

# Desktop PC Power Supply PCSA/E-370P Series

## 370W-class Highly Economical ATX Power Supply



PCSA-370P-X2S

**RoHS  
Directive**

**ATX**  
Continuous Max. **280W** Peak Power **370W**

Model	Description	Stock
PCSA-370P-X2S	Worldwide range, 20-pin/12V 4-pin	Standard stock
PCSA-370P-X2S1	Worldwide range, 24-pin/12V 4-pin/PCI-E 6-pin	Standard stock
PCSA-370P-X2S3	Worldwide range, 24-pin/12V 8-pin (Processor)	Standard stock
PCSE-370P-X2S	Dedicated to 100 VAC input, 20-pin/12V 4-pin	Standard stock
PCSE-370P-X2S2	Dedicated to 100 VAC input, 24-pin/12V 4-pin	Standard stock

### Model Name Coding

**PCS \* - 370 P - X 2 S \***  
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- Series name
- A: Worldwide range  
E: 100 VAC input
- Output power
- Peak output compliant
- ATX output
- +3.3V output
- Standard
- Modification code

### Features

Nipron's economical ATX power supply with the same high reliability

- 370W peak output
- Low price ATX power supply with condensed function
- This is an ideal unit for use in Japan's domestic. 100V system (PCSE-370P series)
- Worldwide range compliant power supply (PCSA-370P series has PFC circuit)

### Output connector (optional component)

Model	Main 20+4pin	Main 24pin	Main 20pin	AT	AUX	12V 4pin	12V 8pin	PCI-E 6pin	PCI-E 6+2pin	HDD	S-ATA	FDD
PCSA-370P-X2S / PCSE-370P-X2S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PCSA-370P-X2S1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PCSA-370P-X2S3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PCSE-370P-X2S2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Refer to "Product Page Guideline" on p.13

Safety standard / Approval	UL	CSA	EN	CE	CCC
Reliability Grade	HFA	FA	HOA	OA	

\*Safety standard / Approval: only PCSA-370P series

### Function

DC start	RS 232C	USB	TTL	PFC	Silence	5VSB FAN	TSFC FAN	Connection	RoHS
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\*PFC: only PCSA-370P series

### Input

AC input	PCSA-370P series	85 - 264V (worldwide range)
	PCSE-370P series	90 - 132V

### Output

Output voltage	+3.3V	+5V	+12V	-12V	+5VSB
Max. current/ max. power (continuous)	17A	21A	18A	0.5A	1.5A
	Total 30A max.				
	Total 267W				
Peak current/ peak power (5 sec max.)	20A	25A	18A	0.5A	2.5A
	Total 35A max.				
	Total 352W				
Total 370.5W					
Min. current	0A	1A	0A	0A	0A

### Dimensions

W×H×D (mm)	150×86×140 (PS/2 size)
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# General Specification Condition: at normal temperature and humidity unless otherwise specified

Refer to [ ] for PCSE-370P-X2S and PCSE-370P-X2S2

Items		Specification					Measurement conditions, etc.
AC Input	Rated Voltage	100 - 240 VAC (90 - 264 VAC)*, [115 VAC (90 - 132 VAC) ]					*Worldwide range
	Input Frequency	50 / 60Hz					47-63Hz
	Efficiency	70% typ. [72% typ.] *Characteristic data: Fig.5 and 21					At rated input/output
	Power Factor	90% min. [60% typ.] *Characteristic data: Fig.6 and 22					
AC Input	Inrush Current	40A peak (100 VAC), 80A peak (240 VAC) [40A peak] *Characteristic data: Fig.7 and 23					At rated input/output at cold start (25°C)
	Input VA	450VA max. [680VA typ.] *Characteristic data: Fig.6 and 22					At rated input and max. output
Output	Rated Voltage	+3.3V	+5V	+12	-12V	+5VSB	
	Rated Current	15A	20A	10A	0.5A	1.5A	
	Max. Current / Power	17A	21A	18A	0.5A	1.5A	Max. output power: 280.5W *Refer to Fig.1 and 2
		30A max.					
	Peak Current / Power	20A	25A	18A	0.5A	2.5A	Peak output power: 370.5W Time: 5 sec or less Duty ratio of repetitive load: 10% or less *Refer to Fig.3: Duty ratio *Refer to Fig.1 and 2: Output power distribution
		35A max.					
	Min. Current	0A	1A*	0A	0A	0A	When using +5V with 1 - 2A, other outputs shall be 50% max. of rated current *Refer to Fig.1 and 2: Output power distribution
		352W max.					
Total Voltage Accuracy (%)	±5 max.	±5 max.	±5 max.	±10 max.	±5 max.	Total accuracy of temperature, input, and load fluctuations	
Max. Ripple Voltage (mVp-p)	50 max.	50 max.	120 max.	120 max.	50 max.	Two wires are coming out from the output connector and connected into one at the edge. 10µF electrolytic capacitor and 0.1µF film capacitor are placed on it and it is measured by the 100MHz oscilloscope. *Characteristic data: Fig.18 and 31	
Max. Spike Voltage (mVp-p)	100 max.	100 max.	120 max.	120 max.	100 max.		
Protection	Overcurrent Protection	OCP Point (A)	21 min.	26 min.	19 min.	Short circuit protection	[When measuring +5V, +3.3V is 10A. Others are rated.] When measuring +3.3V, +5V is 10A When measuring +5V, +3.3V is 15A
		Method	All outputs except for +5VSB shutdown			Hold down current limiting	
		Recovery	Reclosing of input (10 sec min. interval)			Automatic recovery	
	Overvoltage Protection	OVP Point (V)	3.7 - 4.3	5.7 - 7.0	13.4 - 15.6	-	-
Method		All outputs except for +5VSB shutdown			-	-	
Recovery		Reclosing AC input (10 sec min. interval)			-	-	
Environment	Operating Temp. / Humidity	0 to 50°C* / 10 to 90%					*Refer to Fig.4 No condensation
	Storage Temp. / Humidity	-25 to 70°C / 10 to 95%					No condensation
	Vibration	Displacement amplitude: 0.075mm (10-55Hz), Sweep cycles: 10, Test duration: 45 minutes each axis					JIS-C-60068-2-6, at no operation
	Mechanical Shock	Lift one bottom edge up to 50mm and let it fall. Number of bumps: 3 each of 4 edges					JIS-C-60068-2-31, at no operation
Insulation	Dielectric Strength	AC input - DC output/FG: 1500 VAC for 1 minute					
	Insulation Resistance	AC input - DC output/FG: 50MQ min.					At 500 VDC
	Leakage Current	1mA max. (240 VAC) [0.5mA max. (115 VAC) ] *Characteristic data: Fig.8 and 24					YEW, TYPE3226 (1kΩ) or equivalent
EMC	Line Noise Immunity	± 2000V (pulse width: 100/1000ns, repetitive cycle: 30-100Hz, normal/common mode with pos./neg. polarity for 10 minutes)					Measured by INS-410 No fluctuation of DC output or malfunction
	Electrostatic Discharge	EN61000-4-2 compliant					
	Radiated, Radio-Frequency EM Field	EN61000-4-3 compliant					
	Fast Transient Burst	EN61000-4-4 compliant					
	Lightning Surge	EN61000-4-5 compliant					
	RF Conducted Immunity	EN61000-4-6 compliant					
	Magnetic Field Immunity	EN61000-4-8 compliant					
	Voltage Dip / Regulation	EN61000-4-11 compliant					
	Conducted Emission	VCCI-B compliant *Characteristic data: Fig.9, 10, and 25					
	Harmonic Current Regulation	IEC61000-3-2 Class A compliant					Only for PCSA-370P series
Others	Safety Standard	UL60950-1, CSA C22.2 No.60950-1 (c-UL), CE marking (LVD, EMC), CCC (S&E)					Only for PCSA-370P series
	Cooling System	Forced air cooling: thermal-sensing variable speed fan embedded					Fan speed changes by temperature and load.
	Output Grounding	Connected to chassis (FG)					
	Output Hold-up Time	PWR_OK holds up 16ms min. after AC failure *Characteristic data: Fig.15 and 28					At rated output
	Reliability Grade	HOA					Follow our standard
	MTBF	100,000 H min.					Based on EIAJ RCR-9102
	Weight	1.7 kg typ.					
Warranty	1 years after delivery. If any faults belong to us, the defective unit shall be repaired or replaced at our cost.					Except for errors caused by operation not listed	

