLTAGE[V]	[]	12	15	24		86typ (lo=90%) 86typ (lo=100%) 89typ (lo=100%) 99typ (lo=100%) 200% 200% 200% 200% 200% 200% 200%			
		ACIN 85-115V		-	less (Refer to "Derating"		10			
	CURRENT[A]	ACIN 05-115V ACIN 115V-264V	8.4	6.7	4.3		21			
					less (Refer to "Derating"		2.1			
	WATTAGE[W]			100.5	103.2		100.9			
			48max	60max	96max					
	-	-		120max	150max					
				se contact us about det		TSUITIAX	Suumax			
			1 (	120max	120max	150mov	150mov			
	RIPPLE[mVp-p]		160max	160max	160max					
	lo: load factor									
DUIPUI				500max	500max					
	RIPPLE NOISE[mVp-p]		150max	150max	150max					
	lo: load factor		180max	180max	180max					
	10. 1040 140101	10-0 10 00 /0	600max	600max	600max					
ТЕМР	TEMPERATURE REGULATION[mV]		120max	150max	240max					
	WATTAGE[W]         ACIN 85-115V ACIN 15V-264V         Out ACIN 15V-264V           LINE REGULATION[ITV]         *3         48n           LOAD REGULATION [ITV]         *3         48n           LOAD REGULATION [ITV]         1000         100%         1000           [ITV]         *3         1000         100         1000           RIPPLE[ITVP-p]         0 to +40°C         120         -10 to 0°C         160           RIPPLE NOISE[ITVP-p]         0 to +40°C         1500         -10 to 0°C         1800           Io: load factor         Io=0 to 30%         5000         -10 to 0°C         1800           Io: load factor         Io=0 to 30%         6000         0 to +40°C         1200           Io: load factor         Io=0 to 30%         6000         0 to +40°C         1200           Io: load factor         Io=0 to 30%         6000         0 to +40°C         1200           Io: load factor         Io=0 to 30%         6000         0 to +40°C         1200           TEMPERATURE REGULATION[ITV]         *2         48m         5000           HOLD-UP TIME[ITS]         5000         HOLD-UP TIME[ITS]         5000           HOLD-UP TIME[ITS]         000         10.2         10.2 <t< td=""><td></td><td colspan="5"></td></t<>									
		*2	48max	60max	96max	144max	192max			
			500typ (ACIN 115V, I							
			20typ (ACIN 115V, lo	,						
				13.50 to 16.50	21.60 to 26.40					
			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			
				rating and recovers auto		44 40 1 -5 45	E4.00			
ROTECTION				17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	54.00 to 67.20			
		ION	LED (Green)							
THERS			Not provided							
				kternal power source. O			86typ (lo=90%) 86typ (lo=100%) 89typ (lo=90%) 89typ (lo=90%) 89typ (lo=90%) 89typ (lo=90%) 89typ (lo=90%) 89typ (lo=90%) 89typ (lo=90%) 89typ (lo=100%) 89typ (lo=100%) 80typ (lo=00%) 80typ (lo=00%			
		*8		,	· · · ·	/				
SOLATION							86typ (lo=90%) 86typ (lo=100%) 89typ (lo=100%) 89typ (lo=100%) 200% 192max 300max 192max 300max 400max 500max 200max 500max 600max 480max 600max 480max 192max 500max 500max 480max 500m			
		*8								
	OUTPUT-RC	*8				. ,				
NVIRONMENT	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]         1           OUTPUT VOLTAGE SETTING[V]         1           OUTPUT VOLTAGE SETTING[V]         1           OVERCURRENT PROTECTION         V           OVERVOLTAGE PROTECTION[V]         1           TAND         OPERATING INDICATION         L           REMOTE SENSING         N           REMOTE ON/OFF         C           INPUT-OUTPUT • RC         *8           OUTPUT • RC-FG         *8           OUTPUT • RC         *8			, 9,000m (30,000 feet) n						
SOLATION INP SOLATION OU OU NVIRONMENT STOI VIB	VIBRATION		10 - 55Hz, 19.6m/s <sup>2</sup> (	2G), 3minutes period, 6	Ominutes each along X,	Y and Z axes				
	IMPACT		1 1.	ns, once each X, Y and						
SAFETY AND	AGENCY APPROVAL	S	UL62368-1, C-UL (C	SA62368-1), EN62368-	1, UL508 (Except option	-J, -J1) Complies with D	EN-AN			
IOISE	CONDUCTED NOISE		Complies with FCC-E	, VCCI-B, CISPR22-B,	EN55011-B, EN55022-E	3				
REGULATIONS	HARMONIC ATTENUA	ATOR *7	Complies with IEC61	000-3-2 class A						

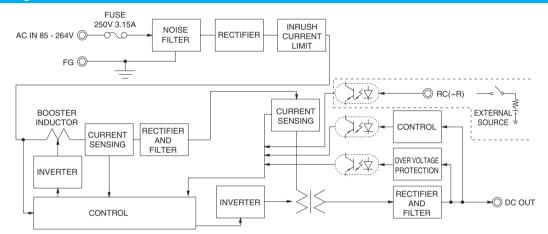


OTHERS	CASE SIZE/WEIGHT	41×97×109	9mm [1.61×3.82×4.29 inches] (Excluding terminal blo	ck ai	nd screw) (W×H×D) / 500g max		
UTHENS	COOLING METHOD	Convection					
WARRANTY	WARRANTY *5	5 years (sub	ject to the operating conditions)				
capacitors	result of measurement of the testing board wi of 22 µ F and 0.1 µ F placed at 150 mm from ninals by a 20 MHz oscilloscope or a ripple-no	he *3	hour warm-up at 25°C. 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	*	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		
	to Keisoku-Giken RM103. Instruction Manual for more details.	operation at 30% load or less. *4 Output power derating is required. Refer to "Derating".			damaged. Parallel operation is not possible with this mode.		
reduced by	load factor is 0 - 30%, the switching power y burst operation, which will cause ripple ar o beyond the specifications.		See 4 in Instruction Manual for more details. Consult us about safety agency approvals for the models with optional functions. Consult us about other classes.	*	Sound noise may be heard from the power supply when used for pulse load.		
*2 Drift is the o	change in DC output for an eight hour period a	fter a half- *8	The RC terminal is added to option -R models. The RC terminal is isolated				

#### **Features**

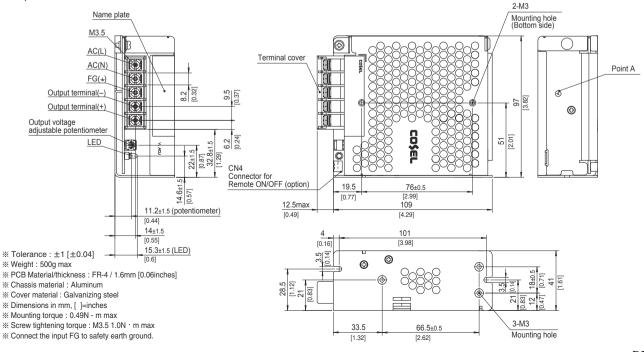
- · Compact design (Depth: 109mm 4.29inches)
- · High efficiency (88%typ PJA100F-24, AC230Vin, 100% load)
- · Low power consumption (1.5W typ AC240Vin, no load at standard model)
- · UL508 approved (Except option -J, -J1), and complies with SEMI F47 (see instruction manual 1.1)
- · Various connection interface options (vertical terminal [-T], AMP connector [-J], [-J1])

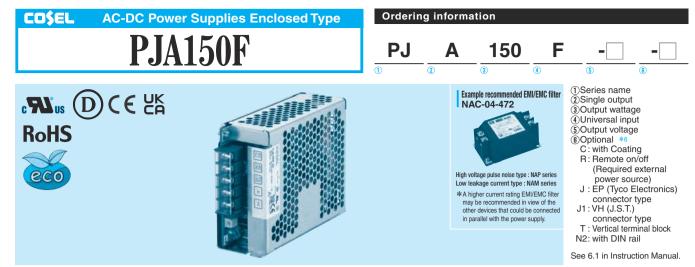
#### **Block diagram**



#### **External view**

The external size of –R option, –J option, –J1 option, –N2 option and –T option models is different from the standard model. See "6. Options and Others" in Instruction Manual for more details.





