PBA10F

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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.

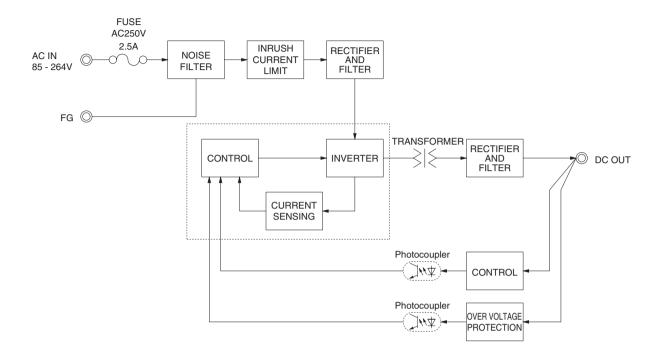
MODEL	PBA10F-5	PBA10F-12	PBA10F-24
MAX OUTPUT WATTAGE[W]	10	10.8	12
DC OUTPUT	5V 2A	12V 0.9A	24V 0.5A

	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)			
	OUDDENTIAL	ACIN 100V	0.30typ (lo=100%)					
	CURRENT[A]	ACIN 200V	0.20typ (lo=100%)					
	FREQUENCY[Hz]		50/60 (47 - 440) or DC					
INPUT		ACIN 100V	74typ	76typ	77typ			
	EFFICIENCY[%]	ACIN 200V	74typ	76typ	77typ			
		ACIN 100V	15typ (lo=100%)					
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%)					
	LEAKAGE CURREN	T[mA]	0.15/0.30max (ACIN 100V/240V 60Hz	, Io=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			
	DIDDI Elm\/n n²	0 to +50°C *1	80max	120max	120max			
	RIPPLE[mVp-p]	-10 - 0℃ *1	140max	160max	160max			
	DIDDLE NOICE(V1	0 to +50°C *1	120max	150max	150max			
OUTPUT	RIPPLE NOISE[mVp-p]	-10 - 0℃ *1	160max	180max	180max			
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	240max			
	TEMPERATURE REGULATION[MV]	-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 1minute of applying	g input again from turning off the input voltage.			
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)					
	OUTPUT VOLTAGE ADJUSTMENT	T 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			
	OVERCURRENT PROT	ECTION	Works over 105% of rated current and	recovers automatically				
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		AC3,000V 1minute, Cutoff current = 1	0mA, DC500V 50MΩmin (At Room Te	mperature)			
ISOLATION	INPUT-FG			0mA, DC500V 50M Ω min (At Room Te				
	OUTPUT-FG			mA, DC500V 50MΩmin (At Room Tem				
	OPERATING TEMP.,HUMID.AND	ALTITUDE	0 1	- 90%RH (Non condensing) 3,000m (10	0,000feet) max			
ENVIRONMENT -	STORAGE TEMP.,HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90%RH (Non cond					
	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,					
SAFETT AND	AGENCY APPROVALS (At only			0950-1, EN50178 Complies with DEN-				
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B					
	HARMONIC ATTENU		Complies with IEC61000-3-2 (Not buil					
OTHERS +	CASE SIZE/WEIGHT	1		hes] (without terminal block) (W×H×D) / 150g max (with cover : 180g max)			
O.HEIIO	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.

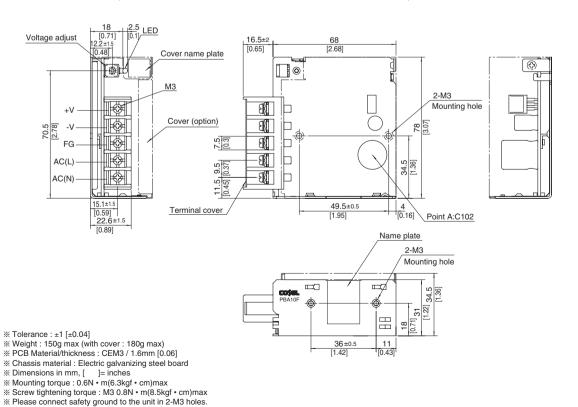
 A sound may occur from power supply at peak loading.





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

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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-

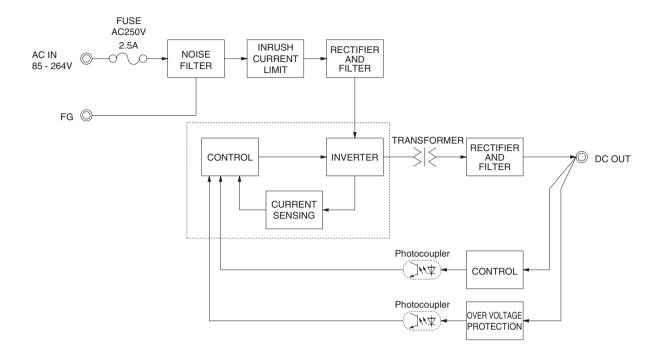
*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