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Desktop PC Power Supply  
Non-backup power supply

## Modification Product

■ Model: PCSA-370P-X2S2

A mounting metal (ACC2819)\* is mounted to PCSA-370P-X2S

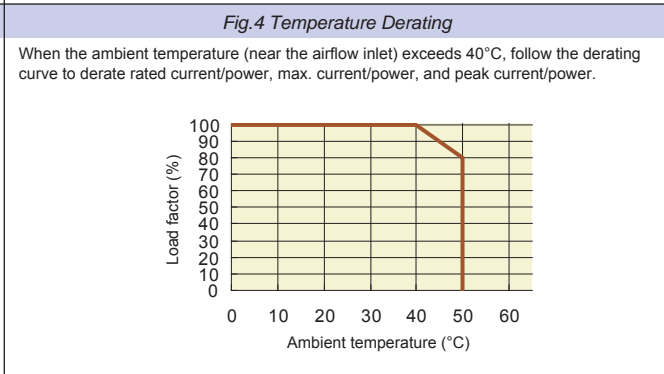
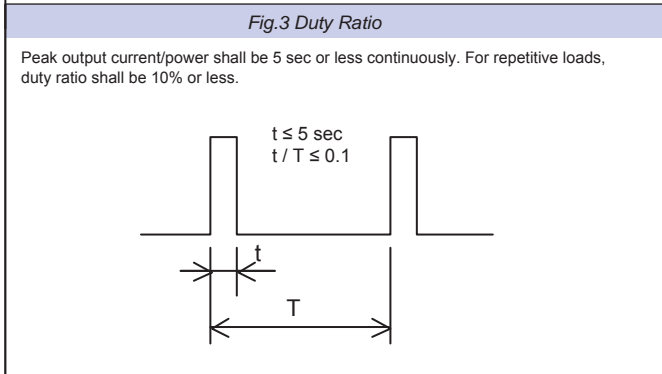
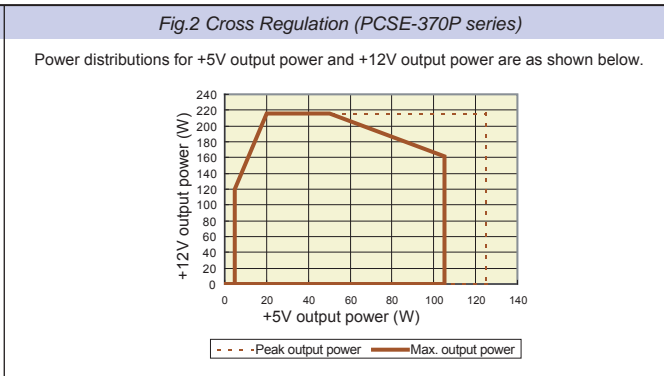
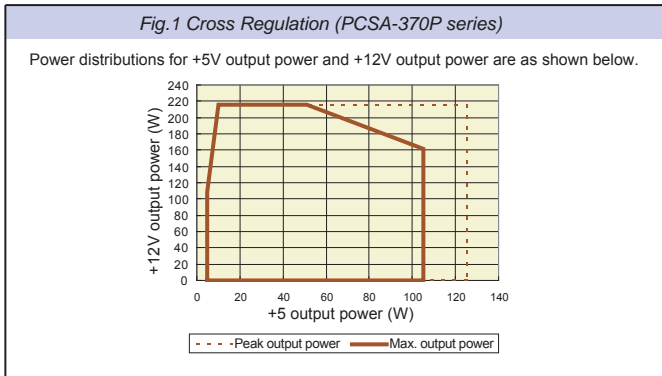
\*Refer to p.164



Picture

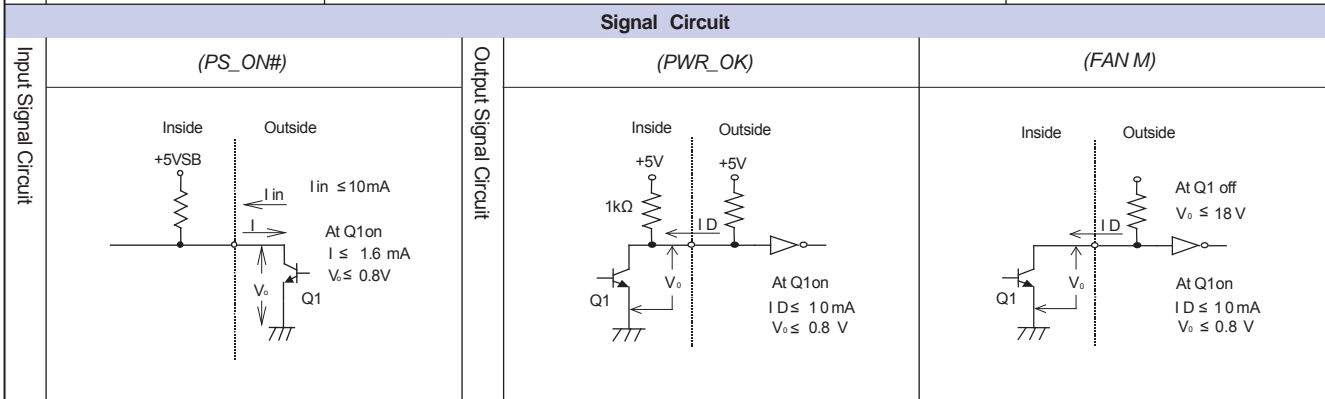
# General Specification Condition: at normal temperature and humidity unless otherwise specified.

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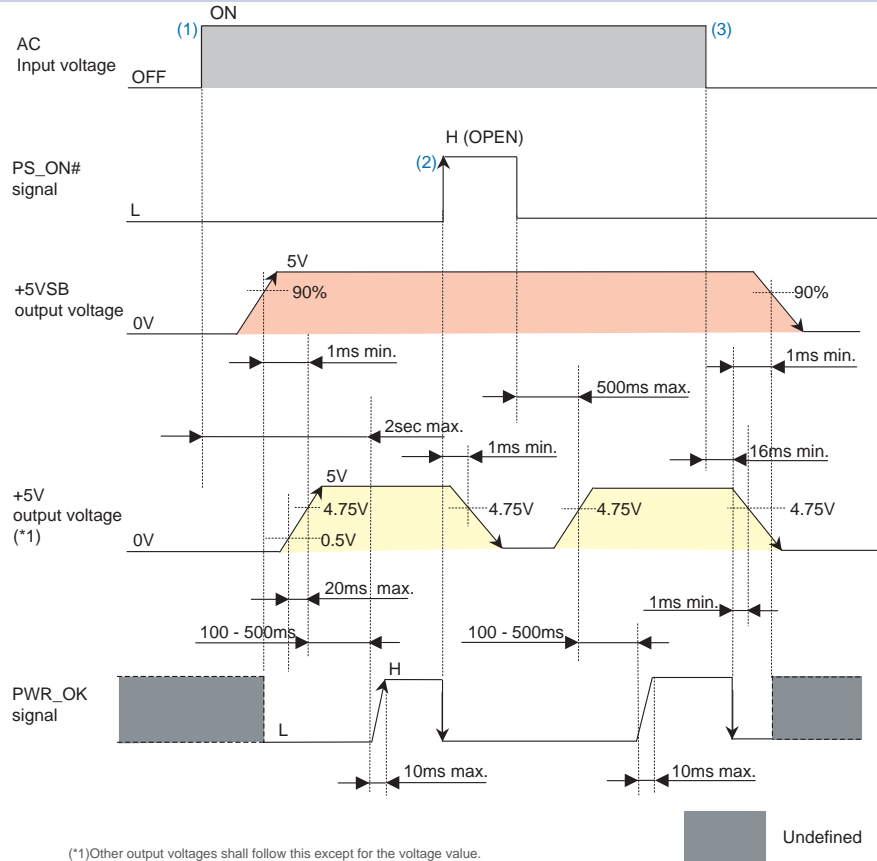


