

The specifications apply to the integrated type direct current stabilization power supply unit: Type NSP2-250-D2S. This unit supplies the direct current output at the AC input service interruption by connecting the specific battery packs (PS2538, PS2565, PS2538L, PS2565L and PS2571)* sold separately.

General specifications (In case no instruction is given, the conditions are at room temperature and room humidity.)

Item		Specifications	Measuring conditions, etc.
AC input	Rated input voltage	AC100-240V	Wide range
	Input voltage range	AC85-264V	
	Rated frequency	50 / 60 Hz	Permissible range 47 - 63Hz
	Inrush current	50Apeak or less (AC 100V), 100Apeak or less (AC 240V)	At rated output, at cold start
	Input capacity	375VA or less	
	Efficiency	68% typ(AC100V), 70% typ(AC240V)	Rated output, in battery full-charged
	Power factor	98% typ(AC100V), 94% typ(AC240V)	
DC input	Rated input voltage	DC24V	Battery nominal voltage value
	Input voltage permissible range	DC20-32V	
	Input capacity	360W or less	
	Efficiency	70% typ	at rated in/outputs
Environmental specifications	Room temperature	0-50 °C	Temperature gradient 15°C/H
	Storage temperature	-25 - 70°C	Temperature gradient 15 °C /H
	Relative humidity	In operation 10 - 90%, non-operation 10 - 95%	No condensation
	Vibration	At amplitude 0.15mm, frequency 10 - 55Hz, sweep cycle 10, to be endurable for 45 minutes to directions of X, Y, and Z.	Conforms to JIS-C-0040-1995
	Shock	At acceleration 150m/s ² , shock affecting time 11ms, shock is given one time to the directions of X, Y and Z. No malfunction, damage, slack, dislocation are seen.	Conforms to JIS-C-0041-1995
Insulation	Dielectric strength	AC 3kV/sec. in each connection between AC input-FG, DC output and DC input	
	Insulation resistance	50MΩ or more between AC input-DC output · DC input · FG	DC 500V, Room temperature, room humidity
		50MΩ or more between DC input-DC output-FG	
Leak current	0.5mA or less (AC100V)/1mA or less (AC240V)	YEW, equivalent to TYPE3226 (1kΩ)	

Remarks
 * Note) Consult previously when the batteries other than the specific battery pack are used. Other types of batteries may occur the liquid leakage, bursting and fire.

出図

（株）ニプロン技管

made by	N. Yamamoto	inspected by	MATSU SHITA	approved by	Y. Matsu bara	Product type:	NSP2-250-D2S	DWG No.	2569-01-4-520
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Nihon Protector Co., Ltd

Due to the technical improvement, the specifications and functions are subject to change without notice.

Item		Specifications	Measuring conditions, etc.
others	Line noise strength	Impulse +/-2kV, cycle 10-50ms (pulse width 100, 800ns)	In the range of DC output specifications and no malfunction occurs.
	Shock voltage strength	+/-4kV in common mode (L-FG, N-FG) is impressed 5 times at 0° , 90° , and 270° . No abnormal condition is found.	Conforms to IEC-1000-4-5
	Input feedback noise, radiant noise	To satisfy VCCI class A, FCC limit class A and EN55022 limit class A	Measured in the condition of being installed in our PC for EMC measurement
	High harmonic wave current regulation	To satisfy IEC 1000-3-2 class A, EN61000-3-2 class A	In operation at the rated in/outputs
	Safety regulation	UL1950, CSA C22.2 No.234 IEC950, EN60950(T Ü V)	
	Cooling system	Compulsory cooling (integrated fan motor with alarm)	Alarm signal outputs at the fan stop
	Product quality grade	FA	Conforms to our regulations
	Warranty period	5 years after delivery. Repair or replacement at no cost when defect is found due to the manufacturer's fault.	To be used under the room temperature and room humidity
Remarks			

