

## PJA1500F

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Example recommended EMI/EMC filter  
NAC-20-472High voltage pulse noise type : NAP series  
Low leakage current type : NAM series

- 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  
W : Parallel operation, LV alarm Remote sensing  
R : Remote on/off (Required external power source or Option -Z□)  
Z□ : AUX Output  
Z1 : 5V  
Z2 : 12V  
Z3 : 24V

See 5.1 in Instruction Manual.

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

## SPECIFICATIONS

	MODEL	PJA1500F-24	PJA1500F-48
INPUT	VOLTAGE[V]	AC85 - 264 1 φ (Output derating is required at AC85V - 115V. See 1.1 and 3.2 in Instruction Manual) *4	
	CURRENT[A]	ACIN 100V	18typ (Io=90%)
		ACIN 115V	16typ (Io=100%)
		ACIN 230V	8typ (Io=100%)
	FREQUENCY[Hz]	50 / 60 (47 - 63)	
	EFFICIENCY[%]	ACIN 100V	84typ (Io=90%)
		ACIN 115V	85typ (Io=100%)
		ACIN 230V	88typ (Io=100%)
OUTPUT	POWER FACTOR	ACIN 100V	0.98typ (Io=90%)
		ACIN 115V	0.98typ (Io=100%)
		ACIN 230V	0.95typ (Io=100%)
	INRUSH CURRENT[A]	ACIN 100V	15/30typ (Io=90%) (Primary inrush current /Secondary inrush current) (More than 10sec to re-start)
		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 115V / 240V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)	
	VOLTAGE[V]	24	48
PROTECTION CIRCUIT AND OTHERS	CURRENT[A]	ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to instruction manual 3.2)
		ACIN 115V-264V	64
	WATTAGE[W]	ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to instruction manual 3.2)
		ACIN 115V-264V	1536
	LINE REGULATION[mV]	*8	96max
	LOAD REGULATION[mV]	*8	150max
	RIPPLE[mVp-p]	0 to +50°C	120max
		-20 to 0°C	160max
	RIPPLE NOISE[mVp-p]	0 to +50°C	150max
		-20 to 0°C	270max
	TEMPERATURE REGULATION[mV]	0 to +50°C	240max
		-20 to +50°C	290max
	DRIFT[mV]	*2	96max
	START-UP TIME[ms]	800typ (ACIN 115V, Io=100%)	
ISOLATION	HOLD-UP TIME[ms]	20typ (ACIN 115V, Io=100%)	
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	20.40 to 28.50	40.80 to 55.20
	OUTPUT VOLTAGE SETTING[V]	24.00 to 24.96	48.00 to 49.92
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically	
ENVIRONMENT	OVERVOLTAGE PROTECTION[V]	28.80 to 34.80	57.00 to 67.20
	OPERATING INDICATION	LED (Green)	
	AUXILIARY OUTPUT	Optional (Option -Z□)	
	REMOTE SENSING	Optional (Option -W)	
SAFETY AND NOISE REGULATIONS	REMOTE ON/OFF	Optional (Option -R) Required external power source or auxiliary output (Option -Z□).	
	INPUT-OUTPUT • RC	*3	AC3,000V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At room temperature)
	INPUT-FG	*3	AC2,000V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At room temperature)
	OUTPUT • RC-FG	*3	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At room temperature)
ENVIRONMENT	OUTPUT-RC	*3	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At room temperature)
	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	
	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/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axes	
SAFETY AND NOISE REGULATIONS	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axes	
	AGENCY APPROVALS	UL62368-1, C-UL (CSA62368-1), EN62368-1, Complies with DEN-AN	
	CONDUCTED NOISE	Complies with FCC Part15 classA, VCCI-A, CISPR22-A, EN55011-A, EN55022-A, additional EMI/EMC Filter required for meeting class B	
SAFETY AND NOISE REGULATIONS	HARMONIC ATTENUATOR *10	Complies with IEC61000-3-2 class A	

## SPECIFICATIONS

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

\*1 This is the result of measurement of the testing board with capacitors of 22  $\mu$ F and 0.1  $\mu$ 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 The RC/AUX terminal are added to option -R/-Z models. The RC/AUX terminals are isolated from input, output, and FG.

\*4 Output power derating is required.

\*5 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.

\*8 Consult us about dynamic load and input response.

\*9 The fan speed slows down or stops 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.

