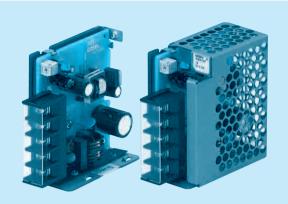
PBA10F

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

- 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-

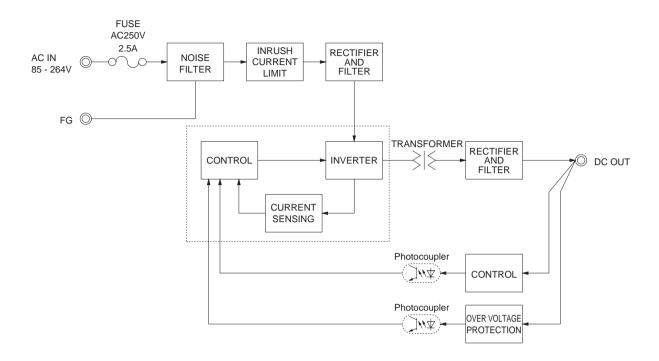
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(:)	er is	optio	nal
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MODEL	PBA10F-5	PBA10F-12	PBA10F-24
MAX OUTPUT WATTAGE[W]	10	10.8	12
DC OUTPUT	5V 2A	12V 0.9A	24V 0.5A

	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	n manual 2.1 Input voltage *3)					
	OUDDENITAL	ACIN 100V	0.30typ (lo=100%)							
	CURRENT[A]	ACIN 200V	0.20typ (lo=100%)							
	FREQUENCY[Hz]		50/60 (47 - 440) or DC							
INPUT	ACIN 100		74typ 76typ 77typ							
	EFFICIENCY[%]	ACIN 200V	74typ	76typ	77typ					
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%)							
	ACIN 200\		30typ (lo=100%)							
	LEAKAGE CURRENT	Γ[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[1	mV] *6	20max	48max	96max					
	LOAD REGULATION	[mV] *6	40max	100max	150max					
	RIPPI F[mVn-n]	0 to +50°C *1	80max	120max	120max					
ОИТРИТ		-10 - 0℃ *1	140max	160max	160max					
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	150max	150max					
		-10 - 0℃ *1	160max	180max	180max					
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	240max					
	TEMPERATURE REGULATION[IIIV]	-10 to +50℃	60max	150max	290max					
	DRIFT[mV]	*2	20max	48max	96max					
	START-UP TIME[ms]		200typ(ACIN 100V, Io=100%) *Start-up time	is 700ms typ for less than 1 minute of applying	input again from turning off the input voltage.					
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT	RANGE[V]	4.50 - 5.50	10.0 - 13.2	19.2 - 27.0					
	OUTPUT VOLTAGE SET	TING[V]	5.00 - 5.15	12.00 - 12.48	24.00 - 24.96					
			Works over 105% of rated current and							
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC	TION[V]	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 50M Ω min (At Room Te						
ISOLATION	INPUT-FG			0mA, DC500V 50MΩmin (At Room Tel						
	OUTPUT-FG			mA, DC500V 50M Ω min (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°C, 20 - 90%RH (Non conde							
	VIBRATION		1 1	eriod, 60minutes each along X, Y and 2	Z axis					
	IMPACT		196.1m/s ² (20G), 11ms, once each X,							
OALELL AND	AGENCY APPROVALS (At only			0950-1, EN50178 Complies with DEN-A						
NOISE REGULATIONS	CONDUCTED NOISE		•	CCI-B, CISPR22-B, EN55011-B, EN550	22-B					
REGULATIONS	HARMONIC ATTENU		Complies with IEC61000-3-2 (Not buil)					
OTHERS	CASE SIZE/WEIGHT		-	hes] (without terminal block) (W×H×D) / 150g max (with cover : 180g max)					
	COOLING METHOD		Convection							

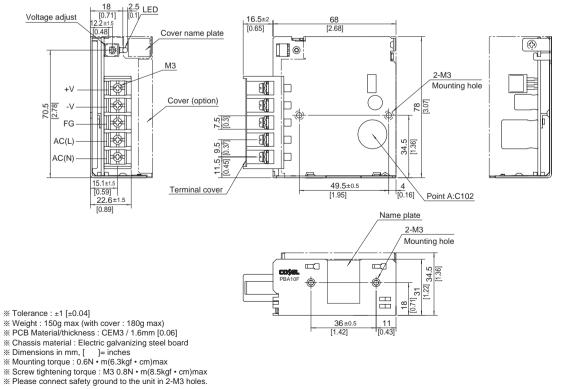
- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- *4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.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