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Output specifications (In case no instruction is given, the conditions are at room temperature and room humidity.)									
Item	CH1	CH2	CH3	CH4	CH5	CH6(5Vs)	Measuring conditions, etc.		
Output Rating	Rated voltage (V)	5	3.3	12	-5	-12	5		
	Rated current (A)	20	10	7	0.5	0.5	1		
	Peak current (A)	23	10	12	0.5	0.5	1		
	Minimum current (A)	1.5	0	0	0	0	0	Minimum load current to satisfy the constant voltage accuracy	
	Maximum output power (W)	Total capacity 133W or less		Total capacity 217W or less		2.5	6	5	Total output 230.5W or less
Output characteristics	Output voltage setting at	Voltage (V)	5.05	3.3	12.0	-5.0	-12.0	5.05	At rated input (3 terminals regulator is used for -5V and -12V outputs)
		Accuracy (%)	+/-1	+/-1	+/-3	-	-	-	
		Current (A)	10	4	5	0.5	0.5	0.5	
	Total voltage accuracy (%)	+/-4 or less	+/-4 or less	+/-4 or less	+/-5 or less	+/-5 or less	+/-5 or less	+/-5 or less	Sum total of temperature fluctuation, input fluctuation and load fluctuation
	Maximum ripple voltage (mV p-p)	50 or less	50 or less	100 or less	50 or less	100 or less	50 or less	50 or less	Lead wire is pulled out of the output connector and 47uF condenser is equipped for measurement.
	Maximum spike voltage (mV p-p)	100 or less	100 or less	200 or less	100 or less	200 or less	100 or less	100 or less	
	Dynamic load fluctuation (mV)	100 or less	100 or less	Rated auto (self) output, +12V output only varies to/from 50 - 100%. Other outputs are of the rated values.					
	Over current protection (A)	23 or more Note1)	13 or more Note2)	13 or more	Short circuit protection	Short circuit protection	Short circuit protection	Other outputs are of the rated loads. All outputs stop at the over-current protection operation of CH1, 2, 3.	
	Return	Input recharge	Input recharge	Input recharge	Auto return	Auto return	Auto return		
	Over voltage protection (V)	6.0-7.0	3.8-4.3	14-15.6	-	-	-	To be returned by the AC input recharge	
	Starting time	Within 100ms						Period that the output voltage rises from 10% to 90%	
	Charge voltage, current	27.3V typ (temperature 25°C at no load), 0.5+/-0.2A (battery voltage at 24V)						Specific for lead sealed battery	
Over discharge prevention (V)	17+/-1 or less (battery circuit shut down)								
Remarks									
Note 1) , Note 2) When other outputs are out of the rated loads, total current value of CH1 and CH2 should be 33A or more.									

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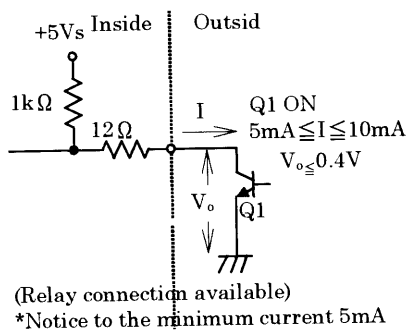
made by	N. Yamamoto	inspected by	MATSU SHITA	approved by	Y. Matsu bara	Product type:	NSP2-250-D2S	DWG No.	2569-01-4-520
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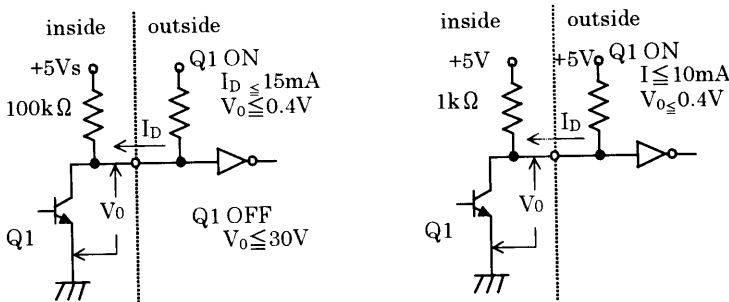
Signal in/output specifications		(In case no instruction is given, the conditions are at room temperature and room humidity.)
Item		Specifications
Input	Output ON/OFF control (REMOTE ON/OFF)	At the 'H' or 'OPEN' inputs, CH1 - 5 outputs stop.
	Battery shut down (SHUT DOWN)	At the 'L'(P12) or 'Positive (+2.4V or more)' (DSUB) inputs, battery connection is shut down. (effective only at the battery back-up operation)
	Operation switch control (BATT CHECK)	At 'L' input, AC inverter compulsorily stops and to be switched to DC operation for the dummy service interruption.
Output	+5Vs	5V +/-5%, 1Amax. Short circuit protection (To be output regardless the remote ON/OFF signal.)
	Output correct signal (POWER GOOD)	When CH1 (+5V) output is correct, 'H' signal is output. (Detect delay time: 200-350mS)
	Service interruption detect signal (AC FAIL)	At AC input voltage drop and service interruption detection, 'H'(P12) or 'Negative (-9Vtyp)' (DSUB) are output. Detect voltage: 80Vtyp, Detect delay time: after AC input shut down 20 - 40mS.
	Battery voltage drop signal (BATT LOW)	'H'(P12) or 'Negative(-9Vtyp)' (DSUB) are output when the battery terminal voltage drops to 19.3 +/-0.5V. (In the battery disconnection condition, 'H' signal is not output.)
	Fan alarm signal (FAN ALARM)	When fan lock stop condition continues, short form wave is continuously output.