## Signal Input / Output Specification Condition: at normal temperature and humidity unless otherwise specified

	Items	Specification	Note
Input Signal	Output ON / OFF Control Signal (PS_ON#)	+3.3V, +5V, +12V, and -12V outputs shutdown with 'H' or 'OPEN' input.	The pin 14 of P1 connector (main 20-pin type) The pin 16 of P1 connector (main 24-pin type)
	+3.3V SENSE	The input terminal to detect the voltage of +3.3V output; by connecting to the load terminal, only the line drop of the + side of the output cable is compensated.	The pin 11 of P1 connector (main 20-pin type) The pin 13 of P1 connector (main 24-pin type)
Output Signal	Normal Output Signal (PWR_OK)	'H' signal is delivered when the +5V output is normal (detection delay time: 100 - 500ms).	The pin 8 of P1 connector
	Fan Monitor Signal (FAN M)	Two cycle pulses per one rotation of the fan motor are delivered (open collector output). Duty ratio of the pulse shall be 0.5 typ. (Interval between the signals becomes longer at low speed and shorter at high speed.) The signal remains 'L' or 'OPEN' when the fan stops caused by any failure or malfunction.	The pin 1 of P10 connector 

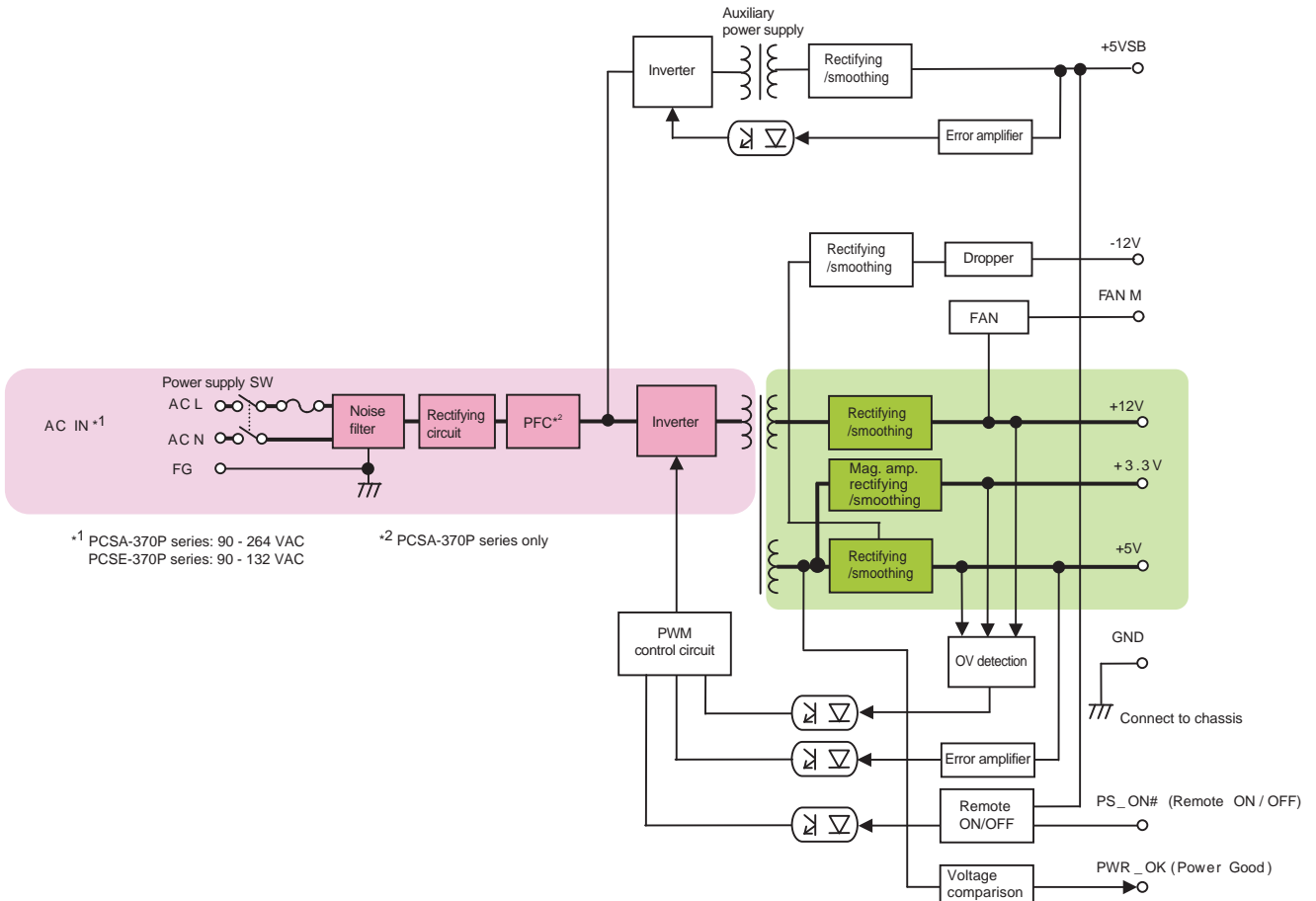


# Sequence Diagram



- (1) With PS\_ON# 'L', all outputs start up at AC input, 100 - 500ms after +5V output starts up, PWR\_OK signal goes 'H'.
- (2) With PS\_ON# 'H' (OPEN) input, all outputs except for +5VSB shutdown.
- (3) At blackout, PWR\_OK goes 'L' after 16ms min. 1ms min. after that, +5V and +5VSB outputs shutdown.

# Block Diagram

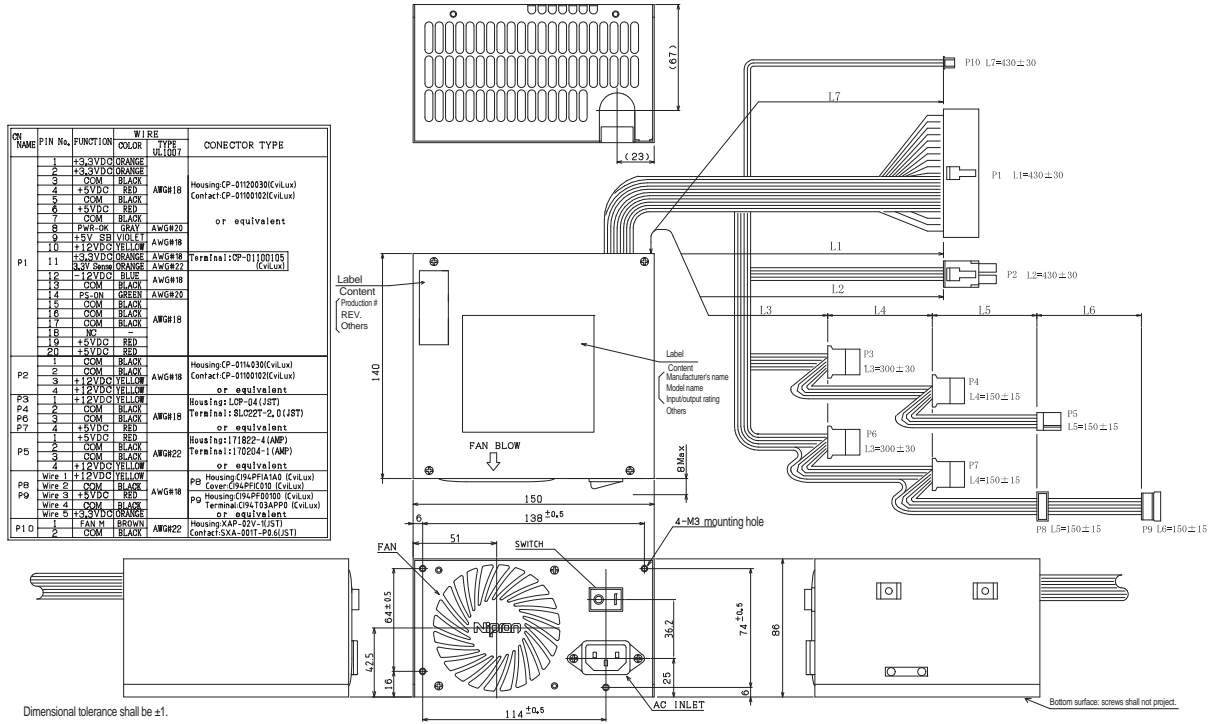


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# Outline Drawing / Output Harness

