PBA10F

A 10 F -





Example recommended EMI/EMC filter NAC-06-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ①Series name ②Single output (3) Output wattage
- 4 Universal input
- ⑤Output voltage
- Optional *5
 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
- (UL508 is acquired) N1:with DIN rail and Cover
- V:Output voltage setting potentiometer external-

Cover is optional

*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.

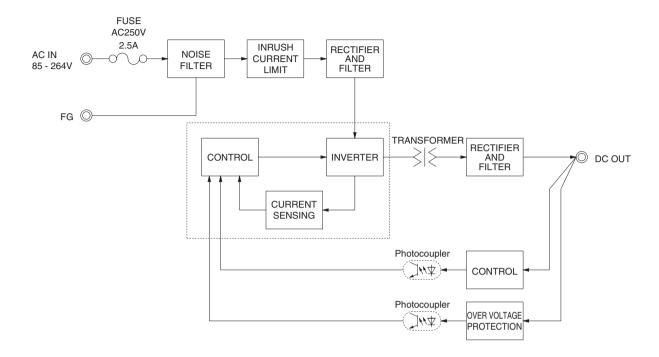
MODEL	PBA10F-5	PBA10F-12	PBA10F-24
MAX OUTPUT WATTAGE[W]	10	10.8	12
DC OUTPUT	5V 2A	12V 0.9A	24V 0.5A

	MODEL		PBA10F-5	PBA10F-12	PBA10F-24			
	VOLTAGE[V]		AC85 - 264 1 φ or DC110 - 370 (AC5	0 or DC70 Please refer to the instruction	on manual 2.1 Input voltage *3)			
	CUDDENTIAL	ACIN 100V	0.30typ (lo=100%)					
	CURRENT[A]	ACIN 200V	0.20typ (lo=100%)					
	FREQUENCY[Hz]		50/60 (47 - 440) or DC					
INPUT	EFFICIENCY[%]	ACIN 100V	74typ	76typ	77typ			
	EFFICIENCI[/6]	ACIN 200V	74typ	76typ	77typ			
	INRUSH CURRENT[A]	ACIN 100V	15typ (lo=100%)					
	INNUSH CONNENT[A]	ACIN 200V	30typ (Io=100%)					
	LEAKAGE CURREN	T[mA]	0.15/0.30max (ACIN 100V/240V 60Hz	, lo=100%, According to IEC60950-1,D	ENAN)			
	VOLTAGE[V]		5	12	24			
	CURRENT[A]		2	0.9	0.5			
	LINE REGULATION[mV] *6	20max	48max	96max			
	LOAD REGULATION	[mV] *6	40max	100max	150max			
	RIPPLE[mVp-p]	0 to +50°C *1	80max	120max	120max			
	mi i EE[mvp p]	-10 - 0℃ *1	140max	160max	160max			
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	150max	150max			
OUTPUT	TIII T EE HOIOE[III VP P]	-10 - 0℃ *1	160max	180max	180max			
	TEMPERATURE REGULATION[mV]	0 to +50℃		120max	240max			
	TEMI ETATORE REGUENTOR(IIIV)	-10 to +50℃	60max	150max	290max			
	DRIFT[mV] *		20max	48max	96max			
	START-UP TIME[ms]			is 700ms typ for less than 1minute of applying	g input again from turning off the input voltage.			
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)					
	OUTPUT VOLTAGE ADJUSTMENT	- 11	4.50 - 5.50	10.0 - 13.2	19.2 - 27.0			
	OUTPUT VOLTAGE SET		5.00 - 5.15	12.00 - 12.48	24.00 - 24.96			
PROTECTION	OVERCURRENT PROT							
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC		5.75 - 7.00	15.0 - 18.0	30.0 - 37.0			
OTHERS	OPERATING INDICA	TION	LED (Green)					
	REMOTE ON/OFF		None	,				
	INPUT-OUTPUT			0mA, DC500V 50MΩmin (At Room Tel	<u> </u>			
ISOLATION	INPUT-FG			0mA, DC500V 50MΩmin (At Room Tel				
	OUTPUT-FG			mA, DC500V 50MΩmin (At Room Temp	-			
	OPERATING TEMP.,HUMID.AND			90%RH (Non condensing) 3,000m (10	0,000feet) max			
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90%RH (Non conde					
	VIBRATION		1 1	eriod, 60minutes each along X, Y and 2	Z axis			
	IMPACT	. 10 :1	196.1m/s ² (20G), 11ms, once each X, Y and Z axis					
SAFETY AND	AGENCY APPROVALS (At only		UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN					
NOISE REGULATIONS	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B					
	HARMONIC ATTENU		Complies with IEC61000-3-2 (Not built-in to active filter *4) *7 31 × 78 × 68mm [1.22 × 3.07 × 2.68 inches] (without terminal block) (W×H×D) / 150g max (with cover : 180g max)					
OTHERS	CASE SIZE/WEIGHT			nesj (without terminal block) (WXHXD) / 150g max (with cover: 180g max)			
	COOLING METHOD Convection							

- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- *4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about dynamic load and input response.
- Please contact us about class C.
- Parallel operation with other model is not possible
- Derating is required when operated with cover.

