

PCA600F

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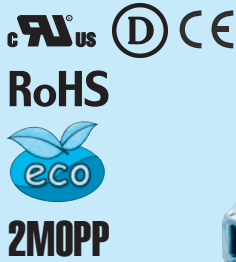
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Terminal Block Style

Example recommended EMI/EMC filter
NAC-16-472



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.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ Universal input
- ⑤ Output voltage
- ⑥ Optional *7
- T : Terminal Block Style
- I : with PMBus interface

For option details, refer to
instruction manual 7.1.

*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	PCA600F-5	PCA600F-12	PCA600F-15	PCA600F-24	PCA600F-32	PCA600F-48
MAX OUTPUT WATTAGE[W]	600	636	645	648	640	624
DC OUTPUT	5V 120A	12V 53A	15V 43A	24V 27A	32V 20A	48V 13A

SPECIFICATIONS

	MODEL		PCA600F-5	PCA600F-12	PCA600F-15	PCA600F-24	PCA600F-32	PCA600F-48	
INPUT	VOLTAGE	[VAC]	85 - 264 1 φ (Output derating is required at less than 90V. Refer to instruction manual 5.2.)						
		[VDC] *1	88 - 370 (Output derating is required at less than 110V.Refer to instruction manual 5.2.)						
	CURRENT[A]	ACIN 100V	7.3typ						
		ACIN 230V	3.2typ						
	FREQUENCY[Hz]		50/60 (45 - 66)						
	EFFICIENCY[%]	ACIN 100V	(Io=50%)	90typ	91typ	91typ	91typ	91typ	91typ
			(Io=100%)	89typ	90typ	90typ	91typ	91typ	91typ
		ACIN 230V	(Io=50%)	92typ	92typ	92typ	93typ	93typ	93typ
			(Io=100%)	91typ	92typ	92typ	93typ	93typ	93typ
	POWER FACTOR	ACIN 100V	0.98typ (Io=100%)						
ACIN 230V		0.95typ (Io=100%)							
	INRUSH CURRENT[A]	ACIN 100V*2	20/40 typ (Io=100%) (Primary inrush current / Secondary inrush current) (More than 3 sec. to re-start)						
		ACIN 230V*2	40/40 typ (Io=100%) (Primary inrush current / Secondary inrush current) (More than 3 sec. to re-start)						
	LEAKAGE CURRENT[ma]		0.5max (ACIN 240V 60Hz, Io=100%, According to IEC60601-1)						
OUTPUT	VOLTAGE[V]		5	12	15	24	32	48	
	CURRENT[A]		120	53	43	27	20	13	
	LINE REGULATION[mV]		20max	48max	60max	96max	128max	192max	
	LOAD REGULATION[mV]		40max	100max	120max	150max	150max	480max	
	RIPPLE[mVp-p]	0 to +50℃ *3*4	160max	240max	240max	240max	320max	480max	
		-20 to 0℃ *3	280max	320max	320max	320max	420max	640max	
	RIPPLE NOISE[mVp-p]	0 to +50℃ *3*4	240max	300max	300max	300max	400max	600max	
		-20 to 0℃ *3	320max	360max	360max	360max	480max	720max	
	TEMPERATURE REGULATION[mV]	0 to +50℃ *4	50max	120max	150max	240max	320max	480max	
		-20 to +50℃ *4	75max	180max	180max	290max	400max	600max	
	DRIFT[mV]		*5	20max	48max	60max	96max	128max	192max
	START-UP TIME[ms]		700typ (ACIN 100/230V Io=100%)						
	HOLD-UP TIME[ms]		20typ (ACIN 230V Io=80%) / 16typ (ACIN 230V Io=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		3.00 to 6.00	7.20 to 14.40	9.00 to 18.00	14.40 to 28.80	19.20 to 38.40	28.80 to 57.60	
	OUTPUT VOLTAGE SETTING[V]		5.00 to 5.05	12.00 to 12.12	15.00 to 15.15	24.00 to 24.24	32.00 to 32.32	48.00 to 48.48	
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating (Recovers automatically, Intermittent overcurrent)						
	OVERVOLTAGE PROTECTION[V]		6.25 to 7.00	15.00 to 16.80	18.75 to 21.00	30.00 to 33.60	40.00 to 44.80	60.00 to 67.20	
	REMOTE SENSING		Provided						
	REMOTE ON/OFF (RC)		Provided						
	DC_OK LAMP		LED (Blue)						
	ALARM LAMP		LED (Orange)						
ISOLATION	COMMUNICATION FUNCTION		Provided (Extended UART)						
	INPUT-OUTPUT		AC4,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) 2MOPP						
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) 1MOPP						
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)						
	OUTPUT - AUX - RC - PG - INFO - DS - ADDR0 - ADDR1 - ADDR2		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)						
ENVIRONMENT	OPERATING TEMP.,HUMIDITY.AND ALTITUDE		-20 to +70℃, 20 - 90%RH (Non condensing)						
	STORAGE TEMP.,HUMIDITY.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing)						
	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	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1, ANSI/AAMI ES60601-1, EN60601-1 3rd, Complies with IEC60601-1-2 4th Ed.						
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR32-B, EN55011-B, EN55032-B						
	HARMONIC ATTENUATOR *6		Complies with IEC61000-3-2 (class A)						