eco

PBA15F

A 15









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

- 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-

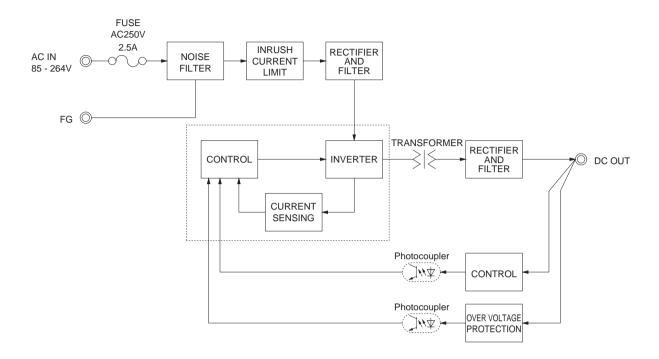
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MODEL	PBA15F-3R3	PBA15F-5	PBA15F-9	PBA15F-12	PBA15F-15	PBA15F-24	PBA15F-48
MAX OUTPUT WATTAGE[W]	9.9	15	15.3	15.6	15	16.8	16.8
DC OUTPUT	3.3V 3A	5V 3A	9V 1.7A	12V 1.3A	15V 1A	24V 0.7A	48V 0.35A

	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)		
	CURRENTIAL	ACIN 100V	0.30typ (lo=100%) 0.4typ (lo=100%)								
	CURRENT[A]	ACIN 200V	0.15typ (lo=100%) 0.2typ (lo=100%)								
	FREQUENCY[Hz]		50/60 (47 - 440) or DC								
INPUT	ACIN 10		68typ	74typ	75typ	75typ	77typ	75typ	75typ		
	EFFICIENCY[%]	ACIN 200V	68typ	75typ	77typ	78typ	80typ	78typ	78typ		
	INDUOLI QUEDENTIAL	ACIN 100V	15typ (Io=100%) (At cold start)							
	INRUSH CURRENT[A] ACIN 200\		30typ (Io=100%) (At cold start)							
	LEAKAGE CURREN	T[mA]	0.15/0.30max (A	ACIN 100V/240V	60Hz, lo=100%,	According to IE	C60950-1,DENAI	N)			
	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[I	mV] *6	20max	20max	36max	48max	60max	96max	192max		
	LOAD REGULATION		40max	40max	100max	100max	120max	150max	240max		
	DIDDI EtasVa al	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max		
	RIPPLE[mVp-p]	-10 - 0℃ *1	140max	140max	160max	160max	160max	160max	200max		
	DIDDI E NOISEImVa ni	0 to +50°C *1	120max	120max	150max	150max	150max	150max	250max		
OUIPUI	RIPPLE NOISE[mVp-p]	-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max		
	TEMPERATURE REQUIRATIONS	0 to +50℃	50max	50max	90max	120max	150max	240max	480max		
	TEMPERATURE REGULATION[mV]	-10 to +50℃	60max	60max	120max	150max	180max	290max	600max		
	DRIFT[mV]	*2	20max	20max	36max	48max	60max	96max	192max		
	START-UP TIME[ms]		200typ(ACIN 100V	, lo=100%) *Start-u	up time is 700ms typ	for less than 1minu	ite of applying input	again from turning	off the input voltage		
	HOLD-UP TIME[ms]		20typ (ACIN 100V, 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	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	48.00 - 49.92		
	OVERCURRENT PROT	ECTION	Works over 105	% of rated curre	nt and recovers a	automatically					
PROTECTION CIRCUIT AND	OVERVOLTAGE PROTEC	[V]NOIT	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		AC3,000V 1min	ute, Cutoff currer	nt = 10mA, DC50	00V 50MΩmin (<i>A</i>	At Room Tempera	ature)			
ISOLATION	INPUT-FG		AC2,000V 1min	ute, Cutoff currer	nt = 10mA, DC50	$00V$ 50M Ω min (A	At Room Tempera	ature)			
	OUTPUT-FG		AC500V 1minut	e, Cutoff current	= 25mA, DC500	V 50M Ω min (At	Room Temperati	ure)			
	OPERATING TEMP.,HUMID.AND	ALTITUDE	-10 to +71℃ (R	equired Derating), 20 - 90%RH (N	Non condensing)	3,000m (10,000	feet) max			
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75℃, 20	0 - 90%RH (Non	condensing) 9,0	00m (30,000feet)	max				
ENVIRONWENT	VIBRATION		10 - 55Hz, 19.6	m/s² (2G), 3min	utes period, 60m	inutes each alon	g X, Y and Z axi	S			
	IMPACT		196.1m/s ² (20G), 11ms, once ea	ach X, Y and Z a	xis					
SAFETY AND	AGENCY APPROVALS (At only	•			EN60950-1, EN						
NOISE	CONDUCTED NOISE		Complies with F	CC Part15 class	B, VCCI-B, CISF	PR22-B, EN5501	1-B, EN55022-B				
REGULATIONS	HARMONIC ATTENU	IATOR			ot built-in to active						
OTHERS	CASE SIZE/WEIGHT		31 × 78 × 85mm	[1.22×3.07×3.3	35 inches] (withou	ut terminal block	(W×H×D) / 20	00g max (with co	ver : 235g max)		
)THERS ⊢	COOLING METHOD		31 x 78 x 85mm [1.22 x 3.07 x 3.35 inches] (without terminal block) (Wx HxD) / 200g max (with cover : 235g max) Convection								

