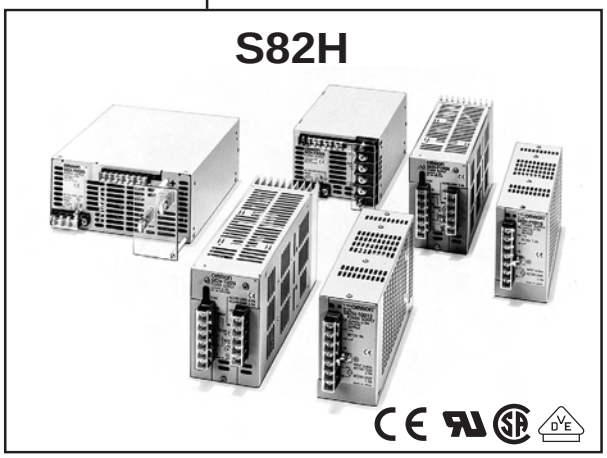
Switching Power Supply
S82H/S82H-3

World Class Power Supplies with Wide Input Voltage Range.

S82H Series

S82H



Industrial Power Supply with Power Factor Correction

S82H-3

Used with Both 100 and 200 VAC Input Voltages

Contents

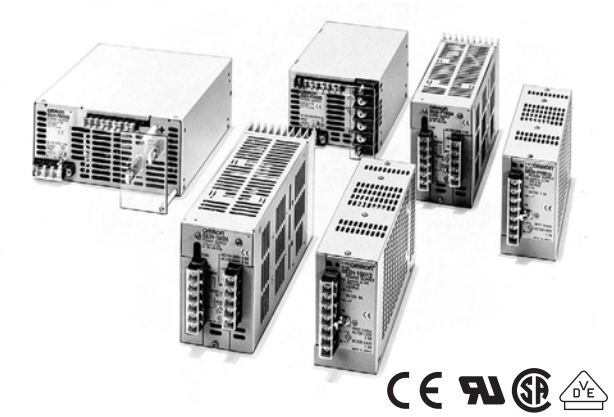
S82H..... 2
S82H-3..... 20

OMRON

Switching Power Supply
S82H

Industrial Power Supply with Power Factor Correction

- Meets EN61000-3-2 (limits for harmonic current emissions) with PFC on 100 to 600 W.
- Suitable for universal usage, conforming to EN50081-1 (Non-PFC models).
- Power range from 100 to 600 W.
- Wide AC input voltage range:
  100 to 240 VAC (S82H-P□□□□□)
  100 or 200 VAC (selected automatically)
  (S82H-□□□□□)
- UL, CSA, and VDE approval.
- IEC (EN) safety approval.
- EMC approval.
- Three-year guarantee
- Long life expectancy: 10 years min.
- Six language instruction manual provided. (English, French, German, Italian, Spanish, and Japanese)



Model Number Structure

■ Model Number Legend

S82H - □ □□□ □□

1 **2** **3**

1. Power Factor Correction
None: No
P: Yes

2. Output Capacity
100: 100 W
150: 150 W
300: 300 W
600: 600 W

3. Output Voltage
05: 5 V
12: 12 V
15: 15 V
24: 24 V

Conversion Table

Conventional model	New model
S82H-3005	S82H-10005
S82H-3012	S82H-10012
S82H-3024	S82H-10024
S82F-1512	S82H-15012
S82F-1524	S82H-15024

Ordering Information

■ List of Models

PFC	Output capacity	Output voltage	Output current	Models
No	100 W	5 V	20 A	S82H-10005
		12 V	9 A	S82H-10012
		15 V	7.2 A	S82H-10015
		24 V	4.6 A	S82H-10024
	150 W	5 V	30 A	S82H-15005
		12 V	13.5 A	S82H-15012
		15 V	10 A	S82H-15015
		24 V	7 A	S82H-15024
Yes	100 W	5 V	20 A	S82H-P10005
		12 V	9 A	S82H-P10012
		15 V	7.2 A	S82H-P10015
		24 V	4.6 A	S82H-P10024
	150 W	5 V	30 A	S82H-P15005
		12 V	13.5 A	S82H-P15012
		15 V	10 A	S82H-P15015
		24 V	7 A	S82H-P15024
	300 W	5 V	60 A	S82H-P30005
		12 V	27 A	S82H-P30012
		15 V	20 A	S82H-P30015
		24 V	14 A	S82H-P30024
	600 W	5 V	120 A	S82H-P60005
		12 V	53 A	S82H-P60012
		15 V	40 A	S82H-P60015
		24 V	27 A	S82H-P60024