MODEL	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 th	ne instruction ma	nual 2.1 Input vo	ltage *3)		
	CUDDENTIAL	ACIN 100V	0.30typ (lo=100%)	0.4typ (Io=100%	6)						
	CURRENT[A]	ACIN 200V	0.15typ (lo=100%)	0.2typ (lo=100%	6)						
	FREQUENCY[Hz]		50/60 (47 - 440)	or DC							
NPUT	EFFICIENOVIO/1	ACIN 100V	68typ	74typ	75typ	75typ	77typ	75typ	75typ		
	EFFICIENCY[%]	ACIN 200V	68typ	75typ	77typ	78typ	80typ	78typ	78typ		
	INDUCH CURRENTIAL	ACIN 100V	15typ (lo=100%) (At cold start)							
	INRUSH CURRENT[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	۷)			
	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		
	HIPPEE[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		
UTPUT	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[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-u	up time is 700ms typ	for less than 1minu	ite of applying input	again from turning of	off the input voltag		
	HOLD-UP TIME[ms]		20typ (ACIN 10	OV, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT	T 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	utomatically					
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	58.0 - 65.0		
THERS	OPERATING INDICA	TION	LED (Green)								
	REMOTE ON/OFF		None								
	INPUT-OUTPUT				nt = 10mA, DC50						
SOLATION	INPUT-FG				nt = 10mA, DC50						
	OUTPUT-FG				= 25mA, DC500						
	OPERATING TEMP., HUMID. AND	ALTITUDE), 20 - 90%RH (N			eet) max			
NVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE			condensing) 9,00						
IVIIIOINILINI	VIBRATION) - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT				ch X, Y and Z a						
PALLITAND	AGENCY APPROVALS (At only				EN60950-1, EN						
NOISE	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B								
REGULATIONS	HARMONIC ATTENU	IATOR			ot built-in to active						
OTHERS	CASE SIZE/WEIGHT		31 × 78 × 85mm	[1.22×3.07×3.0	35 inches] (withou	ut terminal block)	(W×H×D) / 20	00g max (with co	ver : 235g max		
/IIIEN3	COOLING METHOD		Convection								

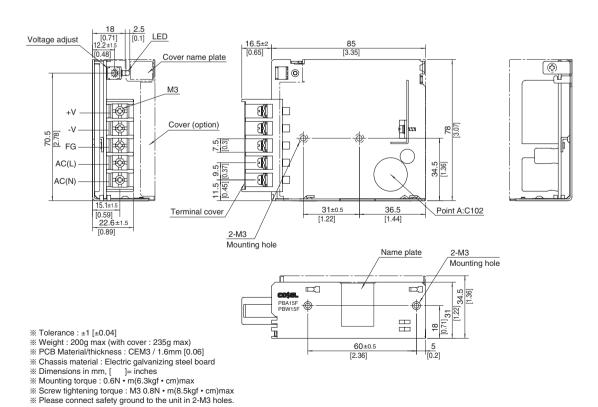
- Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- *4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.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



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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.

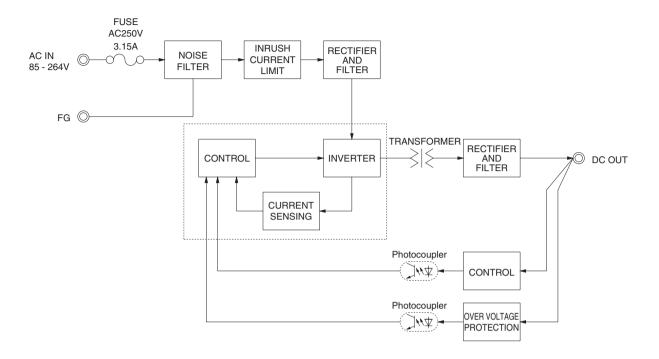
MODEL	PBA30F-3R3	PBA30F-5	PBA30F-9	PBA30F-12	PBA30F-15	PBA30F-24	PBA30F-48
MAX OUTPUT WATTAGE[W]	19.8	30	30.6	30	30	31.2	31.2
DC OUTPUT	3.3V 6A	5V 6A	9V 3.4A	12V 2.5A	15V 2A	24V 1.3A	48V 0.65A

	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	0.30/0.65max (ACIN 100V/240V 60Hz, Io=100%, According to IEC60950-1,DENAN)								
	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			
	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			
	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]	*2	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	T 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			10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT), 11ms, once ea								
SALLII AND	AGENCY APPROVALS (At only					50178 Complies						
NOISE	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B									
REGULATIONS	HARMONIC ATTENU	IATOR	Complies with IEC61000-3-2 (Not built-in to active filter *4) *7									
OTHERS	CASE SIZE/WEIGHT			n [1.22×3.07×4	.06 inches] (with	out terminal block	k) (W×H×D) / 2	70g max (with co	over : 310g max)			
O.71L110	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
 *7 Please contact us about class C.
- Parallel operation with other model is not possible
- Derating is required when operated with cover.