	MODEL		PJA150F-12	PJA150F-15	PJA150F-24	PJA150F-36	PJA150F-48		
	VOLTAGE[V]								
ŀ		ACIN 100V	1.7typ (lo=90%)						
NPUT	CURRENT[A]	ACIN 115V	1.6typ (lo=100%)						
		ACIN 230V	0.8typ (lo=100%)						
F	FREQUENCY[Hz]		50 / 60 (47 - 63)			· · · · · · · · · · · · · · · · · · ·			
ŀ		ACIN 100V	84typ (lo=90%)	84typ (lo=90%)	87typ (lo=90%)	87typ (lo=90%)	87typ (lo=90%)		
	EFFICIENCY[%]	ACIN 115V	84typ (lo=100%)	84typ (lo=100%)	87typ (lo=100%)	87typ (lo=100%)			
		ACIN 230V	87typ (lo=100%)	87typ (lo=100%)	90typ (lo=100%)	90typ (lo=100%)			
		ACIN 100V	0.98typ (Io=90%)	01()p(10/100/0)					
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)						
		ACIN 230V	, , , ,	Power factor correction	is stopped at AC250V	or more			
ŀ		ACIN 100V	16typ (Io=90%) Ta=25						
	INRUSH CURRENT[A]	ACIN 115V	16typ (lo=100%) Ta=2						
		ACIN 230V	32typ (lo=100%) Ta=2				87typ (lo=90%) 87typ (lo=100%) 90typ (lo=100%) 90typ (lo=100%) 153.6 192max 300max 150max 400max 500max 200max 500max 600max 480max 600max 480max 480max 500max 500max 500max 480max 500		
ŀ	LEAKAGE CURRENT				ding to IEC62368-1 and	DEN-AN)			
	VOLTAGE[V]	[]	12	15	24	36	48		
-		ACIN 85-115V			ess (Refer to "Derating"				
	CURRENT[A]	ACIN 115V-264V		10	6.4	4.2	3.2		
-		ACIN 85-115V			ess (Refer to "Derating"		0.2		
CURRENT WATTAGE LINE REGU LOAD REG [mV] RIPPLE[m NUTPUT	WATTAGE[W]	ACIN 115V-264V		150.0	153.6	151.2	153.6		
	LINE REGULATION		48max	60max	96max	144max			
ŀ	LOAD REGULATION	lo=30 to 100%		120max	150max	150max			
		lo=0 to 30%		se contact us about det		Toomax	ooomax		
F		0 to +40°C	120max	120max	120max	150max	150max		
	кігессішкр-рј	-10 to 0°C	160max	160max	160max	200max			
	lo: load factor	lo=0 to 30%		500max	500max	500max			
		0 to +40°C	150max	150max	150max	200max			
	*1	-10 to 0°C	180max	180max	180max	240max			
	lo: load factor	lo=0 to 30%	600max	600max	600max	600max			
ŀ		0 to +40°C	120max	150max	240max	360max			
	TEMPERATURE REGULATION[mV]	-10 to +40°C	180max	180max	290max	440max	(lo=100%)       87typ (lo=100%)         (lo=100%)       90typ (lo=100%)         90typ (lo=100%)       90typ (lo=100%)         100%)       90typ (lo=100%)         153.6       3.2         153.6       3.2         153.6       3.2         ax       192max         ax       300max         ax       500max         ax       500max         ax       600max         ax       600max         ax       600max         ax       600max         ax       192max         to 39.60       43.20 to 52.80         to 39.60       43.20 to 52.80         to 37.44       48.00 to 49.92         to 50.40       54.00 to 67.20         wrature)       reature)         rature)       reature)         wrature)       reature)         wrature)       ses		
ŀ	DRIFT[mV]	*2	48max	60max	96max	144max			
ŀ	START-UP TIME[ms]		500typ (ACIN 115V, Ic		oomax	TTIMAX			
ŀ	HOLD-UP TIME[ms]		20typ (ACIN 115V, lo=						
ŀ	OUTPUT VOLTAGE ADJUSTMEN	T RANGE[V]	21 (	13.50 to 16.50	21.60 to 26.40	32 40 to 39 60	43 20 to 52 80		
-	OUTPUT VOLTAGE SETT		12.00 to 12.48	15.00 to 15.60	24.00 to 24.96				
	OVERCURRENT PROTE			ating and recovers auto			1.000.000		
BOTECTION	OVERVOLTAGE PROTE			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		
L	REMOTE SENSING		Not provided						
ŀ	REMOTE ON/OFF			ternal power source. O	otion -R)		87typ (Io=90%) 87typ (Io=100%) 90typ (Io=100%) 90typ (Io=100%) 90typ (Io=100%) 153.6 192max 300max 150max 400max 500max 200max 500max 400max 500max 400max 500max 400max 500max 480max 600max 480max 480max 500max 5		
	INPUT-OUTPUT • RC	*8			C500V 50MΩ min (At ι	oom temperature)			
	INPUT-FG		AC2,000V 1minute, C	utoff current = 10mA, D	C500V 50MΩ min (At i	oom temperature)			
SOLATION	OUTPUT • RC-FG	*8	AC500V 1minute, Cut	off current = 100mA, D	C500V 50MΩ min (At r	com temperature)	87typ (lo=90%) 87typ (lo=100%) 90typ (lo=100%) 90typ (lo=100%) 153.6 192max 300max 150max 400max 500max 500max 500max 600max 480max 600max 480max 600max 480max 500		
F	OUTPUT-RC	*8			C500V 50M $\Omega$ min (At r	<u> </u>			
	OPERATING TEMP., HUMID.AND	ALTITUDE *4							
F	STORAGE TEMP., HUMID.AND				9,000m (30,000 feet) n	,			
NVIRONMENT	VIBRATION				Ominutes each along X,	36.00 to 37.44       48.00 to 49.92         41.40 to 50.40       54.00 to 67.20         At room temperature)       54.00 to 67.20         At room temperature)       At room temperature)         At room temperature)       54.00 to 67.20         At room temperature)       54.00 to 67.20			
ŀ	IMPACT			s, once each X, Y and					
AFETY AND	AGENCY APPROVAL	s	1 12			-J, -J1) Complies with D	EN-AN		
IOISE	CONDUCTED NOISE				EN55011-B, EN55022-E				
REGULATIONS	HARMONIC ATTENU	ATOR *7	Complies with IEC610						

