

PBA1000F



Features

- Harmonic attenuator, PFC (Complies with IEC61000-3-2)
- Universal input (AC85-264V)
- Super small-size & light weight
- Making to high effective by synchronous rectification technology (PBA50F - 150F)
- High variety of options (PBA50F - 150F)
- Parallel operation and Parallel redundancy operation
- Fan alarm, Remote ON/OFF and other functions(PBA300F - 1500F)
- RoHS Compliant

Safety Agency Approvals

- Complies with DEN-AN
- UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178
- UL508 (PBA50F - 150F, -24, with cover),

EMI Compliance

- FCC-B
- CISPR22-B
- EN55022-B
- VCCI-B
- EN55011-B

CE Markings

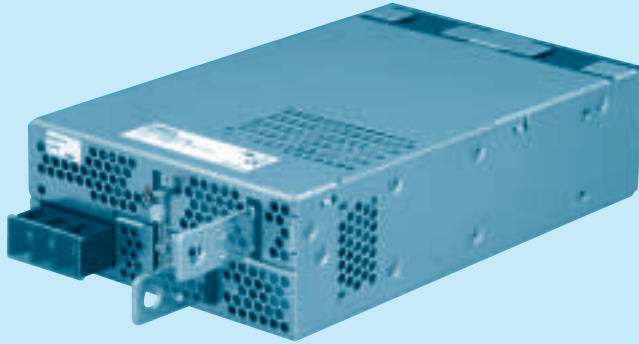
- LVD and EMC directive

EMC Compliance

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5 year warranty(refer to Instruction Manual)

| Model | Input Voltage [V] | Output Wattage [W] | DC Output [V/A] |
|--------------|-----------------------------|--------------------|--------------------------|
| PBA1000F-3R3 | DC 120 - 350 AC 85 - 264 | 660 | 3.3V 200A |
| PBA1000F-5 | DC 120 - 350 AC 85 - 264 | 1000 | 5V 200A |
| PBA1000F-7R5 | DC 120 - 350 AC 85 - 264 | 1005 | 7.5V 134A |
| PBA1000F-12 | DC 120 - 350 AC 85 - 264 | 1056 | 12V 88A |
| PBA1000F-15 | DC 120 - 350 AC 85 - 264 | 1050 | 15V 70A |
| PBA1000F-24 | DC 120 - 350 AC 85 - 264 | 1056 | 24V 44A (peak 51A) |
| PBA1000F-36 | DC 120 - 350 AC 85 - 264 | 1044 | 36V 29A |
| PBA1000F-48 | DC 120 - 350 AC 85 - 264 | 1056 | 48V 22A |


**Recommended Noise Filter
NAC-20-472**


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

- ① Series name
② Single output
③ Output wattage
④ Universal input
⑤ Output voltage
⑥ Optional
C : with Coating
G : Low leakage current
U : Operation stop voltage is set at a lower value
F1 : With Long-Life fan
F3 : Reverse air exhaust type
F4 : Low speed fan

Refer to instruction manual 7.1.

| MODEL | PBA1000F-3R3 | PBA1000F-5 | PBA1000F-7R5 | PBA1000F-12 | PBA1000F-15 | PBA1000F-24 | PBA1000F-36 | PBA1000F-48 | |
|-----------------------|--------------|------------|--------------|-------------|-------------|-------------|-------------|-------------|---------|
| MAX OUTPUT WATTAGE[W] | 660 | 1000 | 1005 | 1056 | 1050 | 1056 | 1044 | 1056 | |
| DC OUTPUT | ACIN 100V | 3.3V 200A | 5V 200A | 7.5V 134A | 12V 88A | 15V 70A | 24V 44A | 36V 29A | 48V 22A |
| | ACIN 200V *3 | 3.3V 200A | 5V 200A | 7.5V 134A | 12V 88A | 15V 70A | 24V 44(51)A | 36V 29A | 48V 22A |