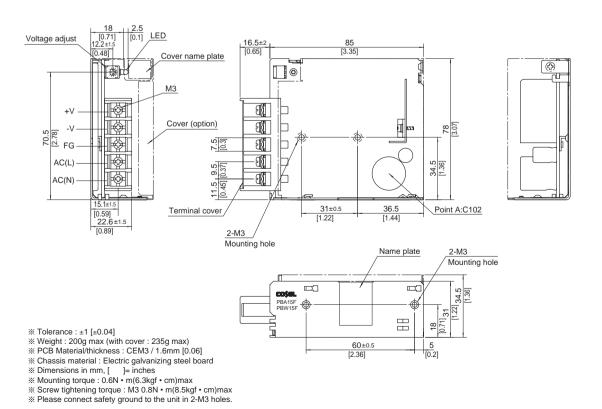
- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- *4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.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



eco

PBA30F







30

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

- 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-

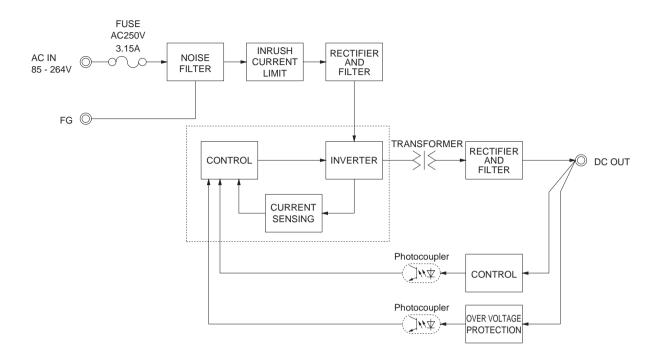
COVAR	10	Ontional
COVE	10	optional

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	oltage *3)		
	CURRENT[A]	ACIN 100V	0.50typ (lo=100%)	0.50typ (lo=100%) 0.70typ (lo=100%)							
	CORKENT[A]	ACIN 200V	0.30typ (lo=100%)	0.40typ (lo=100	1%)						
	FREQUENCY[Hz]		50/60 (47 - 440	or DC							
NPUT	EEEIGIENGVI0/1	ACIN 100V	68typ	74typ	75typ	76typ	78typ	78typ	79typ		
	EFFICIENCY[%]	ACIN 200V	69typ	77typ	77typ	78typ	81typ	81typ	81typ		
	INRUSH CURRENT[A]	ACIN 100V	15typ (lo=100%) (At cold start)							
	ACIN 200V		30typ (lo=100%) (At cold start)							
	LEAKAGE CURREN	T[mA]	0.30/0.65max (A	ACIN 100V/240V	60Hz, lo=100%,	According to IE	C60950-1,DENA	V)			
	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[I	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		
	vietrefillah-h]	-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		-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max		
	TEMPERATURE REGULATION[mV]	0 to +50°C	50max	50max	90max	120max	150max	240max	480max		
	TEMPERATURE REGULATION[IIIV]	-10 to +50℃	60max	60max	120max	150max	180max	290max	600max		
	DRIFT[mV]	*2	20max	20max	36max	48max	60max	96max	192max		
	START-UP TIME[ms]		200typ(ACIN 100V	, lo=100%) *Start-	up time is 700ms typ	for less than 1minu	ite of applying input	again from turning of	off the input voltage		
	HOLD-UP TIME[ms]		20typ (ACIN 100V, 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	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	48.00 - 49.92		
	OVERCURRENT PROT	ECTION	Works over 105	% of rated curre	nt and recovers a	automatically					
PROTECTION I	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		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)								
SOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)								
	OUTPUT-FG				= 25mA, DC500						
	OPERATING TEMP.,HUMID.AND	ALTITUDE), 20 - 90%RH (N	<u>U</u> ,		feet) max			
NVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE			condensing) 9,0						
	VIBRATION				utes period, 60m		g X, Y and Z axi	S			
	IMPACT				ach X, Y and Z a						
MILLI AND	AGENCY APPROVALS (At only				EN60950-1, EN						
NOISE	CONDUCTED NOISE				B, VCCI-B, CISF		1-B, EN55022-B				
REGULATIONS	HARMONIC ATTENU	JATOR			ot built-in to active						
OTHERS	CASE SIZE/WEIGHT		31 × 78 × 103mr	n [1.22 × 3.07 × 4	.06 inches] (with	out terminal block	k) (W x H x D) / 2	270g max (with co	over : 310g ma		
THERS	COOLING METHOD		Convection								

