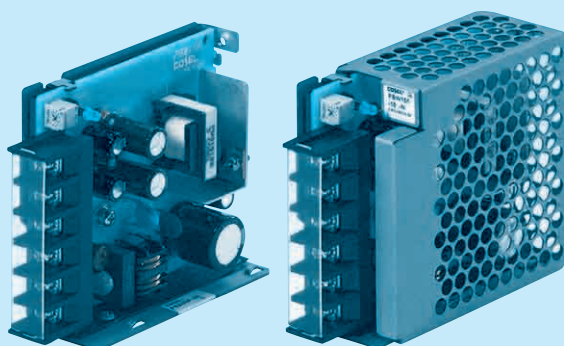




Recommended EM/EMC Filter NAC-06-472



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

- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Universal input
- ⑤ Output voltage
- ⑥ Optional *10
- C : with Coating
- G : Low leakage current

E : Low leakage current and EMI class A

T : Vertical terminal block
J : Connector type
N : with Cover
NI : with DIN rail
V : Output voltage setting potentiometer externaly

Cover is optional

MODEL	PBW15F-12	PBW15F-15
MAX OUTPUT WATTAGE[W]	*5 16.8	15.0
DC OUTPUT	VOLTAGE[V] *6 ± 12 (+24)	± 15 (+30)
	CURRENT1[A]	0.5
	CURRENT2[A] *5	1.0

SPECIFICATIONS

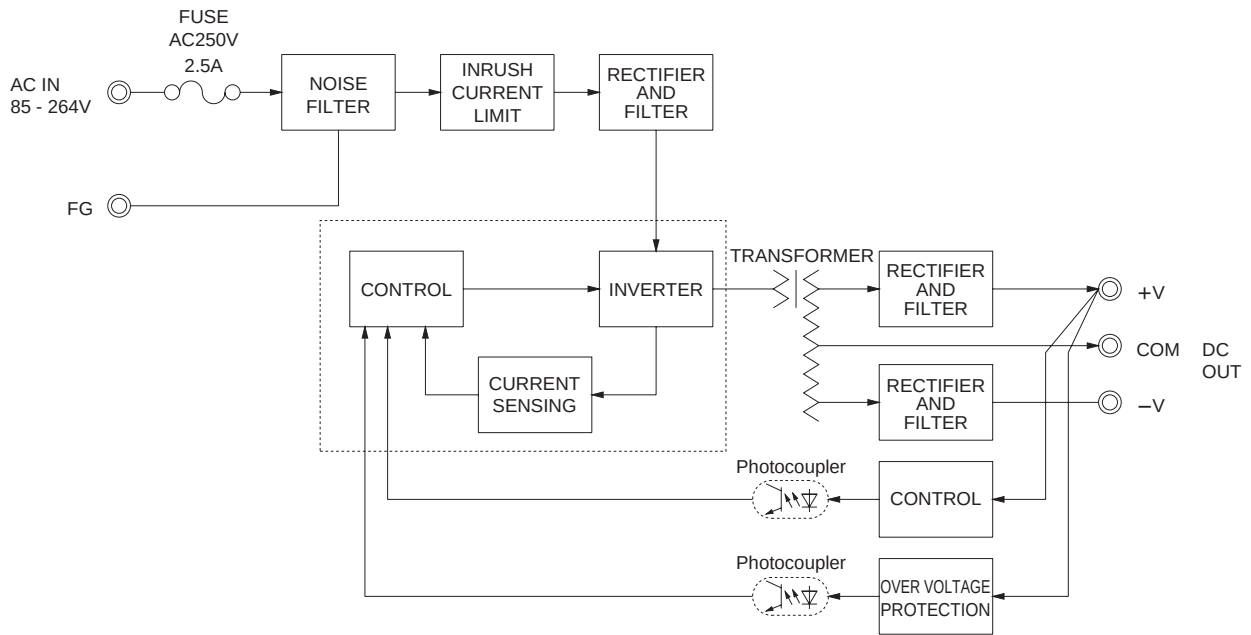
	MODEL	PBW15F-12	PBW15F-15
INPUT	VOLTAGE[V]	AC85 - 264 1 ϕ or DC110 - 370 (AC50 or DC70 Please refer to the instruction manual 2.1 Input voltage *8)	
	CURRENT[A]	ACIN 100V	0.40typ (CURRENT1)
		ACIN 200V	0.20typ (CURRENT1)
	FREQUENCY[Hz]	50/60 (47 - 440) or DC	
	EFFICIENCY[%]	ACIN 100V	74typ (CURRENT1)
		ACIN 200V	77typ (CURRENT1)
	INRUSH CURRENT[A]	ACIN 100V	15typ (CURRENT1) (At cold start)
		ACIN 200V	30typ (CURRENT1) (At cold start)
	LEAKAGE CURRENT[mA]	0.15/0.30max (ACIN 100V/240V 60Hz, Io=100%, According to IEC60950-1.DENAN)	
OUTPUT	VOLTAGE[V]	± 12	± 15 / (+30V reference number)
	CURRENT1[A]	0.7	0.5 / 0.5
	CURRENT2[A]	*5 1.4	1.0 / -
	LINE REGULATION[mV]	60max	60max / 96max
	LOAD REGULATION 1[mV]	600max	600max / 150max
	LOAD REGULATION 2[mV]	750max	750max / -
	RIPPLE[mVp-p]	0 to +50°C *1	120max / 240max
		-10 - 0°C *1	160max / 320max
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	150max / 300max
		-10 - 0°C *1	180max / 360max
	TEMPERATURE REGULATION[mV]	0 to +50°C	150max
		-10 to +50°C	180max
	DRIFT[mV]	*2 48max	60max
PROTECTION CIRCUIT AND OTHERS	START-UP TIME[ms]	200typ(ACIN 100V, Io=100%) *Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.	
	HOLD-UP TIME[ms]	20typ (ACIN 100V, Io=100%)	
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	9.60 - 13.2 (+V and -V are simultaneously adjusted)	
	OUTPUT VOLTAGE SETTING[V]	11.5 - 12.5 (+V and -V CURRENT1)	
	OVERCURRENT PROTECTION	Works over 105% of rated current and recovers automatically	
	OVERVOLTAGE PROTECTION[V]	16.8 - 24.0	20.0 - 29.0
ISOLATION	OPERATING INDICATION	LED (Green)	
	REMOTE ON/OFF	None	
	INPUT-OUTPUT	AC3.000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)	
ENVIRONMENT	INPUT-FG	AC2.000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)	
	OUTPUT-FG	AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)	
	OPERATING TEMP.,HUMID.AND ALTITUDE	-10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max	
SAFETY AND NOISE REGULATIONS	STORAGE TEMP.,HUMID.AND ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max	
	VIBRATION	10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis	
	IMPACT	196.1m/s ² (20G), 11ms, once each X, Y and Z axis	
OTHERS	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	
	HARMONIC ATTENUATOR	Complies with IEC61000-3-2 (Not built-in to active filter *7) *12	
	CASE SIZE/WEIGHT	31 x 78 x 85mm [1.22 x 3.07 x 3.35 inches] (without terminal block) (W x H x D) / 200g max (with cover : 235g max)	
	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 Figures for 0 to rated current 1.The current not measured side is fixed.
- *4 Figures for 0 to rated current 2.The current not measured