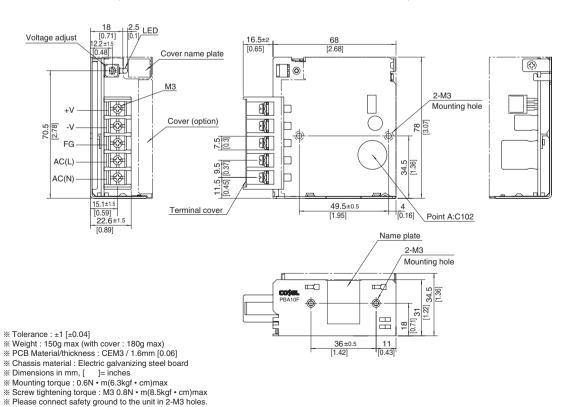
 A sound may occur from power supply at peak loading.





External view

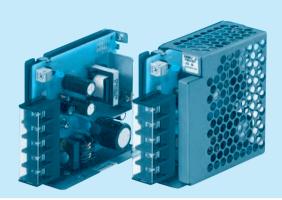
* External size of option T,J,N,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.



PBA15F

A 15 F -









High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

Cover is optional

①Series name ②Single output

(3) Output wattage 4 Universal input

⑤Output voltage

Optional *5
 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 (UL508 is acquired

[5V, 12V, 24V]) N1: with DIN rail and Cover

V:Output voltage setting potentiometer external-

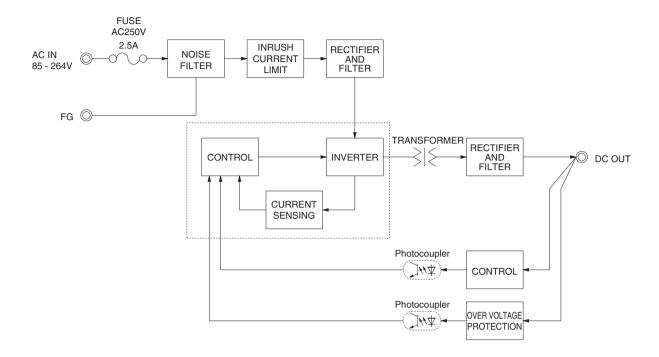
*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

MODEL	PBA15F-3R3	PBA15F-5	PBA15F-9	PBA15F-12	PBA15F-15	PBA15F-24	PBA15F-48
MAX OUTPUT WATTAGE[W]	9.9	15	15.3	15.6	15	16.8	16.8
DC OUTPUT	3.3V 3A	5V 3A	9V 1.7A	12V 1.3A	15V 1A	24V 0.7A	48V 0.35A

	MODEL		PBA15F-3R3	PBA15F-5	PBA15F-9	PBA15F-12	PBA15F-15	PBA15F-24	PBA15F-48		
	VOLTAGE[V]		AC85 - 264 1 φ	or DC110 - 370	(AC50 or DC70	Please refer to the	ne instruction ma	nual 2.1 Input vo	ltage *3)		
	CURRENT[A]	ACIN 100V	0.30typ (lo=100%)	0.4typ (lo=100%	6)						
	CONNENT[A]	ACIN 200V	0.15typ (lo=100%)	0.2typ (lo=100%	6)						
	FREQUENCY[Hz]		50/60 (47 - 440)	or DC							
INPUT	EFFICIENCY[%]	ACIN 100V	68typ	74typ	75typ	75typ	77typ	75typ	75typ		
	EFFICIENCI[/6]	ACIN 200V	68typ	75typ	77typ	78typ	80typ	78typ	78typ		
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)							
	INNUSH CUNNENT[A]	ACIN 200V	30typ (Io=100%) (At cold start)							
	LEAKAGE CURREN	T[mA]	0.15/0.30max (A	ACIN 100V/240V	60Hz, lo=100%,	According to IEC	C60950-1,DENAN	1)			
	VOLTAGE[V]		3.3	5	9	12	15	24	48		
	CURRENT[A]		3	3	1.7	1.3	1	0.7	0.35		
	LINE REGULATION[mV] *6	20max	20max	36max	48max	60max	96max	192max		
	LOAD REGULATION	[mV] *6	40max	40max	100max	100max	120max	150max	240max		
	RIPPLE[mVp-p]	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max		
	nirrcc[iiivp-p]	-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max		
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	120max	150max	150max	150max	150max	250max		
OUTPUT	MIPPLE NOISE[IIIVP-P]	-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max		
1	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	480max		
	TEMPERATURE REGULATION[IIV]	-10 to +50℃	60max	60max	120max	150max	180max	290max	600max		
	DRIFT[mV] *		20max	20max	36max	48max	60max	96max	192max		
	START-UP TIME[ms]		200typ(ACIN 100V	, Io=100%) * Start-ı	up time is 700ms typ	o for less than 1minu	ite of applying input	again from turning of	off the input voltage		
	HOLD-UP TIME[ms]		20typ (ACIN 10	0V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT	range[v]	2.85 - 3.60	4.50 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	39.0 - 53.0		
	OUTPUT VOLTAGE SET		3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	48.00 - 49.92		
	OVERCURRENT PROT	ECTION		% of rated curre	nt and recovers a	automatically					
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC	TION[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	58.0 - 65.0		
OTHERS	OPERATING INDICA	TION	LED (Green)								
	REMOTE ON/OFF		None								
	INPUT-OUTPUT					$00V$ $50M\Omega$ min (A					
ISOLATION	INPUT-FG		· ·			$00V$ $50M\Omega$ min (A		,			
	OUTPUT-FG					V 50MΩmin (At					
	OPERATING TEMP., HUMID. AND		_	<u> </u>		Non condensing)		eet) max			
ENVIRONMENT	STORAGE TEMP.;HUMID.AND	ALTITUDE				00m (30,000feet)					
	VIBRATION			0 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT), 11ms, once ea							
SAFELL AND	AGENCY APPROVALS (At only					50178 Complies					
NOISE REGULATIONS	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B								
NEGULATIONS	HARMONIC ATTENU		Complies with IEC61000-3-2 (Not built-in to active filter *4) *7 31 × 78 × 85mm [1.22 × 3.07 × 3.35 inches] (without terminal block) (W×H×D) / 200g max (with cover : 235g max)								
OTHERS	CASE SIZE/WEIGHT			[1.22×3.07×3.0	35 inches] (witho	ut terminal block)	(W×H×D) / 20	00g max (with co	ver : 235g max)		
J.//E/10	COOLING METHOD		Convection								