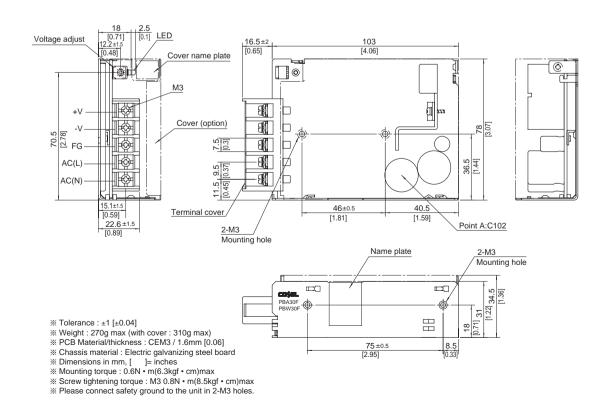
- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- *4 When two or more units are used, they may not comply with the harmonic attenuator. Please contact us for details.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



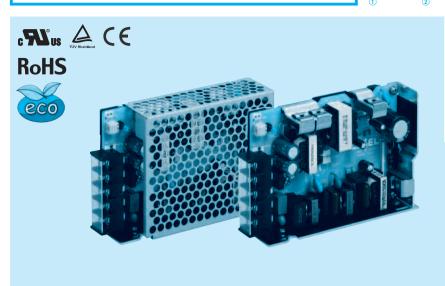
External view

* 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

50



Recommended EMI/EMC Filter NAC-06-472

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

- ①Series name ②Single output
- (3)Output wattage 4 Universal input
- (§) Output 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-

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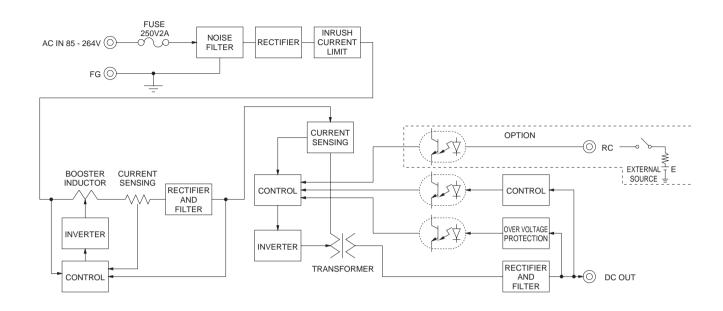
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MODEL	PBA50F-3R3	PBA50F-5	PBA50F-9	PBA50F-12	PBA50F-15	PBA50F-24	PBA50F-36	PBA50F-48
MAX OUTPUT WATTAGE[W]	33	50	50.4	51.6	52.5	52.8	50.4	52.8
DC OUTPUT	3.3V 10A	5V 10A	9V 5.6A	12V 4.3A	15V 3.5A	24V 2.2A	36V 1.4A	48V 1.1A