SPECIFICATIONS

OTHERS	CASE SIZE/WEIGHT	89 X 41 X 152mm [3.50 X 1.61 X 5.98 inches] (without terminal block and screw) (W X H X D) / 840g max
	COOLING METHOD	Forced cooling (internal fan)

*1 DC input safety agency approvals deleted.

*2 The value is primary surge. The current of input surge to a built-in EMI/EMS Filter(0.2ms or less) is excluded.

*3 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN:RM103).

*4 5V output product, the maximum temperature of 40°C.

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

*6 Please contact us about another class.

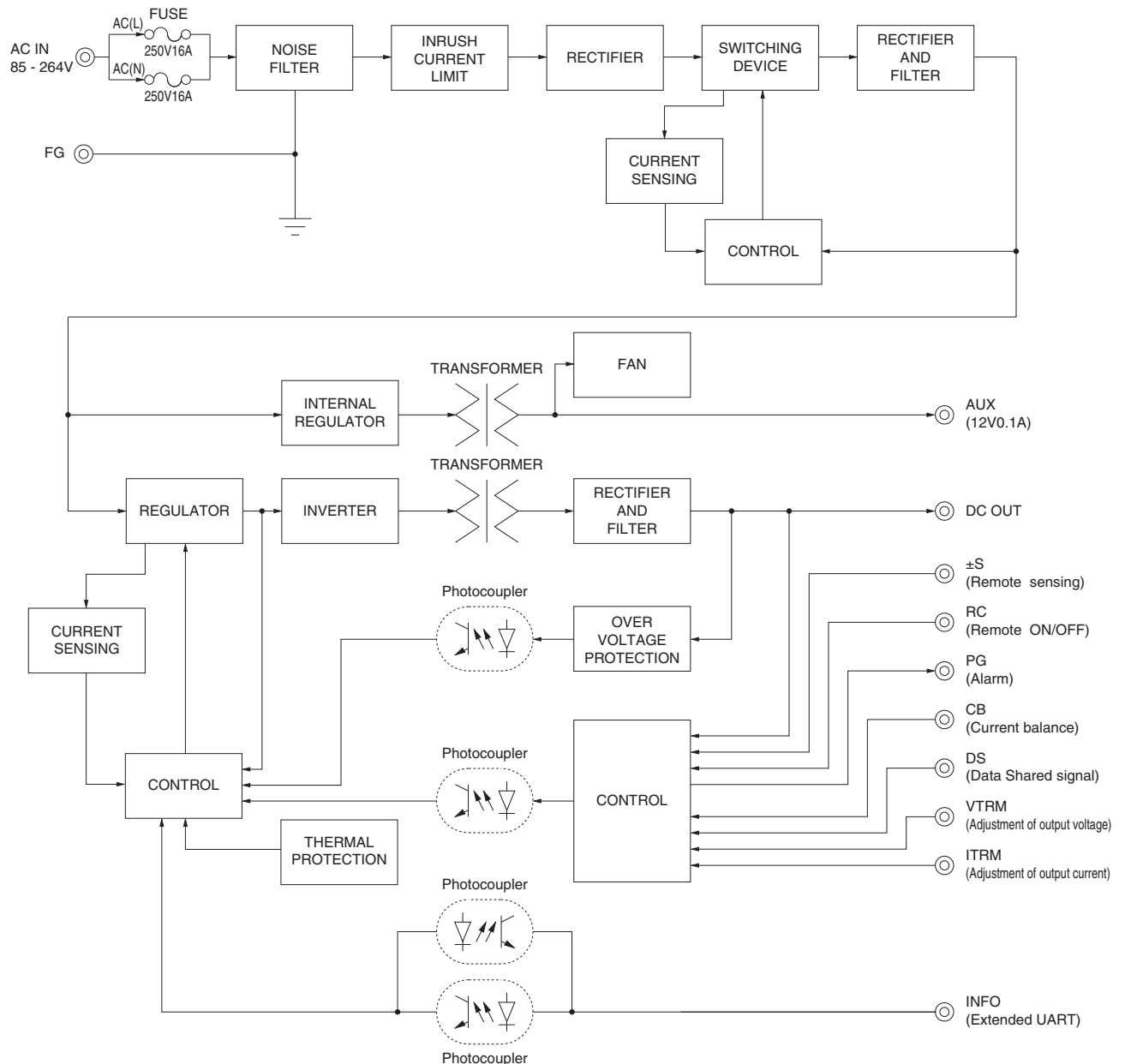
*7 The listed options may affect the published standard specifications. Please contact us for detailed product specifications and safety approvals.