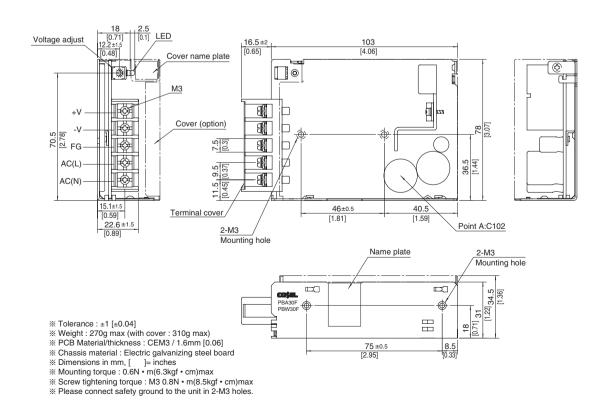
 A sound may occur from power supply at peak loading.





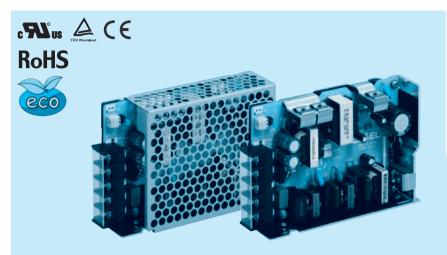
External view

** 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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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.

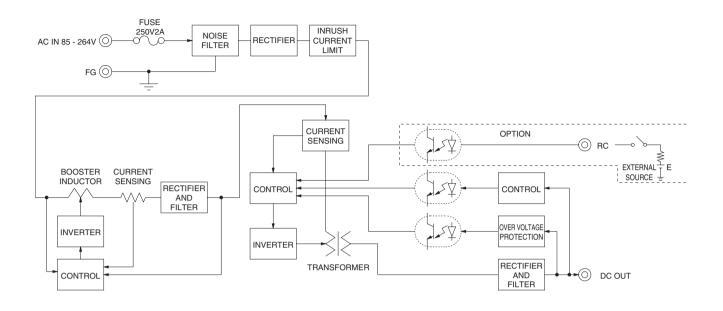
MODEL	PBA50F-3R3	PBA50F-5	PBA50F-9	PBA50F-12	PBA50F-15	PBA50F-24	PBA50F-36	PBA50F-48
MAX OUTPUT WATTAGE[W]	33	50	50.4	51.6	52.5	52.8	50.4	52.8
DC OUTPUT	3.3V 10A	5V 10A	9V 5.6A	12V 4.3A	15V 3.5A	24V 2.2A	36V 1.4A	48V 1.1A

	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)		
	CURRENT[A]	ACIN 100V	0.5typ	0.7typ							
	CURRENT[A]	ACIN 200V	0.3typ	0.4typ							
	FREQUENCY[Hz]		50/60 (47 - 63)								
	EFFICIENCY[%]	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 PACTOR(IO=100 %)	ACIN 200V		0.93typ							
	INRUSH CURRENT[A]		15typ (lo=100%) (At cold start)								
	INNUSH CONNENT[A]	ACIN 200V	30typ (lo=100%) (At cold start)								
	LEAKAGE CURRENT[mA]			CIN 100V/240V		According to IE					
	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	
	1111 1 EE[1114 P-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	HIFFEE 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	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 100V, lo=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	
DDOTECTION	OVERCURRENT PROT				ent and recovers		1		T		
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			/A: D =				
	INPUT-OUTPUT · RC	*3				500V 50MΩmin					
ISOLATION	INPUT-FG					500V 50MΩmin					
	OUTPUT · RC-FG	*3				00V 50MΩmin (
	OPERATING TEMP.,HUMID.AND					(Non condensing 000m (30,000fee		olieet) max			
ENVIRONMENT	STORAGE TEMP.,HUMID.AND VIBRATION	ALIIIUDE				minutes each ald					
	IMPACT				nutes period, 60 each X, Y and Z		nig X, Y and Z a	IXIS			
	AGENCY APPROVALS (At only	, AC input)					o with DEN AN				
SAFETY AND NOISE	CONDUCTED NOISE	AC IIIput)									
REGULATIONS	HARMONIC ATTENUAT	TOR .	Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B Complies with IEC61000-3-2 *6								
	CASE SIZE/WEIGHT										
OTHERS	COOLING METHOD		Convection	III [1.22 X 3.23 X	4.72 IIICHES] (WIL	nout terrinial DIO	ICK/ (VV X II X D) /	2009 max (Will	ii covei . szsg III	an)	
	COOLING WEINUD		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.

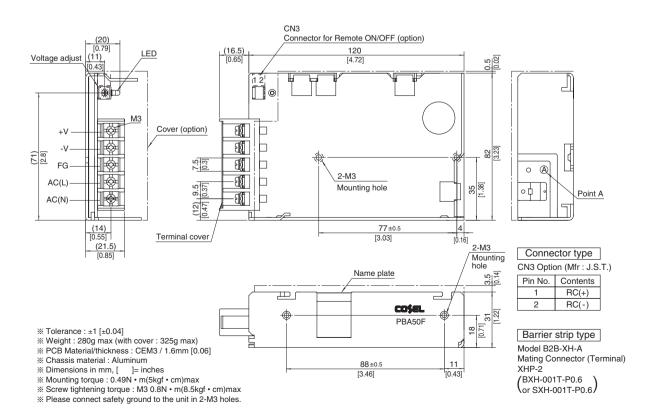
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about class C.
- Parallel operation with other model is not possible.
- Derating is required when operated with cover
- A sound may occur from power supply at peak loading.