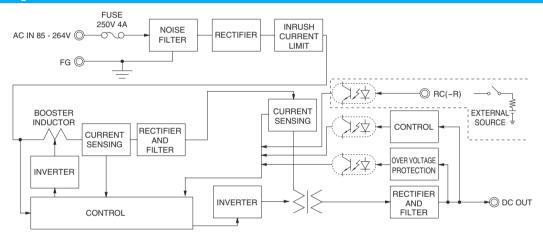


	OOLING METHOD				41×97×129mm [1.61×3.82×5.08 inches] (Excluding terminal block and screw) (W×H×D) / 600g max							
· · · · · · · · · · · · · · · · · · ·		Convection										
WARRANTY WA	ARRANTY *5	5 years (su	pject to the operating conditions)									
*1 This is the result	It of measurement of the testing board with ca	apacitors of	hour warm-up at 25°C.		isolated from input, output, and FG.							
22 µ F and 0.1 µ I	F placed at 150 mm from the output termina	als by a 20 🛛 😽	3 Consult us about dynamic load and input response. Measure the output	*	Do not use the power supply in overcurrent conditions or in unspecified							
MHz oscilloscope	pe or a ripple-noise meter equivalent to Keiso	ku-Giken	voltage by using the average mode of the tester to deal with the burst		input voltage ranges. Otherwise the internal components may be							
RM103.			operation at 30% load or less.		damaged.							
See 1.6 of Instruc	uction Manual for more details.	*	4 Output power derating is required. Refer to "Derating".	Parallel operation is not possible with this mode.								
When the load fa	factor is 0 - 30%, the switching power loss is r	reduced by 🛛 😽	5 See 4 in Instruction Manual for more details.	*	Sound noise may be heard from the power supply when used for							
burst operation, v	which will cause ripple and ripple noise to go	beyond 😽	6 Consult us about safety agency approvals for the models with optional functions.		pulse load.							
the specifications	ns.	*	7 Consult us about other classes.									
*2 Drift is the change	nge in DC output for an eight hour period aft	ter a half- 🛛 😽	8 The RC terminal is added to option -R models. The RC terminal is									

#### Features

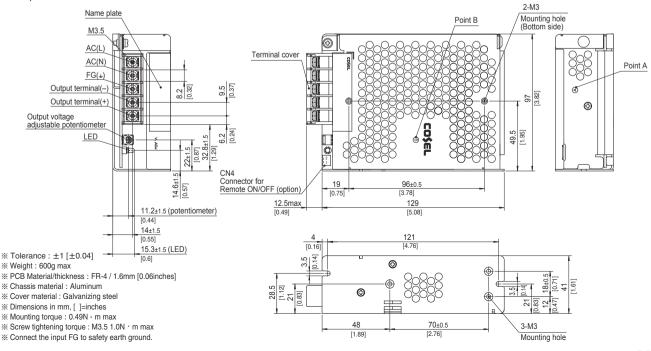
- · Compact design (Depth: 129mm 5.08inches)
- · High efficiency (90%typ PJA150F-24, AC230Vin, 100% load)
- · Low power consumption (1.5W typ AC240Vin, no load at standard model)
- · UL508 approved (Except option -J, -J1), and complies with SEMI F47 (see instruction manual 1.1)
- · Various connection interface options (vertical terminal [-T], AMP connector [-J], [-J1])

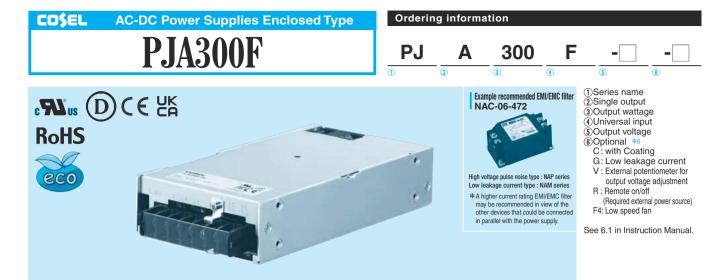
#### **Block diagram**



#### **External view**

The external size of –R option, –J option, –J1 option, –N2 option and –T option models is different from the standard model. See "6. Options and Others" in Instruction Manual for more details.





	MODEL		PJA300F-5	PJA300F-12	PJA300F-15	PJA300F-24	PJA300F-36	PJA300F-48
	VOLTAGE[V]		AC85 - 264 1 ¢ (O	utput derating is req	uired at AC85V - 100	V. Refer to "Derating	" and instruction ma	nual 1.1, 3)
		ACIN 100V	3.5typ (lo=100%)	3.9typ (lo=100%)				
	CURRENT[A]	ACIN 115V	3.0typ (lo=100%)	3.3typ (lo=100%)	red at AC85V - 100V. Refer to "Derating" and instruct           81typ (lo=100%)         82typ (lo=100%)         83typ (lo=1)           82typ (lo=100%)         83typ (lo=100%)         83typ (lo=1)           84typ (lo=100%)         86typ (lo=100%)         87typ (lo=1)           84typ (lo=10%)         12.5         8.4         7           96max         144max         120max         150max         240max           180max         240max         36.00to 37			
		ACIN 230V	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , ,				
	FREQUENCY[Hz]		50 / 60 (47 - 63)					
		ACIN 100V	73typ (lo=100%)	79typ (lo=100%)	81typ (lo=100%)	82typ (lo=100%)	83typ (lo=100%)	82typ (lo=100%)
	EFFICIENCY[%]	ACIN 115V	, ,	, ,	, ,			83typ (lo=100%)
NPUT		ACIN 230V	, ,					86typ (lo=100%)
		ACIN 100V	, ,					
	POWER FACTOR	ACIN 115V						
		ACIN 230V	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	a=25°C at cold start				
	INRUSH CURRENTIA							
		ACIN 230V						
	LEAKAGE CURRENT	[mA]	, ,		According to IEC623	368-1 and DEN-AN)		
			5	12	15	,	36	48
		ACIN 85-100V	Output derating is r	equired at ACIN 10	)V or less (Refer to "	Derating")		
	VOLTAGE[V]         AC85 - 261 4 (Output dentaing is required at AC85V - 100V. Refer to "Dentaing" and is QURRENT[A]           URRENT[A]         AC81 100V         3.5typ (lo=100%)         3.9typ (lo=100%)           FREQUENCY[Hz]         50 / 60 (47 - 63)         3.9typ (lo=100%)         8typ (lo=100%)           EFFICIENCY[%]         AC81 119V         74typ (lo=100%)         8typ (l			1	1		8.4	6.3
		302.4	302.4					
	LINE REGULATION							
	-	-						
	-							
							160max 4	400max
DUTPUT	RIPPLE NOISE[mVn-n]							
								6.3 302.4 192max 300max 150max
	TEMPERATURE REGULATION[mV]							
	DRIFT[mV]	*2						
				1				
		T RANGE[V]	21 X	,	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	CTION	Works over 105% of	of rating and recover	s automatically			-
ROTECTION						27.60 to 33.60	41.40 to 50.40	55.20 to 67.20
IRCUIT AND	OPERATING INDICAT	ION	LED (Green)				83typ (lo=100%)       83typ (lo=10         87typ (lo=100%)       83typ (lo=10         87typ (lo=100%)       86typ (lo=10         36       48         8.4       6.3         302.4       302.4         144max       192max         150max       300max         150max       150max         200max       200max         240max       500max         360max       480max         440max       600max         36.00 to 39.60       43.20 to 52.         36.00 to 37.44       48.00 to 49.         41.40 to 50.40       55.20 to 67.         9       600         9       41.40 to 50.40         9       55.20 to 67.         9       600         9       600         41.40 to 50.40       55.20 to 67.         9       600         9       600         9       600         9       600         9       600         9       600         9       600         9       600         9       600         9       600         9       <	
THERS	REMOTE SENSING		Not provided					
	REMOTE ON/OFF		Optional (Required	external power sou	rce. Option -R)			
	INPUT-OUTPUT • RC	*9	AC3,000V 1minute	, Cutoff current = 10	mA, DC500V 50MΩ	min (At room tempe	erature)	
	INPUT-FG		AC2,000V 1minute	, Cutoff current = 10	mA, DC500V 50MΩ	min (At room tempe	erature)	
SOLATION	OUTPUT • RC-FG	*9	AC500V 1minute, 0	Cutoff current = 100r	nA, DC500V 50MΩ	min (At room tempe	rature)	
	OUTPUT-RC	*9	AC500V 1minute, 0	Cutoff current = 100r	nA, DC500V 50MΩ	min (At room tempe	rature)	
	OPERATING TEMP., HUMID.AND	ALTITUDE *4					,	
	STORAGE TEMP., HUMID.AND	ALTITUDE		0,1		0,		
INVIRONMENT	,			· ·	0,7 7 7	,	es	
		<u> </u>				h DEN-AN		
AFETY AND	AGENCIAFFROVAL							
AFETY AND		5						