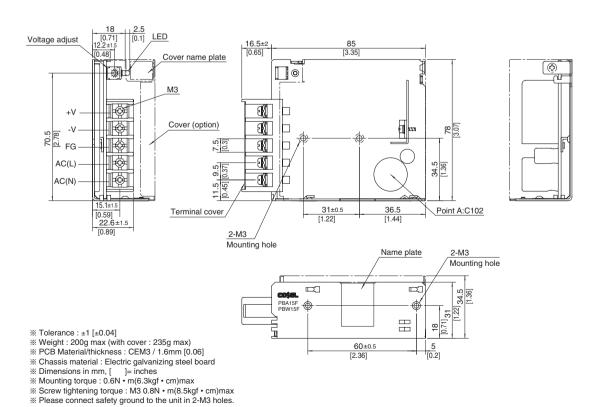
- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- *4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about dynamic load and input response.
- 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.



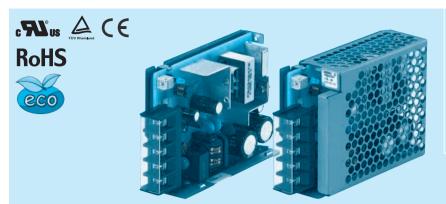
External view

※ 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.



PBA30F

A 30



Example recommended EMI/EMC filter NAC-06-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

Cover is optional

①Series name ②Single output

- (3) Output wattage
- 4 Universal input ⑤Output voltage
- Optional *5
 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 (UL508 is acquired
- [5V, 12V, 24V])
- N1: with DIN rail and Cover
- V:Output voltage setting potentiometer external-

*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.

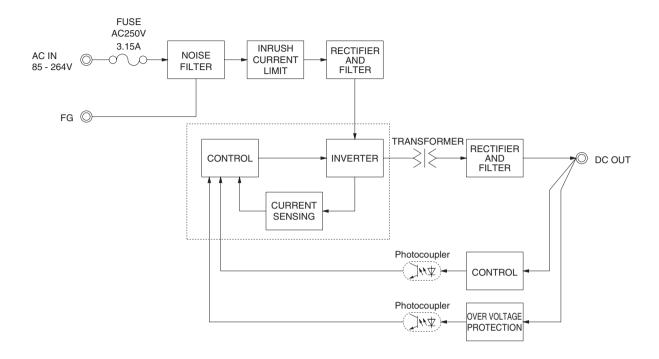
MODEL	PBA30F-3R3	PBA30F-5	PBA30F-9	PBA30F-12	PBA30F-15	PBA30F-24	PBA30F-48
MAX OUTPUT WATTAGE[W]	19.8	30	30.6	30	30	31.2	31.2
DC OUTPUT	3.3V 6A	5V 6A	9V 3.4A	12V 2.5A	15V 2A	24V 1.3A	48V 0.65A

	MODEL		PBA30F-3R3	PBA30F-5	PBA30F-9	PBA30F-12	PBA30F-15	PBA30F-24	PBA30F-48		
	VOLTAGE[V]		AC85 - 264 1 φ	or DC110 - 370	(AC50 or DC70	Please refer to the	ne instruction ma	nual 2.1 Input vo	ltage *3)		
	CURRENT[A]	ACIN 100V	0.50typ (lo=100%)	0.70typ (lo=100	%)						
	CORNENT[A]	ACIN 200V	0.30typ (lo=100%)	0.40typ (lo=100	%)						
	FREQUENCY[Hz]		50/60 (47 - 440)	or DC							
INPUT	EFFICIENCY[%]	ACIN 100V	68typ	74typ	75typ	76typ	78typ	78typ	79typ		
	EFFICIENCI[/6]	ACIN 200V	69typ	77typ	77typ	78typ	81typ	81typ	81typ		
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)							
	INNUSH CUNNENT[A]	ACIN 200V	30typ (Io=100%) (At cold start)							
	LEAKAGE CURREN	T[mA]	0.30/0.65max (A	ACIN 100V/240V	60Hz, lo=100%,	According to IEC	C60950-1,DENAN	۷)			
	VOLTAGE[V]		3.3	5	9	12	15	24	48		
	CURRENT[A]		6	6	3.4	2.5	2	1.3	0.65		
	LINE REGULATION[mV] *6	20max	20max	36max	48max	60max	96max	192max		
	LOAD REGULATION	[mV] *6	40max	40max	100max	100max	120max	150max	240max		
	RIPPLE[mVp-p]	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max		
	MIPPLE[IIIVP-P]	-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max		
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	120max	150max	150max	150max	150max	250max		
OUTPUT	MIPPLE NOISE[IIIVP-P]	-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max		
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	480max		
	TEMPERATURE REGULATION[IIV]	-10 to +50℃	60max	60max	120max	150max	180max	290max	600max		
	DRIFT[mV] *		20max	20max	36max	48max	60max	96max	192max		
	START-UP TIME[ms]		200typ(ACIN 100V	, Io=100%) * Start-ı	up time is 700ms typ	o for less than 1minu	ite of applying input	again from turning of	off the input voltage		
	HOLD-UP TIME[ms]		20typ (ACIN 10	0V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT	range[v]	2.85 - 3.60	4.50 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	39.0 - 53.0		
	OUTPUT VOLTAGE SET		3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	48.00 - 49.92		
	OVERCURRENT PROT	ECTION		% of rated curre	nt and recovers a	automatically					
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC	TION[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	58.0 - 65.0		
OTHERS	OPERATING INDICA	TION	LED (Green)								
	REMOTE ON/OFF		None								
	INPUT-OUTPUT					$00V$ $50M\Omega$ min (A					
ISOLATION	INPUT-FG		· ·			$00V$ $50M\Omega$ min (A					
	OUTPUT-FG					V 50MΩmin (At					
	OPERATING TEMP., HUMID. AND		_	<u> </u>		Non condensing)		eet) max			
ENVIRONMENT	STORAGE TEMP.;HUMID.AND	ALTITUDE				00m (30,000feet)					
	VIBRATION			- 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT), 11ms, once ea							
SAFETY AND	AGENCY APPROVALS (At only					50178 Complies					
NOISE REGULATIONS	CONDUCTED NOISE		•			PR22-B, EN5501	1-B, EN55022-B				
NEGULATIONS	HARMONIC ATTENU		Complies with IEC61000-3-2 (Not built-in to active filter *4) *7 31 × 78 × 103mm [1.22 × 3.07 × 4.06 inches] (without terminal block) (W × H × D) / 270g max (with cover : 310g max								
OTHERS	CASE SIZE/WEIGHT			n [1.22 × 3.07 × 4	.06 inches] (with	out terminal block	() (W × H × D) / 2	70g max (with co	over : 310g max)		
	COOLING METHOD		Convection								

- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- *4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about dynamic load and input response.
- Please contact us about class C.
- Parallel operation with other model is not possible
- Derating is required when operated with cover.

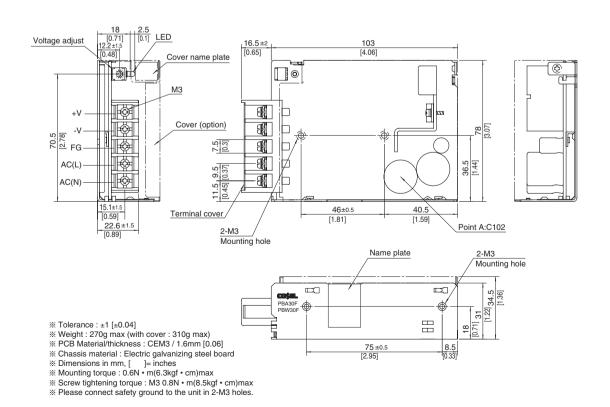
 A sound may occur from power supply at peak loading.





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.



PBA50F

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c**¶**°us ≜ C€ **RoHS** eco

Example recommended EMI/EMC filter NAC-06-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ①Series name ②Single output
- (3) Output wattage
- 4 Universal input
- ⑤Output voltage
- Optional *5
 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 and Cover
- V:Output voltage setting potentiometer external-

Cover is optional

*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.

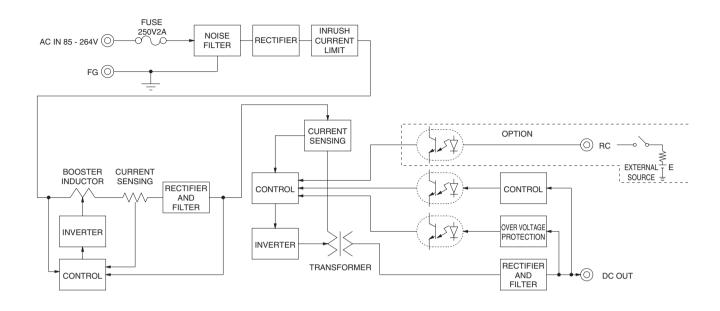
MODEL	PBA50F-3R3	PBA50F-5	PBA50F-9	PBA50F-12	PBA50F-15	PBA50F-24	PBA50F-36	PBA50F-48
MAX OUTPUT WATTAGE[W]	33	50	50.4	51.6	52.5	52.8	50.4	52.8
DC OUTPUT	3.3V 10A	5V 10A	9V 5.6A	12V 4.3A	15V 3.5A	24V 2.2A	36V 1.4A	48V 1.1A

