Desktop PC Power Supply PCSA/E-370P Series

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

1. Series name
2. A: Worldwide range
   E: 100 VAC input
3. Output power
4. Peak output compliant
5. ATX output
6. +3.3V output
7. Standard
8. Modification code

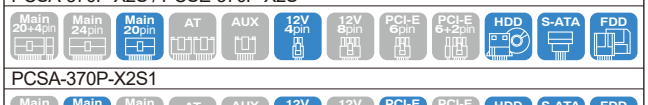
Features

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

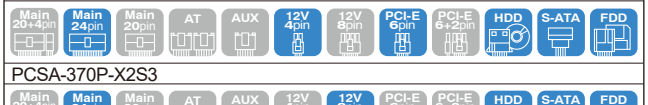
- 370W peak output
- Low price ATX power supply with condensed function
- This is an ideal unit for use in Japan's domestic. 100V system (PCSE-370P series)
- Worldwide range compliant power supply (PCSA-370P series has PFC circuit)

Output connector (optional component)

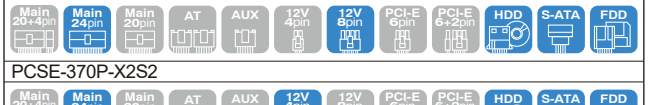
PCSA-370P-X2S / PCSE-370P-X2S



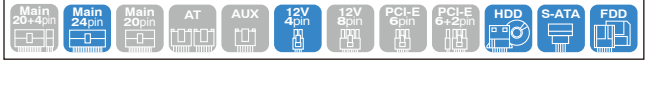
PCSA-370P-X2S1



PCSA-370P-X2S3



PCSE-370P-X2S2



Refer to "Product Page Guideline" on p.11

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

*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				
	Total 280.5W				
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)

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					
	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.					
			267W 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.					
			352W 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
	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	-	-	When +3.3V, +5V, and +12V have over voltage, outputs except for +5VSB shutdown
		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: 50MΩ 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 Standards		UL60950-1, c-UL, CCC, CE marking (IEC62368-1)					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

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.

Fig.1 Cross Regulation (PCSA-370P series)

Power distributions for +5V output power and +12V output power are as shown below.

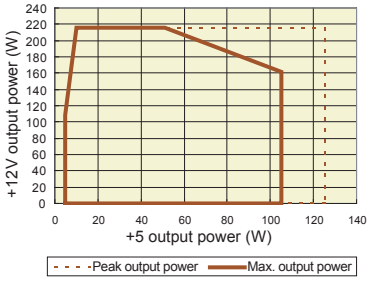


Fig.2 Cross Regulation (PCSE-370P series)

Power distributions for +5V output power and +12V output power are as shown below.

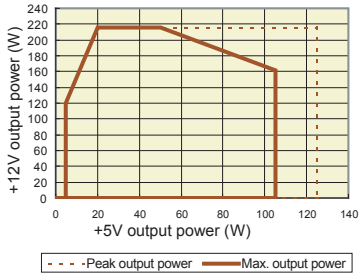


Fig.3 Duty Ratio

Peak output current/power shall be 5 sec or less continuously. For repetitive loads, duty ratio shall be 10% or less.

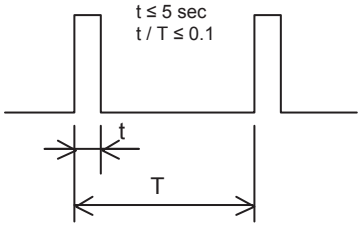
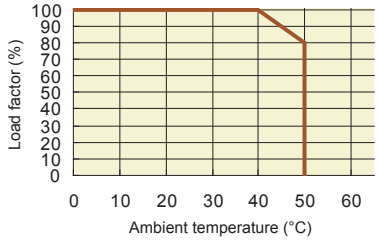
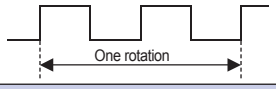


Fig.4 Temperature Derating

When the ambient temperature (near the airflow inlet) exceeds 40°C, follow the derating curve to derate rated current/power, max. current/power, and peak current/power.



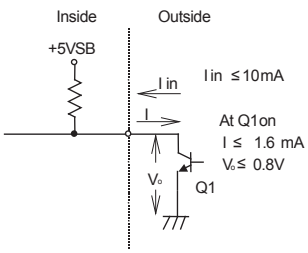
Signal Input / Output Specification Condition: at normal temperature and humidity unless otherwise specified

	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 

Signal Circuit

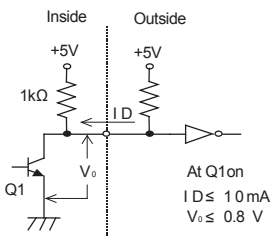
Input Signal Circuit

(PS_ON#)