	MODEL		PBA50F-3R3	PBA50F-5	PBA50F-9	PBA50F-12	PBA50F-15	PBA50F-24	PBA50F-36	PBA50F-48	
	VOLTAGE[V]			or DC120 - 370) (AC50 or DC70	Please refer to	the instruction n	nanual 2.1 Input	voltage *4)		
	CURRENTIA	ACIN 100V	0.5typ	0.7typ							
	CORRENT[A]	ACIN 200V	0.3typ 0.4typ								
	FREQUENCY[Hz]		50/60 (47 - 63)								
	EEEICIENCVII/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							
	ACIN 100		15typ (Io=100%	(At cold start)							
	INRUSH CURRENT[A]	ACIN 200V	30typ (Io=100%	typ (lo=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]		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[m	V]	40max	40max	100max	100max	120max	150max	240max	240max	
	RIPPLE[mVp-p]	0 to +50°C * 1	80max	80max	120max	120max	120max	120max	150max	150max	
	PIPPI E NOISE[m\/n-n]	-10 - 0°C *1	140max	140max	160max	160max	160max	160max	200max	200max	
		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	
	I TEMPERATURE RECUII ATIONIMVI -	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	192max	
	START-UP TIME[ms]		350typ(ACIN 10	50typ(ACIN 100V, Io=100%)							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)								
	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		3.30 - 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 PROT	ECTION									
PROTECTION CIRCUIT AND	OVERVOLINGE 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)	D (Green)							
	REMOTE ON/OFF			ired external pov							
	INPUT-OUTPUT · RC	*3				500V 50MΩmin					
ISOLATION	INPUT-FG			AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC-FG	*3				$00V$ $50M\Omega$ min (
	OPERATING TEMP.,HUMID.AND	ALTITUDE				(Non condensing		00feet) max			
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE				000m (30,000fee	,				
LIVINOINILIVI	VIBRATION					minutes each ald	ng X, Y and Z a	axis			
	IMPACT				ach X, Y and Z						
SALLII AND	AGENCY APPROVALS (At only	AC input)				N50178 Complie					
NOISE	CONDUCTED NOISE					PR22-B, EN550	11-B, EN55022-	В			
REGULATIONS	HARMONIC ATTENUAT	OR		EC61000-3-2 *							
OTHERS	CASE SIZE/WEIGHT			m [1.22 X 3.23 X	4.72 inches] (wit	nout terminal blo	ck) (W×H×D) /	280g max (with	h cover : 325g m	ax)	
O.HERO	COOLING METHOD		Convection								

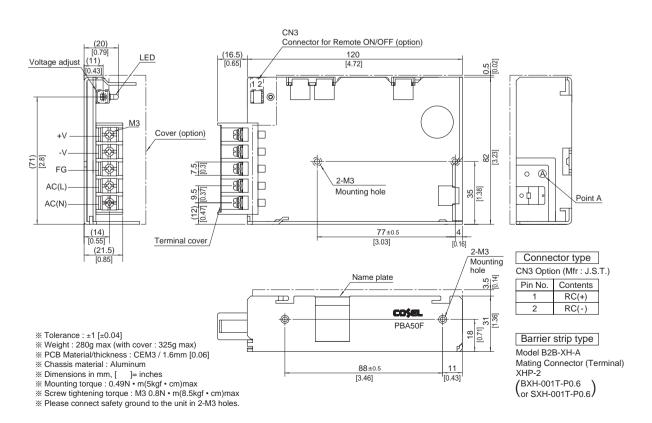
- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN
- *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
 *3 Applicable when Remote ON/OFF(optional) is added. RC is insulated with input, output and
- *4 Derating is required.

- *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.