	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	0 (AC50 or DC70	Please refer to	the instruction n	nanual 2.1 Input	voltage *4)		
	CUDDENTIAL	ACIN 100V	0.5typ	0.7typ							
	CURRENT[A]	ACIN 200V	0.3typ	0.4typ							
	FREQUENCY[Hz]		50/60 (47 - 63)								
	EEEIOIENOVI0/1	ACIN 100V	75typ	80typ	79typ	80typ	81typ	82typ	83typ	83typ	
INPUT	EFFICIENCY[%]	ACIN 200V	76typ	82typ	81typ	82typ	83typ	84typ	85typ	85typ	
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ							
	POWER FACTOR(IO=100%)	ACIN 200V	0.87typ	0.93typ							
	INRUSH CURRENT[A]	ACIN 100V	15typ (lo=100%	(At cold start)							
	INNUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At cold start)								
	LEAKAGE CURRENT[1	nA]	0.4/0.75max (ACIN 100V/240V 60Hz, Io=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[m\		20max	20max	36max	48max	60max	96max	144max	192max	
	LOAD REGULATION[m		40max	40max	100max	100max	120max	150max	240max	240max	
	RIPPLE[mVp-p]	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max	
	піггесішур-рі	-10 - 0℃ *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	
OUTPUT	MIPPLE NOISE[IIIVP-P]	-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	300max	
	TEMPERATURE REGULATION[mV]	0 to +50℃		50max	90max	120max	150max	240max	360max	480max	
		-10 to +50℃	60max	60max 20max	120max	150max	180max	290max	450max	600max	
	DRIFT[mV]				36max	48max	60max	96max	144max	192max	
	START-UP TIME[ms]	350typ(ACIN 10									
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT			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 SET		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	
PROTECTION	OVERCURRENT PROT				ent and recovers						
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC		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	
OTHERS	OPERATING INDICATION	ON	LED (Green)								
	REMOTE ON/OFF			ired external pov							
	INPUT-OUTPUT · RC	*3				500V 50MΩmin					
ISOLATION	INPUT-FG					500V 50MΩmin					
	OUTPUT · RC-FG	*3				00V 50MΩmin (
	OPERATING TEMP.,HUMID.AND					(Non condensing		Offeet) max			
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALIIIUDE				000m (30,000fee					
	VIBRATION					minutes each ald	ong X, Y and Z a	axis			
	AGENCY APPROVALS (At only	, AC innut			ach X, Y and Z		o with DEN AN				
SAFETY AND NOISE	CONDUCTED NOISE	y AC Input)		UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN							
REGULATIONS	HARMONIC ATTENUAT	ΓΩΡ	Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B Complies with IEC61000-3-2 *6								
	CASE SIZE/WEIGHT	On				hout terminal blo	ck) (M×H×D)	280g may (with	h cover : 325g m	av)	
OTHERS	COOLING METHOD			III [1.22 X 3.23 X	4.72 Inches] (WII	nout terminal bio	CK) (VV X T X D) /	Zoug max (Wit	ii covei . 3∠3g m	ах)	
	COOLING WE I HOD		Convection								

- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN
- *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
- *4 Derating is required.

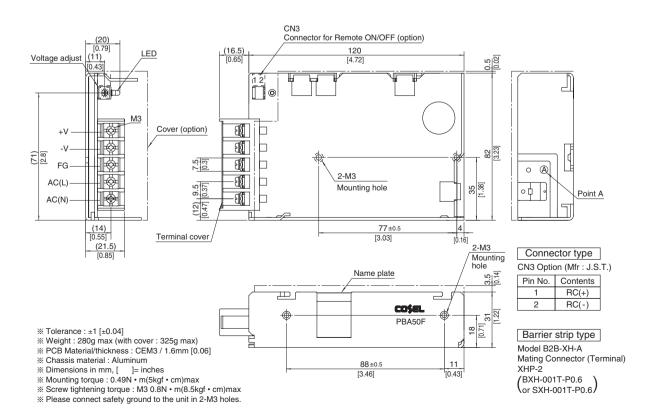
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about class C.
- Parallel operation with other model is not possible.
- Derating is required when operated with cover
- A sound may occur from power supply at peak loading.





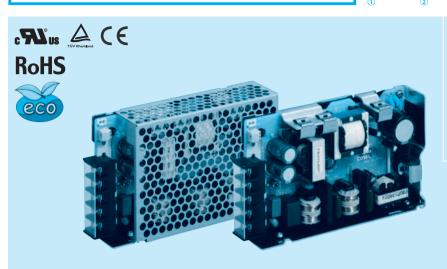
External view

* 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.



PBA75F

75 F



Example recommended EMI/EMC filter NAC-06-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- Series name
 Single output (3) Output wattage
- 4 Universal input
- ⑤Output voltage
- Optional *5
 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 and Cover
 - V:Output voltage setting potentiometer external-

Cover is optional

*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.

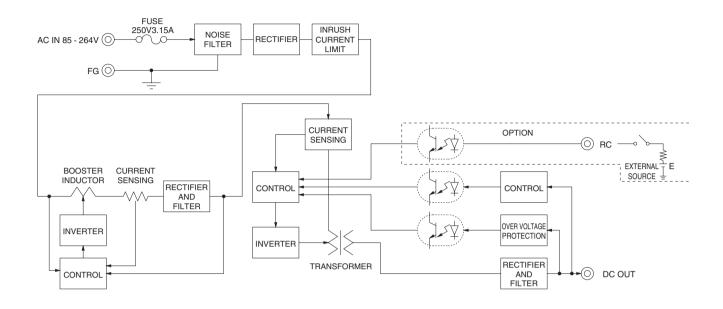
MODEL	PBA75F-3R3	PBA75F-5	PBA75F-9	PBA75F-12	PBA75F-15	PBA75F-24	PBA75F-36	PBA75F-48
MAX OUTPUT WATTAGE[W]	49.5	75	75.6	75.6	75	76.8	75.6	76.8
DC OUTPUT	3.3V 15A	5V 15A	9V 8.4A	12V 6.3A	15V 5A	24V 3.2A	36V 2.1A	48V 1.6A