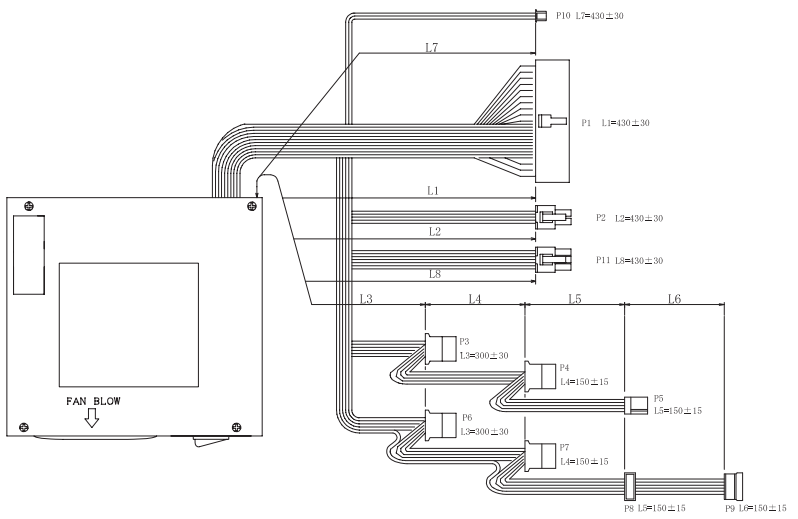
## Outline drawing (all models of the series) / Output harness (PCSA-370P-X2S, PCSE-370P-X2S)

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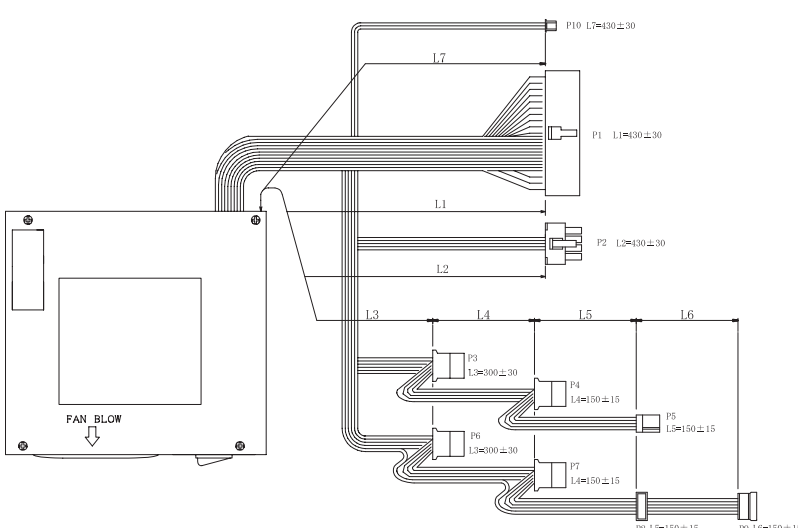
CON. NAME	PIN No.	FUNCTION	COLOR	WIRE TYPE	CONNECTOR TYPE
P1	1	+3.3VDC	ORANGE	UL1007	Housing CP-0112030(CvLux) Contact CP-0100102(CvLux)
	2	+3.3VDC	ORANGE		
	3	DCM	BLACK		AWG#18
	4	+5VDC	RED		
	5	DCM	BLACK		or equivalent
	6	+5VDC	RED		
	7	DCM	BLACK		AWG#20
	8	PWR-OK	GRAY		
	9	+5V SB	VIOLET		AWG#18
	10	+12VDC	YELLOW		
	11	+3.3VDC	ORANGE		Terminal:CP-01100105 (CvLux)
	12	+3.3VDC	ORANGE		
	13	+3.3VDC	ORANGE		AWG#18
	14	-12VDC	BLUE		
	15	DCM	BLACK		AWG#20
	16	PS-ON	GREEN		
	17	DCM	BLACK		AWG#18
	18	DCM	BLACK		
	19	DCM	BLACK		AWG#18
20	MP	BLACK			
P2	1	DCM	BLACK		Housing CP-0114030(CvLux) Contact CP-0100102(CvLux)
	2	DCM	BLACK		
	3	+12VDC	YELLOW		or equivalent
	4	+12VDC	YELLOW		
	P3	1	+12VDC	YELLOW	
P4	2	DCM	BLACK		Terminal: SL022T-2, 0(1ST)
P7	4	+5VDC	RED		
P5	1	+5VDC	RED		Housing: 171822-4(AMP)
	2	DCM	BLACK		
	P6	3	DCM	BLACK	
P8	Wire 1	+12VDC	YELLOW		Housing: C94PF1A10 (CvLux) Cover: C94PF010 (CvLux)
	Wire 2	DCM	BLACK		
	Wire 3	+5VDC	RED		Housing: C94PF0300 (CvLux) Terminal: C94T03APP0 (CvLux) or equivalent
	Wire 4	DCM	BLACK		
P10	1	FAN M	BROWN		Housing: XAP-02V-1(1ST) Contact: SXA-0011-P6(1ST)
	2	DCM	BLACK		

### Output Harness (PCSA-370P-X2S1)



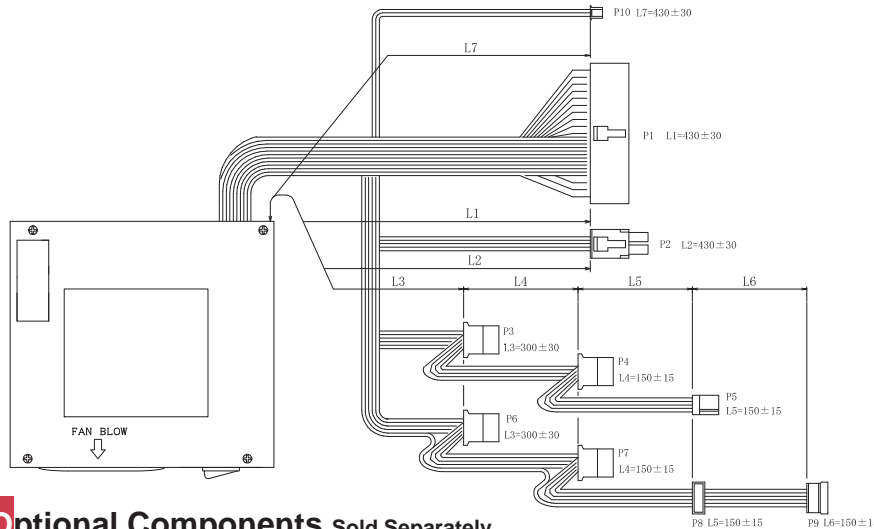
CON. NAME	PIN No.	FUNCTION	COLOR	WIRE TYPE	CONNECTOR TYPE
P1	1	+3.3VDC	ORANGE	UL1007	Housing CP-0112030(CvLux) Contact CP-0100102(CvLux)
	2	+3.3VDC	ORANGE		
	3	DCM	BLACK		AWG#18
	4	+5VDC	RED		
	5	DCM	BLACK		or equivalent
	6	+5VDC	RED		
	7	DCM	BLACK		AWG#20
	8	PWR-OK	GRAY		
	9	+5V SB	VIOLET		AWG#18
	10	+12VDC	YELLOW		
	11	+12VDC	YELLOW		Terminal:CP-01100105 (CvLux)
	12	+3.3VDC	ORANGE		
	13	+3.3VDC	ORANGE		AWG#18
	14	-12VDC	BLUE		
	15	DCM	BLACK		AWG#20
	16	PS-ON	GREEN		
	17	DCM	BLACK		AWG#18
	18	DCM	BLACK		
	19	DCM	BLACK		AWG#18
20	MP	BLACK			
P2	1	DCM	BLACK		Housing CP-0114030(CvLux) Contact CP-0100102(CvLux)
	2	DCM	BLACK		
	3	+12VDC	YELLOW		or equivalent
	4	+12VDC	YELLOW		
	P3	1	+12VDC	YELLOW	
P4	2	DCM	BLACK		Terminal: SL022T-2, 0(1ST)
P7	4	+5VDC	RED		
P5	1	+5VDC	RED		Housing: 171822-4(AMP)
	2	DCM	BLACK		
	P6	3	DCM	BLACK	
P8	Wire 1	+12VDC	YELLOW		Housing: C94PF1A10 (CvLux) Cover: C94PF010 (CvLux)
	Wire 2	DCM	BLACK		
	Wire 3	+5VDC	RED		Housing: C94PF0300 (CvLux) Terminal: C94T03APP0 (CvLux) or equivalent
	Wire 4	DCM	BLACK		
P10	1	FAN M	BROWN		Housing: XAP-02V-1(1ST) Contact: SXA-0011-P6(1ST)
	2	DCM	BLACK		