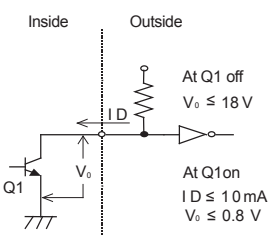


Output Signal Circuit

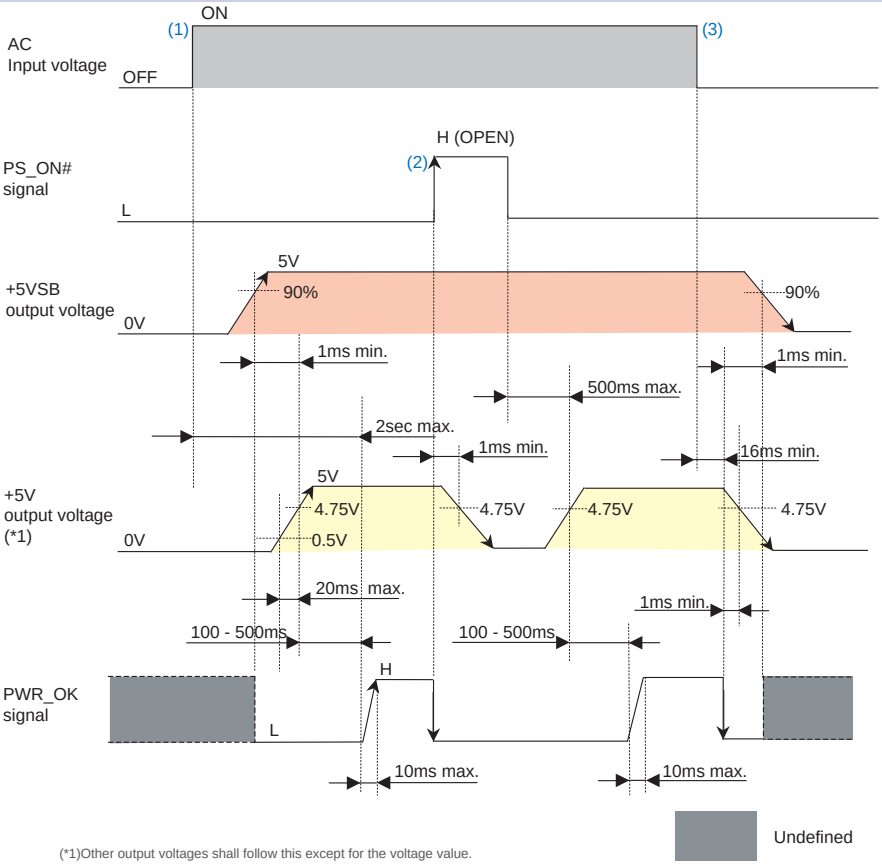
(PWR_OK)



(FAN M)



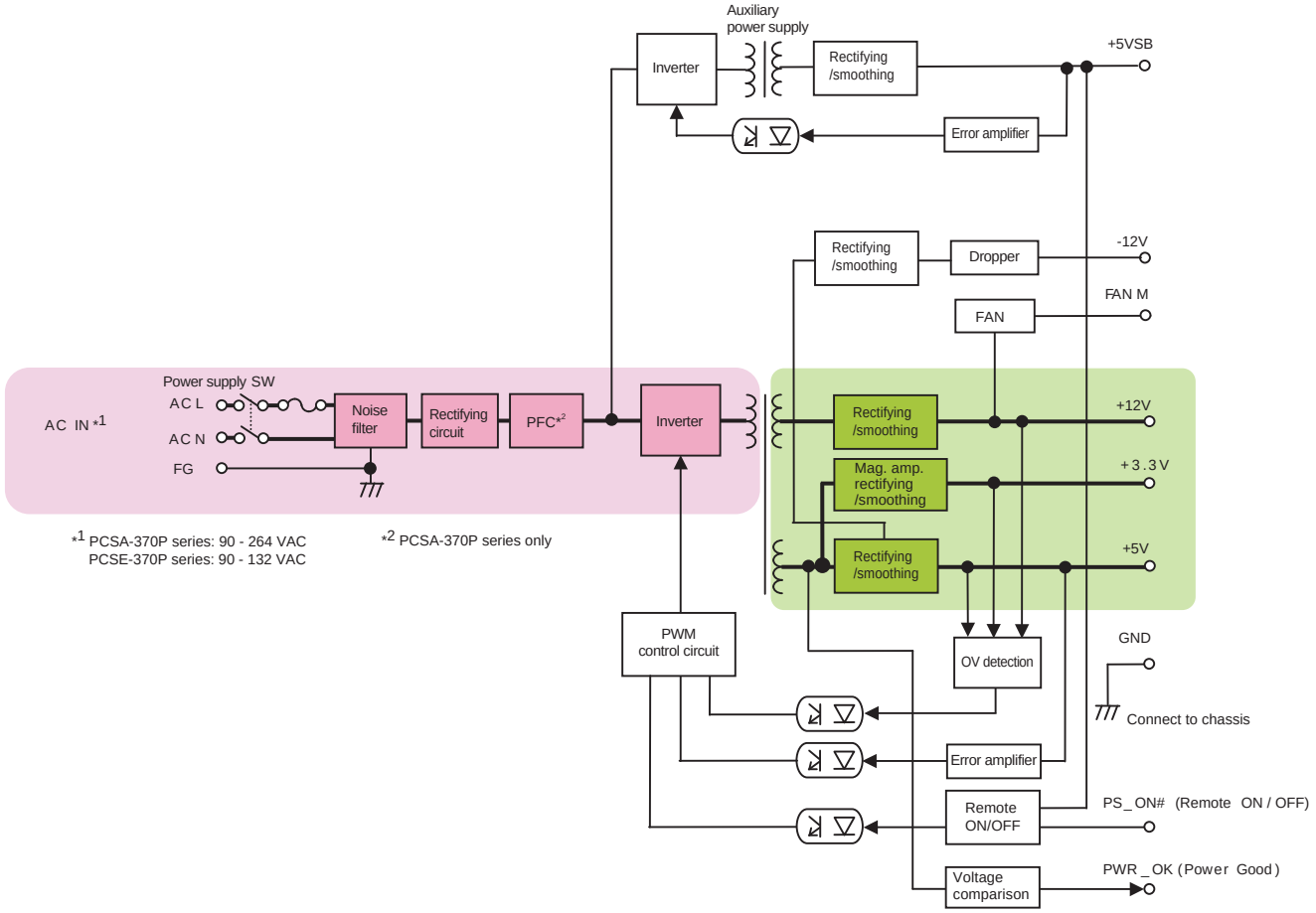
Sequence Diagram



(*1)Other output voltages shall follow this except for the voltage value.