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

Features

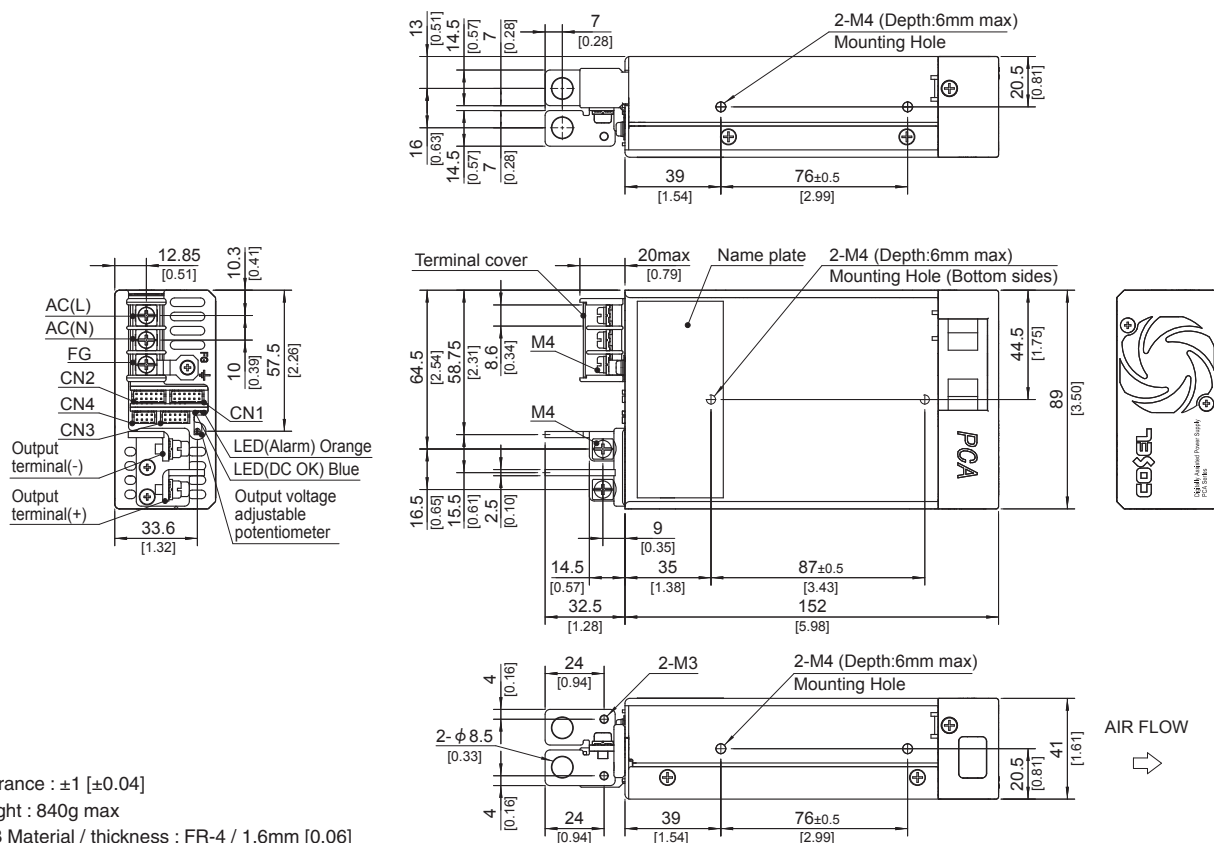
- Low profile (41mm, 1.61 inch = meet to 1U height)
- Universal input 85 - 264VAC (Refer to item 5.2, when using at 85 - 90VAC)
- DC input 88 - 370VDC possible (Refer to item 5.2, when using at 88 - 110VDC)
- For medical electric equipment (ANSI/AAMI ES60601-1, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- Medical Isolation Grade 2MOPP
- With AUX output 12V 0.1A (Voltage variable range 5 - 12V)
- Constant current regulation
- Output voltage can be varied to near 0V (Refer to item 3.6)
- With various alarms
- Parallel Operation / N+1 Parallel Redundancy Operation possible
- Monitoring function by communication and various setting values can be changed (Refer to item 3.11)