■ Accessories (Order Separately)

Applicable power supply	Bottom-mounting	Side-mounting	Front-mounting Back-mounting	Fan	Terminal Expansion Bracket
S82H-□100□□	S82Y-H10B	S82Y-H10S	S82Y-H10F	---	---
S82H-□150□□	S82Y-F15B	S82Y-F15S	---	---	---
S82H-P300□□	S82Y-D30B	S82Y-D30S	---	S82Y-DFAN	---
S82H-P600□□	S82Y-D60B	S82Y-D60S	---	S82Y-DFAN	S82Y-D60T

Specifications

■ Ratings/Characteristics

Item			PFC					
			No		Yes			
			100 W	150 W	100 W	150 W	300 W	600 W
Efficiency			70% to 86% (depending on the model)					
Life expectancy (see note 1.)			10 years min. in standard installation conditions at 40°C at the rated input with 50% load.					
Input	**Voltage**		100 to 120 VAC/200 to 240 VAC (selected automatically) (85 to 132 VAC/170 to 264 VAC)		100 to 240 VAC (85 to 264 VAC)			
	Frequency		47 to 450 Hz		47 to 63 Hz			
	Current	**100-VAC input**	2.5 A max.	4 A max.	1.7 A max.	2.5 A max.	5 A max.	10 A max.
		200-VAC input	1.5 A max.	2.5 A max.	0.85 A max.	1.3 A max.	2.5 A max.	5 A max.
	Leakage current (See note 2.)	**100-VAC input**	0.5 mA max.				0.75 mA max.	1 mA max.
		200-VAC input	1 mA max.				1.5 mA max.	2.0 mA max.
	Inrush current (See note 2.)	**100-VAC input**	25 A max.					
		200-VAC input	50 A max.					
	Power factor		0.5 to 0.7 (depending on the model)		0.95			
Output	**Voltage adjustment range**		±10% (adjustable with variable resistor (V.ADJ))					
	Ripple		2% (p-p) max.					
	Input variation influence		0.4% max. (at 85- to 132-VAC/170- to 264-VAC input, 100% load)					
	Load variation influence		0.8% max. (with rated input, 0 to 100% load)					
	Temperature variation influence		0.05%/°C max. (with rated I/O at an ambient temperature range between 0°C to 50°C)		0.05%/°C max. (with rated I/O at an ambient temperature range between 0°C to 40°C)			
	Startup time		0.8 s max. (Up to 90% of the rated voltage under rated input.)		1 s max. (Up to 90% of the rated voltage under rated input.)			
	Hold time		20 ms min.					
Additional function	**Overload protection**		105% max. of rated load current, inverted L drop type, automatic reset				105% max. of rated load current, inverted L drop type, automatic reset (output shut off after 5 s, reset by input reset)	
	Overvoltage protection		120% of rated output voltage (typical), shutoff type, input reset					
	Parallel operation		No	Yes, 5 Units max.	No	Yes, 5 Units max.	Yes, 2 Units max.	
	Series operation		Yes					
	Remote sensing		Yes					
	Remote control		No	Yes	No	Yes		
	Remote voltage adjustment		Yes					
	Cooling method		Natural air-cooling used				Forced air-cooling with built-in fan	
	Fan alarm function		No				Yes	