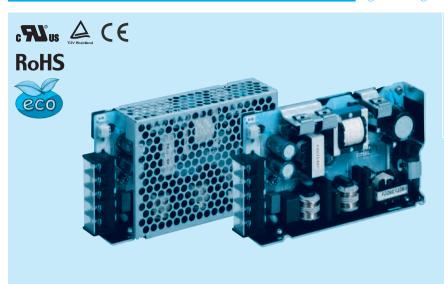
External view

** 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.



PBA75F

75







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

- 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-

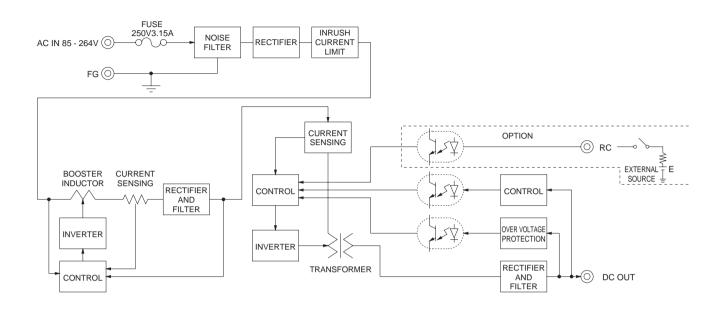
Cove		

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 - 370 (AC50 or DC70 Please refer to the instruction manual 2.1 Input voltage ★4)									
	CURRENT[A]	ACIN 100V	0.7typ	1.0typ								
	CORRENT[A]	ACIN 200V		0.5typ								
	FREQUENCY[Hz]		50/60 (47 - 63)									
	EFFICIENCY[%]	ACIN 100V	77typ	81typ	80typ	81typ	82typ	83typ	84typ	84typ		
INPUT	LITICILIAC I [70]	ACIN 200V	78typ	83typ	82typ	83typ	84typ	85typ	86typ	86typ		
		ACIN 100V		0.99typ								
		ACIN 200V		0.93typ								
		ACIN 100V		5typ (Io=100%) (At cold start)								
			30typ (Io=100%	, , ,								
	LEAKAGE CURRENT[n	nA]				According to IE						
H	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[mV		20max	20max	36max	48max	60max	96max	144max	192max		
L	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		
		-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		
OUTPUT		-10 - 0°C * 1	160max	160max	180max	180max	180max	180max	300max	300max		
	TEMPERATURE REGULATION[mV]	0 to +50°C		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	192max		
	START-UP TIME[ms]		350typ(ACIN 100V, Io=100%)									
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)									
	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			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			% of rated curre				T	T	T		
CIDCLIIT 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		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	Treeded Timilater Cateri Carrein - Teering Bedeet Conserning (Action Temperature)									
	OPERATING TEMP.,HUMID.AND STORAGE TEMP.,HUMID.AND		-10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max									
ENVIDONMENT	VIBRATION	ALIIIUDE	-20 to +75°C, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis									
	IMPACT						nig Λ, τ and ∠ a	CIAR				
	AGENCY APPROVALS (At only	AC innus		96.1m/s ² (20G), 11ms, once each X, Y and Z axis L60950-1, C-UL(CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN								
JAILII AND	CONDUCTED NOISE	AG IIIput)				PR22-B, EN550		.D.				
REGULATIONS	HARMONIC ATTENUAT	OB		EC61000-3-2 *		DE NZZ-D, ENSSU	I I-D, ENDOUZZ-	D				
	CASE SIZE/WEIGHT	UK				hout torminal bla	아) (W>ㅂ>ㅁ)	/ 250a may /isl	h cover : 400g m	av)		
OTHERS +	COOLING METHOD		Convection	11 [1.20 X 3.23 X	o.o i ilichesj (Wit	nout terminal bio	UK) (VVAHAD) /	Soug max (With	ii cover . 400g m	ax)		
	COOLING WEITOD		CONVECTION									

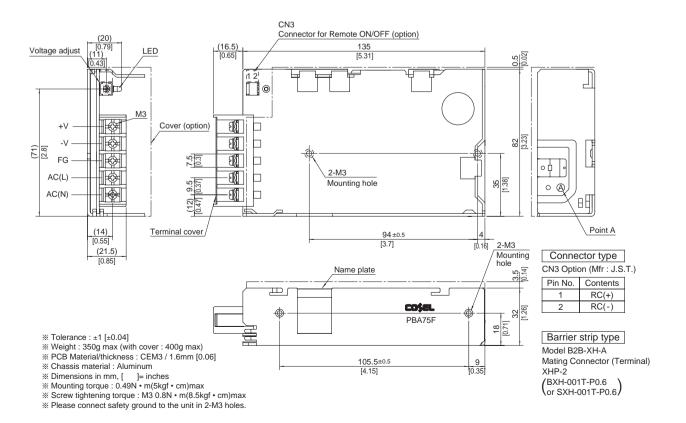
- *1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C. Applicable when Remote ON/OFF(optional) is added. RC is insulated with input, output and
- *4 Derating is required.

- *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 and V is different from standard model and refer to 7 Option of instruction manual for details.



