

PLA150F

PL A 150 F -□ -□

① ② ③ ④ ⑤ ⑥

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
⑥ 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 AC240V in, no load, ErP-compliant)
N1 : with DIN rail

See 5.1 in Instruction Manual.

SPECIFICATIONS

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

	MODEL		PLA150F-12	PLA150F-15	PLA150F-24	PLA150F-36	PLA150F-48
INPUT	VOLTAGE[V]		AC85 - 264 1 φ (Output derating is required at AC85V - 115V. See 1.1 and 3.2 in Instruction Manual) *3 (DC input *3)				
	CURRENT[A]	ACIN 100V	1.7typ (Io=90%)				
		ACIN 115V	1.6typ (Io=100%)				
		ACIN 230V	0.8typ (Io=100%)				
	FREQUENCY[Hz]		50 / 60 (47 - 63) (DC input and 440Hz *3)				
	EFFICIENCY[%]	ACIN 100V	84typ (Io=90%)	84typ (Io=90%)	87typ (Io=90%)	87typ (Io=90%)	87typ (Io=90%)
		ACIN 115V	84typ (Io=100%)	84typ (Io=100%)	87typ (Io=100%)	87typ (Io=100%)	87typ (Io=100%)
		ACIN 230V	87typ (Io=100%)	87typ (Io=100%)	90typ (Io=100%)	90typ (Io=100%)	90typ (Io=100%)
	POWER FACTOR	ACIN 100V	0.98typ (Io=90%)				
ACIN 115V		0.98typ (Io=100%)					
ACIN 230V		0.95typ (Io=100%) * Power factor correction is stopped at AC250V or more.					
INRUSH CURRENT[A]	ACIN 100V	16typ (Io=90%) Ta=25°C at cold start					
	ACIN 115V	16typ (Io=100%) Ta=25°C at cold start					
	ACIN 230V	32typ (Io=100%) Ta=25°C at cold start					
LEAKAGE CURRENT[ma]			0.75max (ACIN 115V / 240V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)				
OUTPUT	VOLTAGE[V]		12	15	24	36	48
	CURRENT[A]	ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to instruction manual 3.2)				
		ACIN 115V-264V	12.5	10	6.4	4.2	3.2
	WATTAGE[W]	ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to instruction manual 3.2)				
		ACIN 115V-264V	150.0	150.0	153.6	151.2	153.6
	LINE REGULATION[mV] *4		48max	60max	96max	144max	192max
	LOAD REGULATION [mV] *4	Io=30 to 100%	100max	120max	150max	150max	300max
		Io=0 to 30%	Burst operation (Please contact us about detail)				
	RIPPLE[mVp-p]	0 to +40°C	120max	120max	120max	150max	150max
		-10 to 0°C	160max	160max	160max	200max	400max
		Io: load factor	Io=0 to 30%	500max	500max	500max	500max
	RIPPLE NOISE[mVp-p]	0 to +40°C	150max	150max	150max	200max	200max
		-10 to 0°C	180max	180max	180max	240max	500max
		Io: load factor	Io=0 to 30%	600max	600max	600max	600max
	TEMPERATURE REGULATION[mV]	0 to +40°C	120max	150max	240max	360max	480max
		-10 to +40°C	180max	180max	290max	440max	600max
DRIFT[mV] *2		48max	60max	96max	144max	192max	
START-UP TIME[ms]			500typ (ACIN 115V, Io=100%) Ta=25°C				
HOLD-UP TIME[ms]			20typ (ACIN 115V, Io=100%)				
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]			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 SETTING[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
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]		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 INDICATION		LED (Green)				
	REMOTE SENSING		Not provided				
	REMOTE ON/OFF		Optional (Required external power source. Option -R)				
ISOLATION	INPUT-OUTPUT • C *9		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature)				
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature)				
	OUTPUT • RC-FG *9		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At room temperature)				
	OUTPUT-RC *9		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At room temperature)				
ENVIRONMENT	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/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				
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178, UL508 (Except option -J) Complies with DEN-AN				
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B				
	HARMONIC ATTENUATOR *8		Complies with IEC61000-3-2 class A				

SPECIFICATIONS

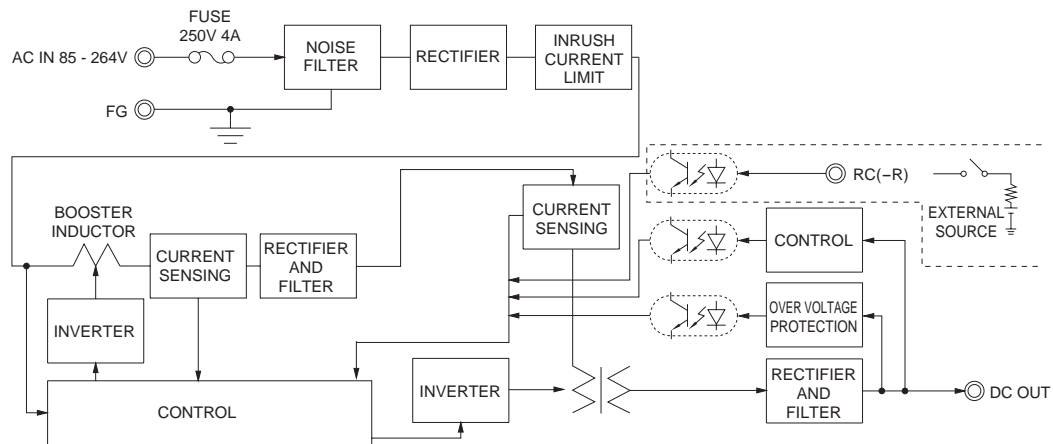
OTHERS	CASE SIZE/WEIGHT	41 X 97 X 129mm [1.61 X 3.82 X 5.08 inches] (Excluding terminal block and screw) (W X H X D) / 600g max
	COOLING METHOD	Convection
WARRANTY	WARRANTY	*6 5 years (subject to the operating conditions)

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| <p>*1 This is the result of measurement of the testing board with capacitors of 22 μF and 0.1 μF placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken RM103.</p> <p>See 1.6 of Instruction Manual for more details.</p> <p>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.</p> | <p>hour warm-up at 25°C.</p> <p>*3 Output power derating is required. As for DC input, consult us for advice.</p> <p>*4 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.</p> <p>*5 Output power derating is required. See 3.2 in Instruction Manual.</p> <p>*6 See 3.3 in Instruction Manual for more details.</p> <p>*7 Consult us about safety agency approvals for the models with optional functions.</p> <p>*8 Consult us about other classes.</p> | <p>*9 The RC terminal is added to option -R models. The RC terminal is isolated from input, output, and FG.</p> <p>* Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be damaged.</p> <p>* Parallel operation is not possible with this mode.</p> <p>* Sound noise may be heard from the power supply when used for pulse load.</p> |
| <p>*2 Drift is the change in DC output for an eight hour period after a half-</p> | | |

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 [-JJ])

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.