Item		PFC					
		No		Yes			
		100 W	150 W	100 W	150 W	300 W	600 W
Other	Ambient temperature	Operating: See the derating curve in the “Engineering Data” section. No condensation or icing. Storage: –25°C to 65°C with no condensation or icing					
	Ambient humidity (operating)	25% to 85%					
	Dielectric strength	3 kVAC, 50/60 Hz for 1 min between all inputs and all outputs with a current leakage of 25 mA max. 2.5 kVAC, 50/60 Hz for 1 min between all inputs and GR terminals with a current leakage of 25 mA max. 1.0 kVAC, 50/50 Hz for 1 min between all outputs and GR terminals with a current leakage of 15 mA max. for each 100-W model, 20 mA max. for each 150-W model, 25 mA max. for each 300-W model, and 50 mA max. for each 600-W model. (See note 3.)					
	Insulation resistance	100 MΩ min. between all outputs and all inputs/GR terminals at 500 VDC (See note 3.)					
	Vibration resistance	Malfunction: 10 to 55 Hz, 0.375-mm single amplitude for 2 hrs each in X, Y, and Z directions					
	Shock resistance	Malfunction: 300 m/s^2 (approx. 30G), 3 times each in ±X, ±Y, and ±Z directions					
	Output indicator	Yes (green)					
	EMC	Emission Enclosure: EN55011 Group 1 class A (PFC models) EN55022 Group 1 class B (Non-PFC models) Emission AC Mains: EN55011 Group 1 class A (PFC models) EN55022 Group 1 class B (Non-PFC models) Immunity ESD: EN61000-4-2: 4 kV contact discharge (level 2) 8 kV air discharge (level 3) Immunity RF-interference: ENV50140: 10 V/m (10 k to 1 GHz) (level 3) Immunity Conducted Disturbance: ENV50141: 10 V (0.15 to 80 MHz) (level 3) Immunity Burst: EN61000-4-4: 2 kV power-line (level 3) 2 kV I/O signal-line (level 4)					
	Limits for harmonic current emission	---		Conforms to EN61000-3-2, IEC1000-3-2			
	EMC standards	Conforms to EN50081-1, EN50082-2		Conforms to EN50081-2, EN50082-2		Conforms to EN50081-2, EN50082-2 (See note 4.)	
	Approved standards	UL1012, CSA E.B. 1402C, VDE 0160, IEC 950, EN 60950					
	Weight	950 g max.	1,800 g max.	1,050 g max.	1,850 g max.	3,500 g max.	5,500 g max.

Note: 1. The fan is one of the replacement parts.

2. As defined with the rated input voltage and rated output voltage/current.

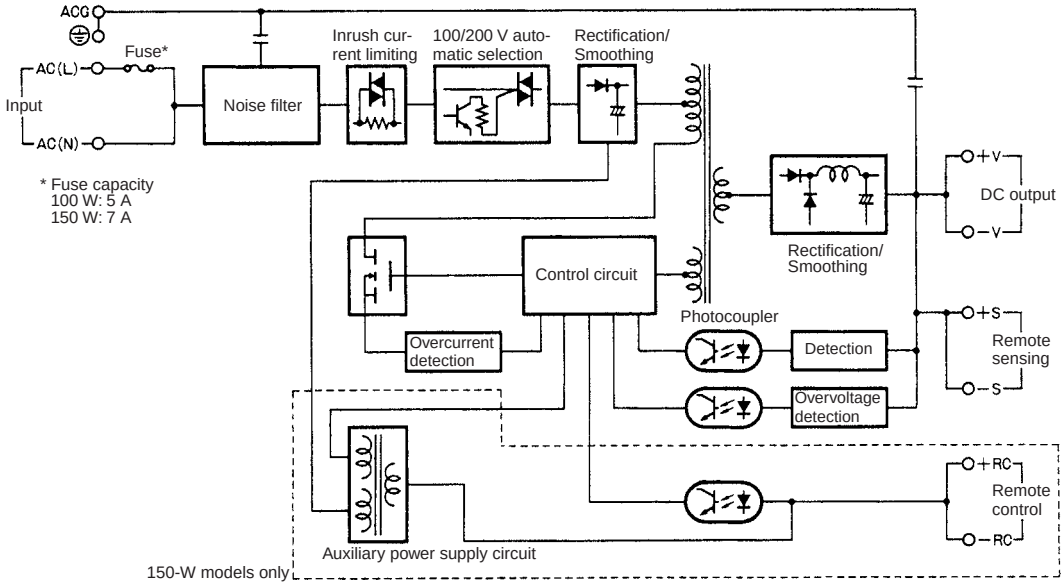
3. A surge absorber is provided for the input circuits of 300 and 600-W models. To test the dielectric strength and insulation resistance of these models, remove the short bar attached across the GR and ACG terminals.