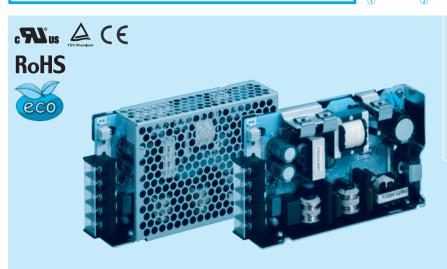
External view

* 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



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.

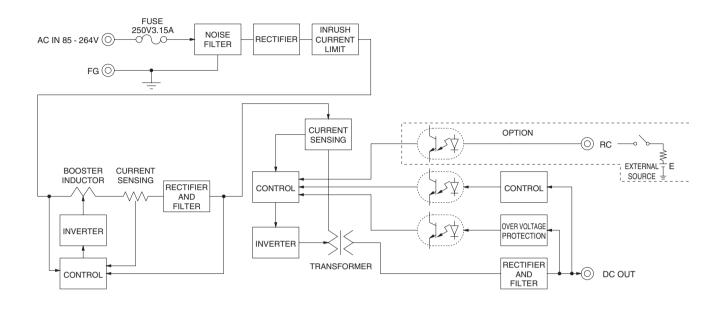
MODEL	PBA75F-3R3	PBA75F-5	PBA75F-9	PBA75F-12	PBA75F-15	PBA75F-24	PBA75F-36	PBA75F-48
MAX OUTPUT WATTAGE[W]	49.5	75	75.6	75.6	75	76.8	75.6	76.8
DC OUTPUT	3.3V 15A	5V 15A	9V 8.4A	12V 6.3A	15V 5A	24V 3.2A	36V 2.1A	48V 1.6A

	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)									
	EEEIOJENOVIO I	ACIN 100V	77typ	81typ	80typ	81typ	82typ	83typ	84typ	84typ		
INPUT	EFFICIENCY[%]	ACIN 200V	78typ	83typ	82typ	83typ	84typ	85typ	86typ	86typ		
	DOWED FACTOR/L 4000/	ACIN 100V	0.98typ	0.99typ								
	POWER FACTOR(Io=100%)	ACIN 200V	0.87typ	0.93typ								
	INDUAL CURRENTIAL	ACIN 100V	15typ (lo=100%	(At cold start)								
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At cold start)									
	LEAKAGE CURRENT[mA]		0.4/0.75max (A	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]		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	nV]	40max	40max	100max	100max	120max	150max	240max	240max		
	DIDDI E(V1	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max		
	RIPPLE[mVp-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	KIPPLE NOISE[mvp-p]	-10 - 0℃ *1	160max	160max	180max	180max	180max	180max	300max	300max		
	TEMPEDATURE REQUIRATIONSVI	0 to +50℃	50max	50max	90max	120max	150max	240max	360max	480max		
	TEMPERATURE REGULATION[mV]	-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	00V, lo=100%)								
	HOLD-UP TIME[ms]		20typ (ACIN 10	0V, lo=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	AC3,000V 1mir	ute, Cutoff curre	ent = 10mA, DC	500V 50MΩmin	(At Room Tempe	erature)				
ISOLATION	INPUT-FG		AC2,000V 1mir	ute, Cutoff curre	ent = 10mA, DC	500V 50MΩmin	(At Room Tempe	erature)				
	OUTPUT · RC-FG	*3	AC500V 1minu	te, Cutoff curren	t = 100mA, DC5	00V 50MΩmin (At Room Tempe	rature)				
	OPERATING TEMP.,HUMID.AND	ALTITUDE	-10 to +71℃ (F	Required Deratin	g), 20 - 90%RH	(Non condensing	g) 3,000m (10,00	0feet) max				
ENVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE	-20 to +75°C, 2	0 - 90%RH (No	n condensing) 9,	000m (30,000fee	et) max					
LIVINONWENT	VIBRATION		10 - 55Hz, 19.6	10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT				each X, Y and Z							
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	TOR	Complies with IEC61000-3-2 *6									
OTHERS	CASE SIZE/WEIGHT		32×82×135mm [1.26×3.23×5.31 inches] (without terminal block) (W×H×D) / 350g max (with cover: 400g max)									
OTHERS	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.

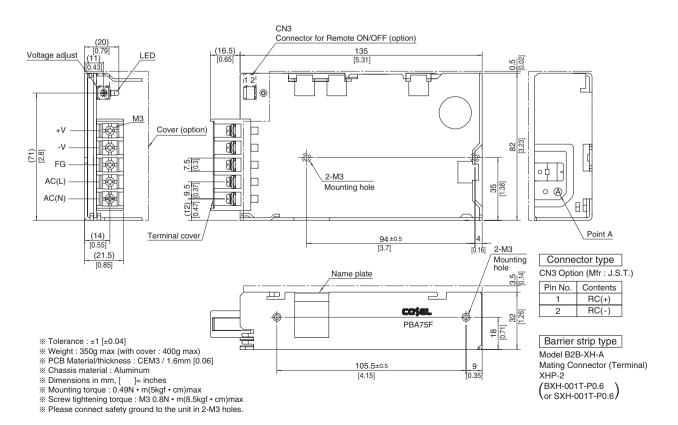
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about class C.
- Parallel operation with other model is not possible.
- Derating is required when operated with cover
- A sound may occur from power supply at peak loading.