Signal Input Circuit



Signal Output Circuit

(AC FAIL, BATT LOW, FAN ALARM) (POWER GOOD)



Sequence signal pin arrangement

CN No.	Pin No.	Cable color	Signal
P12	1	Black	COM
	2	Yellow	SHUT DOWN
	3	Blue	AC FAIL
	4	White	BATT LOW
	5	ORANGE	BATT CHECK
	6	Purple	FAN ALARM
P1	1-7	Refer to cable specifications	
	8	Orange	POWER GOOD
	9	Yellow	+5Vs
	10-20	Refer to cable specifications	
DSUB	1	-	BATT LOW
	4	-	SHUT DOWN
	8	-	AC FAIL

DSUB is equivalent to JEC-9P(Nippon Acchaku)
DSUB signal is equivalent to the ADM232AARN (Analog Devices)
GND is common to power output GND.

Remarks

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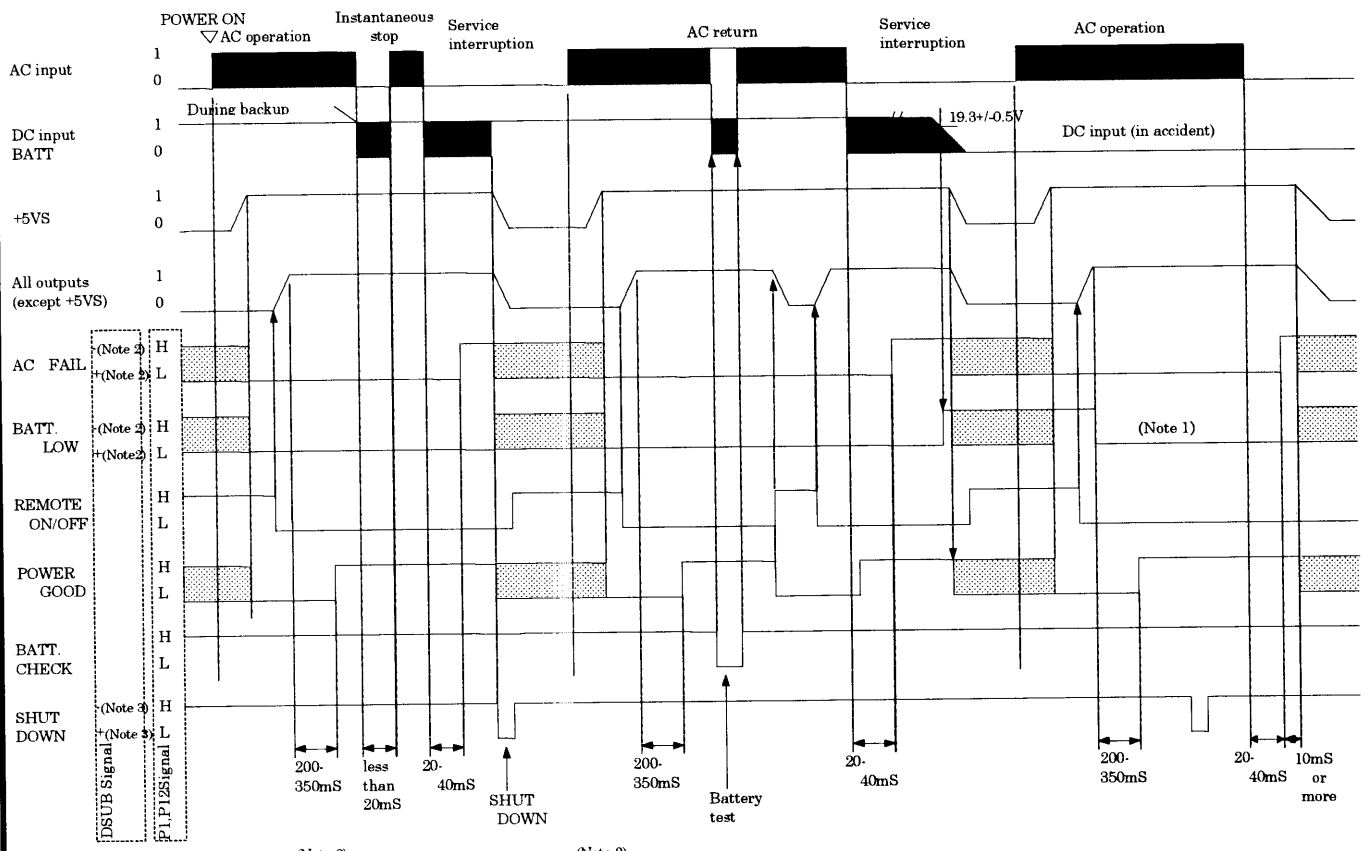
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Signal in/outputs specifications

(In case no instruction is given, the conditions are at room temperature and room humidity.)

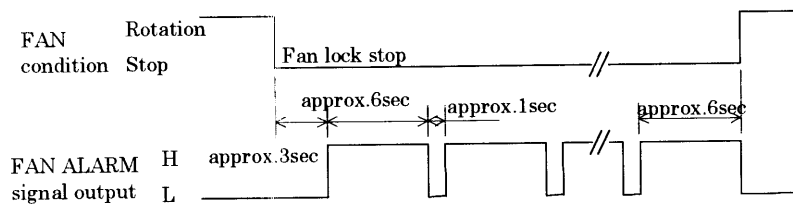


- (Note 1) BATT LOW is not output because of charge output.
- (Note 2) Negative(-) signal output -9Vtyp
Positive(+) signal output +9Vtyp
- (Note 3) Negative(-) signal output +0.4V to -30Vtyp
Positive(+) signal output +2.8 to +30Vtyp

is indeterminate area.

(Fan alarm signal output specifications)