(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

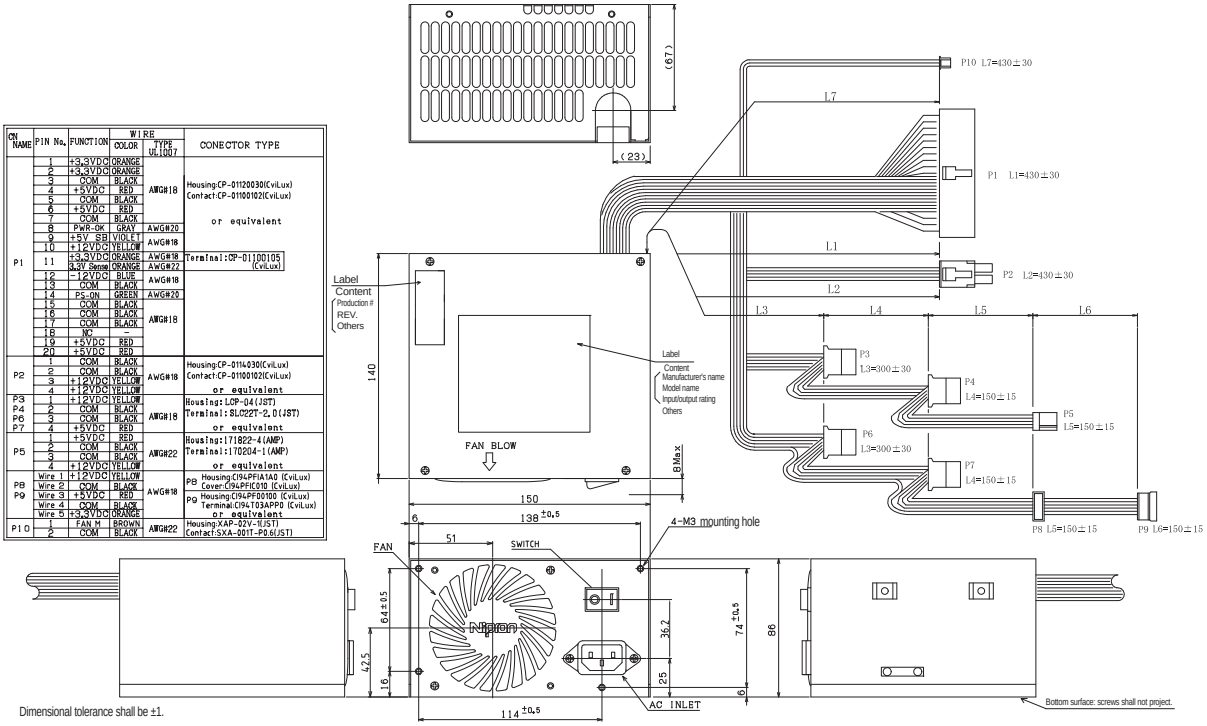


*1 PCSA-370P series: 90 - 264 VAC
PCSE-370P series: 90 - 132 VAC

*2 PCSA-370P series only

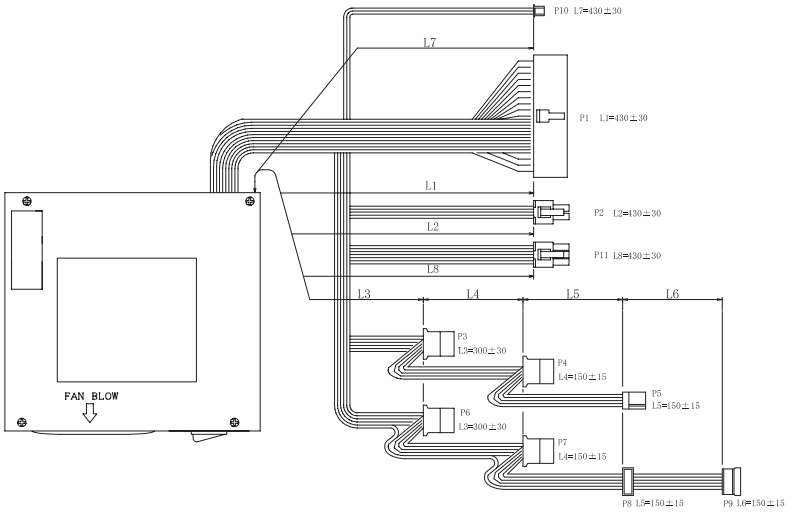
Outline Drawing / Output Harness

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



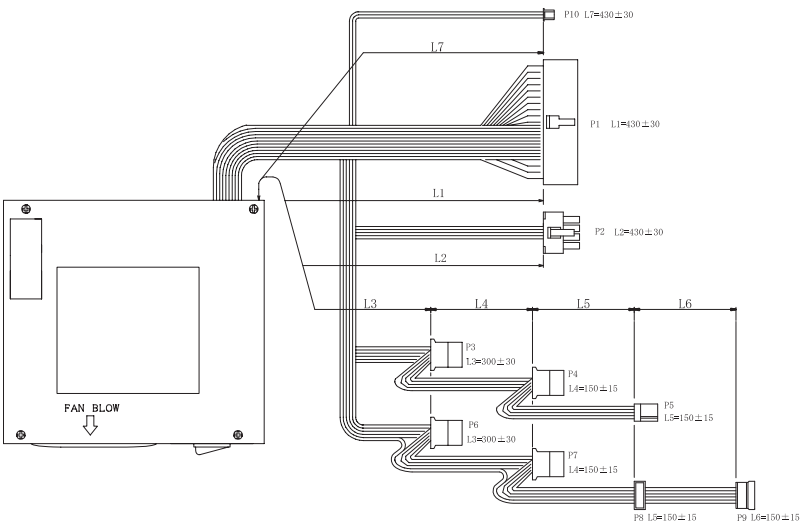
CN NAME	PIN No.	FUNCTION	WIRE COLOR	WIRE TYPE UL1007	CONECTOR TYPE
P1	1	+3.3VDC	ORANGE	AWG#18	Housing:CP-01120030(CviLux) Contact:CP-01100102(CviLux) or equivalent
	2	+3.3VDC	ORANGE		
	3	COM	BLACK		
	4	+5VDC	RED		
	5	COM	BLACK		
	6	+5VDC	RED		
	7	COM	BLACK		
	8	PWR-OK	GRAY	AWG#20	
	9	+5V SB	VIOLET	AWG#18	
	10	+12VDC	YELLOW		
	11	+12VDC	YELLOW		
	12	+3.3VDC	ORANGE	AWG#18	Terminal:CP-01100105 (CviLux)
	13	+3.3VDC Sense	ORANGE	AWG#22	
	14	-12VDC	BLUE	AWG#18	
	15	COM	BLACK		
	16	PS-ON	GREEN	AWG#20	
	17	COM	BLACK	AWG#18	
	18	COM	BLACK		
	19	NC	-		
	20	+5VDC	RED		
P2	1	COM	BLACK	AWG#18	Housing:CP-0114030(CviLux) Contact:CP-01100102(CviLux) or equivalent
	2	COM	BLACK		
	3	+12VDC	YELLOW		
	4	+12VDC	YELLOW		
P3 P4 P6 P7	1	+12VDC	YELLOW	AWG#18	Housing: LCP-04(JST) Terminal: SLC22T-2,0(JST) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	+5VDC	RED		
P5	1	+5VDC	RED	AWG#22	Housing:171822-4(AMP) Terminal:170204-1(AMP) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	+12VDC	YELLOW		
P8 P9	Wire 1	+12VDC	YELLOW	AWG#18	P8 Housing:C194PF1A1A0 (CviLux) Cover:C194PFIC010 (CviLux) P9 Housing:C194PF00100 (CviLux) Terminal:C194T03APP0 (CviLux) or equivalent
	Wire 2	COM	BLACK		
	Wire 3	+5VDC	RED		
	Wire 4	COM	BLACK		
	Wire 5	+3.3VDC	ORANGE		
P10	1	FAN M	BROWN	AWG#22	Housing:XAP-02V-1(JST) Contact:SXA-001T-P0.6(JST)
	2	COM	BLACK		