Block diagram



External view

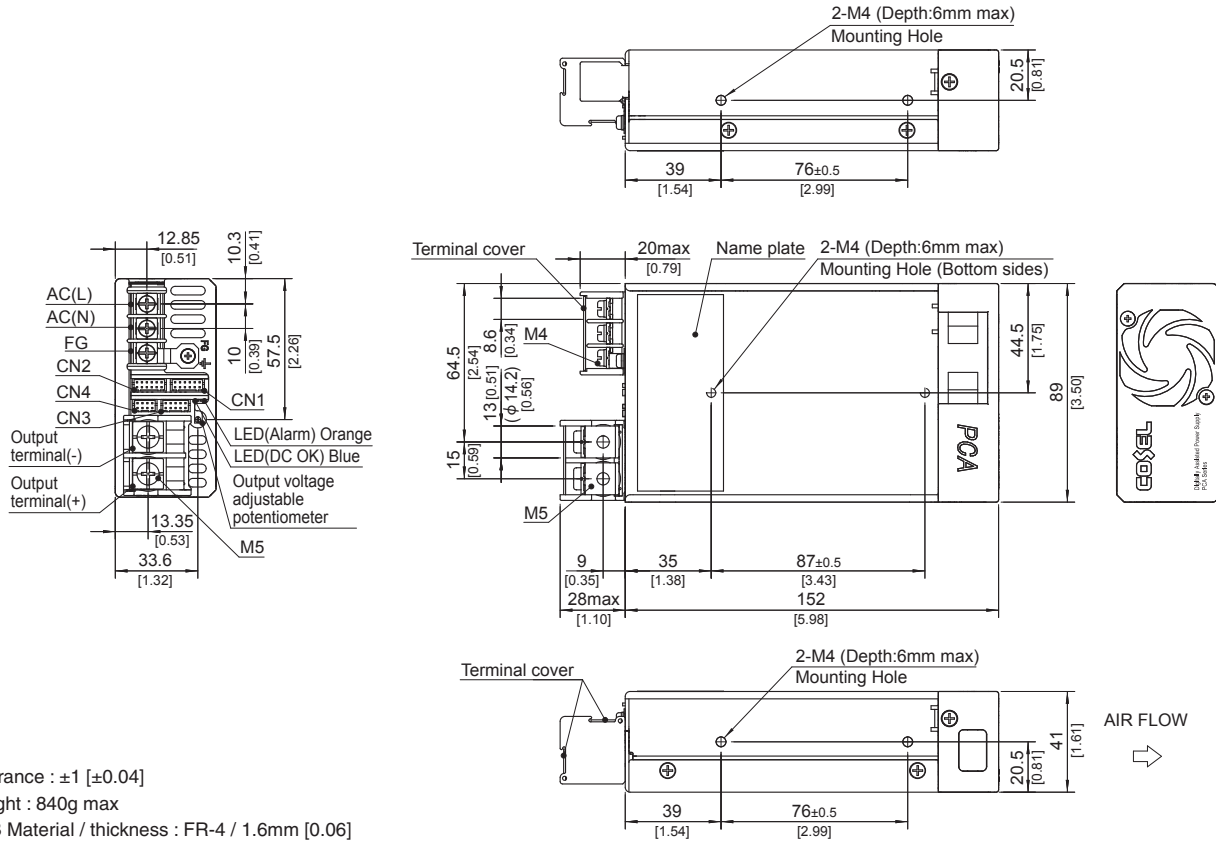
<PCA600F-□ (Bus Bar Style) >



- ※ Tolerance : ± 1 [± 0.04]
- ※ Weight : 840g max
- ※ PCB Material / thickness : FR-4 / 1.6mm [0.06]
- ※ Chassis Material : Aluminum
- ※ Fan cover Material : PBT
- ※ Dimensions in mm, [] = inches
- ※ Mounting torque : 1.2N·m max
- ※ Input and output terminal screw tightening torque
 - M3 0.6N·m max
 - M4 1.6N·m max
- ※ Please connect safety ground to FG terminal on the unit.

External view

<PCA600F-□-T (Terminal Block Style) >



- ※ Tolerance : ± 1 [± 0.04]
- ※ Weight : 840g max
- ※ PCB Material / thickness : FR-4 / 1.6mm [0.06]
- ※ Chassis Material : Aluminum
- ※ Fan cover Material : PBT
- ※ Dimensions in mm, [] = inches
- ※ Mounting torque : 1.2N·m max
- ※ Input and output terminal screw tightening torque
 - M4 1.6N·m max
 - M5 2.5N·m max
- ※ Please connect safety ground to FG terminal on the unit.