	MODEL		PBA75F-3R3	PBA75F-5	PBA75F-9	PBA75F-12	PBA75F-15	PBA75F-24	PBA75F-36	PBA75F-48	
	VOLTAGE[V]		AC85 - 264 1 φ	or DC120 - 37	0 (AC50 or DC7	Please refer to	the instruction r	nanual 2.1 Input	voltage *4)		
	CUDDENTIAL	ACIN 100V	0.7typ	1.0typ					_		
	CURRENT[A]	ACIN 200V	0.4typ	0.5typ							
	FREQUENCY[Hz]		50/60 (47 - 63)								
	EEEIOIENOVI0/1	ACIN 100V	77typ	81typ	80typ	81typ	82typ	83typ	84typ	84typ	
INPUT	EFFICIENCY[%]	ACIN 200V	78typ	83typ	82typ	83typ	84typ	85typ	86typ	86typ	
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ							
	POWER FACTOR(IO=100%)	ACIN 200V	0.87typ	0.93typ							
	INDUCU CUDDENTIAL	ACIN 100V	15typ (lo=100%	(At cold start)							
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At cold start)								
	LEAKAGE CURRENT[I	nA]	0.4/0.75max (A	.4/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC60950-1,DENAN)							
	VOLTAGE[V]		3.3	5	9	12	15	24	36	48	
	CURRENT[A]		15	15	8.4	6.3	5	3.2	2.1	1.6	
	LINE REGULATION[m\	/]	20max	20max	36max	48max	60max	96max	144max	192max	
	LOAD REGULATION[m	ıV]	40max	40max	100max	100max	120max	150max	240max	240max	
	RIPPLE[mVp-p]	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max	
	RIPPLE[IIIVP-P]	-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max	200max	
OUIPUI	RIPPLE NOISE[mVp-p]	0 to +50°C * 1	120max	120max	150max	150max	150max	150max	250max	250max	
	RIPPLE NOISE[IIIVP-P]	-10 - 0℃ *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℃	60max	60max	120max	150max	180max	290max	450max	600max	
	DRIFT[mV]	*2	20max	20max	36max	48max	60max	96max	144max	192max	
	START-UP TIME[ms]		350typ(ACIN 100V, Io=100%)								
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT	T 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 SET	TING[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	36.00 - 37.44	48.00 - 49.92	
	OVERCURRENT PROT	ECTION	Works over 105	5% of rated curr	ent and recovers	automatically					
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC	TION[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	
OTHERS	OPERATING INDICATION	NC	LED (Green)								
	REMOTE ON/OFF			ired external po							
	INPUT-OUTPUT · RC	*3				500V 50MΩmin					
ISOLATION	INPUT-FG		AC2,000V 1mir	nute, Cutoff curre	ent = 10mA, DC	500V 50MΩmin	(At Room Tempe	erature)			
	OUTPUT · RC-FG	*3				00V 50MΩmin (
	OPERATING TEMP.,HUMID.AND	ALTITUDE						Ofeet) max			
ENVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE				000m (30,000fee					
	VIBRATION					minutes each ald	ong X, Y and Z a	axis			
	IMPACT			196.1m/s ² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND	AGENCY APPROVALS (At only	AC input)				N50178 Complie					
NOISE	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B								
REGULATIONS	HARMONIC ATTENUAT	ГOR	Complies with IEC61000-3-2 *6								
OTHERS	CASE SIZE/WEIGHT		32 × 82 × 135m	m [1.26 × 3.23 ×	5.31 inches] (wit	hout terminal blo	ck) (W×H×D)	350g max (wit	h cover : 400g m	ax)	
O.I.E.IIO	COOLING METHOD		Convection								

- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN
- *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
- *4 Derating is required.

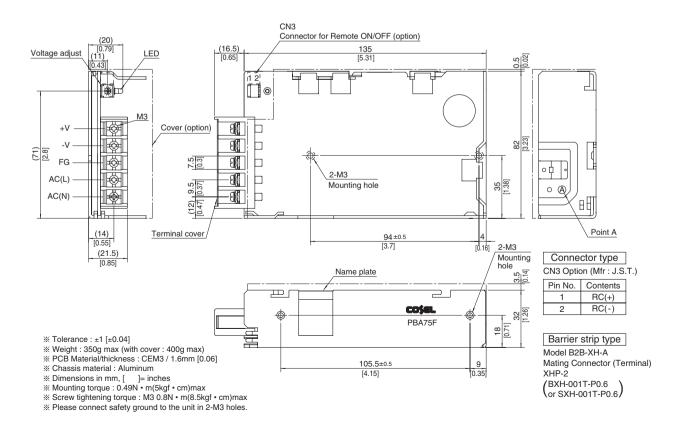
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about class C.
- Parallel operation with other model is not possible.
- Derating is required when operated with cover
- A sound may occur from power supply at peak loading.





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.



RoHS

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PBA100F

100 F -5

Example recommended EMI/EMC filter NAC-06-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ①Series name ②Single output
- (3) Output wattage
- 4 Universal input
- ⑤Output voltage
- Optional *5
 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 (Only -12,-15,-24,-36,-48)
 - R:with Remote ON/OFF
- N:with Cover
- (Only 24V UL508 is acquired) N1 :with DIN rail and Cover
- V:Output voltage setting potentiometer external-

Cover is optional

*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.