4. To ensure emission enclosure rating, ferrite cores should be used on all cabling on 300/600 models.

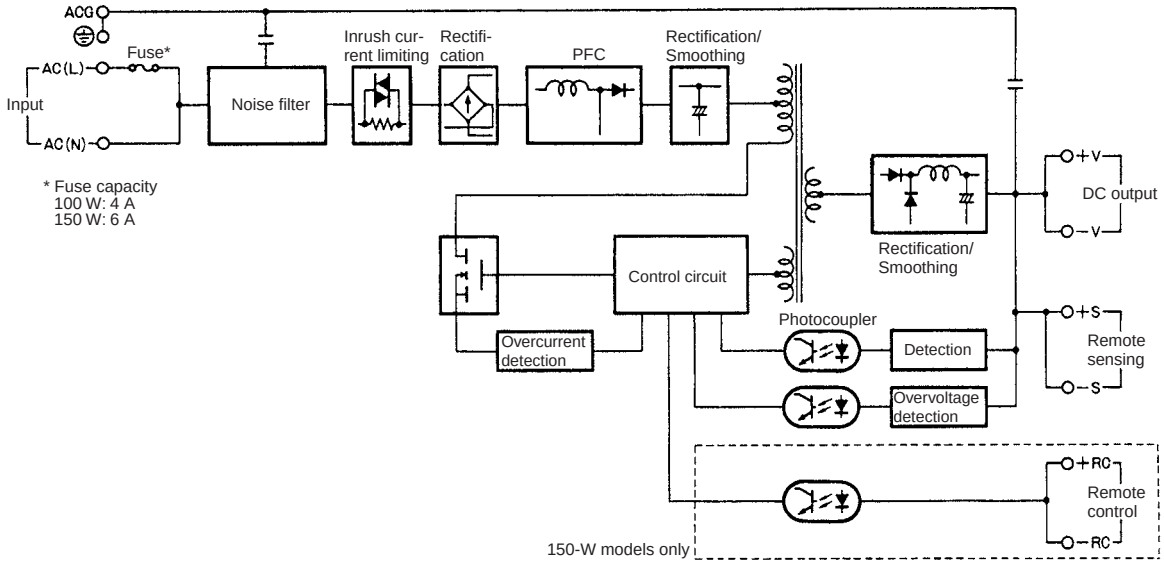
Connections

■ Block Diagrams

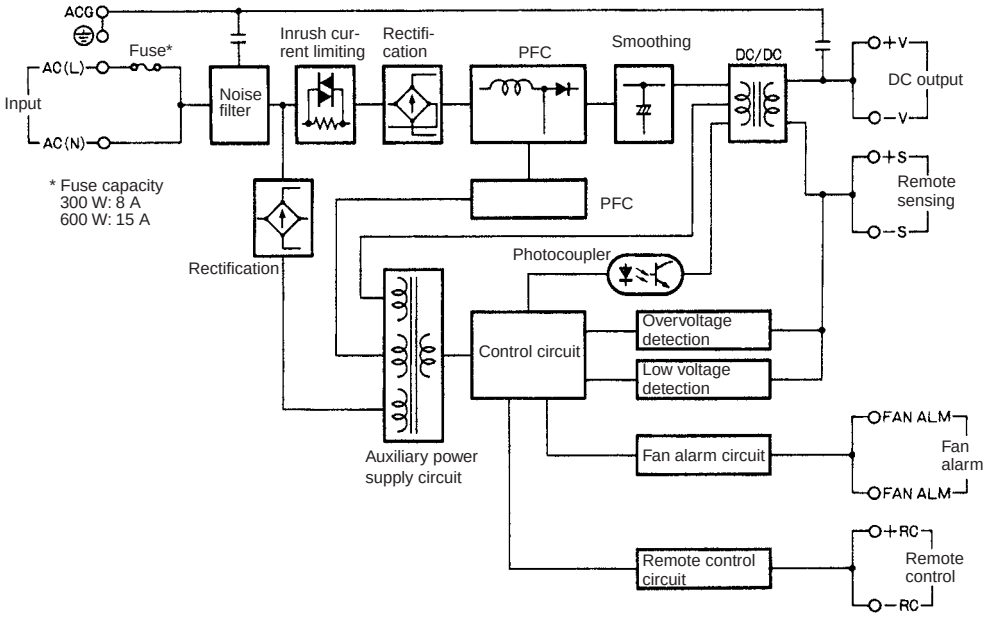
S82H-100□□ (100 W)
S82H-150□□ (150 W)



S82H-P100□□ (100 W)
S82H-P150□□ (150 W)