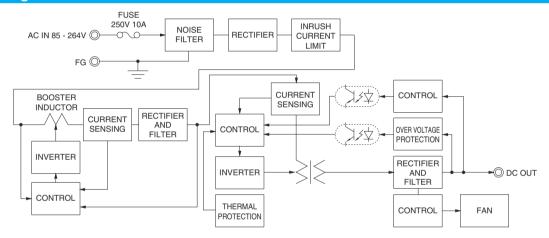


OTHERS	CASE SIZE/WEIGHT	102×41	×190mm [4.02×1.61×7.48 inches] (Excluding terminal blo	ock a	and screw) (W×H×D) / 1.0kg max				
UTHERS	COOLING METHOD *7	Forced cooling (internal fan)							
WARRANTY	WARRANTY *5	5 years (	(subject to the operating conditions)						
*1 This is the r	result of measurement of the testing board with ca	apacitors of	*3 Consult us about dynamic load and input response.		isolated from input, output, and FG.				
22 µ F and	0.1 µ F placed at 150 mm from the output termina	als by a 20	*4 Output power derating is required. Refer to "Derating".	*	Do not use the power supply in overcurrent conditions or in unspecified				
MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken			*5 See 4 in Instruction Manual for more details.		input voltage ranges. Otherwise the internal components may be				
RM103.			*6 Consult us about safety agency approvals for the models with optional functions.		damaged.				
See 1.6 of I	Instruction Manual for more details.		*7 The fan speed slows down at no load.	*	Parallel operation is not possible with this mode.				
*2 Drift is the opening the opening of the openi	change in DC output for an eight hour period after	r a half-hour	*8 Consult us about other classes.	*	Sound noise may be heard from the power supply when used for				
warm-up at	25°C.		*9 The RC terminal is added to option –R models. The RC terminal is		pulse load.				
Feat	ures								

#### catures

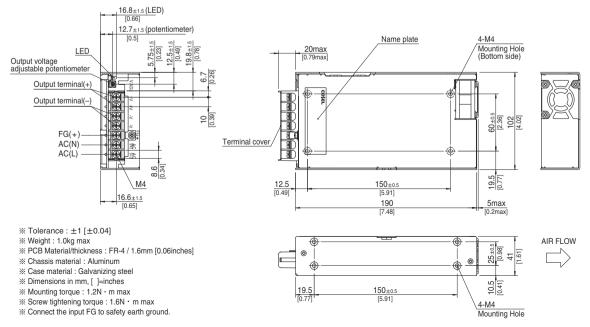
- · Cost-effective
- · Longer life (see Instruction Manual)
- · Low profile (meets 1U height = 41 mm or 1.61 inches)
- · Wide operating temperature range (-20°C to +70°C Refer to "Derating")
- · Slow fan speed at no load
- · Complies with SEMI F-47
- · Many optional functions

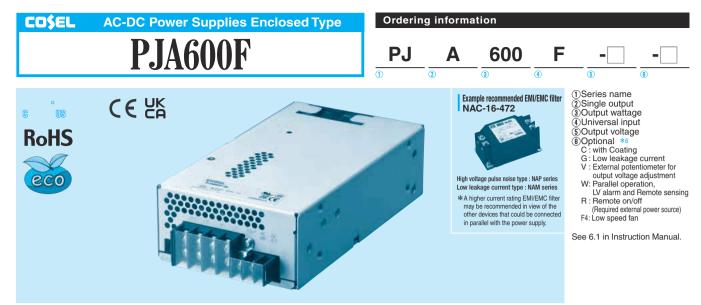
#### Block diagram



#### **External view**

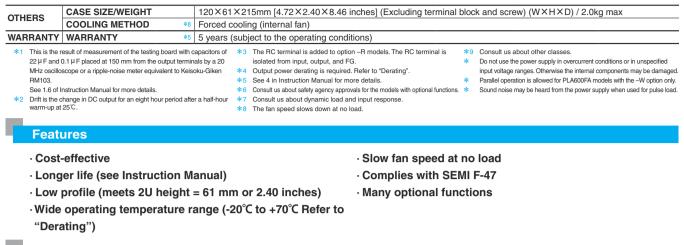
The external size of –V option and –R option models is different from the standard model. See "6. Options and Others" in Instruction Manual for more details.



