AC-DC Power Supplies Enclosed Type

PCA1500F

Ordering information

PC	A	1500	F	-5	-□
①	②	③	④	⑤	⑧

Example recommended EMI/EMC filter
NAC-30-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series
Low profile type : EAC 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
③Output wattage
④Universal input
⑤Output voltage
⑧Optional ＊6
C :with Coating
G :Low leakage current
I :with PMBus interface
F2 :Reverse air exhaust type
P3 :Master-slave Operation
W1 :Alarm function

For option details, refer to instruction manual 6.1.

＊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		PCA1500F-5	PCA1500F-12	PCA1500F-15	PCA1500F-24	PCA1500F-32	PCA1500F-48
MAX OUTPUT WATTAGE[W]	ACIN 100V/230V	1500/1500	1500/1500	1500/1500	1560/1680	1504/1664	1536/1680
DC OUTPUT	ACIN 100V/230V	5V 300A/300A	12V 125A/125A	15V 100A/100A	24V 65A/70A	32V 47A/52A	48V 32A/35A

SPECIFICATIONS

	MODEL		PCA1500F-5	PCA1500F-12	PCA1500F-15	PCA1500F-24	PCA1500F-32	PCA1500F-48
INPUT	VOLTAGE	[VAC]	85 - 264 1 ϕ (Output derating is required at less than 95V. Refer to “Derating”)					
	CURRENT[A]	ACIN 100V	18typ					
		ACIN 230V	7.8typ			8.5typ		
	FREQUENCY[Hz]		50/60 (45 - 66)					
	EFFICIENCY[%] ACIN 100V	(Io=50%)	90typ	91typ	91typ	91typ	91typ	91typ
		(Io=100%)	88typ	90typ	90typ	91typ	91typ	91typ
	EFFICIENCY[%] 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＊1	20/40 typ (Io=100%) (Primary inrush current / Secondary inrush current) (More than 10 sec. to re-start)					
		ACIN 230V＊1	40/40 typ (Io=100%) (Primary inrush current / Secondary inrush current) (More than 10 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]	ACIN 100V/230V	300/300	125/125	100/100	65/70	47/52	32/35
	LINE REGULATION[mV]		20max	48max	60max	96max	128max	192max
	LOAD REGULATION[mV]		40max	100max	120max	150max	150max	480max
	RIPPLE[mVp-p]	0 to +50℃ ＊2＊3	160max	240max	240max	240max	320max	480max
		-20 to 0℃ ＊2	280max	320max	320max	320max	420max	640max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊2＊3	240max	300max	300max	300max	400max	600max
		-20 to 0℃ ＊2	320max	360max	360max	360max	480max	720max
	TEMPERATURE REGULATION[mV]	0 to +50℃ ＊3	50max	120max	150max	240max	320max	480max
		-20 to +50℃ ＊3	75max	180max	180max	290max	400max	600max
	DRIFT[mV]	＊4	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, Hiccup 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)					
	COMMUNICATION FUNCTION		Provided (Extended UART)					
ISOLATION	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		UL62368-1, EN62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), ANSI/AAMI ES60601-1, EN60601-1 3rd, C-UL (equivalent to CAN/CSA-C22.2 No.60601-1), Complies with IEC60601-1-2 4th Ed.					
	CONDUCTED NOISE		Complies with FCC Part15 classA, VCCI-A, CISPR11-A, CISPR32-A, EN55011-A, EN55032-A					
	HARMONIC ATTENUATOR ＊5		Complies with IEC61000-3-2 (class A)					