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.

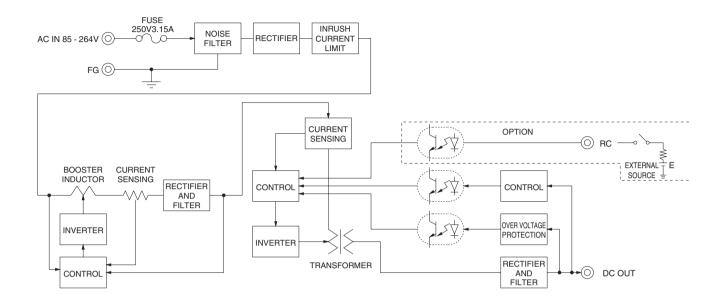
MODEL	PBA100F-3R3	PBA100F-5	PBA100F-9	PBA100F-12	PBA100F-15	PBA100F-24	PBA100F-36	PBA100F-48
MAX OUTPUT WATTAGE[W]	66	100	94.5	102	105	108	100.8	100.8
DC OUTPUT	3.3V 20A	5V 20A	9V 10.5A	12V 8.5A	15V 7A	24V 4.5A	36V 2.8A	48V 2.1A

POWER FACTOR(IG=100%) ACM 100W 0.98typ 0.99typ 0.93typ		MODEL		PBA100F-3R3	PBA100F-5	PBA100F-9	PBA100F-12	PBA100F-15	PBA100F-24	PBA100F-36	PBA100F-48	
CURRENT A A CON 2007 0.5 typ 0.7 typ		VOLTAGE[V]		AC85 - 264 1 φ	or DC120 - 370	(AC50 or DC7	Please refer to	the instruction r	nanual 2.1 Input	voltage *4)		
PREQUENCY 12 25066 (47 - 63) 81typ 83typ 84typ 84		OUDDENTIAL	ACIN 100V	0.9typ	1.3typ							
		CURRENT[A]	ACIN 200V	0.5typ	0.7typ							
POWER FACTOR(s- 100%) ACM 200V 79typ 84typ 82typ 83typ 86typ		FREQUENCY[Hz]		50/60 (47 - 63)	,							
POWER FACTOR(s- 100%) ACM 200V 79typ 84typ 82typ 83typ 86typ			ACIN 100V	77typ	82typ	80typ	81typ	83typ	84typ	84tvp	84typ	
POWER FACTOR(lo=100%) ACM 200V 0.98/typ 0.98/typ 0.98/typ	INPUT	EFFICIENCY[%]	ACIN 200V	79typ								
INRUSH CURRENT[A]			ACIN 100V	0.98typ		, ,,	, ,,	, ,,			, ,,	
INRUSH CURRENT[IA]		POWER FACTOR(Io=100%)	ACIN 200V	0.87tvp	0.93tvp							
INRUSH CURRENTIA												
LEAKAGE CURRENT[mA]		INRUSH CURRENT[A]										
VOLTAGE[V] 3.3 5 9 12 15 24 36 48		LEAKAGE CURRENTIN	nA1									
CURRENT[A] 20 20 10.5 8.5 7 4.5 2.8 2.1										36	48	
LINE REGULATION[mV]		CURRENTIAL		20	20	10.5	8.5	7	4.5	2.8	2.1	
OUTPUT Higher Regulation House			/1	20max		36max		60max	96max	144max		
OUTPUT Continue				40max	40max	100max	100max	120max	150max	240max	240max	
OUTPUT TIME[ms] 10 - 0 C * 1			0 to +50℃ *1	80max	80max	120max	120max	120max	120max	150max	150max	
OUTPUT		RIPPLE[mVp-p]	-10 - 0℃ *1		140max	160max	160max	160max	160max	200max	200max	
OUTPUT HIPPLE NOISE TMVP-P 10 - 0 C * 160max 160max 180max 180max 180max 180max 300max 300max 300max 300max 300max 120max 150max 240max 360max 480max 480max 480max 180max 180max 240max 360max 480max 360max 480max 360max 480max 360max			_		120max				150max	250max	250max	
TEMPERATURE REGULATION(mV)	OUTPUT	RIPPLE NOISE[mVp-p]										
Internation												
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. 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] 3.20 - 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 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 CIRCUIT AND OPERATING INDICATION LED (Green) REMOTE SENSING Optional (Only -3R3, -5 Option -K) 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) OPERATING TEMP.HUMIDAND ALTITUDE -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 3.000m (10.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 3.000m (30.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 3.000m (30.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 3.000m (30.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 3.000m (30.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 4.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 4.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 5.000m (30.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 5.000m (30.000feet) max STORAGE TEMP.HUMIDAND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 5.000m (30.000feet) max STORAGE		DRIFT[mV]			20max							
OUTPUT VOLTAGE ADJUSTÍMENT 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				350typ(ACIN 10	00V, lo=100%)					'		
OUTPUT VOLTAGE ADJUSTÍMENT 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		HOLD-UP TIME[ms]		20typ (ACIN 10	0V, lo=100%)							
OVERCURRENT PROTECTION OVERVOLTAGE PROTECTION 0.0 - 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		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	
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		OUTPUT VOLTAGE SET	TING[V]	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	
OPERATING INDICATION OTHERS OPERATING INDICATION CIRCUIT AND OTHERS OPERATING INDICATION REMOTE SENSING REMOTE SENSING REMOTE ON/OFF Optional (Required external power source) Optional (Required external power source) INPUT-OUTPUT · RC **A C3.000V Iminute. Cutoff current = 10mA. DC500V 50MΩmin (At Room Temperature) INPUT-FG OUTPUT · RC-FG **3 AC500V Iminute, Cutoff current = 10mA. DC500V 50MΩmin (At Room Temperature) OPERATING TEMP.HUMID.AND ALTITUDE **OPERATING TEMP.HUMID.AND ALTITUDE **TORAGE TEMP.HUMID.AND ALTITUDE **TORAGE TEMP.HUMID.AND ALTITUDE **OPERATION IMPACT INPACT **AGENCY APPROVALS (At only AC input) **ONDISE **REGULATIONS **OCODIUCTED NOISE **CASE SIZE/WEIGHT **OCODIUCTED NOISE CASE SIZE/WEIGHT **OCODIUCTED NOISE CASE SIZE/WEIGHT **Optional (Only -3R3, -5 Option -K) Optional (Required external power source) **Optional (Required external power		OVERCURRENT PROT	ECTION	Works over 105	% of rated curre	ent and recovers	automatically		•	•		