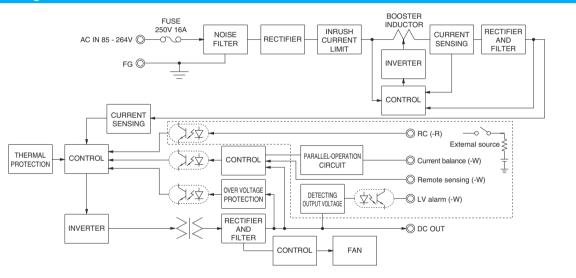


	MODEL		PJA600F-5	PJA600F-12	PJA600F-15	PJA600F-24	PJA600F-36	PJA600F-48
	VOLTAGE[V]			utput derating is req	uired at AC85V - 100	V. Refer to "Deratino	" and instruction ma	nual 1.1, 3)
		ACIN 100V	6.7typ (lo=100%)	7.5typ (lo=100%)				, ,
	CURRENT[A]	ACIN 115V	5.7typ (lo=100%)	6.5typ (lo=100%)				
		ACIN 230V	2.8typ (lo=100%)	3.2typ (lo=100%)				
	FREQUENCY[Hz]							
		ACIN 100V	, ,	81tvp (lo=100%)	82tvp (lo=100%)	84tvp (lo=100%)	85tvp (lo=100%)	85typ (lo=100%)
	EFFICIENCY[%]		, ,			· · · · · · · · · · · · · · · · · · ·	and instruction ma         85typ (lo=100%)         86typ (lo=100%)         88typ (lo=100%)         88typ (lo=100%)         188typ (lo=100%)         188typ (lo=100%)         11         36         16.7         601.2         144max         150max         160max         200max         240max         360max         440max         144max         144max         144max         144max         140max         36.00 to 37.44         41.40 to 50.40         erature)         erature)         orature)         000 feet) max	85typ (lo=100%)
NPUT			,	, , , , ,			, , ,	88typ (lo=100%)
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
	POWER FACTOR		, ,					
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	) (Primary inrush cu	rrent /Secondary inr	ush current) (More t	han 3sec to re-start)	
	FREQUENCY[Hz]         50 / 60 (47 - 63)         EVENCE           EFFICIENCY[%]         ACIN 100V         76typ (lo=100%)         81typ (lo=100%)         82typ (lo=100%)         84typ (lo=100%)         85typ (lo=100%)         88typ (l							
						, , ,	,	
	LEAKAGE CUBBENT					, ,		
		[1124]			<u> </u>	, ,	36	48
		ACIN 85-100V	-				00	10
	CURRENT[A]			· ·	· · · · · · · · · · · · · · · · · · ·		16.7	12.5
					-	-	10.7	12.0
	WATTAGE[W]		· · ·	, ·	```		601.2	600
		-						
	-							
UTPUT								
							240max 50	
	*1							
	TEMPERATURE REGULATION[mV]							
	DDIETImVI							
		*2		1	bumax	96max	144max	1921118X
		TDANCEIVI		, ,	10 50 to 10 50	01 C0 to 00 40	20.40 to 20.00	40.00 to 50.00
						24.00 to 24.96	36.00 to 37.44	48.00 to 49.92
						07.00 to 00.00	44 40 1- 50 40	55 00 to 07 00
ROTECTION				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
THERS		ION	. ,	0			86typ (lo=100%)         85typ (li           88typ (lo=100%)         85typ (li           88typ (lo=100%)         88typ (li           an 3sec to re-start)         88typ (li           an 3sec to re-start)         an 3sec to re-start)           an 3sec to re-start)         36           48         16.7           12.5         601.2           601.2         600           144max         192max           150max         150max           150max         150max           160max         400max           200max         200max           240max         500max           36.00 to 39.60         43.20 to           32.40 to 39.60         43.20 to           32.40 to 50.40         55.20 to           41.40 to 50.40         55.20 to           rature)         ature)           ature)         00 feet) max	
THENS				· · · · · · · · · · · · · · · · · · ·	rea Option D			
		*0			, ,	main (At we are taken		
		*3	,	,	,	· · · · · ·	,	
SOLATION		+0					,	
	OUTPUT-RC-FG	*3	,		,	<u> </u>	/	
					mA, DC500V 50MΩ			
	OPERATING TEMP., HUMID.AND	-		0 /:		0,	ou reet) max	
NVIRONMENT	STORAGE TEMP., HUMID.AND	ALITUDE			nsing), 9,000m (30,0	,		
	VIBRATION				riod, 60minutes each	along X, Y and Z ax	es	
	IMPACT		( ),	1ms, once each X,				
AFETY AND	AGENCY APPROVAL	s			2368-1 Complies wit			
OISE	CONDUCTED NOISE				22-B, EN55011-B, E	N55022-B		
REGULATIONS	HARMONIC ATTENU	ATOR *9	Complies with IEC6	51000-3-2 class A				



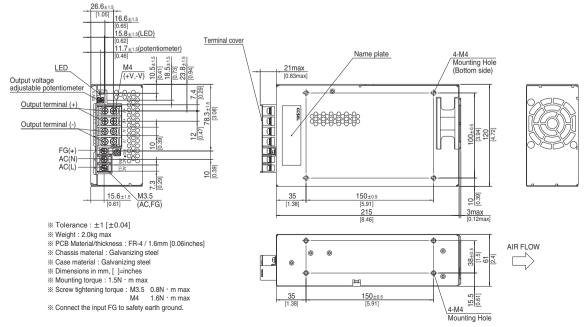


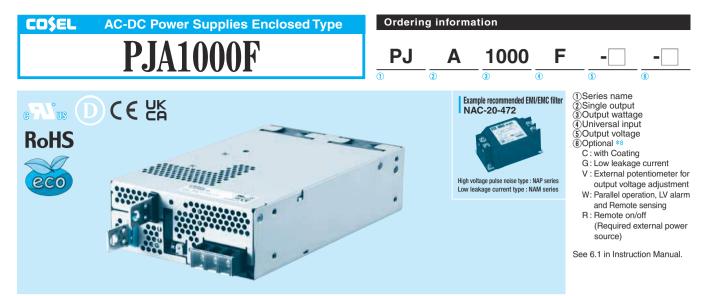
#### Block diagram



#### External view

The external size of –V option, –W option and –R option models is different from the standard model. See "6. Options and Others" in Instruction Manual for more details.