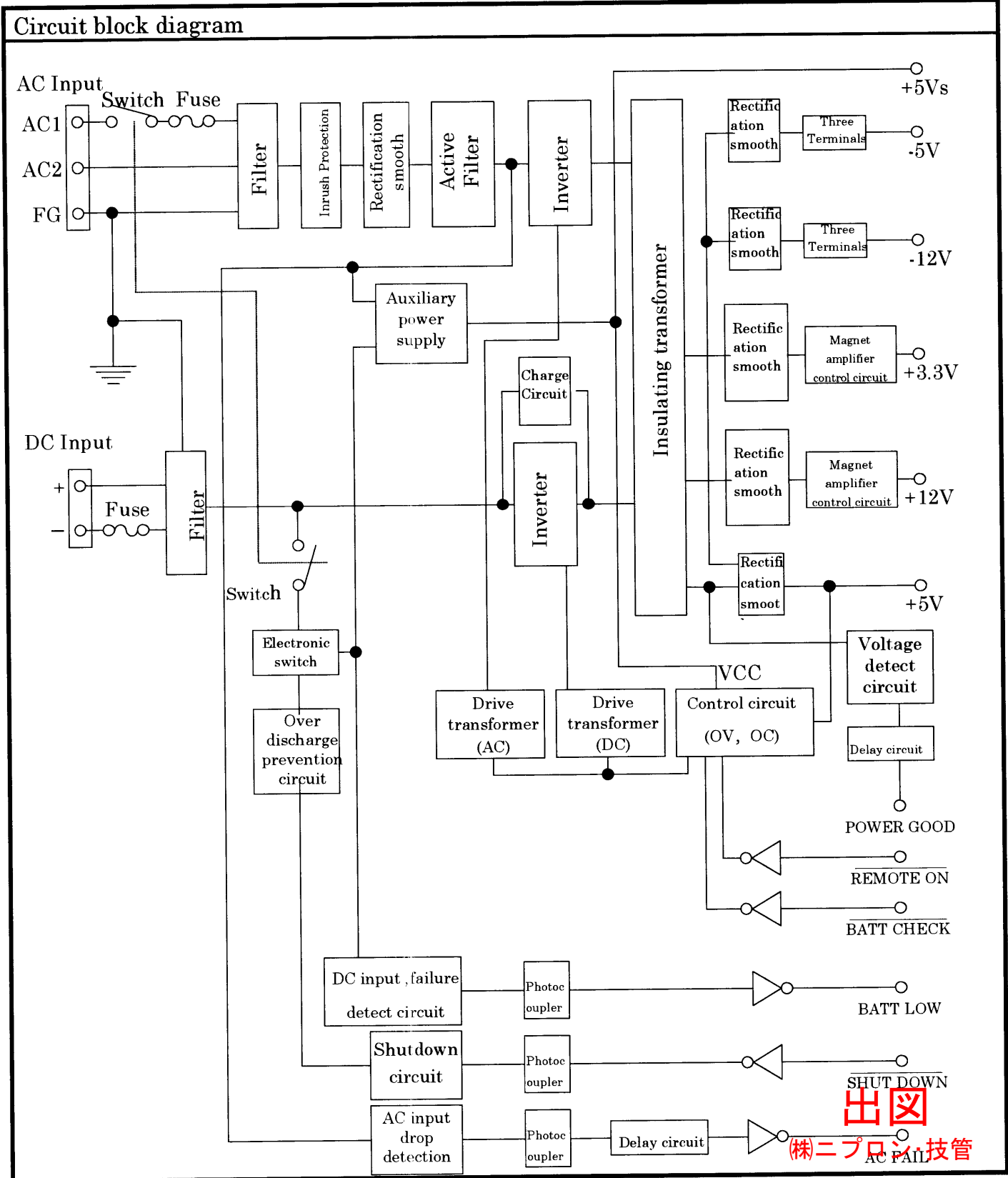
When fan lock stop condition continues, the following short form wave is continuously output (at ON input of the remote ON/OFF signal).