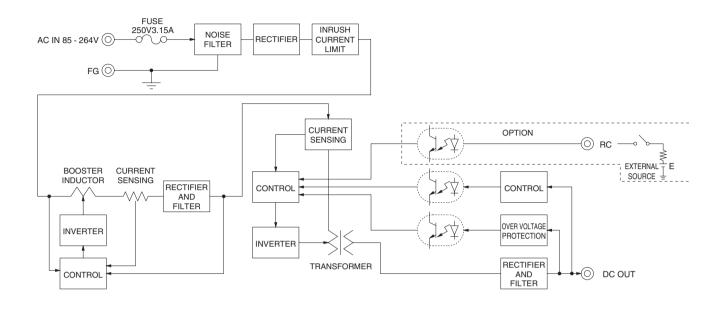
MODEL	PBA100F-3R3	PBA100F-5	PBA100F-9	PBA100F-12	PBA100F-15	PBA100F-24	PBA100F-36	PBA100F-48
MAX OUTPUT WATTAGE[W]	66	100	94.5	102	105	108	100.8	100.8
DC OUTPUT	3.3V 20A	5V 20A	9V 10.5A	12V 8.5A	15V 7A	24V 4.5A	36V 2.8A	48V 2.1A

	MODEL		PBA100F-3R3	PBA100F-5	PBA100F-9	PBA100F-12	PBA100F-15	PBA100F-24	PBA100F-36	PBA100F-48		
	VOLTAGE[V]		AC85 - 264 1 φ	or DC120 - 370	(AC50 or DC7	Please refer to	the instruction r	nanual 2.1 Input	voltage *4)			
	CURRENT[A]	ACIN 100V	0.9typ	1.3typ								
	CORRENT[A]	ACIN 200V		0.7typ								
	FREQUENCY[Hz]		50/60 (47 - 63)									
	EEEICIENCVI9/1	ACIN 100V	77typ	82typ	80typ	81typ	83typ	84typ	84typ	84typ		
INPUT	EFFICIENCY[%]	ACIN 200V	79typ	84typ	82typ	83typ	86typ	86typ	86typ	86typ		
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ								
	POWER FACTOR(IO=100 %)	ACIN 200V		0.93typ								
	INRUSH CURRENT[A]	ACIN 100V										
	INNUSH CURRENT[A]	ACIN 200V	40typ (lo=100%	40typ (Io=100%) (At cold start)								
	LEAKAGE CURRENT[r	nA]	0.4/0.75max (A	CIN 100V/240V	60Hz, lo=100%	According to IE	C60950-1,DENA	N)				
	VOLTAGE[V]		3.3	5	9	12	15	24	36	48		
	CURRENT[A]		20	20	10.5	8.5	7	4.5	2.8	2.1		
	LINE REGULATION[m\		20max	20max	36max	48max	60max	96max	144max	192max		
	LOAD REGULATION[m		40max	40max	100max	100max	120max	150max	240max	240max		
	RIPPLE[mVp-p]	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max		
	IIII I EE[IIIVP-P]	-10 - 0℃ *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		
OUTPUT		-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	300max		
1	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	360max	480max		
		-10 to +50℃	60max	60max	120max	150max	180max	290max	450max	600max		
	DRIFT[mV]	*2	20max	20max	36max	48max	60max	96max	144max	192max		
	START-UP TIME[ms]		350typ(ACIN 10									
	HOLD-UP TIME[ms]		20typ (ACIN 10									
	OUTPUT VOLTAGE ADJUSTMENT		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 SET		3.20 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92		
	OVERCURRENT PROT				ent and recovers	1	1		T			
PROTECTION	OVERVOLTAGE PROTEC		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		
OTHERS	OPERATING INDICATION	ON	LED (Green)									
OTHERS	REMOTE SENSING			-3R3, -5 Option								
	REMOTE ON/OFF			ired external pov			/··-	. \				
	INPUT-OUTPUT · RC	*3				500V 50MΩmin						
ISOLATION	INPUT-FG					500V 50MΩmin						
	OUTPUT · RC-FG	*3				00V 50MΩmin (
	OPERATING TEMP.,HUMID.AND					(Non condensing		Offeet) max				
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALIIIUDE				000m (30,000fee						
	VIBRATION					minutes each ald	ong X, Y and Z a	axis				
	IMPACT	. 10 :1	196.1m/s ² (20G), 11ms, once each X, Y and Z axis UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN									
	AGENCY APPROVALS (At only	AC Input)						D.				
NOISE REGULATIONS	CONDUCTED NOISE HARMONIC ATTENUAT	rop.				SPR22-B, EN550	и I-B, EN55022-	В				
		UK	Complies with IEC61000-3-2 *6 32 × 93 × 147mm [1.26 × 3.66 × 5.79 inches] (without terminal block) (W×H×D) / 440g max (with cover : 500g max)									
OTHERS	CASE SIZE/WEIGHT			TI [1.26 X 3.66 X	5.79 inchesj (wit	nout terminal blo	CK) (WXHXD)	440g max (wit	n cover : 500g m	ax)		
	COOLING METHOD		Convection									

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

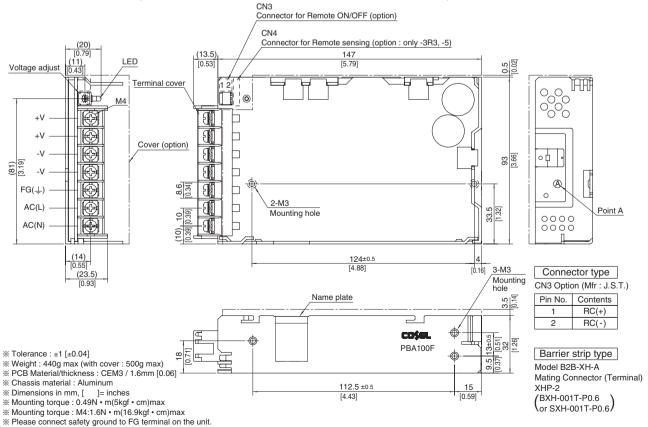
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about class C.
- Parallel operation with other model is not possible.
- Derating is required when operated with cover
- A sound may occur from power supply at peak loading.