	MODEL		PJA1000F-12	PJA1000F-15	PJA1000F-24	PJA1000F-36	PJA1000F-48			
	VOLTAGE[V]		AC85 - 264 1 ¢ (Outpu	it derating is required at	AC85V - 115V. Refer to	o "Derating" and instructi	on manual 1.1, 3)			
		ACIN 100V	12.5typ (lo=90%)							
	CURRENT[A]	ACIN 115V	11.0typ (lo=100%)							
		ACIN 230V	5.5typ (lo=100%)							
1	FREQUENCY[Hz]		50 / 60 (47 - 63)							
INPUT INPUT INPUT INPUT INPUT INPUT INPUT IN INPUT IN		ACIN 100V	81typ (lo=90%)	82typ (lo=90%)	84typ (lo=90%)	84typ (lo=90%)	84typ (lo=90%)			
1	EFFICIENCY[%]	ACIN 115V	82typ (lo=100%)	82typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%)			
INPUT		AC85 - 264 1 \$\u03c6 (Output derating is required at AC85V - 115V. Refer to "Derating" and insi           ACIN 100V         12.5typ (lo=00%)           ACIN 100V         15.5typ (lo=100%)           ACIN 100V         5.5typ (lo=100%)           B2typ (lo=100%)         82typ (lo=00%)         84typ (lo=90%)           ACIN 100V         81typ (lo=90%)         82typ (lo=100%)         84typ (lo=100%)           ACIN 100V         82typ (lo=100%)         82typ (lo=100%)         85typ (lo=100%)         85typ (lo=100%)           ACIN 100V         0.98typ (lo=90%)         82typ (lo=100%)         85typ (lo=100%)         88typ (lo=100%)           ACIN 100V         0.98typ (lo=90%)         85typ (lo=100%)         88typ (lo=100%)         88typ (lo=100%)           ACIN 115V         0.98typ (lo=100%)         (Pirmary inrush current /Secondary inrush current) (More than 10sec           ACIN 200V         0.95typ (lo=100%) (Primary inrush current /Secondary inrush current) (More than 10sec           ACIN 300V         0.030typ (lo=100%) (Primary inrush current /Secondary inrush current) (More than 10sec           ACIN 115V         1.5max (ACIN 240V, 60Hz, lo=100%, According to IEC62368-1 and DEN-AN)           12         15         24         36           ANN 55115V         Output derating is required at ACIN 115V or less (Refer to "Derating")           ANN 55115W	88typ (lo=100%)	88typ (lo=100%)						
		ACIN 100V	0.98typ (Io=90%)							
1	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)							
		ACIN 230V	0.95typ (lo=100%)							
Γ		ACIN 100V	15/30typ (Io=90%) (Pri	mary inrush current /Se	condary inrush current	Refer to "Derating" and instruction manual 1.1, 3)         %)       84typ (lo=90%)       84typ (lo=90%)         0%)       85typ (lo=100%)       85typ (lo=100%)         0%)       85typ (lo=100%)       88typ (lo=100%)         0%)       88typ (lo=100%)       88typ (lo=100%)         1       hcurrent) (More than 10sec to re-start)       1         1 and DEN-AN)       36       48         eating")       1008       1008         144max       192max       150max         100max       600max       480max         440max       600max       600max         36.00 to 37.44       48.00 to 49.92         30       43.20				
INPUT	INRUSH CURRENT[A]	ACIN 115V	15/30typ (lo=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)							
1	LEAKAGE CURRENT	[mA]	1.5max (ACIN 240V, 60	0Hz, Io=100%, Accordin	ig to IEC62368-1 and E	)EN-AN)				
	VOLTAGE[V]		12	15	24	36	48			
	CURRENT[A]	ACIN 85-115V	Output derating is requ	ired at ACIN 115V or le	ss (Refer to "Derating")					
	CORRENT[A]	ACIN 115V-264V	84	67	42	28	21			
		ACIN 85-115V	Output derating is requ	ired at ACIN 115V or le	ss (Refer to "Derating")					
	WATTAGE[W]	ACIN 115V-264V	1008	1005	1008	1008	1008			
	LINE REGULATION[m	יV] <b>*</b> 2	48max	60max	96max	144max	192max			
	LOAD REGULATION	mV] *2	100max	120max	150max	150max	300max			
	RIPPLE[mVp-p]	0 to +50℃	180max	180max	120max	150max	200max			
	PUT RIPPLE NOISE[mVp-p] 0 to +50°C 210max 210max 150max	160max	200max	500max						
		150max	200max	300max						
RIF	*1	-20 to 0°C	270max	270max	180max	240max	600max			
		0 to +50℃	120max	150max	240max	360max	500max 300max 600max 480max 600max			
	TEMPERATURE REGULATION[mV]	-20 to +50℃	180max	180max	290max	440max				
	DRIFT[mV]	*3	48max	60max	96max	144max	192max			
	START-UP TIME[ms]		800typ (ACIN 115V, lo=	=100%)						
	HOLD-UP TIME[ms]		20typ (ACIN 115V, lo=	100%)						
	OUTPUT VOLTAGE ADJUSTMEN	IT RANGE[V]	10.80 to 13.50	13.50 to 17.30	20.40 to 28.50	30.60 to 40.80	40.80 to 55.20			
	OUTPUT VOLTAGE SETT	ING[V]	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 ra	ting and recovers auton	natically					
PROTECTION	OVERVOLTAGE PROTE	CTION[V]	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			
	OPERATING INDICAT	ION	LED (Green)							
OTHERS	REMOTE SENSING		Optional (Option -W)				600max 480max 600max 192max 40.80 to 55.20 48.00 to 49.92			
	REMOTE ON/OFF			· · · · ·	,					
	INPUT-OUTPUT		AC3,000V 1minute, Cu	toff current = 25mA, DC	$500V 50M\Omega$ min (At ro	oom temperature)				
ISOLATION	INPUT-FG		AC2,000V 1minute, Cu	toff current = 25mA, DC	$0.500V 50M\Omega$ min (At ro	oom temperature)	85typ (lo=100%)         85typ (lo=100%)         88typ (lo=100%)         start)        start)         48         21         1008         192max         300max         200max         500max         300max         600max         480max         600max         192max			
	OUTPUT-FG		,	,		/				
(	OPERATING TEMP., HUMID. AND	ALTITUDE *4	-20 to +70°C (Refer to '	"Derating"), 20 - 90%R⊦	I (Non condensing), 3,0	000m (10,000 feet) max				
	STORAGE TEMP., HUMID. AND	ALTITUDE	-20 to +75℃, 20 - 90%	RH (Non condensing),	9,000m (30,000 feet) m	ax				
	VIBRATION		10 - 55Hz, 19.6m/s <sup>2</sup> (20	G), 3minutes period, 60	minutes each along X,	Y and Z axes				
	IMPACT		196.1m/s2 (20G), 11ms	s, once each X, Y and Z	axes					
SAFETY AND	AGENCY APPROVAL	s	UL62368-1, C-UL (CS/	A62368-1), EN62368-1	Complies with DEN-AN					
	CONDUCTED NOISE		Complies with FCC-B,	VCCI-B, CISPR22-B, E	N55011-B, EN55022-B					
REGULATIONS	HARMONIC ATTENU	ATOR *5	Complies with IEC6100	00-3-2 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	ears (subject to the operating conditions)							
22 µ F and MHz oscillo RM103. See 1.6 of I	esuit of measurement of the testing board with co 2.1 µ F placed at 150 mm from the output termina scope or a ripple-noise meter equivalent to Keiso nstruction Manual for more details. about dynamic load and input response.	is by a 20 warm-up at 25°C. optional functions.							

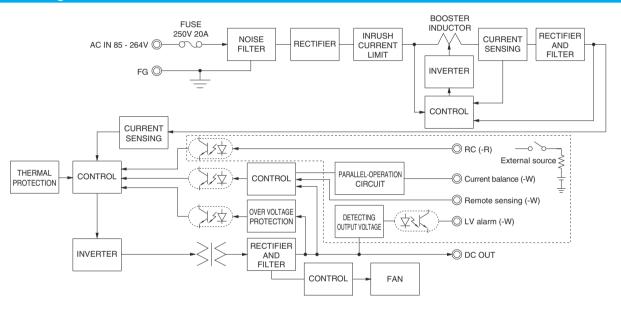
#### Features

- · 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 Refer to "Derating")

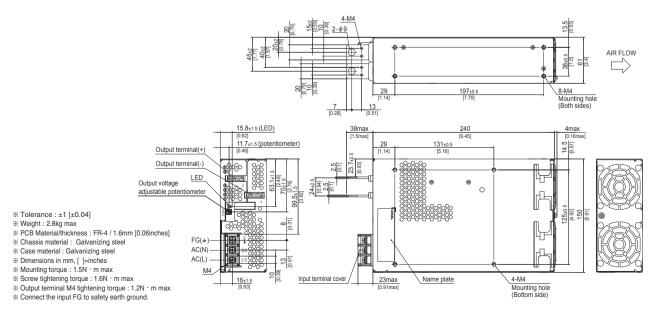
· Stop or slow fan speed at no load

#### **Block diagram**



#### External view

The external size of –V option, –W option and –R option models is different from the standard model. See "6. Options and Others" in Instruction Manual for more details.