SPECIFICATIONS

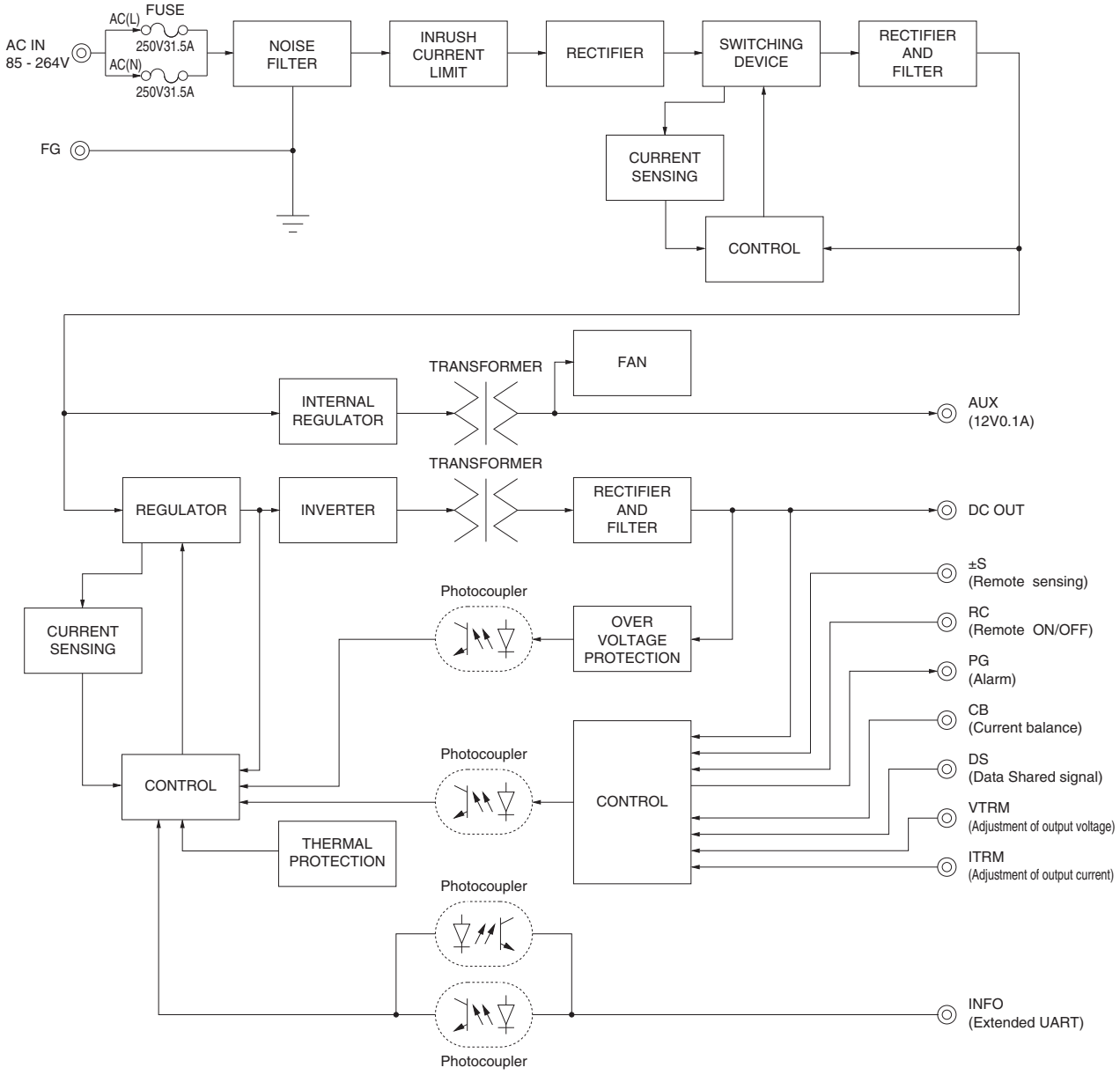
OTHERS	CASE SIZE/WEIGHT	140×41×203mm [5.52×1.61×7.99 inches] (without terminal block and screw) (W×H×D) / 2.0kg max
	COOLING METHOD	Forced cooling (internal fan)

∗1 The value is primary surge. The current of input surge to a built-in EMI/EMS Filter(0.2ms or less) is excluded.
∗2 Measured by 20MHz oscilloscope or Ripple-Noise meter (equivalent to KEISOKU-GIKEN:RM103). Please refer to the instruction manual 1.2.
∗3 5V, 12V, 15V output product, the maximum temperature of 40℃.
∗4 Drift is the change in DC output for an eight hours period after a half-hour warm-up at 25℃.
∗5 Please contact us about another class.
∗6 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.