PBA100F

100







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

- 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-

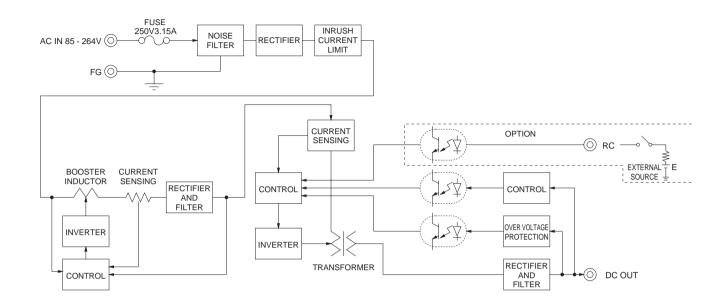
Cover is optional

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	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	0.9typ	1.3typ								
	ACIN 200\		0.5typ									
	FREQUENCY[Hz]		50/60 (47 - 63)									
	EFFICIENCY[%]	ACIN 100V	77typ	82typ	80typ	81typ	83typ	84typ	84typ	84typ		
INPUT	EFFICIENCI[/0]	ACIN 200V	79typ	84typ	82typ	83typ	86typ	86typ	86typ	86typ		
		ACIN 100V		0.99typ								
	FOWER FACTOR(IO=100 /6)	ACIN 200V		0.93typ								
		ACIN 100V		0typ (Io=100%) (At cold start)								
	LEAKAGE CURRENT[r	nA]		CIN 100V/240V		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		
	r ==[vp p]	-10 - 0℃ *1		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°C *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	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%) 20typ (ACIN 100V, Io=100%)									
	HOLD-UP TIME[ms]		71 .		T	T	1		1			
	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			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		I	T	T	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)									
OTTLENO	REMOTE SENSING		Optional (Only -3R3, -5 Option -K) Optional (Required external power source)									
	REMOTE ON/OFF INPUT-OUTPUT · RC	*3				500\/ F0M o ==:=	/A+ D T					
ISOLATION	INPUT-FG	*3	The cycle of this indicate of the control of the cycle of									
ISOLATION	OUTPUT · RC-FG	*3	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)									
	OPERATING TEMPHUMID.AND		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature) -10 to +71℃ (Required Derating), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max									
	STORAGE TEMP., HUMID.AND					000m (30,000fee		Doleet) Illax				
ENVIRONMENT	VIBRATION	ALITIODE				minutes each ald		ovic				
	IMPACT				ach X, Y and Z		nig ∧, raliu Z a	SIAE				
		ΔC innut)				N50178 Complie	e with DEN.AN					
SAFETY AND NOISE	CONDUCTED NOISE	AO IIIput)				SPR22-B, EN550		.R				
REGULATIONS		OR		EC61000-3-2 *		71 1422-D; LINOOU	TI-D, LINOUZZ-	<i>D</i>				
	CASE SIZE/WEIGHT	- CA				hout terminal blo	rck) (WYHYD)	/ 440a max (wit	h cover : 500a m	ax)		
OTHERS	COOLING METHOD		Convection	11 [1.20 \ 0.00 \	o., o monesj (wit	noat terrinial blu	ON (WATIAD)	Trog max (wit	., 55461 . 5669 III	un,		
	COOLING MILITIOD		CONVECTION									

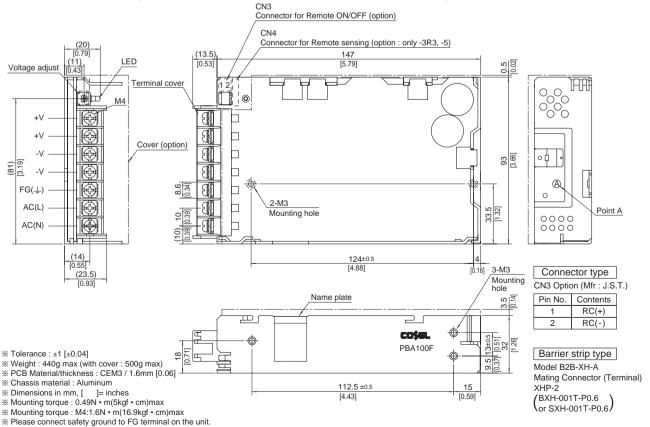
- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN
- *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
 *3 Applicable when Remote ON/OFF(optional) is added. RC is insulated with input, output and
- *4 Derating is required.

- *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.