	MODEL		PJA1500F-12	PJA1500F-15	PJA1500F-24	PJA1500F-36	PJA1500F-48				
ĺ	VOLTAGE[V]		AC85 - 264 1 ¢ (Outp	ut derating is required a	t AC85V - 115V. Refer t	o "Derating" and instructi	ion manual 1.1, 3)				
		ACIN 100V	18typ (lo=90%)								
	CURRENT[A]	ACIN 115V	16typ (lo=100%)								
		ACIN 230V	8typ (lo=100%)								
	FREQUENCY[Hz]		50 / 60 (47 - 63)								
		ACIN 100V	81typ (lo=90%)	82typ (Io=90%)	84typ (Io=90%)	84typ (lo=90%)	84typ (lo=90%)				
	EFFICIENCY[%]	ACIN 115V	82typ (lo=100%)	82typ (lo=100%)	85typ (lo=100%)	85typ (lo=100%)	84typ (lo=100%)				
INPUT	CURRENT[A]         ACIN 100/ ACIN 115/ ACIN 230/ FREQUENCY[Hz]           EFFICIENCY[%]         ACIN 100/ ACIN 230/ ACIN 230/ ACIN 230/ ACIN 100/ POWER FACTOR           POWER FACTOR         ACIN 100/ ACIN	ACIN 230V	85typ (lo=100%)	85typ (lo=100%)	88typ (lo=100%)	88typ (lo=100%)	87typ (lo=100%)				
		ACIN 100V	0.98typ (lo=90%)				struction manual 1.1, 3)         b)       84typ (lo=90%)         6)       84typ (lo=100%)         6)       87typ (lo=100%)         6)       87typ (lo=100%)         20 to re-start)       200 re-start)         20 to re-start)       200 max         300 max       300 max         600 max       480 max         600 max       192 max         40.80 to 55.20       48.00 to 49.92         57.00 to 67.20       57.00 to 67.20				
	POWER FACTOR	ACIN 115V	0.98typ (lo=100%)								
		ACIN 230V	0.95typ (lo=100%)								
	VOLTAGE[V]         AC85 - 284 14 (Output derating is required at AC85V - 115V. Refer to "Derating" and inst 181yp (ic=90%).           CURRENT[A]         ACIN 10W         181yp (ic=90%).           ACIN 12W         81yp (ic=100%).           FREQUENCY[Hz]         50 / 60 (47 - 63).           EFFICIENCY[%]         ACIN 10W         81yp (ic=100%).           ACIN 12W         82yp (ic=100%).         82typ (ic=100%).           BStyp (ic=100%).         82typ (ic=100%).         85typ (ic=100%).           ACIN 12W         0.98typ (ic=100%).         85typ (ic=100%).           ACIN 12W         0.98typ (ic=100%).         85typ (ic=100%).           ACIN 12W         0.98typ (ic=100%).         88typ (ic=100%).           ACIN 12W         0.98typ (ic=100%).         (Primary inrush current/Secondary inrush current). (More than 10sec ACIN 22W           INRUSH CURRENT[A]         ACIN 12W         15/320(ic=100%). (Primary inrush current/Secondary inrush current). (More than 10sec ACIN 22W           LEAKAGE CURRENT[A]         ACIN 12W         15/32         14           VOLTAGE[V]         12         15         24           VATTAGE[W]         48max         ACIN 240V. CoH2, ic=100%. According to iEC6236e1-1 and DEN-AN)           VOLTAGE[V]         12         15         24           MACIN 1191 VI 0.12MAL derating is required	) (More than 10sec to re	e-start)								
	INRUSH CURRENT[A]	ACIN 115V	15/30typ (lo=100%) (Primary inrush current /Secondary inrush current) (More than 10sec to re-start)								
		ACIN 230V	30/30typ (lo=100%) (l	30/30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10sec to re-start)							
	LEAKAGE CURRENT	[mA]	1.5max (ACIN 240V, 6	60Hz, Io=100%, Accord	ng to IEC62368-1 and I	DEN-AN)					
ĺ	VOLTAGE[V]		12	15	24	36	48				
		ACIN 85-115V	Output derating is req	uired at ACIN 115V or I	ess (Refer to "Derating")	1					
	CORRENT[A]	ACIN 115V-264V	125	100	64	42	32				
	WATTAOEDAG	ACIN 85-115V	Output derating is req	uired at ACIN 115V or I	ess (Refer to "Derating")						
	WATTAGE[W]	ACIN 115V-264V	1500	1500	1536	1512	1536				
	LINE REGULATION[m	nV] *2	48max	60max	96max	144max	192max				
-	LOAD REGULATION[	mV] *2	100max	120max	150max	150max	300max				
	RIPPLE[mVp-p]	0 to +50°C	180max	180max	120max	150max	200max				
		-20 to 0°C	240max	240max	160max	200max	500max				
OUIPUI	RIPPLE NOISE[mVp-p]	0 to +50°C	210max	210max	150max	200max	300max				
R	*1	-20 to 0°C	270max	270max	270max	240max	600max				
		0 to +50°C	120max	150max	240max	360max	480max				
	TEMPERATURE REGULATION[mv]	-20 to +50°C	180max	180max	290max	440max	600max				
	DRIFT[mV] *3		48max	60max	96max	144max	192max				
	START-UP TIME[ms]		800typ (ACIN 115V, Io	=100%)		!					
	HOLD-UP TIME[ms]										
		T RANGE[V]		,	20.40 to 28.50	30.60 to 40.80	40.80 to 55.20				
				15.00 to 15.60	24.00 to 24.96	36.00 to 37.44	48.00 to 49.92				
ĺ	OVERCURRENT PROTE	CTION	Works over 105% of r	ating and recovers auto	matically	· ·					
PROTECTION						43.20 to 52.20	57.00 to 67.20				
CIRCUIT AND	<b>OPERATING INDICAT</b>	ION	LED (Green)	•							
OTHERS	REMOTE SENSING		Optional (Option -W)								
	REMOTE ON/OFF			ternal power source. O	otion -R)						
	INPUT-OUTPUT					oom temperature)	192max 40.80 to 55.20 48.00 to 49.92				
ISOLATION	INPUT-FG		AC2,000V 1minute, C	utoff current = 25mA, D	C500V 50MΩ min (At r	oom temperature)					
	OUTPUT-FG		AC500V 1minute, Cut	off current = 100mA, De	C500V 50M $\Omega$ min (At ro	om temperature)					
	OPERATING TEMP., HUMID. AND	ALTITUDE *4				, ,					
	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75°C, 20 - 90%	6RH (Non condensing),	9,000m (30,000 feet) m	iax					
ENVIRONMENT	VIBRATION										
		RATION 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axes									
SAFETY AND	AGENCY APPROVAL	s				N					
NOISE	CONDUCTED NOISE		, ,		<u>/  </u>		required for meeting cl				
REGULATIONS	HARMONIC ATTENU		Complies with IEC610	0							



OTHERS COOLING METHOD *6 WARRANTY WARRANTY *7 *1 This is the result of measurement of the testing board with	Forced cooling (internal fan) 5 years (subject to the operating conditions)						
	5 years (subject to the operating conditions)						
where the the second of an and the second of the second of the	5 years (subject to the operating conditions)						
<ul> <li>This is the result of measurement of the testing board with 22 μ F and 0.1 μ F placed at 150 mm from the output termi MHz oscilloscope or a ripple-noise meter equivalent to Keis RM103.</li> <li>See 1.6 of Instruction Manual for more details.</li> <li>*2 Consult us about dynamic load and input response.</li> </ul>	inals by a 20 warm-up at 25°C.	*8 Consult us about safety agency approvals for the models with optional functions.           * 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.           * Audible noise may be heard from the power supply when used for pulse load.					

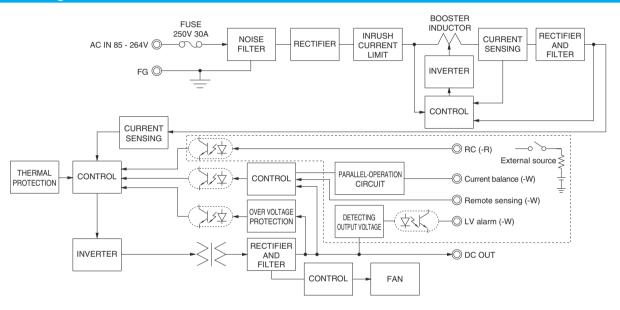
#### Features

- · 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 Refer to "Derating")

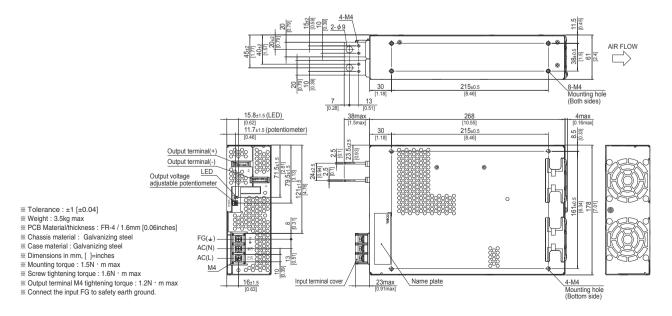
· Stop or slow fan speed at no load

#### **Block diagram**



#### External view

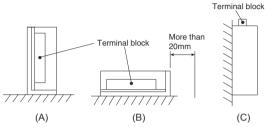
The external size of –V option, –W option and –R option models is different from the standard model. See "6. Options and Others" in Instruction Manual for more details.