Remarks

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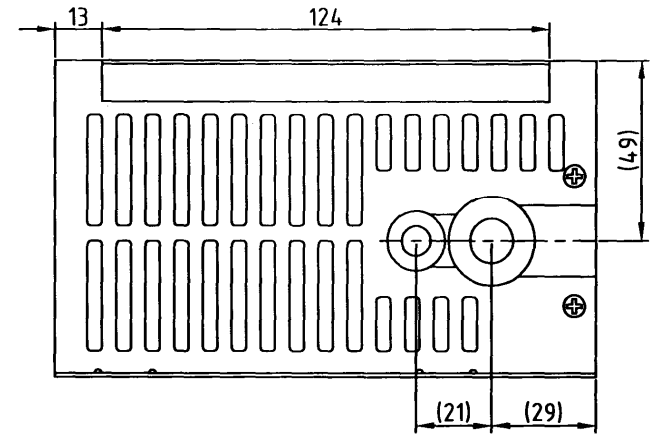
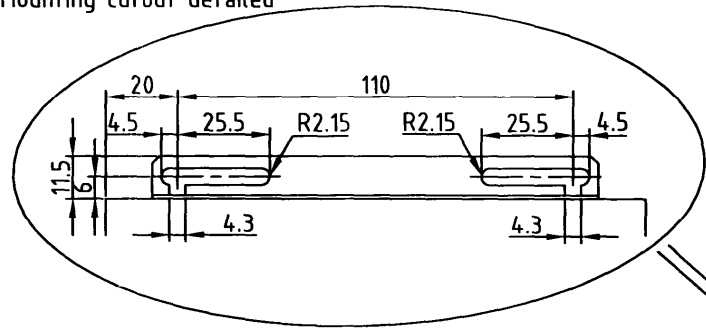
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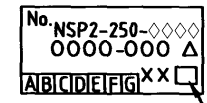
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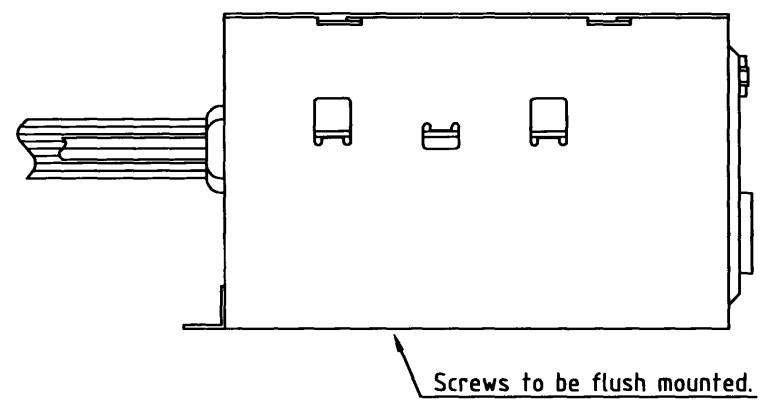
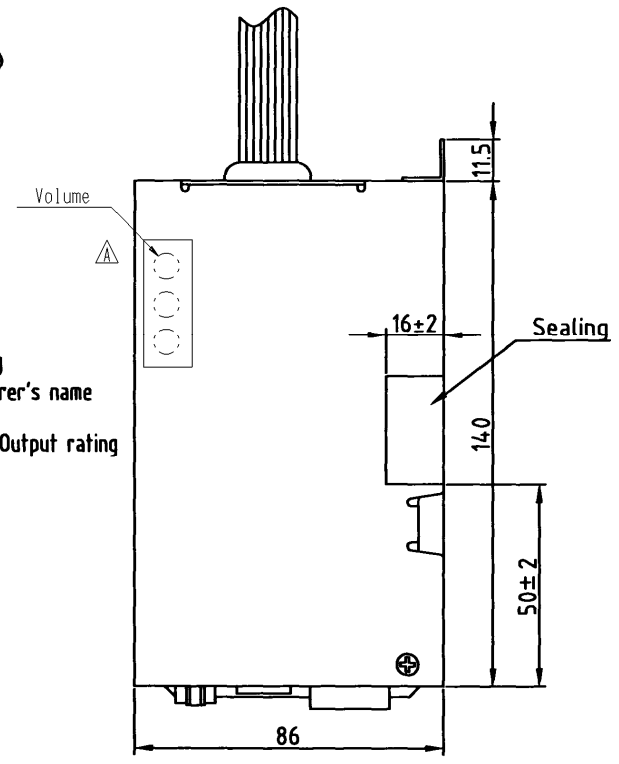
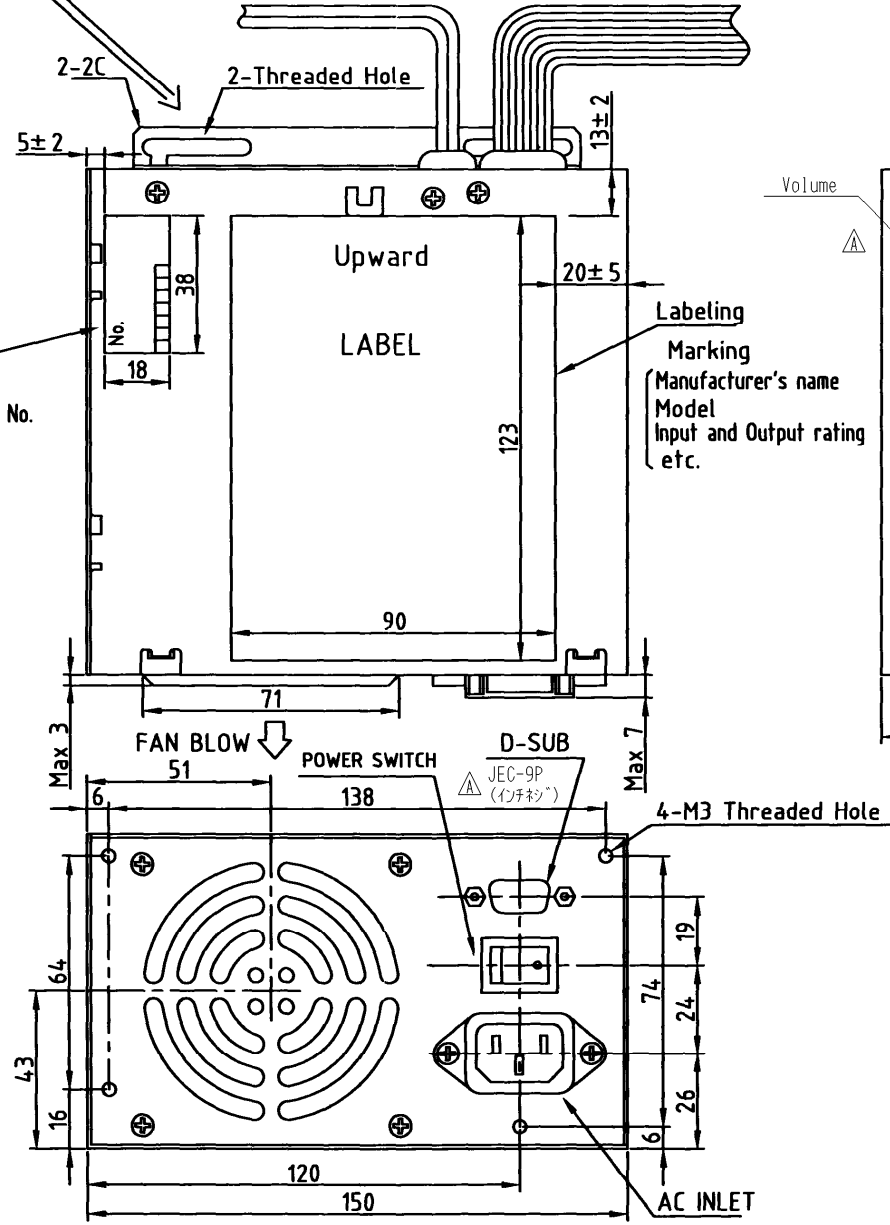
Mounting cutout detailed



NAME	TYPE
AC INLET	IEC360 type
POWER SWITCH	SJ-W2F4A-01BB2(ECHO), or equivalent
FAN	DC12V 80□



0000-000 Manufacturing No.
XX Date
△ "Non marked"...Manufactured at MDF
"H"...Manufactured at HDF
◇◇◇◇ Product form



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(株)ニプロン・技管

A版 △×3:2001.11.28 Tsuchida I-131126

Tolerances; ± 0.5, unless otherwise noted.

DRAWN BY	CHECKED BY	APPROVED BY	SCALE	MATERIALS	TITLE	DRAWING No.
Yodo	MATSU SHITA	Y. Matsu bara	UNITS m/m			
ISSUED	2000. 5. 31		3RD ANGLE PROJECTION	FINISH	NSP2-250-D2S	2569-01-3-556