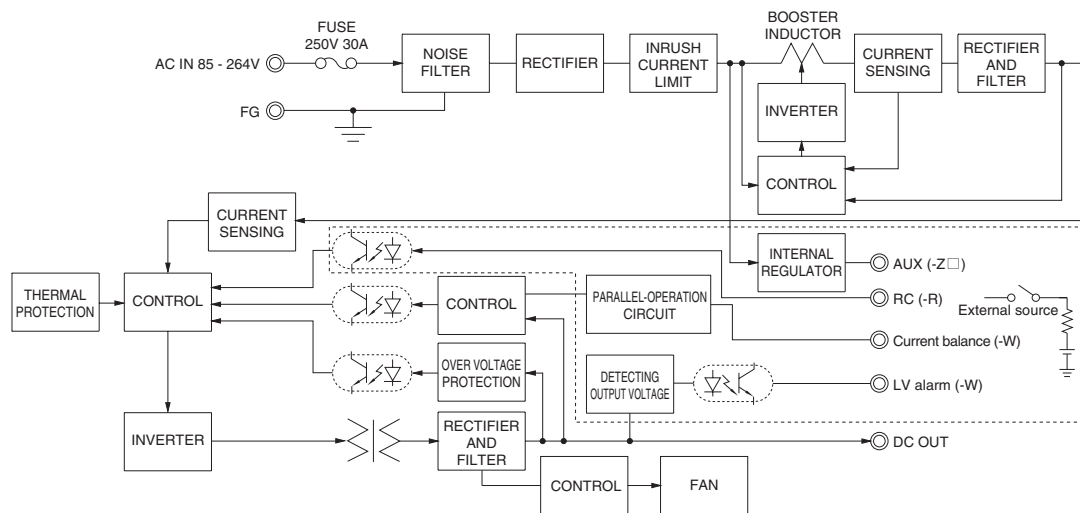
\* Parallel operation is allowed for PLA1500F models with the -W option only.

\* Sound noise may be heard from the power supply when used for pulse load.

## Features

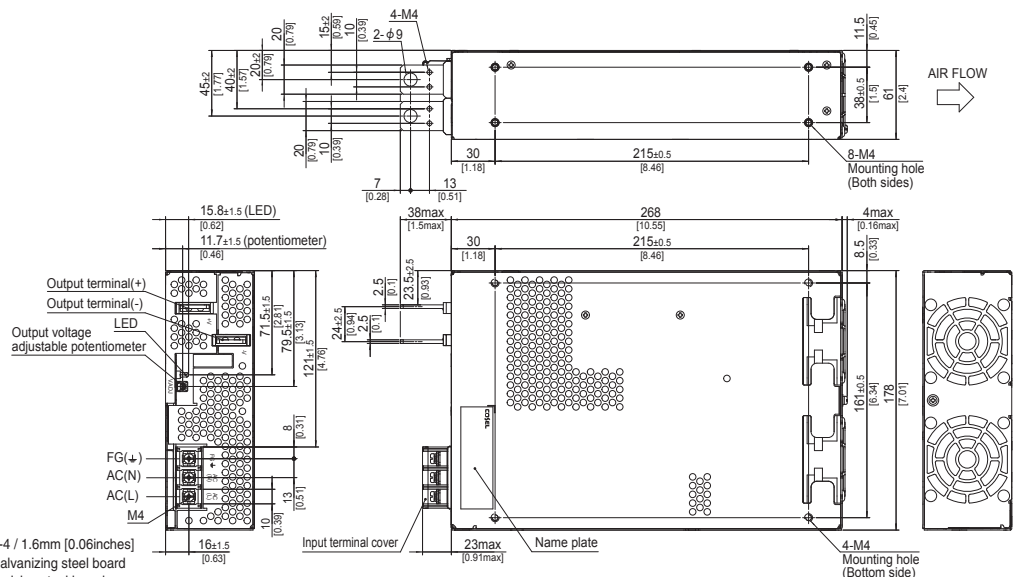
- Cost-effective
- Longer life (see Instruction Manual)
- Low profile (meets 2U height = 61 mm or 2.4 inches)
- Wide operating temperature range (-20°C to +70°C see instruction manual)
- Stop or slow fan speed at no load
- Many optional functions

## 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.



※ Tolerance : ±1 [±0.04]

※ Weight : 3.5kg max

※ PCB Material/thickness : FR-4 / 1.6mm [0.06inches]

※ Chassis material : Electric galvanizing steel board

※ Case material : Electric galvanizing steel board

※ Dimensions in mm, [ ]=inches

※ Mounting torque : 1.5N · m max

※ Screw tightening torque : 1.6N · m max

※ Output terminal M4 tightening torque : 1.2N · m max

※ Connect the input FG to safety earth ground.