Output Harness (PCSA-370P-X2S1)



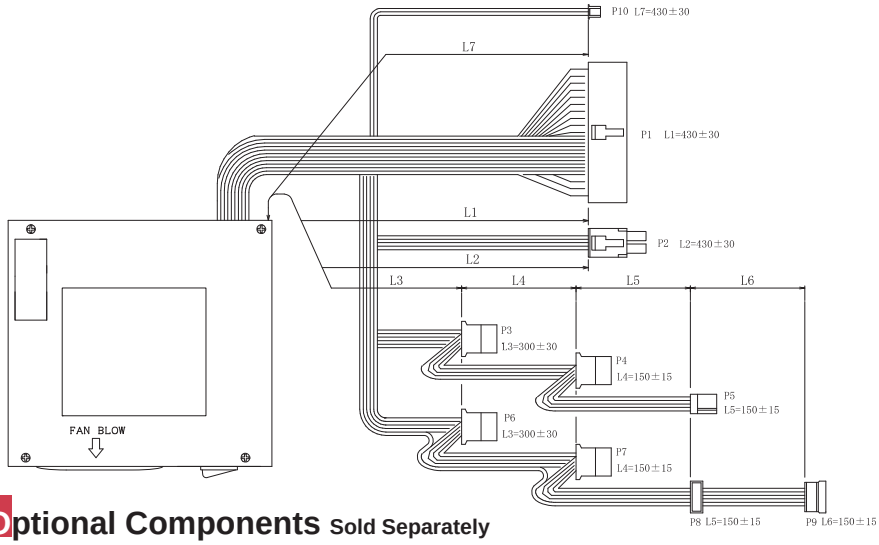
CN NAME	PIN No.	FUNCTION	WIRE COLOR	WIRE TYPE UL1007	CONECTOR TYPE
P1	1	+3.3VDC	ORANGE	AWG#18	Housing:CP-01124030(CviLux) Contact:CP-01100102(CviLux) or equivalent
	2	+3.3VDC	ORANGE		
	3	COM	BLACK		
	4	+5VDC	RED		
	5	COM	BLACK		
	6	+5VDC	RED		
	7	COM	BLACK		
	8	PWR-OK	GRAY	AWG#20	
	9	+5V SB	VIOLET	AWG#18	
	10	+12VDC	YELLOW		
	11	+12VDC	YELLOW		
	12	+3.3VDC	ORANGE	AWG#18	Terminal:CP-01100105 (CviLux)
	13	+3.3VDC Sense	ORANGE	AWG#22	
	14	-12VDC	BLUE	AWG#18	
	15	COM	BLACK		
	16	PS-ON	GREEN	AWG#20	
	17	COM	BLACK	AWG#18	
	18	COM	BLACK		
	19	COM	BLACK		
	20	NC	-		
	21	+5VDC	RED		
	22	+5VDC	RED		
	23	+5VDC	RED		
	24	COM	BLACK		
P2	1	COM	BLACK	AWG#18	Housing:CP-0114030(CviLux) Contact:CP-01100102(CviLux) or equivalent
	2	COM	BLACK		
	3	+12VDC	YELLOW		
	4	+12VDC	YELLOW		
P3 P4 P6 P7	1	+12VDC	YELLOW	AWG#18	Housing: LCP-04(JST) Terminal: SLC22T-2,0(JST) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	+5VDC	RED		
P5	1	+5VDC	RED	AWG#22	Housing:171822-4(AMP) Terminal:170204-1(AMP) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	+12VDC	YELLOW		
P8 P9	Wire 1	+12VDC	YELLOW	AWG#18	P8 Housing:C194PF1A1A0 (CviLux) Cover:C194PFIC010 (CviLux) P9 Housing:C194PF00100 (CviLux) Terminal:C194T03APP0 (CviLux) or equivalent
	Wire 2	COM	BLACK		
	Wire 3	+5VDC	RED		
	Wire 4	COM	BLACK		
	Wire 5	+3.3VDC	ORANGE		
P10	1	FAN M	BROWN	AWG#22	Housing:XAP-02V-1(JST) Contact:SXA-001T-P0.6(JST)
	2	COM	BLACK		
P11	1	+12VDC	YELLOW	AWG#18	Housing:45559-0002 (Molex) Terminal:5556 (Molex)
	2	+12VDC	YELLOW		
	3	+12VDC	YELLOW		
	4	COM	BLACK		
	5	COM	BLACK		
	6	COM	BLACK		

Output Harness (PCSA-370P-X2S3)