OPERATING INDICATION REMOTE SENSING REMOTE ON/OFF Optional (Only ⋅3R3, ⋅5 Option ⋅K) REMOTE ON/OFF Optional (Required external power source) INPUT-OUTPUT ⋅ RC INPUT-OUTPUT ⋅ RC INPUT-FG AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature) OUTPUT ⋅ RC-FG AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature) OUTPUT ⋅ RC-FG AC5.000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature) OUTPUT ⋅ RC-FG AC5.000V 1minute, Cutoff current = 10mA, 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) 9,000m (30,000feet) max VIBRATION IMPACT INPACT AGENCY APPROVALS (At only AC input) VICHOPS COOPLICS AG0950-1), EN60950-1, EN50178 Complies with DEN-AN CONDUCTED NOISE REGULATIONS CASE SIZE/WEIGHT CASE SIZE/WEIGHT LED (Green) Optional (Only ⋅3R3, ⋅5 Option ⋅ K) AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature) OPERATING INPACT -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,000m (30,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,000m (30,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,000m (30,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,000m (30,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,000m (30,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,000m (30,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,000m (30,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,000m (30,000feet) max VIBRATION -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 9,00	PROTECTION	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	
REMOTE ON/OFF Optional (Chily '3753, '3 Optional '0 Optional (Required external power source)	CIRCUIT AND	OPERATING INDICATION	ON	LED (Green)					•		•	
INPUT-OUTPUT · RC **3 AC3.000V 1minute. Cutoff current = 10mA. DC500V 50MΩmin (At Room Temperature)	OTHERS	REMOTE SENSING		Optional (Only	-3R3, -5 Option	-K)						
INPUT-FG		REMOTE ON/OFF		Optional (Requi	red external pov	ver source)						
OUTPUT · RC-FG **3 AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature) PENVIRONMENT SOTRAGE TEMP.HUMID.AND ALTITUDE -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max VIBRATION 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis MPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis SAFETY AND NOISE REGULATIONS CONDUCTED NOISE 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 *6 CASE SIZE/WEIGHT 32×93×147mm [1.26×3.66×5.79 inches] (without terminal block) (W×H×D) / 440g max (with cover: 500g max)		INPUT-OUTPUT · RC	*3	AC3,000V 1min	ute, Cutoff curre	ent = 10mA, DC	500V 50MΩmin	(At Room Tempe	erature)			
OPERATING TEMP.HUMID.AND ALTITUDE -10 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 3.000m (10.000feet) max	ISOLATION	INPUT-FG		AC2,000V 1min	ute, Cutoff curre	ent = 10mA, DC	500V 50MΩmin	(At Room Tempe	erature)			
STORAGE TEMP.HUMID.AND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing) 9.000m (30.000feet) max		OUTPUT · RC-FG	*3	AC500V 1minut	e, Cutoff curren	t = 100mA, DC5	00V 50MΩmin (At Room Tempe	erature)			
VIBRATION 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis IMPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis SAFETY AND NOISE REGULATIONS CONDUCTED NOISE REGULATIONS CONDUCTED NOISE REGULATIONS CONDUCTED NOISE REGULATIONS CONDUCTED NOISE COMPLIES With FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B CASE SIZE/WEIGHT 32 × 93 × 147mm [1.26 × 3.66 × 5.79 inches] (without terminal block) (W×H×D) / 440g max (with cover : 500g max)		OPERATING TEMP., HUMID.AND	ALTITUDE	-10 to +71°C (F	equired Derating	g), 20 - 90%RH	(Non condensing	g) 3,000m (10,00	Ofeet) max			
VIBRATION 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis IMPACT 196.1m/s² (20G), 11ms, once each X, Y and Z axis SAFETY AND NOISE REGULATIONS OTHERS OTHERS OWNER 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis 196.1m/s² (20G), 11ms, once each X, Y and Z axis UL60950-1, 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 32×93×147mm [1.26×3.66×5.79 inches] (without terminal block) (W×H×D) / 440g max (with cover: 500g max)	ENVIDONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE	-20 to +75°C, 2	0 - 90%RH (Nor	condensing) 9,	000m (30,000fee	et) max				
AGENCY APPROVALS (At only AC input) UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN CONDUCTED NOISE REGULATIONS HARMONIC ATTENUATOR CASE SIZE/WEIGHT CASE SIZE/WEIGHT DU60950-1, C-UL(CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN Com	ENVIRONMENT	VIBRATION										
NOISE CONDUCTED NOISE Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B REGULATIONS HARMONIC ATTENUATOR Complies with IEC61000-3-2 *6 OTHERS CASE SIZE/WEIGHT 32×93×147mm [1.26×3.66×5.79 inches] (without terminal block) (W×H×D) / 440g max (with cover: 500g max)		IMPACT										
NOISE REGULATIONS CONDUCTED NOISE Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B CONDUCTED NOISE Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B CONDUCTED NOISE Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B CONDUCTED NOISE Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B CONDUCTED NOISE Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B CONDUCTED NOISE COMPLIES COMPL	SAFETY AND	AGENCY APPROVALS (At only	/ AC input)	UL60950-1, C-U	JL(CSA60950-1)), EN60950-1, E	N50178 Complie	s with DEN-AN				
OTHERS CASE SIZE/WEIGHT 32 x 93 x 147mm [1.26 x 3.66 x 5.79 inches] (without terminal block) (W x H x D) / 440g max (with cover : 500g max)	NOISE	CONDUCTED NOISE		Complies with F	CC Part15 clas	sB, VCCI-B, CIS	PR22-B, EN550	11-B, EN55022-	·B			
OTHERS	REGULATIONS	HARMONIC ATTENUAT	TOR	Complies with IEC61000-3-2 *6								
UTITIERS COOLING METHOD Convection	OTHERS	CASE SIZE/WEIGHT		32×93×147mi	m [1.26 × 3.66 ×	5.79 inches] (wit	hout terminal blo	ock) (W×H×D)	/ 440g max (wit	h cover : 500g m	ax)	
COOLING MILITIOD CONVECTION	OTHERS	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.