- side is fixed.
- *5 The sum of +power -power must be less than output power.
- *6 $\pm 12, \pm 15$ can be used as +24 and +30.
- *7 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
- *8 Derating is required.
- *9 Figures to rated current 1.

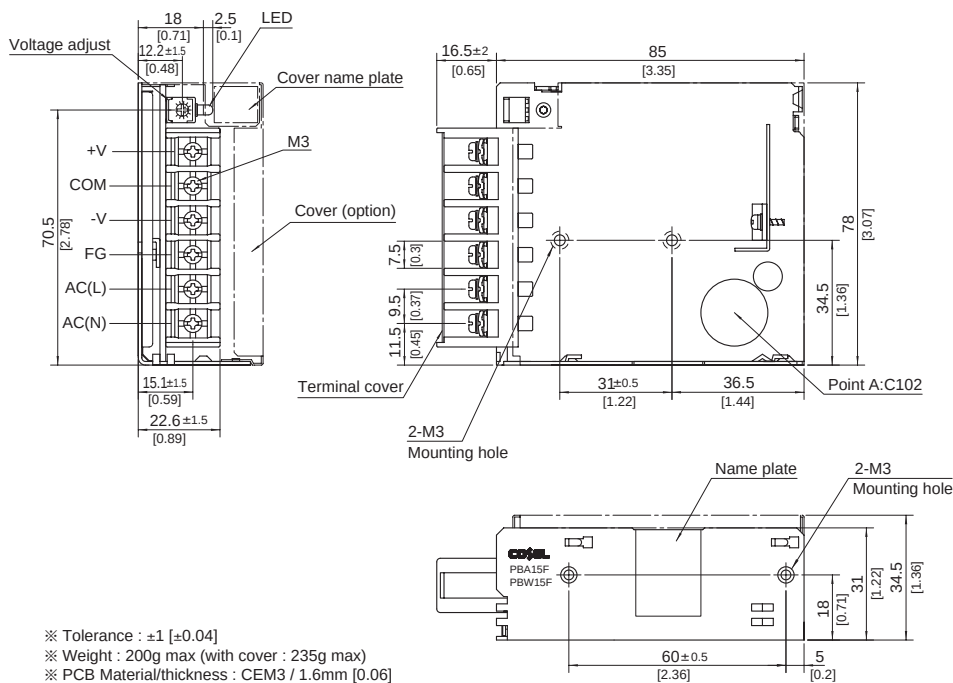
- *10 Please contact us about safety approvals for the model with option.
- *11 Please contact us about dynamic load and input response.
- *12 Please contact us about class C.
- * Parallel operation with other model is not possible.
- * Derating is required when operated with cover.
- * A sound may occur from power supply at peak loading.

Block diagram



External view

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



- ※ Tolerance : ± 1 [± 0.04]
- ※ Weight : 200g max (with cover : 235g max)
- ※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
- ※ Chassis material : Electric galvanizing steel board
- ※ Dimensions in mm, [] = inches
- ※ Mounting torque : $0.6\text{N} \cdot \text{m}$ (6.3kgf $\cdot$ cm) max
- ※ Screw tightening torque : $M3\ 0.8\text{N} \cdot \text{m}$ (8.5kgf $\cdot$ cm) max
- ※ Please connect safety ground to the unit in 2-M3 holes.



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- дистрибьютор электронных компонентов с 1994 года
- контрактный производитель электроники с 2007 года с собственным производством в Санкт-Петербурге (компания Макро ЕМС, входит в ГК Макро Групп)
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- поставка электронных компонентов по проектным ценам
- инженерная поддержка проектов заказчиков
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- необходимые сертификаты и лицензии

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