CN NAME	PIN No.	FUNCTION	WIRE COLOR	WIRE TYPE UL1007	CONECTOR TYPE
P1	1	+3.3VDC	ORANGE	AWG#18	Housing:CP-01124030(CviLux) Contact:CP-01100102(CviLux) or equivalent
	2	+3.3VDC	ORANGE		
	3	COM	BLACK		
	4	+5VDC	RED		
	5	COM	BLACK		
	6	+5VDC	RED		
	7	COM	BLACK		
	8	PWR-OK	GRAY	AWG#20	
	9	+5V SB	VIOLET	AWG#18	
	10	+12VDC	YELLOW		
	11	+12VDC	YELLOW		
	12	+3.3VDC	ORANGE	AWG#18	Terminal:CP-01100105 (CviLux)
	13	+3.3VDC Sense	ORANGE	AWG#22	
	14	-12VDC	BLUE	AWG#18	
	15	COM	BLACK		
	16	PS-ON	GREEN	AWG#20	
	17	COM	BLACK	AWG#18	
	18	COM	BLACK		
	19	COM	BLACK		
	20	NC	-		
	21	+5VDC	RED		
	22	+5VDC	RED		
	23	+5VDC	RED		
	24	COM	BLACK		
P2	1	COM	BLACK	AWG#18	Housing:CP-0118030(CviLux) Contact:CP-01100102(CviLux) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	COM	BLACK		
	5	+12VDC	YELLOW		
	6	+12VDC	YELLOW		
	7	+12VDC	YELLOW		
	8	+12VDC	YELLOW		
P3 P4 P6 P7	1	+12VDC	YELLOW	AWG#18	Housing: LCP-04(JST) Terminal: SLC22T-2,0(JST) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	+5VDC	RED		
P5	1	+5VDC	RED	AWG#22	Housing:171822-4(AMP) Terminal:170204-1(AMP) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	+12VDC	YELLOW		
P8 P9	Wire 1	+12VDC	YELLOW	AWG#18	P8 Housing:C194PF1A1A0 (CviLux) Cover:C194PFIC010 (CviLux) P9 Housing:C194PF00100 (CviLux) Terminal:C194T03APP0 (CviLux) or equivalent
	Wire 2	COM	BLACK		
	Wire 3	+5VDC	RED		
	Wire 4	COM	BLACK		
	Wire 5	+3.3VDC	ORANGE		
P10	1	FAN M	BROWN	AWG#22	Housing:XAP-02V-1(JST) Contact:SXA-001T-P0.6(JST)
	2	COM	BLACK		

Output Harness (PCSA-370P-X2S2)



CN NAME	PIN No.	FUNCTION	WIRE COLOR	WIRE TYPE UL1007	CONECTOR TYPE
P1	1	+3.3VDC	ORANGE	AWG#18	Housing:CP-01124030(CviLux) Contact:CP-01100102(CviLux) or equivalent
	2	+3.3VDC	ORANGE		
	3	COM	BLACK		
	4	+5VDC	RED		
	5	COM	BLACK		
	6	+5VDC	RED		
	7	COM	BLACK		
	8	PWR-OK	GRAY	AWG#20	
	9	+5V SB	VIOLET	AWG#18	
	10	+12VDC	YELLOW		
	11	+12VDC	YELLOW		
	12	+3.3VDC	ORANGE		
	13	3.3V Sense	ORANGE	AWG#18	Terminal:CP-01100105 (CviLux)
		+3.3VDC	ORANGE		
	14	-12VDC	BLUE	AWG#18	
	15	COM	BLACK		
	16	PS-ON	GREEN	AWG#20	
	17	COM	BLACK	AWG#18	
	18	COM	BLACK		
	19	COM	BLACK		
	20	NC	-	-	
	21	+5VDC	RED	AWG#18	Housing:CP-01140301(CviLux)
	22	+5VDC	RED		
	23	+5VDC	RED		
	24	COM	BLACK		
P2	1	COM	BLACK	AWG#18	Housing:CP-01140301(CviLux) Contact:CP-01100102(CviLux) or equivalent
	2	COM	BLACK		
	3	+12VDC	YELLOW		
	4	+12VDC	YELLOW		
P3 P4 P6 P7	1	+12VDC	YELLOW	AWG#18	Housing: LCP-04(JST) Terminal: SLC22T-2.0(JST) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	+5VDC	RED		
P5	1	+5VDC	RED	AWG#22	Housing:171822-4(AMP) Terminal:170204-1(AMP) or equivalent
	2	COM	BLACK		
	3	COM	BLACK		
	4	+12VDC	YELLOW		
P8 P9	ire1	+12VDC	YELLOW	AWG#18	Housing:CI94PFIA1A0 (CviLux) Cover:CI94PFIC010 (CviLux) Housing:CI94PF00100 (CviLux) Terminal:CI94T03APP0 (CviLux) or equivalent
	ire2	COM	BLACK		
	ire3	+5VDC	RED		
	ire4	COM	BLACK		
	ire5	+3.3VDC	ORANGE		
P10	1	FAN M	BROWN	AWG#22	Housing:XAP-02V-1(JST) Contact:SXA-001T-P0.6(JST)
	2	COM	BLACK		

Optional Components Sold Separately

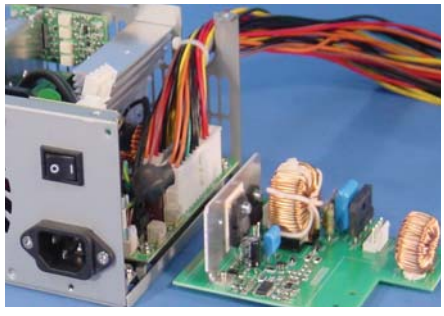
Cable

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

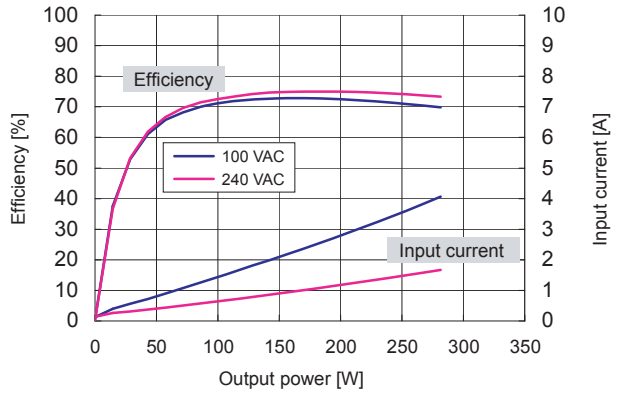
Internal Structure (PCSA-370P-X2S)



