Recommended Noise Filter  
NAC-06-472

High voltage pulse noise type : NAP series  
Low leakage current type : NAM series  
\* The Noise 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  
C : with Coating  
G : Low leakage current (0.15mA max / ACIN 240V)  
E : Low leakage current and EMI class A (0.5mA max / ACIN 240V)  
T : Vertical terminal block  
J : Connector type  
R : with Remote ON/OFF  
N : with Cover (Only 24V UL508 is acquired)  
N1 : with DIN rail  
V : Output voltage setting potentiometer externally

Cover is optional

MODEL	PBA50F-3R3	PBA50F-5	PBA50F-9	PBA50F-12	PBA50F-15	PBA50F-24	PBA50F-36	PBA50F-48
MAX OUTPUT WATTAGE[W]	33	50	50.4	51.6	52.5	52.8	50.4	52.8
DC OUTPUT	3.3V 10A	5V 10A	9V 5.6A	12V 4.3A	15V 3.5A	24V 2.2A	36V 1.4A	48V 1.1A

## SPECIFICATIONS

MODEL	PBA50F-3R3	PBA50F-5	PBA50F-9	PBA50F-12	PBA50F-15	PBA50F-24	PBA50F-36	PBA50F-48	
VOLTAGE[V]	AC85 - 264 1 φ or DC120 - 370 (AC50 or DC70 Please refer to the instruction manual 2.1 Input voltage *4)								
CURRENT[A]	ACIN 100V	0.5typ	0.7typ						
	ACIN 200V	0.3typ	0.4typ						
FREQUENCY[Hz]	50/60 (47 - 63)								
EFFICIENCY[%]	ACIN 100V	75typ	80typ	79typ	80typ	81typ	82typ	83typ	
	ACIN 200V	76typ	82typ	81typ	82typ	83typ	84typ	85typ	
POWER FACTOR(lo=100%)	ACIN 100V	0.98typ	0.99typ						
	ACIN 200V	0.87typ	0.93typ						
INRUSH CURRENT[A]	ACIN 100V	15typ (lo=100%) (At cold start)							
	ACIN 200V	30typ (lo=100%) (At cold start)							
LEAKAGE CURRENT[mA]	0.4/0.75max (ACIN 100V/240V 60Hz, lo=100%, According to IEC60950-1.DENAN)								
VOLTAGE[V]	3.3	5	9	12	15	24	36	48	
CURRENT[A]	10	10	5.6	4.3	3.5	2.2	1.4	1.1	
LINE REGULATION[mV]	20max	20max	36max	48max	60max	96max	144max	192max	
LOAD REGULATION[mV]	40max	40max	100max	100max	120max	150max	240max	240max	
RIPPLE[mVp-p]	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max
	-10 - 0°C *1	140max	140max	160max	160max	160max	160max	200max	200max
RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	120max	150max	150max	150max	150max	250max	250max
	-10 - 0°C *1	160max	160max	180max	180max	180max	180max	300max	300max
TEMPERATURE REGULATION[mV]	0 to +50°C	50max	50max	90max	120max	150max	240max	360max	480max
	-10 to +50°C	60max	60max	120max	150max	180max	290max	450max	600max
DRIFT[mV]	*2	20max	20max	36max	48max	60max	96max	144max	
START-UP TIME[ms]	350typ (ACIN 100V, lo=100%)								
HOLD-UP TIME[ms]	20typ (ACIN 100V, lo=100%)								
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	2.85 - 3.63	4.00 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	28.8 - 39.6	39.0 - 53.0	
OUTPUT VOLTAGE SETTING[V]	3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	35.00 - 37.44	48.00 - 49.92	
OVERCURRENT PROTECTION	Works over 105% of rated current and recovers automatically								
OVERVOLTAGE PROTECTION[V]	4.00 - 5.25	5.75 - 7.00	11.5 - 14.0	15.0 - 18.0	20.0 - 25.0	30.0 - 37.0	43.0 - 50.0	58.0 - 65.0	
OPERATING INDICATION	LED (Green)								
REMOTE ON/OFF	Optional (Required external power source)								
INPUT-OUTPUT · RC	*3	AC3.000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
INPUT-FG	AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)								
OUTPUT · RC-FG	*3	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
OPERATING TEMP., HUMID. AND ALTITUDE	-10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max								
STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing) 3,000m (10,000feet) max								
VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis								
IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis								
AGENCY APPROVALS (At only AC input)	UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN								
CONDUCTED NOISE	Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B								
CE MARKING	Low Voltage Directive, EMC Directive								
HARMONIC ATTENUATOR	Complies with IEC61000-3-2								
CASE SIZE/WEIGHT	31 X 82 X 120mm (without terminal block) (W X H X D) / 280g max (without cover)								
COOLING METHOD	Convection								

- \*1 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN :RM101).  
\*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.  
\*3 Applicable when Remote ON/OFF (optional) is added. RC is insulated with input, output and FG.  
\*4 Derating is required.