## **COŞEL** | PJA-series

# Assembling and Installation Method Do not insert a screw more than 6mm from the outside of a power supply to keep enough insulation distance between the screw and internal components. Chassis of Chassis of Chassis of Chassis of PLA series Mounting Screw

#### PJA100F, PJA150F



If you use two or more power supplies side by side, please keep a sufficient distance between them to allow enough air ventilation.Ambient temperature around each power supply should not exceed the temperature range shown in "derating".

#### PJA300F Vent hole side More than 30mm More than Ferminal block More than Terminal block Terminal block Not allowed Terminal block F A N Fan side More than 30mm Vent hole side Air flow Terminal block 7777777777 Terminal block (D) (A) (B) (C) (E) PJA600F More than 30mm More than 30mm Vent hole side Terminal block Vent hole side Terminal block More than Terminal block Not allowed Fixed Terminal bloc F A N Fixed Fixed Fan side More than 30mm screw (4pcs.) side screw screw Γ Γ (4pcs (4pcs Air flow Terminal block 77 Fixed screw Fixed screw (4pcs.) Terminal block ╋ (4pcs.) (A) (B) (C) (D) (E) PJA1000F, PJA1500F More than 30mm More than 30mm More than 30mm More than 30mm Fixed More than 30mm More than Vent hole side screw (4pcs.) Terminal block Terminal Terminal Terminal block ŋ More than block side block side • FAN FAN \_ Π Terminal block Fan Fan side Air flow . Air flow Π Fixed screw side (4pcs.) 777 Fixed screw (4pcs.) Fixed screw (4pcs.) Fixed screw (B) (C) (A) ╋ t (4pcs.) Terminal block Fixed Fixed screw (4pcs.) screw Not (4pcs. Terminal allowed block Terminal block

(D)

(E)

(F)

PJA-series | COŞEL

#### **Assembling and Installation Method**

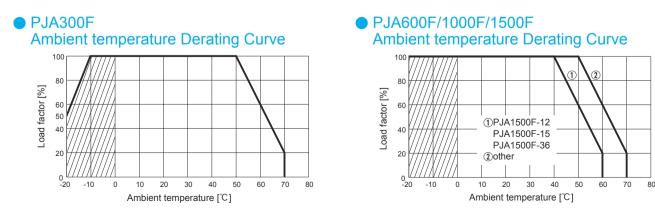
- When mounting the power supply with screws, it is recommended that this be done as shown above . If other methods are used, be sure the weight of the power supply is taken into account.
- Avoid the not allowed installation method as it gives excessive stress to the mounting holes.
- Do not block air flow of the built-in fan (terminal block and ventilation hole).
- If the power supply is used in a dusty environment, use an airfilter. Make sure air flow is not blocked.
- If the built-in fan stops, thermal protection will work and the outputwill stop.
- The life expectancy (R(t)=90%) of the built-in fan varies depending on the operating condition.

#### Derating Input voltage Derating Curve [%] 100 90 Load 85 ①PJA100F,PJA150F PJA1000F,PJA1500F 80 ⑦P.IA300F ③PJA600F 85 100 115 PJA100F/150F-12.15 PJA100F/150F-24,36,48 Ambient temperature Derating Curve Ambient temperature Derating Curve (Reference value) (Reference value) 100 3 3 80 80 Load factor [%] Load factor [%] 1 60 60 (1)Convection (A mount) ①Convection (A mount) 50 50 2 Convection (B, C mount) ②Convection (B, C mount) 40 ③Forced air (0.5m<sup>3</sup> / min) 40 ③Forced air (0.5m<sup>3</sup> / min) 30 30 20 20 50 55 60 80 30 35 40 45 50 55 60 80 70 -10 -20 -10 0 10 20 30 40 -20 0 10 20 70 Ambient temperature [°C] Ambient temperature [°C]

In the hatched area, the specification of Ripple, Ripple Noise is different from other area.

The ambient temperature should be measured 5 to 10 cm away from the power supply so that it won't be influenced by the heat from the power supply. Please consult us for more details.

Make sure the temperature at point A and point B is less than the temperatures shown in Instruction Manual 3.



The ambient temperature is defined as the temperature of the air (at the terminal block side) that the built-in cooling fan blows into the power supply. Please pay attention to the heat generated by the input and output wires. Please consult us for more details.

### **COŞEL** | PJA-series

#### **Instruction Manual**

◆It is neccessary to read the "Instruction Manual" and "Before using our product" before you use our product.

Instruction Manual

https://www.cosel.co.jp/redirect/catalog/en/PJA/ Before using our product https://en.cosel.co.jp/technical/caution/index.html



#### **Basic Characteristics Data**

Madal		Switching	Input current	Rated	Inrush current	PCB	Patterr	1		Parallel availability
Model	Circuit method	frequency [kHz]	[A]	input fuse	protection circuit	Material	Single sided	Double sided	Series operation	Parallel operation
PJA100F	Active filter	40 to 160	1.2 *1	250V 3.15A	Thermister	FR-4		Yes	Yes	No
FJATUUF	Flyback converter	20 to 150 *2	1.2 * 1	200V 0.10A	Thermistor	ГП-4		tes	tes	INO
PJA150F	Active filter	40 to 160	1.7 *1	250V 4A	Thermistor	FR-4		Yes	Yes	No
FJAIDUF	Flyback converter	20 to 150 *2	1.7 * 1	2301 44	Thermistor	ГП-4		res	163	INO
	Active filler	60	3.9 *3	250V 10A	Thermistor	FR-4		Yes	Yes	No
PJA300F	Forward converter	140	3.9 43	250V 10A	THEITIISIO	Г <b>П-</b> 4		res	165	INO
	Active filler	60		0501/104	000			Vaa	Vaa	*4
PJA600F	Forward converter	220	7.5 *3	250V 16A	SCR	FR-4		Yes	Yes	<b>~</b> 4
PJA1000F	Active filter	65	12.5 *1	250V 20A	TRIAC	FR-4		Yes	Vaa	24
FJATUUUF	Forward converter	210	12.3 🛧 1	230V 20A	INIAC	ГП-4		tes	Yes	*4
	Active filter	65	100 41		TRIAC	ED 4		Vaa	Vaa	*4
PJA1500F	Forward converter	210	18.0 *1	250V 30A	INIAC	FR-4		Yes	Yes	<b>~</b> 4

\*1 The input current shown is at ACIN 100V and 90% load.
\*2 The burst mode frequency varies according to the operating conditions. Consult us for more details.
\*3 The input current shown is at ACIN 100V and 100% load.

\*4 Parallal operation is possible with -W option. see "6.Option and Other" is Instruction Manual.