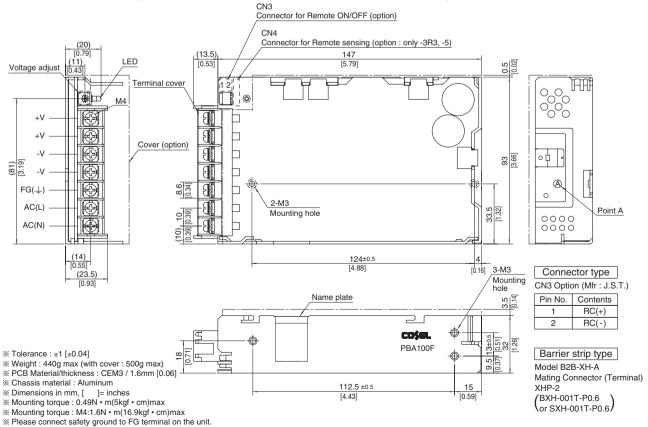
- *5 Please contact us about safety approvals for the model with option.
- *6 Please contact us about class C.
- Parallel operation with other model is not possible.
- Derating is required when operated with cover
- A sound may occur from power supply at peak loading.





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

150

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 (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.

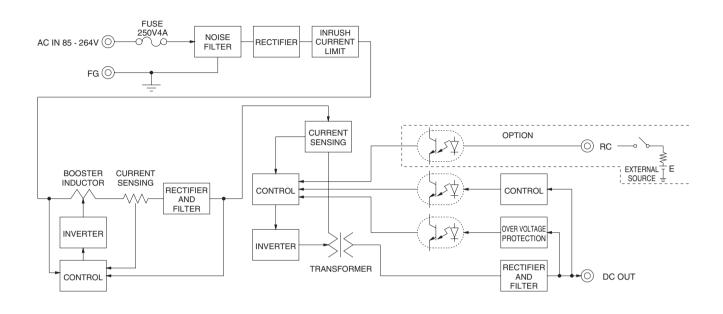
MODEL	PBA150F-3R3	PBA150F-5	PBA150F-9	PBA150F-12	PBA150F-15	PBA150F-24	PBA150F-36	PBA150F-48
MAX OUTPUT WATTAGE[W]	99	150	150.3	156	150	156	154.8	158.4
DC OUTPUT	3.3V 30A	5V 30A	9V 16.7A	12V 13A	15V 10A	24V 6.5A	36V 4.3A	48V 3.3A