### Output Harness (PCSA-370P-X2S3)



CON. NAME	PIN No.	FUNCTION	COLOR	WIRE TYPE	CONNECTOR TYPE
P1	1	+3.3VDC	ORANGE	UL1007	Housing CP-0112030(CvLux) Contact CP-0100102(CvLux)
	2	+3.3VDC	ORANGE		
	3	DCM	BLACK		AWG#18
	4	+5VDC	RED		
	5	DCM	BLACK		or equivalent
	6	+5VDC	RED		
	7	DCM	BLACK		AWG#20
	8	PWR-OK	GRAY		
	9	+5V SB	VIOLET		AWG#18
	10	+12VDC	YELLOW		
	11	+12VDC	YELLOW		Terminal:CP-01100105 (CvLux)
	12	+3.3VDC	ORANGE		
	13	+3.3VDC	ORANGE		AWG#18
	14	-12VDC	BLUE		
	15	DCM	BLACK		AWG#20
	16	PS-ON	GREEN		
	17	DCM	BLACK		AWG#18
	18	DCM	BLACK		
	19	DCM	BLACK		AWG#18
20	MP	BLACK			
P2	1	DCM	BLACK		Housing CP-0118030(CvLux) Contact CP-0100102(CvLux)
	2	DCM	BLACK		
	3	DCM	BLACK		or equivalent
	4	+12VDC	YELLOW		
	P3	1	+12VDC	YELLOW	
P4	2	DCM	BLACK		Terminal: SL022T-2, 0(1ST)
P7	4	+5VDC	RED		
P5	1	+5VDC	RED		Housing: 171822-4(AMP)
	2	DCM	BLACK		
	P6	3	DCM	BLACK	
P8	Wire 1	+12VDC	YELLOW		Housing: C94PF1A10 (CvLux) Cover: C94PF010 (CvLux)
	Wire 2	DCM	BLACK		
	Wire 3	+5VDC	RED		Housing: C94PF0300 (CvLux) Terminal: C94T03APP0 (CvLux) or equivalent
	Wire 4	DCM	BLACK		
P10	1	FAN M	BROWN		Housing: XAP-02V-1(1ST) Contact: SXA-0011-P6(1ST)
	2	DCM	BLACK		

## Output Harness (PCSA-370P-X2S2)



CON NAME	PIN No.	FUNCTION	COLOR	WIRE TYPE	CONNECTOR TYPE
P1	1	+3.3VDC	ORANGE	UL1007	Housing CP-0124030(CvLux) Contact CP-0100102(CvLux)
	2	+3.3VDC	ORANGE	UL1007	
	3	COM	BLACK	AWG#18	or equivalent
	4	+5VDC	RED	AWG#18	
	5	COM	BLACK	AWG#18	Terminal: CP-01100105 (CvLux)
	6	+5VDC	RED	AWG#18	
	7	COM	BLACK	AWG#18	Housing CP-0114030(CvLux) Contact CP-0100102(CvLux)
	8	FAN-OK	GRAY	AWG#22	
	9	+5V SB	YELLOW	AWG#18	Housing: LCP-04 (JST)
	10	+12VDC	YELLOW	AWG#18	
	11	+12VDC	YELLOW	AWG#18	or equivalent
	12	+3.3VDC	ORANGE	AWG#18	
	13	3.3V Sense	ORANGE	AWG#18	Terminal: SL022T-2, 0 (JST)
	14	+3.3VDC	ORANGE	AWG#18	
	15	COM	BLACK	AWG#18	or equivalent
	16	PS_ON	GREEN	AWG#22	
	17	COM	BLACK	AWG#18	Housing: 171822-4 (AMP)
	18	COM	BLACK	AWG#18	
	19	COM	BLACK	AWG#18	Terminal: 170204-1 (AMP)
	20	PS	BLACK	AWG#18	
P2	1	+5VDC	RED	AWG#18	Housing: 171822-4 (AMP)
	2	COM	BLACK	AWG#18	
	3	+5VDC	RED	AWG#18	or equivalent
	4	+5VDC	RED	AWG#18	
P3	1	+5VDC	RED	AWG#18	Housing: 171822-4 (AMP)
	2	COM	BLACK	AWG#18	
P4	1	+5VDC	RED	AWG#18	or equivalent
	2	COM	BLACK	AWG#18	
P5	1	+5VDC	RED	AWG#18	Housing: 171822-4 (AMP)
	2	COM	BLACK	AWG#18	
P6	1	+5VDC	RED	AWG#18	or equivalent
	2	COM	BLACK	AWG#18	
P7	1	+5VDC	RED	AWG#18	Housing: 171822-4 (AMP)
	2	COM	BLACK	AWG#18	
P8	1	+12VDC	YELLOW	AWG#18	Housing: 171822-4 (AMP)
	2	COM	BLACK	AWG#18	
P9	1	+5VDC	RED	AWG#18	Housing: 171822-4 (AMP)
	2	COM	BLACK	AWG#18	
P10	1	+3.3VDC	ORANGE	AWG#18	Housing: 171822-4 (AMP)
	2	FAN M	BROWN	AWG#22	

## Optional Components Sold Separately

Picture	Model	Type	Description
	WH2753	AC power cord	125 VAC 12A [PSE]
	WH2753-02	AC power cord	125 VAC 12A (tracking resistance type) [PSE]
	ACC2819	Mounting panel	Power supply rear mounting metal

## Other Optional Components

Model	Description	Model	Description
ACC2637	Automatic startup unit	WH5105	12V 4-pin connector conversion harness (80mm)
WH2820	20-pin extension harness (600mm)	WH5105-02	12V 4-pin connector conversion harness (320mm)
WH2747	20-pin extension harness (450mm)	WH5055	AT connector conversion harness
WH2892-02	20-pin extension harness (200mm)	ACC5046	Harness with PS_ON switch
WH2812	PCI-E 6-pin connector conversion harness	ACC5077	PS_ON terminal short connector
WH2886	SIG connector conversion harness	WH5073	PS_ON terminal short 20-pin harness