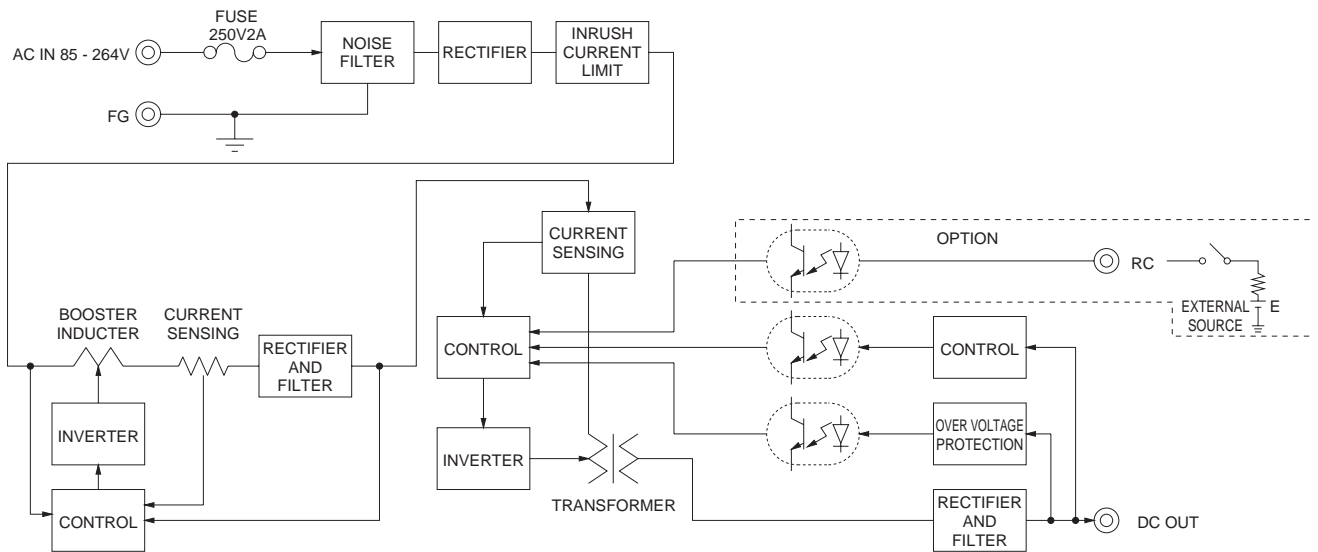
- \* Parallel operation with other model is not possible.  
\* Derating is required when operated with cover.  
\* A sound may occur from power supply at peak loading.

## Distribution:

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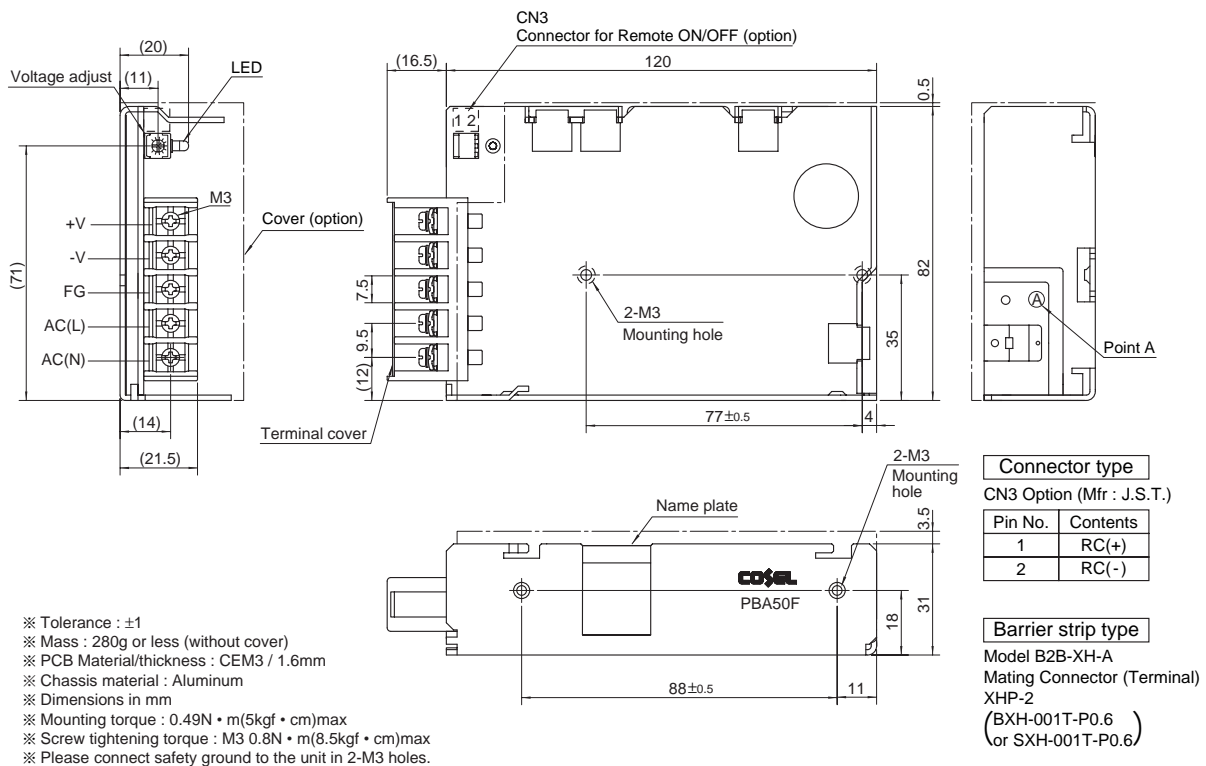
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Block diagram



External view

※ External size of option T,J,R,N,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.



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