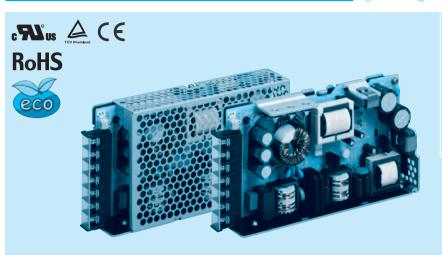
External view

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



PBA150F

A 150 F -5



Example recommended EMI/EMC filter NAC-06-472



High voltage pulse noise type : NAP series Low leakage current type : NAM series

*A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ①Series name ②Single output
- (3) Output wattage 4 Universal input
- ⑤Output voltage
- Optional *5
 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 (Only -12,-15,-24,-36,-48)
 - R:with Remote ON/OFF
- N:with Cover
- (Only 24V UL508 is acquired) N1 :with DIN rail and Cover
- V:Output voltage setting potentiometer external-

Cover is optional

*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.

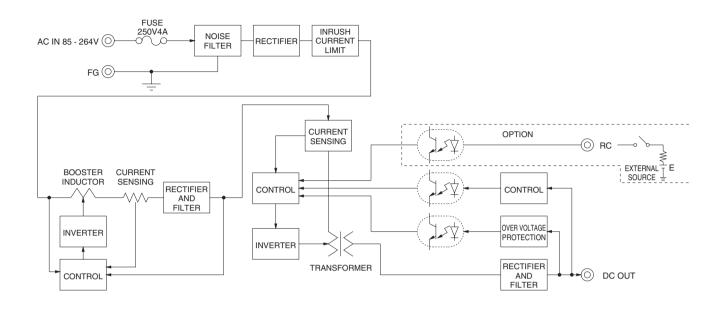
MODEL	PBA150F-3R3	PBA150F-5	PBA150F-9	PBA150F-12	PBA150F-15	PBA150F-24	PBA150F-36	PBA150F-48
MAX OUTPUT WATTAGE[W]	99	150	150.3	156	150	156	154.8	158.4
DC OUTPUT	3.3V 30A	5V 30A	9V 16.7A	12V 13A	15V 10A	24V 6.5A	36V 4.3A	48V 3.3A

	MODEL		PBA150F-3R3	PBA150F-5	PBA150F-9	PBA150F-12	PBA150F-15	PBA150F-24	PBA150F-36	PBA150F-48
	VOLTAGE[V]		AC85 - 264 1 φ or DC120 - 370 (AC50 or DC70 Please refer to the instruction manual 2.1 Input voltage *4)							
INPUT	CURRENT[A]	ACIN 100V	1.3typ 2.0typ							
	CURRENT[A]	ACIN 200V								
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	80typ	83typ	82typ	83typ	84typ	85typ	85typ	85typ
		ACIN 200V	82typ	86typ	85typ	86typ	87typ	88typ	88typ	88typ
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ						
		ACIN 200V								
	INRUSH CURRENT[A]	ACIN 100V	20typ (lo=100%) (At cold start)							
	INNUSH CURRENT[A]	ACIN 200V	40typ (lo=100%) (At cold start)							
	LEAKAGE CURRENT[mA]		0.4/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC60950-1,DENAN)							
	VOLTAGE[V]		3.3	5	9	12	15	24	36	48
ОИТРИТ	CURRENT[A]		30	30	16.7	13	10	6.5	4.3	3.3
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	100max	120max	150max	240max	240max
	RIPPI F[mVn-n]	0 to +50°C * 1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ *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℃ *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℃	60max	60max	120max	150max	180max	290max	450max	600max
	DRIFT[mV] *2		20max	20max	36max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		350typ(ACIN 100V, lo=100%)							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=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 SET		3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92
	OVERCURRENT PROTECTION									
PROTECTION	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)							
OTHERS	REMOTE SENSING		Optional (Only -3R3, -5 Option -K)							
	REMOTE ON/OFF		Optional (Required external power source)							
	INPUT-OUTPUT · RC *3									
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)							
	OUTPUT · RC-FG *3		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE									
			-20 to +75°C, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (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							
NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)									
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
	HANWONIC ATTENDATOR		Complies with IEC61000-3-2 *6							
OTHERS	CASE SIZE/WEIGHT		34×93×168mm [1.34×3.66×6.61 inches] (without terminal block) (W×H×D) / 560g max (with cover: 630g max)							
	COOLING METHOD		Convection							

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

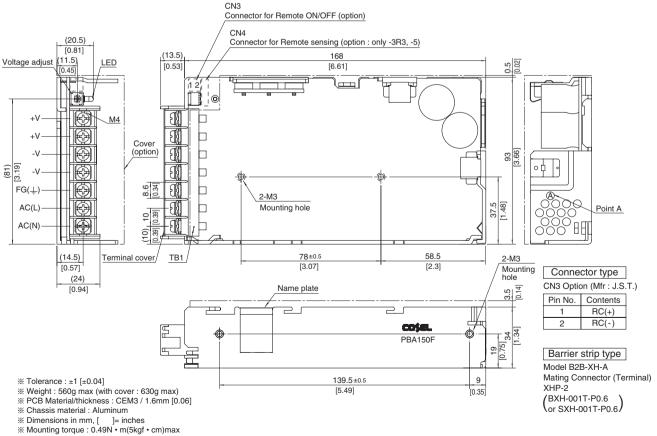
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about class C.
- Parallel operation with other model is not possible.
- Derating is required when operated with cover
- A sound may occur from power supply at peak loading.





External view

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



- Mounting torque: M4:1.6N m(16.9kgf cm)max
 Keep drawing current per pin below 20A for TB1.
 Please connect safety ground to FG terminal on the unit.

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