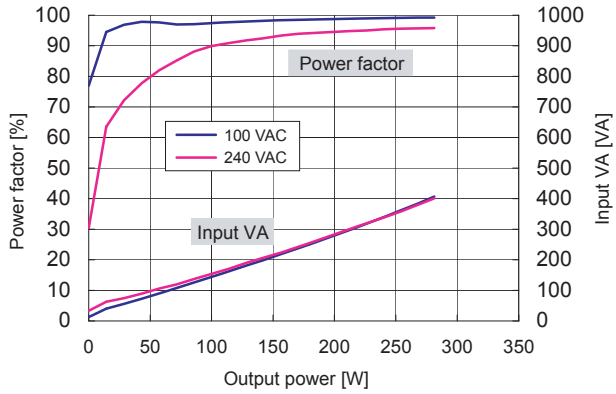
Internal Structure (PCSE-370P-X2S)

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

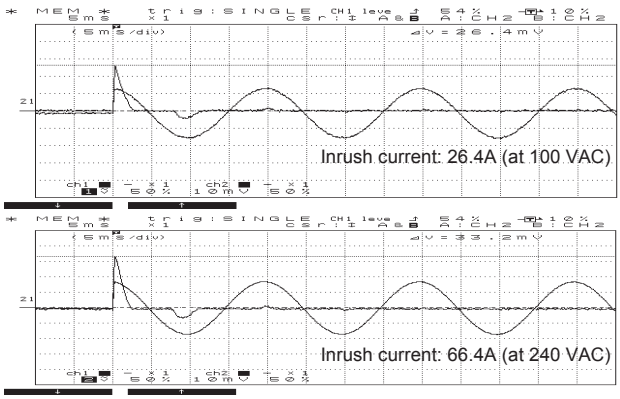
● Fig.5 Efficiency / Input Current vs. Output Power



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



● Fig.7 Inrush Current



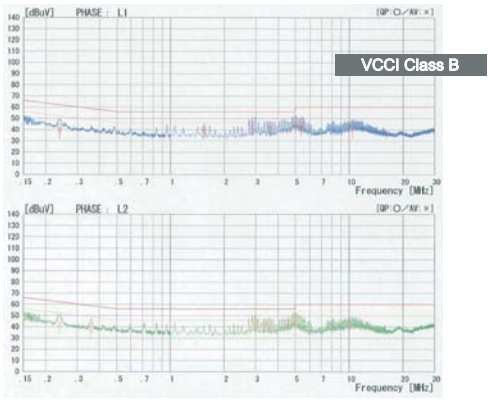
● Fig.8 Leakage Current

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

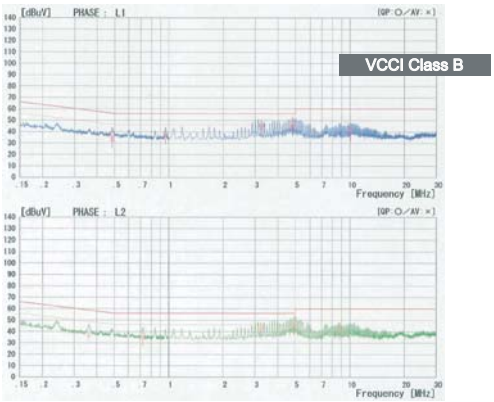
● Fig.9 Conducted Emission at 100 VAC

Input: 100 VAC
Load: Rated
Mode: Peak



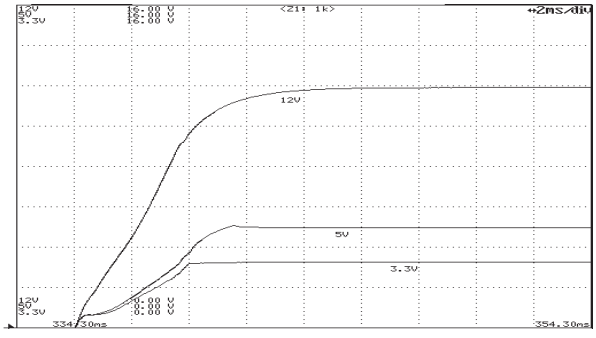
● Fig.10 Conducted Emission at 240 VAC

Input: 240 VAC
Load: Rated
Mode: Peak



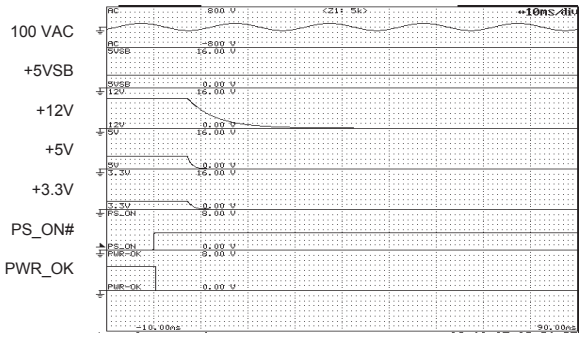
● Fig.11 Rising Characteristics at 100 VAC

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



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

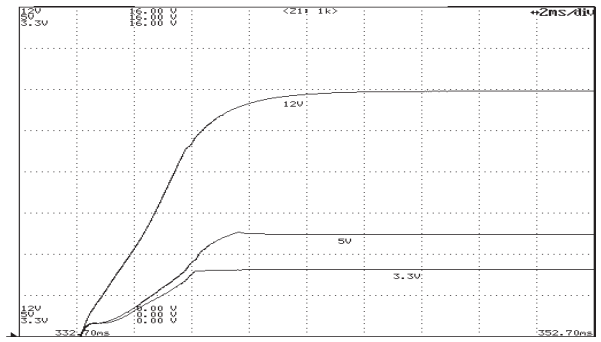
Input: 100 VAC
Load: Rated
Time axis: 10ms/DIV



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

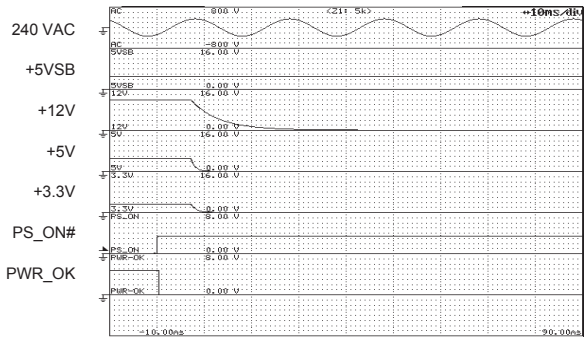
● Fig.13 Rising Characteristics at 240 VAC