## Internal Structure (PCSA-370P-X2S)



## Internal Structure (PCSE-370P-X2S)

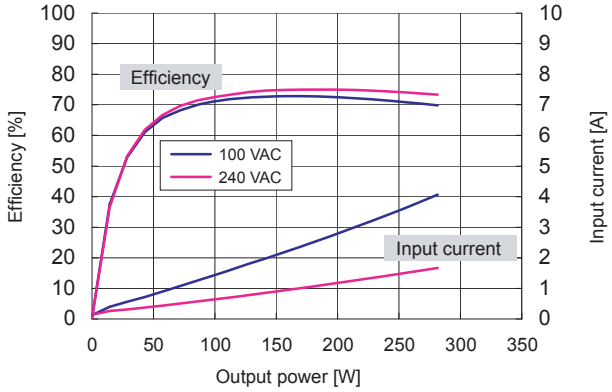


# Characteristics Data PCSA-370P-X2S (Examples of actual measurement)

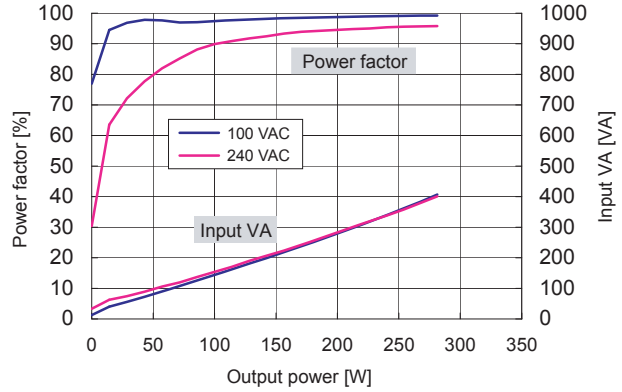
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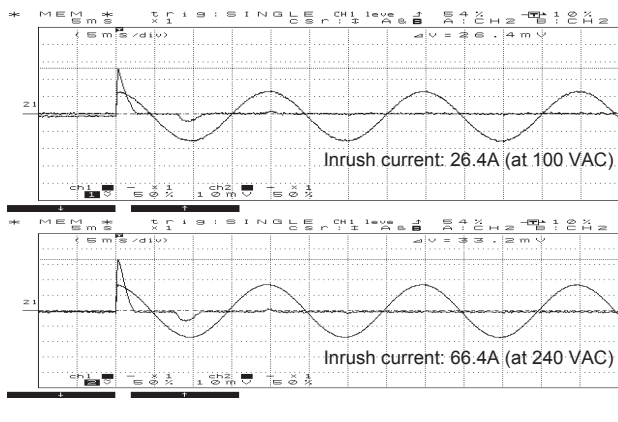
● Fig.5 Efficiency / Input Current vs. Output Power



● Fig.6 Power Factor / Input VA vs. Output Power



● Fig.7 Inrush Current



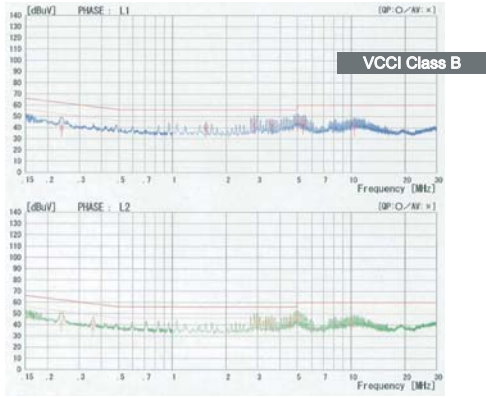
● Fig.8 Leakage Current

Input: 100 / 240 VAC  
Load: Rated and min. load

	Rated load	Min. load
100 VAC	0.34mA	0.27mA
240 VAC	0.65mA	0.68mA

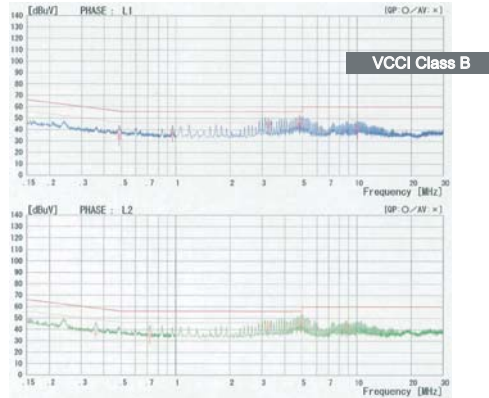
● Fig.9 Conducted Emission at 100 VAC

Input: 100 VAC  
Load: Rated  
Mode: Peak



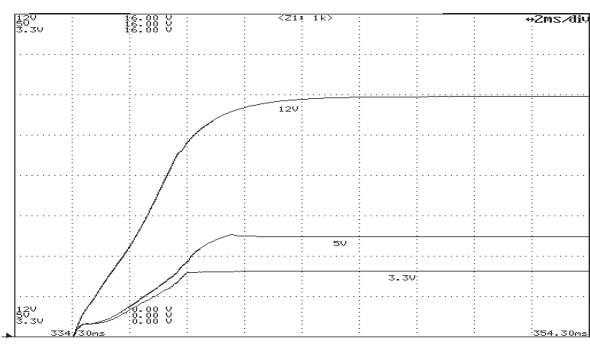
● Fig.10 Conducted Emission at 240 VAC

Input: 240 VAC  
Load: Rated  
Mode: Peak



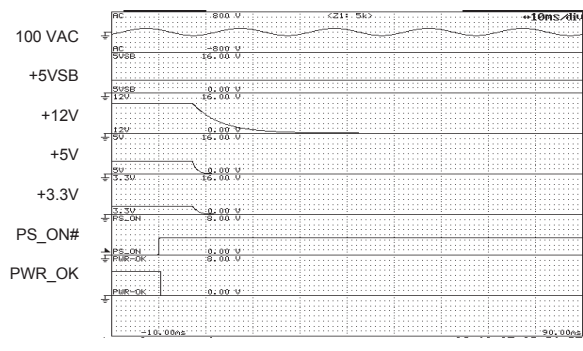
● Fig.11 Rising Characteristics at 100 VAC

Input: 100 VAC  
Load: Rated  
Time axis: 2ms/DIV



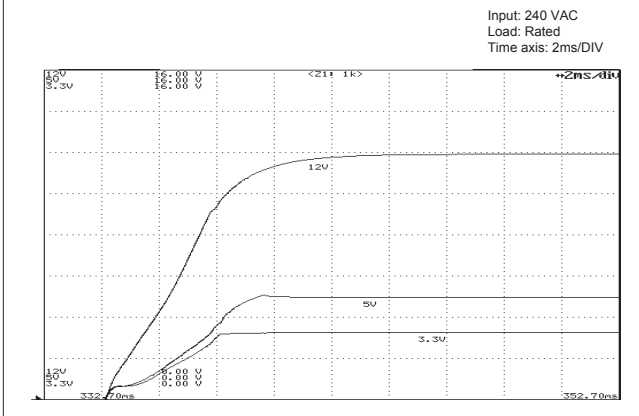
● Fig.12 Falling Characteristics at 100 VAC when REMOTE goes Off

Input: 100 VAC  
Load: Rated  
Time axis: 10ms/DIV

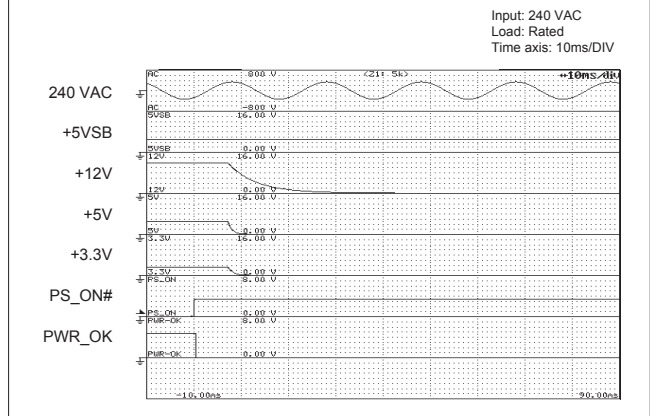


# Characteristics Data PCSA-370P-X2S (Examples of actual measurement)

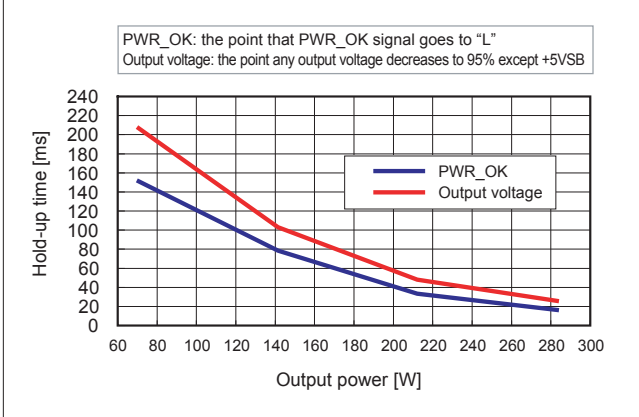
● Fig.13 Rising Characteristics at 240 VAC