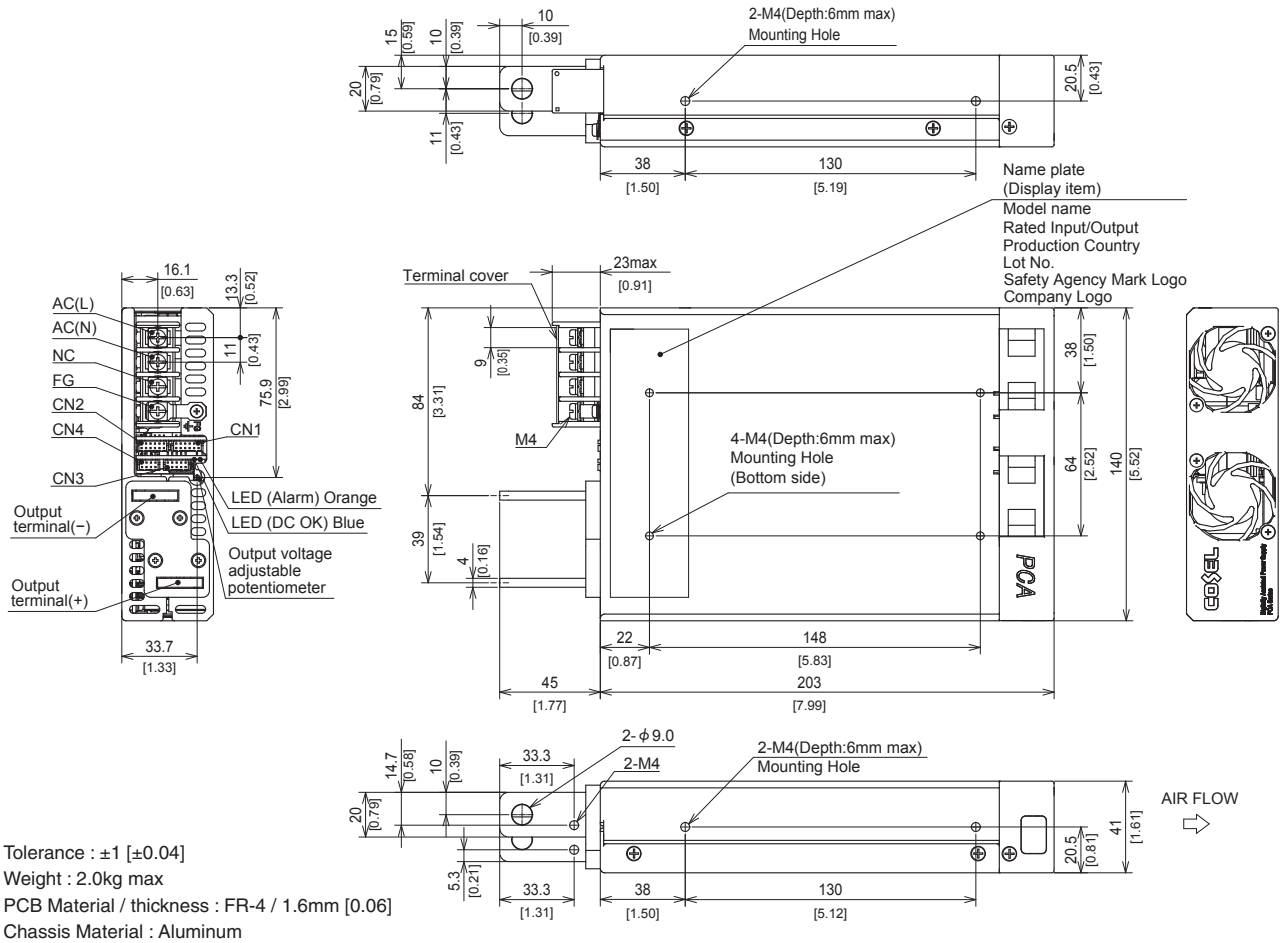
Features

- Low profile (41mm, 1.61 inch = meet 1U height)
- Universal input 85 - 264VAC (Refer to "Derating", when using at 85 - 95VAC)
- 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 adjustable range 5 - 12V)
- Constant current function
- Output voltage can be adjusted to near 0V (Refer to the item 2.6 on Instruction Manual.)
- With various alarms
- Parallel Operation / N+1 Parallel Redundancy Operation available
- Monitoring function and various setting values can be changed by communication (Refer to the item 2.11 on Instruction Manual.)
- Complies with SEMI F47 (Refer to the item 2.1 on Instruction Manual.)

Block diagram



External view



※ Tolerance : ±1 [±0.04]
※ Weight : 2.0kg 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.

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