Input: 240 VAC
Load: Rated
Time axis: 2ms/DIV



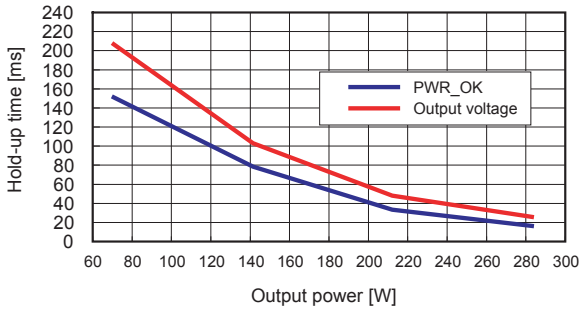
● Fig.14 Falling Characteristics at 240 VAC when REMOTE goes Off

Input: 240 VAC
Load: Rated
Time axis: 10ms/DIV



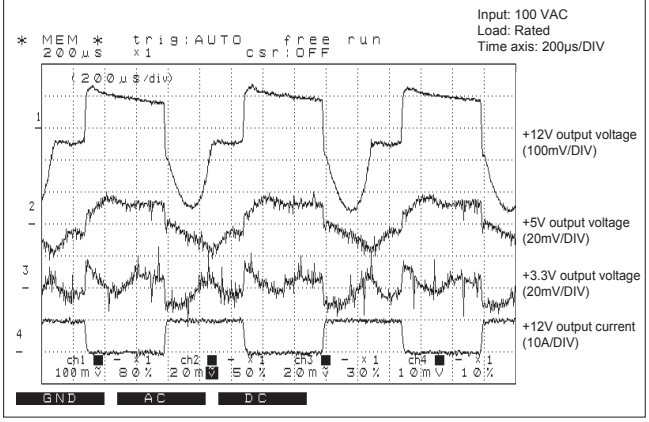
● Fig.15 Output Hold-up Time vs. Output Power

PWR_OK: the point that PWR_OK signal goes to "L"
Output voltage: the point any output voltage decreases to 95% except +5VSB



● Fig.16 Dynamic Load Fluctuation Characteristics at 1kHz

Input: 100 VAC
Load: Rated
Time axis: 200μs/DIV



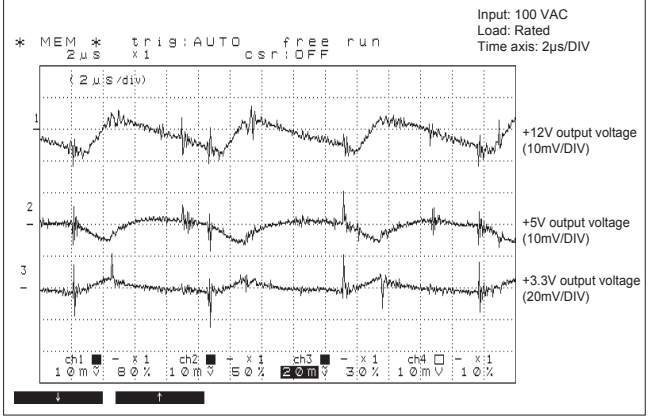
● Fig.17 Output Voltage Regulation

Output	Min. load	Rated load	Peak load
+12V output	0A	10A	18A
+5V output	1A	20A	21A
+3.3V output	0A	15A	17A

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

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



● Fig.19 Ambient Temperature vs. Expected Service Life

■ Electrolytic capacitors

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

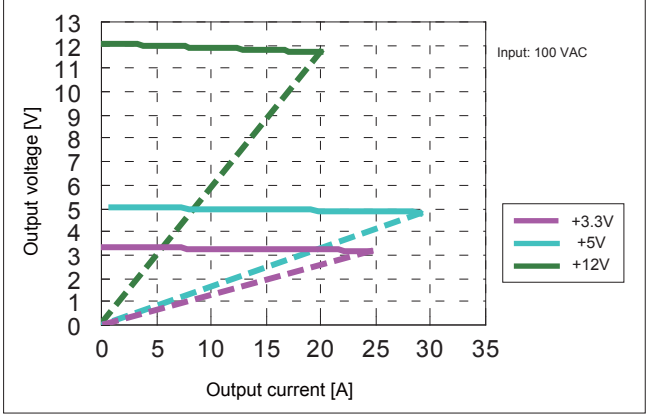
Intake air temp.	20°C	30°C	40°C
Expected service life (yr)	approx. 17	approx. 8.9	approx. 4.5

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

■ Fan

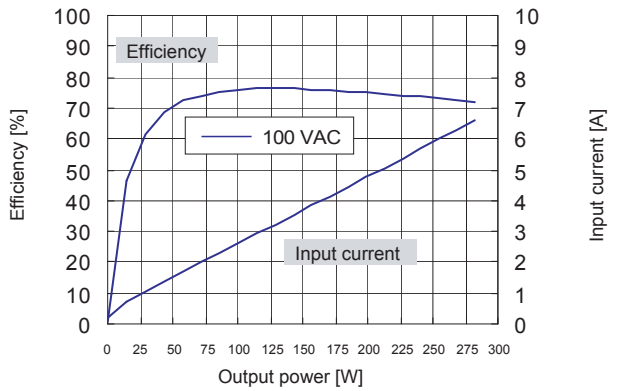
Ambient temp.	20°C	30°C	40°C
Expected service life (yr)	approx. 11	approx. 11	approx. 11

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

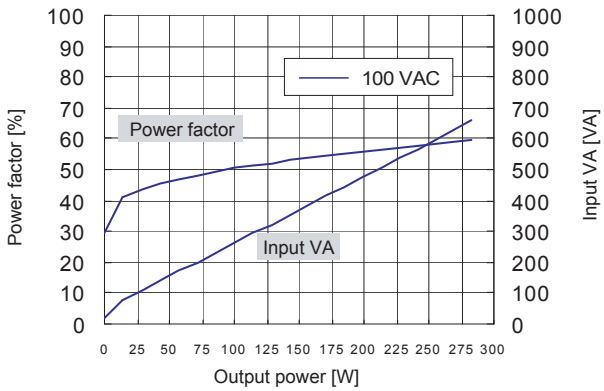


Characteristics Data PCSE-370P-X2S (Examples of actual measurement)