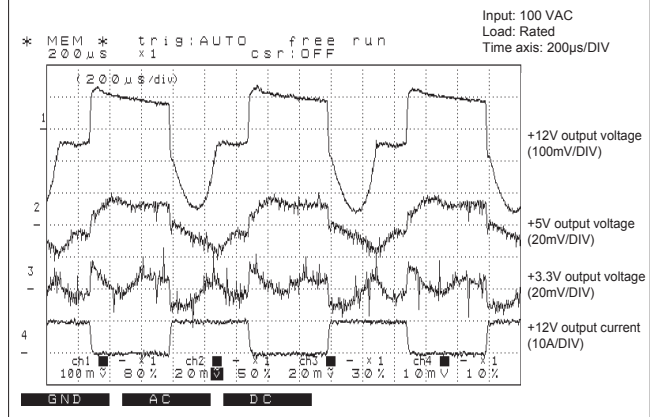
● Fig.14 Falling Characteristics at 240 VAC when REMOTE goes Off



● Fig.15 Output Hold-up Time vs. Output Power



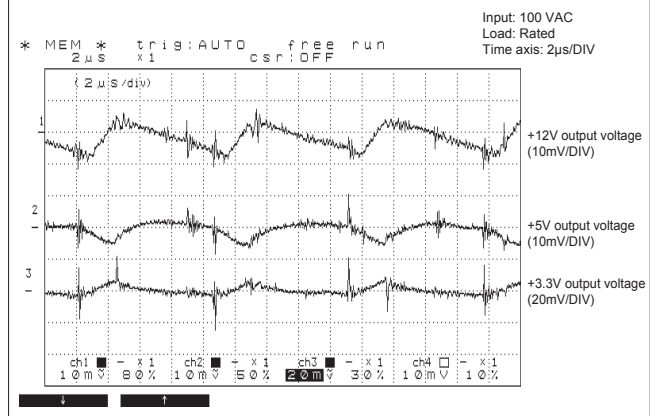
● Fig.16 Dynamic Load Fluctuation Characteristics at 1kHz



● Fig.17 Output Voltage Regulation

Output	AC input voltage					
	85 VAC	100 VAC	132 VAC	176 VAC	240 VAC	264 VAC
+12V output (min. load)	12.077 V	12.076 V	12.076 V	12.076 V	12.075 V	12.076 V
+12V output (rated load)	11.935 V	11.935 V	11.934 V	11.934 V	11.934 V	11.934 V
+12V output (peak load)	11.870 V	11.870 V	11.869 V	11.869 V	11.869 V	11.869 V
+5V output (min. load)	5.133 V	5.133 V	5.133 V	5.133 V	5.133 V	5.133 V
+5V output (rated load)	4.972 V	4.972 V	4.972 V	4.972 V	4.971 V	4.972 V
+5V output (peak load)	4.939 V	4.939 V	4.939 V	4.939 V	4.939 V	4.939 V
+3.3V output (min. load)	3.411 V	3.411 V	3.411 V	3.412 V	3.412 V	3.412 V
+3.3V output (rated load)	3.294 V	3.294 V	3.294 V	3.294 V	3.294 V	3.294 V
+3.3V output (peak load)	3.265 V	3.265 V	3.265 V	3.265 V	3.265 V	3.265 V

● Fig.18 Ripple and Spike Voltage



● Fig.19 Ambient Temperature vs. Expected Service Life

■ Electrolytic capacitors

Input: 90 VAC  
Load: Rated  
Operating time: 24 consecutive hours

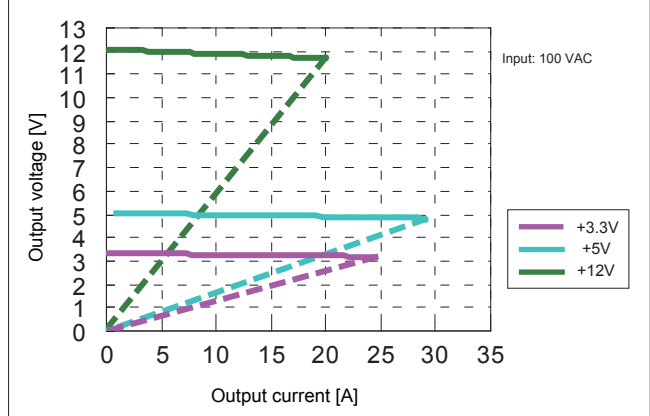
Intake air temp.	20°C	30°C	40°C
Expected service life (yr)	approx. 17	approx. 8.9	approx. 4.5

※ Lifetime shall be 15 years at longest due to deterioration of sealing plates.

■ Fan

Ambient temp.	20°C	30°C	40°C
Expected service life (yr)	approx. 11	approx. 11	approx. 11

● Fig.20 Over Current Protection (V-I Characteristic)

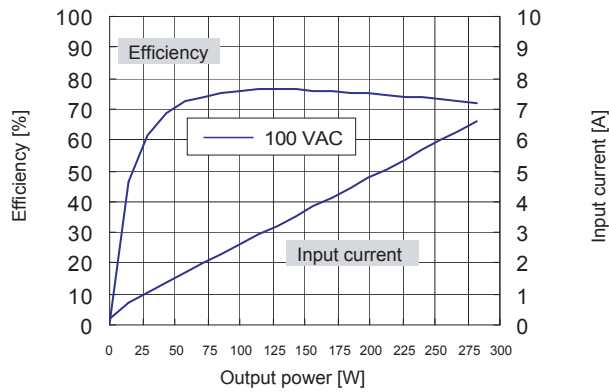


BRAIN Power Supply  
Desktop PC Power Supply  
Non-backup Power Supply

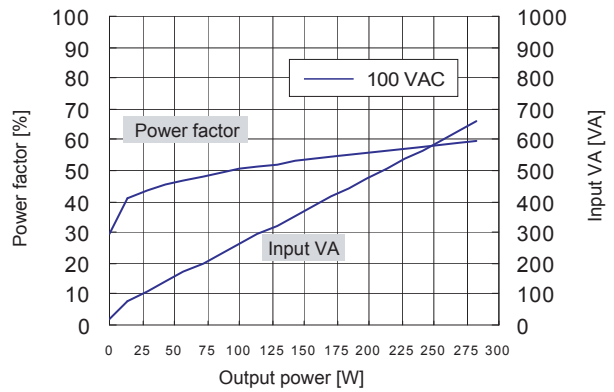


# Characteristics Data PCSE-370P-X2S (Examples of actual measurement)

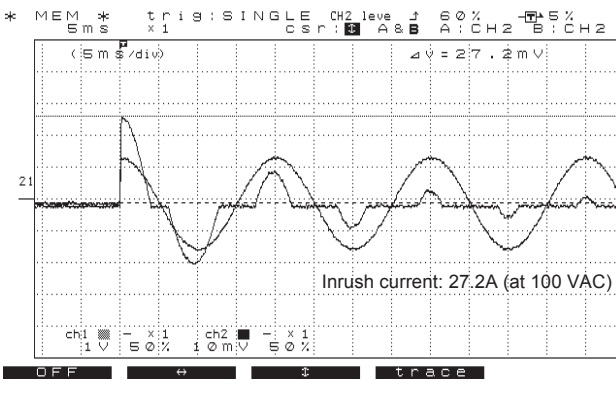
● Fig.21 Efficiency / Input Current vs. Output Power