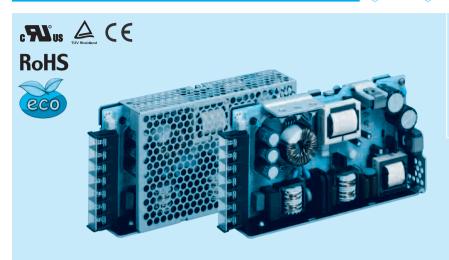
External view

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



PBA150F

150



Recommended EMI/EMC Filter NAC-06-472



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

- 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-

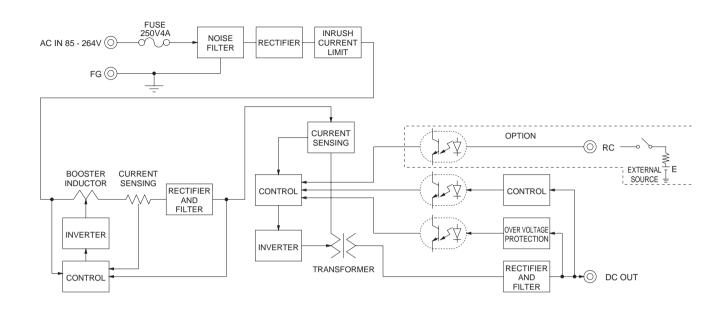
Cover	is op	tional
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MODEL	PBA150F-3R3	PBA150F-5	PBA150F-9	PBA150F-12	PBA150F-15	PBA150F-24	PBA150F-36	PBA150F-48
MAX OUTPUT WATTAGE[W]	99	150	150.3	156	150	156	154.8	158.4
DC OUTPUT	3.3V 30A	5V 30A	9V 16.7A	12V 13A	15V 10A	24V 6.5A	36V 4.3A	48V 3.3A

	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 n	nanual 2.1 Input	voltage *4)			
	CURRENT[A]	ACIN 100V	1.3typ	2.0typ								
	CURRENT[A]	ACIN 200V	0.7typ									
	FREQUENCY[Hz]		50/60 (47 - 63)									
	EFFICIENCY[%]	ACIN 100V	80typ	83typ	82typ	83typ	84typ	85typ	85typ	85typ		
INPUT	EFFICIENCT[%]	ACIN 200V	82typ	86typ	85typ	86typ	87typ	88typ	88typ	88typ		
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ								
		ACIN 200V		0.93typ								
	INRUSH CURRENT[A]	ACIN 100V	20typ (Io=100%	(At cold start)								
	INKUSH CUKKENI[A]	ACIN 200V	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]		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[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		
	KIPPLE[IIIVP-P]	-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		
OUTPUT	KIPPLE NOISE[IIIVP-P]	-10 - 0°C * 1	160max	160max	180max	180max	180max	180max	300max	300max		
		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 10	0V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]			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 PROT	ECTION		% of rated curre	ent and recovers	automatically						
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		
	OPERATING INDICATION	ON	LED (Green)									
OTHERS	REMOTE SENSING		Optional (Only -3R3, -5 Option -K)									
	REMOTE ON/OFF		Optional (Required external power source)									
	INPUT-OUTPUT · RC	*3	The species Triminates Cates Carrette - Territ (De Cook Contagnin (Na Teom Territoria)									
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)									
	OUTPUT · RC-FG	*3				$00V$ $50M\Omega$ min (
	OPERATING TEMP.,HUMID.AND			10 to +71℃ (Required Derating), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max								
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE		20 to +75°C, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max								
	VIBRATION					minutes each ald	ong X, Y and Z a	axis				
	IMPACT				ach X, Y and Z							
SALLII AND	AGENCY APPROVALS (At only	AC input)				N50178 Complie						
NOISE	CONDUCTED NOISE					PR22-B, EN550	11-B, EN55022-	В				
REGULATIONS	TIARMONIO ALTENOAL	OR		EC61000-3-2 *								
OTHERS	CASE SIZE/WEIGHT			m [1.34 × 3.66 ×	6.61 inches] (wit	nout terminal blo	ck) (W×H×D)	560g max (with	h cover : 630g m	ax)		
	COOLING METHOD		Convection									

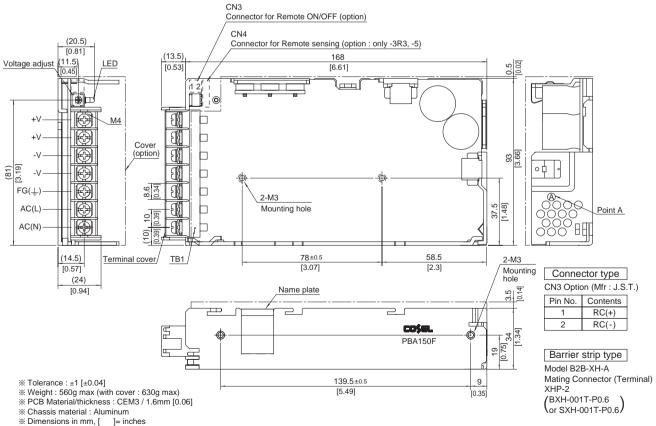
- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN
- *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
 *3 Applicable when Remote ON/OFF(optional) is added. RC is insulated with input, output and
- *4 Derating is required.

- *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,V and K is different from standard model and refer to 7 Option of instruction manual for details.



- ** Dimensions in mm, []= inches
 ** Mounting torque : 0.49N m(5kgf cm)max