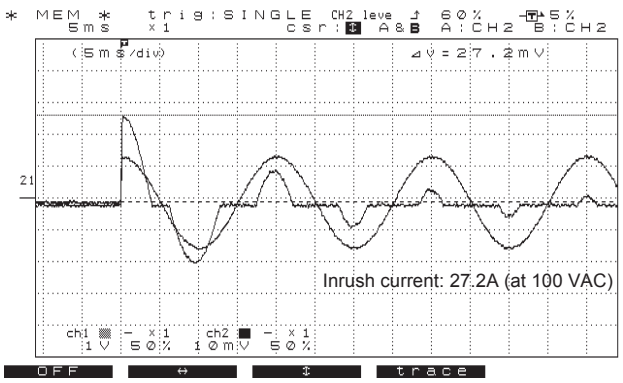
● Fig.21 Efficiency / Input Current vs. Output Power



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



● Fig.23 Inrush Current



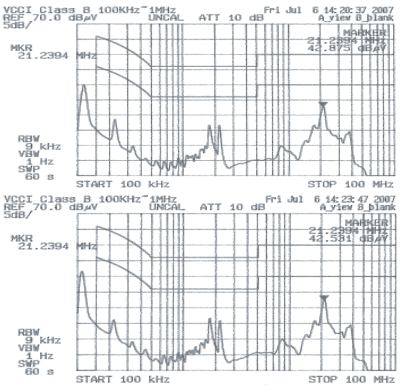
● Fig.24 Leakage Current

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

Input: 100 VAC
Load: Rated
Mode: AV



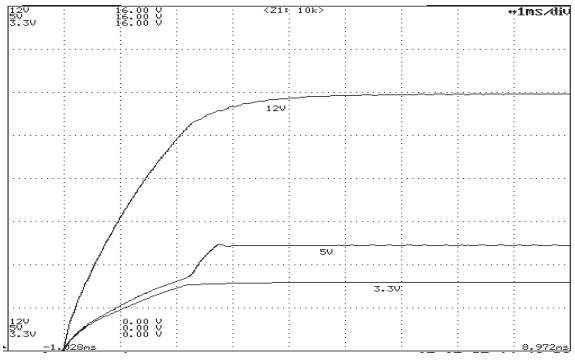
Measuring point: L-FG

Measuring point: N-FG

In-house measurement data

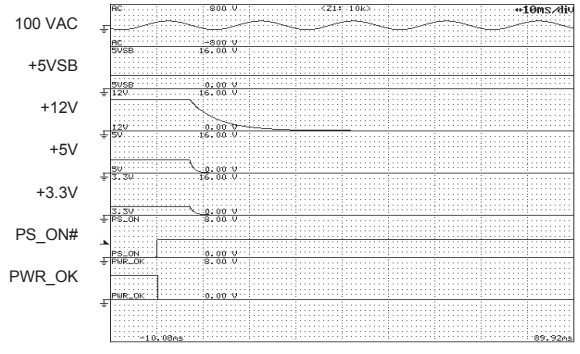
● Fig.26 Rising Characteristics at 100 VAC

Input: 100 VAC
Load: Rated
Time axis: 1ms/DIV



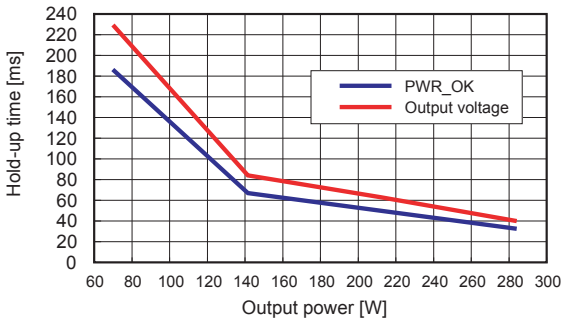
● Fig.27 Falling Characteristics at 100 VAC when REMOTE goes Off

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



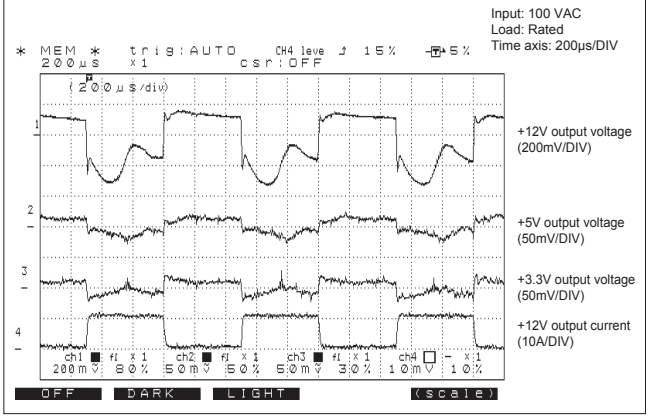
● Fig.28 Output Hold-up Time vs. Output Power

PWR_OK: the point that PWR_OK signal goes to "L"
Output voltage: the point any output voltage decreases to 95% except +5VSB



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

● Fig.29 Dynamic Load Fluctuation Characteristics at 1kHz

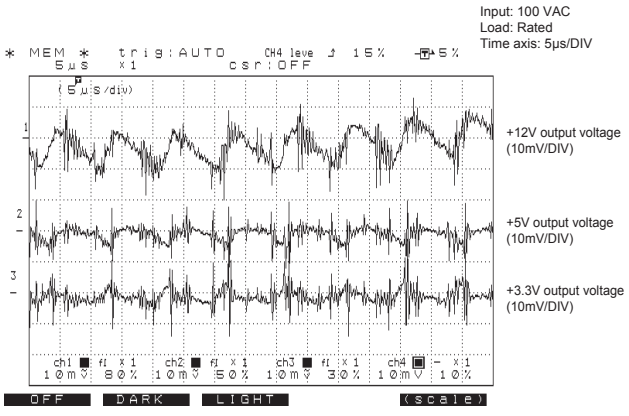


● Fig.30 Output Voltage Regulation

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)