SPECIFICATIONS

| MODEL | PBA1000F-3R3 | PBA1000F-5 | PBA1000F-7R5 | PBA1000F-12 | PBA1000F-15 | PBA1000F-24 | PBA1000F-36 | PBA1000F-48 | | |
|------------------------------------|---|--|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|
| INPUT | VOLTAGE[V] | AC85 - 264 1φ or DC120 - 350 (AC50 or DC70 Please refer to the instruction manual 7. option *5) | | | | | | | | |
| | CURRENT[A] | ACIN 100V | 9typ | 13typ | | | | | | |
| | | ACIN 200V | 5typ | 7typ | | | | | | |
| | FREQUENCY[Hz] | 50/60 (47 - 63) | | | | | | | | |
| | EFFICIENCY[%] | ACIN 100V | 74typ | 79typ | 80typ | 82typ | 82typ | 84typ | 84typ | |
| | | ACIN 200V | 76typ | 81typ | 83typ | 84typ | 84typ | 86typ | 86typ | |
| | POWER FACTOR | ACIN 100V | 0.98typ (Io=100%) | | | | | | | |
| | | ACIN 200V | 0.95typ (Io=100%) | | | | | | | |
| INRUSH CURRENT[A] | ACIN 100V | 20/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10 sec. to re-start) | | | | | | | | |
| | ACIN 200V | 40/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10 sec. to re-start) | | | | | | | | |
| LEAKAGE CURRENT[mA] | 0.5/1.0max (ACIN 100V/240V 60Hz, Io=100%, According to IEC60950-1, DENAN) | | | | | | | | | |
| OUTPUT | VOLTAGE[V] | 3.3 | 5 | 7.5 | 12 | 15 | 24 | 36 | 48 | |
| | CURRENT[A] | ACIN 100V | 200 | 200 | 134 | 88 | 70 | 44 | 29 | 22 |
| | | ACIN 200V *3 | 200 | 200 | 134 | 88 | 70 | 44(51) | 29 | 22 |
| | LINE REGULATION[mV] | 20max | 20max | 36max | 48max | 60max | 96max | 144max | 192max | |
| | LOAD REGULATION[mV] | 40max | 40max | 60max | 100max | 120max | 150max | 150max | 300max | |
| | RIPPLE[mVp-p] | 0 to +50C *1 | 80max | 80max | 120max | 120max | 120max | 120max | 150max | 150max |
| | | -20 - 0C *1 | 140max | 140max | 160max | 160max | 160max | 160max | 160max | 400max |
| | RIPPLE NOISE[mVp-p] | 0 to +50C *1 | 120max | 120max | 150max | 150max | 150max | 150max | 200max | 200max |
| | | -20 - 0C *1 | 160max | 160max | 180max | 180max | 180max | 180max | 240max | 500max |
| | TEMPERATURE REGULATION[mV] | 0 to +50C *1 | 40max | 50max | 75max | 120max | 150max | 240max | 360max | 480max |
| | | -20 to +50C *1 | 60max | 75max | 120max | 180max | 180max | 290max | 440max | 600max |
| | DRIFT[mV] | *2 | 12max | 20max | 30max | 48max | 60max | 96max | 144max | 192max |
| | START-UP TIME[ms] | 400typ(ACIN 100/200V, Io=100%) *Start-up time is 500ms typ for less than 1minute of applying input again from turning off the input voltage. | | | | | | | | |
| HOLD-UP TIME[ms] | 20typ (ACIN 100/200V, Io=100%) | | | | | | | | | |
| OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | 2.64 - 3.96 | 3.96 - 6.00 | 5.25 - 8.25 | 8.25 - 13.20 | 10.50 - 16.50 | 16.50 - 26.40 | 25.20 - 39.60 | 38.40 - 56.00 | | |
| OUTPUT VOLTAGE SETTING[V] | 3.30 - 3.40 | 5.00 - 5.15 | 7.50 - 7.80 | 12.00 - 12.48 | 15.00 - 15.60 | 24.00 - 24.96 | 36.00 - 37.44 | 48.00 - 49.92 | | |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | Works over 105% of rated current or 101% of peak current and recovers automatically | | | | | | | | |
| | OVERVOLTAGE PROTECTION[V] *4 | Vo+0.66 - 1.32 | Vo+1.0 - 2.0 | Vo+1.5 - 3.0 | Vo+2.4 - 4.8 | Vo+3.0 - 6.0 | Vo+4.8 - 9.6 | Vo+7.2 - 14.4 | Vo+4.8 - 12.0 | |
| | OPERATING INDICATION | LED (Green) | | | | | | | | |
| | REMOTE SENSING | Provided | | | | | | | | |
| ISOLATION | REMOTE ON/OFF | Provided | | | | | | | | |
| | INPUT-OUTPUT · RC | AC3.000V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature) | | | | | | | | |
| | INPUT-FG | AC2.000V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature) | | | | | | | | |
| | OUTPUT · RC · AUX-FG | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature) | | | | | | | | |
| ENVIRONMENT | OUTPUT-RC · AUX | AC100V 1minute, Cutoff current = 100mA, DC100V 50MΩmin (At Room Temperature) | | | | | | | | |
| | OPERATING TEMP.,HUMID.AND ALTITUDE | -20 to +71°C (Required Derating), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max | | | | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | -20 to +75°C, 20 - 90%RH (Non condensing) 3,000m (10,000feet) max | | | | | | | | |
| | VIBRATION | 10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | | |
| SAFETY AND NOISE REGULATIONS | IMPACT | 196.1m/s ² (20G), 11ms, once each X, Y and Z axis | | | | | | | | |
| | AGENCY APPROVALS (At only AC input) | UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN | | | | | | | | |
| | CONDUCTED NOISE | Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B | | | | | | | | |
| | CE MARKING | Low Voltage Directive, EMC Directive | | | | | | | | |
| OTHERS | HARMONIC ATTENUATOR | Complies with IEC61000-3-2 | | | | | | | | |
| | CASE SIZE/WEIGHT | 150×61×240mm (without terminal block and screw) (W×H×D) /2.2kg max | | | | | | | | |
| | COOLING METHOD | Forced cooling (internal fan) | | | | | | | | |

*1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
Ripple and ripple noise is measured on measuring board with capacitor of 22 μF within 150mm from the output terminal.