● Fig.22 Power Factor / Input VA vs. Output Power



● Fig.23 Inrush Current

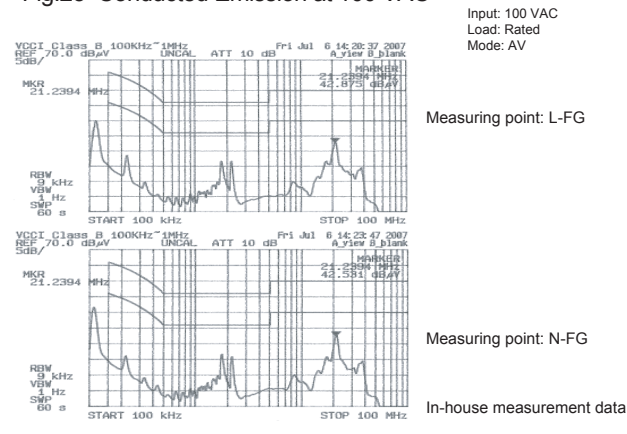


● Fig.24 Leakage Current

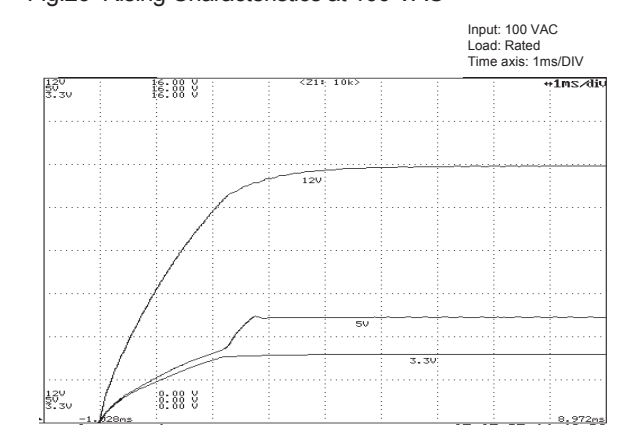
Input: 100 VAC  
Load: Rated and min. load

	Rated load	Min. load
100 VAC	0.28mA	0.27mA

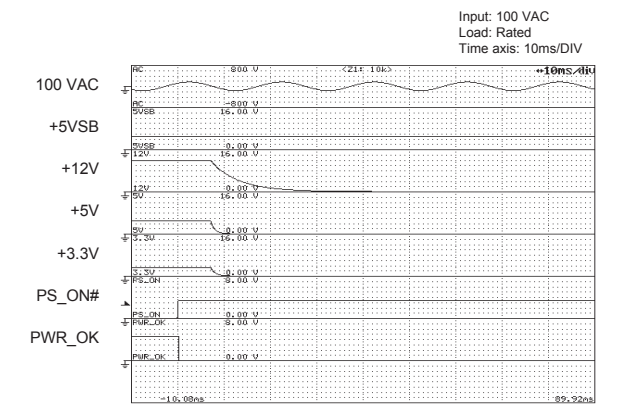
● Fig.25 Conducted Emission at 100 VAC



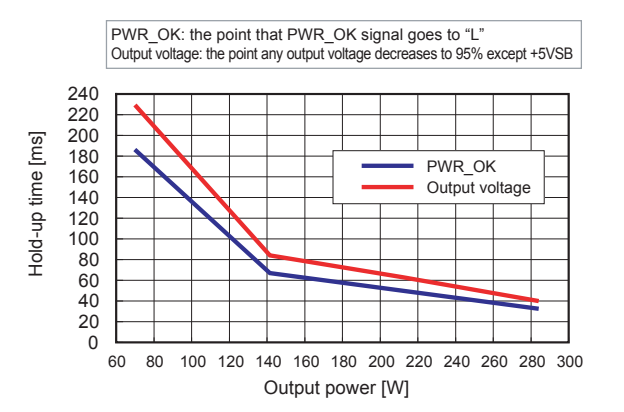
● Fig.26 Rising Characteristics at 100 VAC



● Fig.27 Falling Characteristics at 100 VAC when REMOTE goes Off

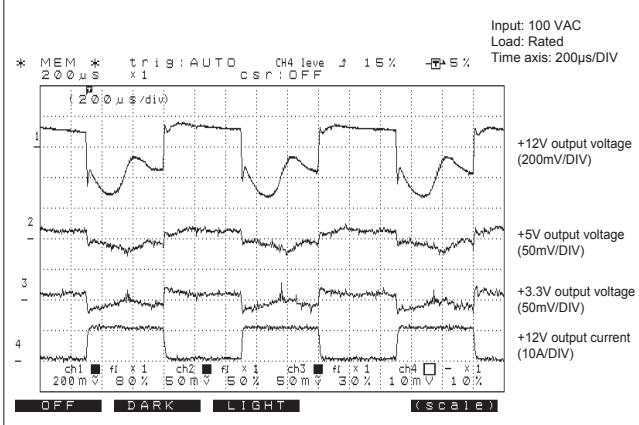


● Fig.28 Output Hold-up Time vs. Output Power



# Characteristics Data PCSE-370P-X2S (Examples of actual measurement)

● Fig.29 Dynamic Load Fluctuation Characteristics at 1kHz



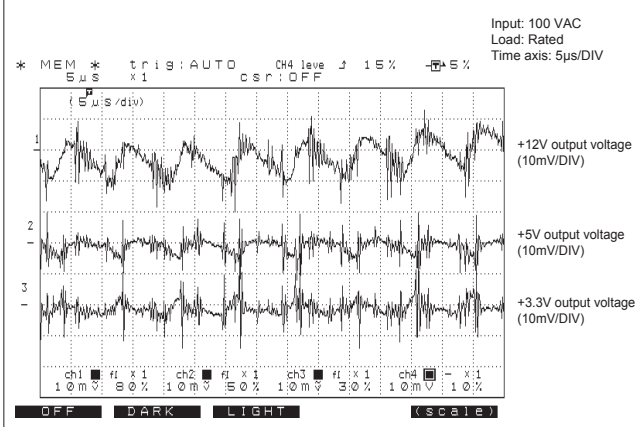
● Fig.30 Output Voltage Regulation

Output	Min. load	Rated load	Peak load
12V output	0A	18A	18A
5V output	1A	21A	25A
3.3V output	0A	17A	20A

AC input voltage	90 VAC	100 VAC	132 VAC
12V output (min. load)	12.069 V	12.072 V	12.072 V
12V output (rated load)	11.916 V	11.917 V	11.917 V
12V output (peak load)	11.847 V	11.847 V	11.845 V
5V output (min. load)	5.012 V	5.012 V	5.012 V
5V output (rated load)	4.877 V	4.877 V	4.876 V
5V output (peak load)	4.832 V	4.833 V	4.831 V
3.3V output (min. load)	3.420 V	3.420 V	3.420 V
3.3V output (rated load)	3.305 V	3.305 V	3.305 V
3.3V output (peak load)	3.275 V	3.275 V	3.275 V

● Fig.31 Ripple and Spike Voltage



● Fig.32 Ambient Temperature vs. Expected Service Life

■ Electrolytic capacitors

Input: 100 VAC  
Load: Rated  
Operating time: 24 consecutive hours

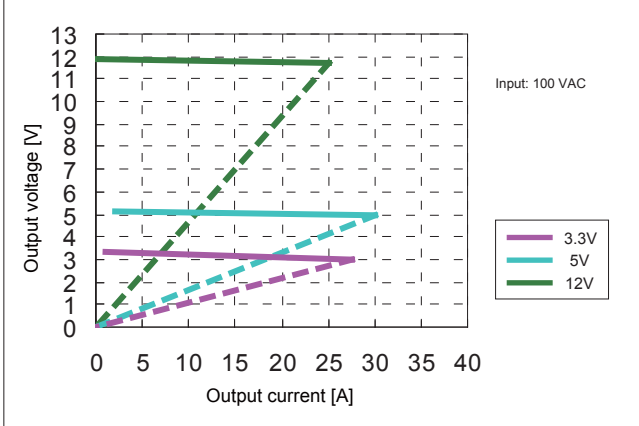
Intake air temp.	20°C	30°C	40°C
Expected service life (yr)	approx. 46	approx. 23	approx. 11

※ Lifetime shall be 15 years at longest due to deterioration of sealing plates.

■ Fan

Ambient temp.	20°C	30°C	40°C
Expected service life (yr)	approx. 11	approx. 11	approx. 11

● Fig.33 Over Current Protection (V-I Characteristic)



BRAIN Power Supply  
Desktop PC Power Supply  
Non-backup Power Supply