	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	0 (AC50 or DC70	Please refer to	the instruction r	nanual 2.1 Input	voltage *4)		
	CURRENT[A]	ACIN 100V	1.3typ 2.0typ								
Ľ	CORRENT[A]	ACIN 200V	0.7typ	1.0typ							
I	FREQUENCY[Hz]		50/60 (47 - 63)								
		ACIN 100V	80typ	83typ	82typ	83typ	84typ	85typ	85typ	85typ	
INPUT		ACIN 200V	82typ	86typ	85typ	86typ	87typ	88typ	88typ	88typ	
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ 0.99typ								
		ACIN 200V									
Ι.		ACIN 100V	20typ (lo=100%) (At cold start)								
	INRUSH CURRENT[A]	ACIN 200V	40typ (lo=100%) (At cold start)								
ī	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	
	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	
	•	0 to +50°C *1	80max	80max	120max	120max	120max	120max	150max	150max	
	RIPPLE[mVp-p]	-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 I	RIPPLE NOISE[mVp-p]	-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	
1		-10 to +50℃	60max	60max	120max	150max	180max	290max	450max	600max	
1	DRIFT[mV]	*2	20max	20max	36max	48max	60max	96max	144max	192max	
5	START-UP TIME[ms]		350lyp(ACIN 100V, Io=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	36.00 - 37.44	48.00 - 49.92	
	OVERCURRENT PROTECTION										
<u> </u>	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	
FROILCHON	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		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)								
ISOLATION I	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) 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/s² (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								
NOISE (CONDUCTED NOISE		Complies with FCC Part15 classB. VCCI-B. CISPR22-B. EN55011-B. EN55022-B								
			Complies with IEC61000-3-2 *6								
OTHERS	CASE SIZE/WEIGHT		34×93×168mm [1.34×3.66×6.61 inches] (without terminal block) (WxHxD) / 560g max (with cover: 630g max)								
	COOLING METHOD		Convection Convection								
	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 FG.
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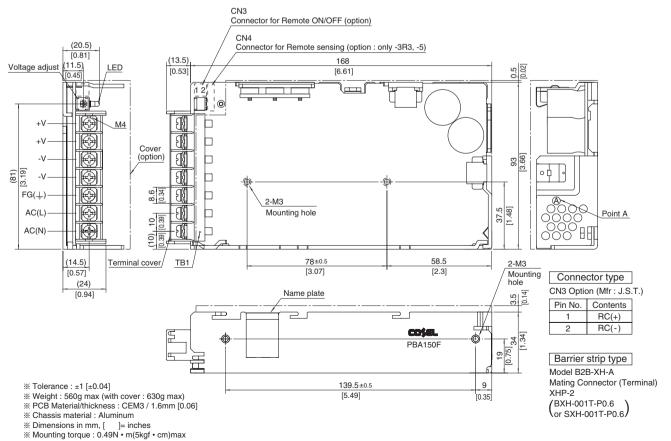
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External view

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Cosel:

N-PBA15-J/T N-PBA10-J/T N-PBA50 N-PBA75-J/T N-PBA10 N-PBA50-J/T N-PBA15 N-PBA100 N-PBA30 N-PBA100-J/T N-PBA30-J/T N-PBA30-J/T N-PBA75 N-PBA150 F-PPBA75-1 N-PBA150-J/T PBA100F-5-T PBA100F-5-C PBA30F-24-J/N PBA100F-3R3-CMN PBA100F-15-TN PBA100F-36-GJ PBA30F-9-J/N PBA30F-48 PBA75F-5-T PBA75F-15-R/N PBA15F-3R3-N PBA75F-3R3-EN PBA75F-24-J PBA75F-48-CT PBA150F-24-R/N1 PBA50F-15-GN PBA50F-36-R PBA150F-15-R/N PBA10F-24-EN PBA150F-5-CEN PBA150F-12-CN PBA15F-5 PBA50F-12-R PBA50F-5-E PBA75F-12-CR PBA75F-12-R/N PBA50F-24-J/R PBA150F-36-N1 PBA15F-5-TN PBA100F-3R3-T PBA100F-12-R/P PBA150F-15-CN1 PBA50F-24-CEN PBA30F-48-J PBA10F-5-N PBA100F-9-T PBA100F-12-TN PBA150F-48-D40N PBA150F-48-R/T PBA30F-24-CT PBA150F-3R3-E PBA150F-24-C PBA15F-48-GN PBA150F-24-CTN PBA150F-5-T PBA75F-15-CRN PBA150F-5-V/N PBA100F-36-GTN PBA100F-12-CN1 PBA50F-15 PBA100F-24-CTN PBA150F-24-GTN PBA150F-24-J PBA50F-9-TN PBA30F-5-GN PBA50F-48-R PBA75F-36-C PBA30F-12-V PBA50F-5-R PBA150F-3R3-T PBA150F-24-J/N1 PBA30F-3R3-CN PBA75F-36-T PBA150F-3R3-GR PBA150F-24-E PBA100F-24-CN1 PBA100F-24-R PBA150F-3R3-T PBA150F-36-GN1 PBA100F-5-CN PBA50F-12-CJ/N PBA100F-48-R/T PBA50F-36-CN PBA150F-5-G PBA150F-3R3-C PBA150F-12-J PBA150F-12-N/N PBA30F-5-J/R PBA150F-5-G PBA30F-5-CE