*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.

*3 () means peak current. Peak loading for 10s. And Duty 35% max, refer to Instruction manual

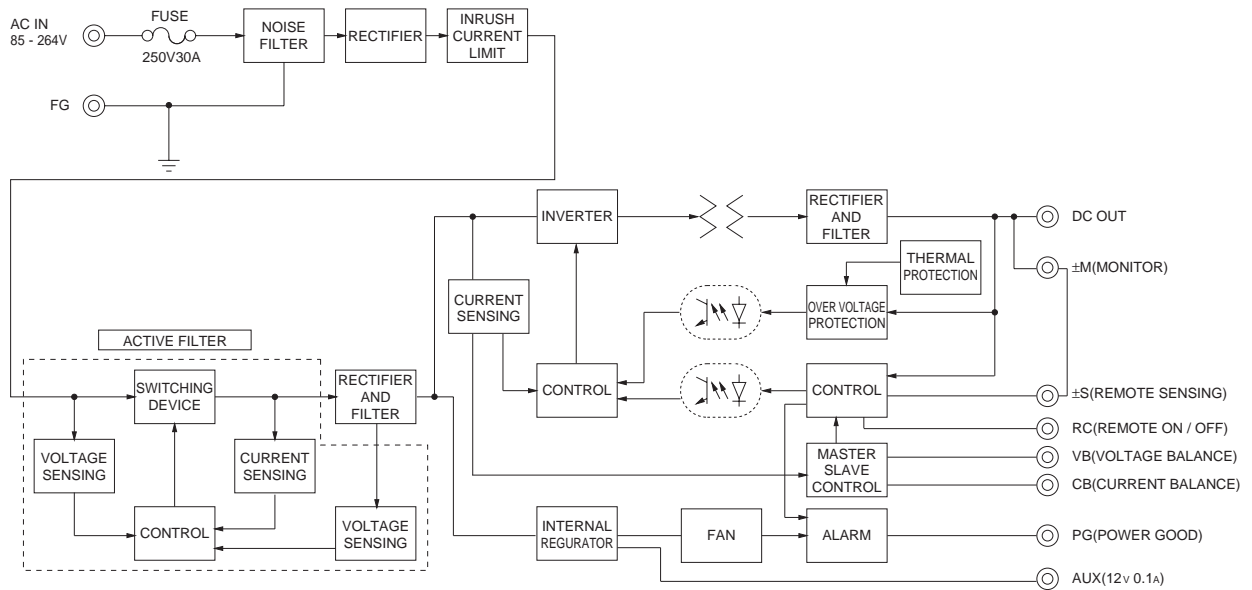
in detail.

*4 Overvoltage protection circuit to follow to output voltage setting.

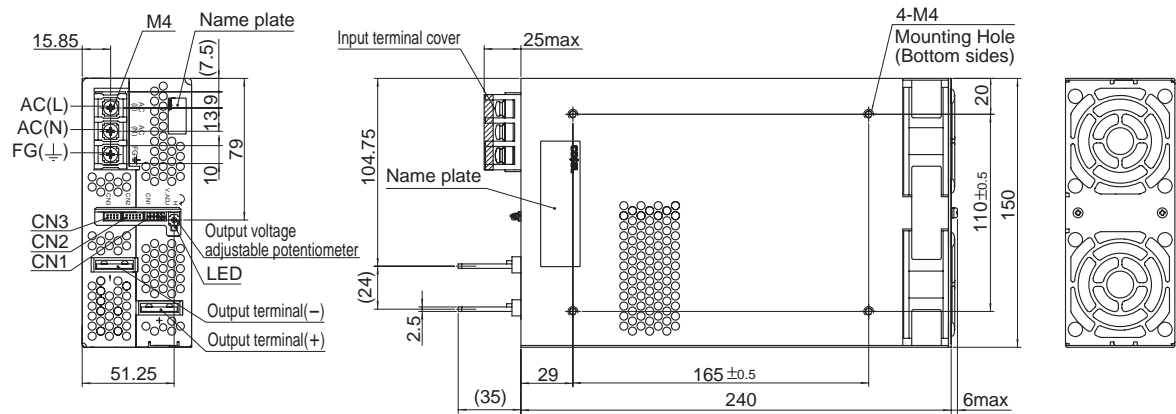
*5 Derating is required.Consult us for details.

* A sound may occur from power supply at pulse loading.

Block diagram



External view



- ※ Tolerance : ±1
- ※ Mass : 2.2kg or less
- ※ PCB Material/thickness : FR-4 / 1.6mm
- ※ Chassis material : Aluminum
- ※ Dimensions in mm
- ※ Mounting torque : 1.2N • m(12.8kgf • cm)max
- ※ Screw tightening torque : 1.6N • m(16.9kgf • cm)max
- ※ The housing for the remote sensing unused is mounted on CN1
- ※ Please connect earth to FG terminal on the unit.