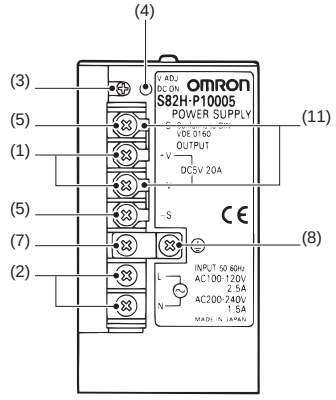
S82H-P300□□ (300 W)
S82H-P600□□ (600 W)



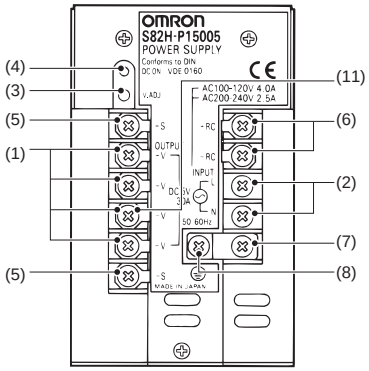
■ Installation

Terminal Arrangement

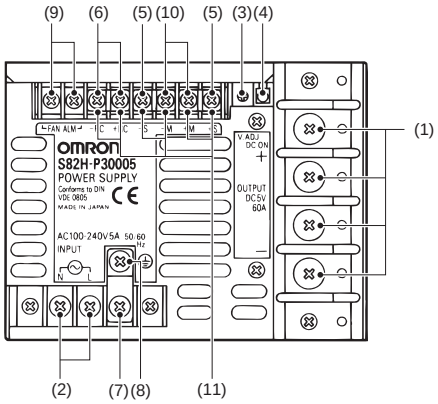
S82H-□100□□ (100 W)



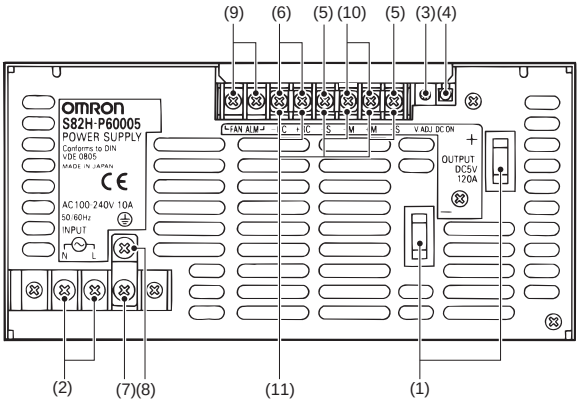
S82H-□150□□ (150 W)



S82H-P300□□ (300 W)



S82H-P600□□ (600 W)



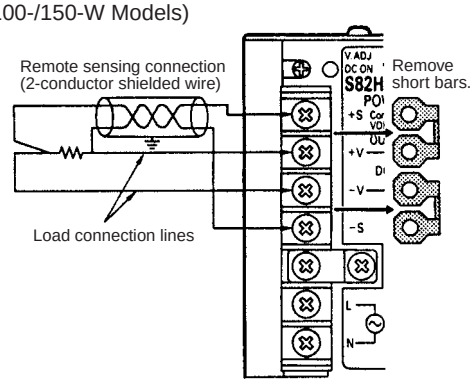
1. **DC Output Terminals**: Connect the load lines to these terminals.
2. **Input Terminals L and N (with fuse inserted into the L side)**: Connect the input lines to these terminals.
3. **Output voltage adjustment trimmer V.ADJ (with adjustment range of ±10% of rated output)**: Adjusts the output voltage.
4. **Output indicator DC ON (green)**: Lit while a DC output is ON.
5. **Remote sensing terminals**: Corrects the voltage drop in the load lines.
6. **Remote control terminals**: Enables external signals to turn the output ON and OFF while the input voltage is imposed. The terminals are short-circuited with a short bar before shipping.
7. **ACG Terminal**: The intermediate point of the input filter. The terminal is short-circuited to the ground terminal (GR) before shipping.
8. **Ground Terminal (GR)**: Shorted to the housing. Ground the Power Supply through this terminal.
9. **Fan alarm terminals FAN ALM**: Turns ON when the revolution of the built-in fan drops.
10. **Output voltage monitor terminals**: Connected to the DC output terminals internally. No output current can be, however, obtained from these terminals. Short-circuit the terminals to the remote sensing terminals +S and –S if the remote sensing function is not used.
11. **Short bar**

Operation

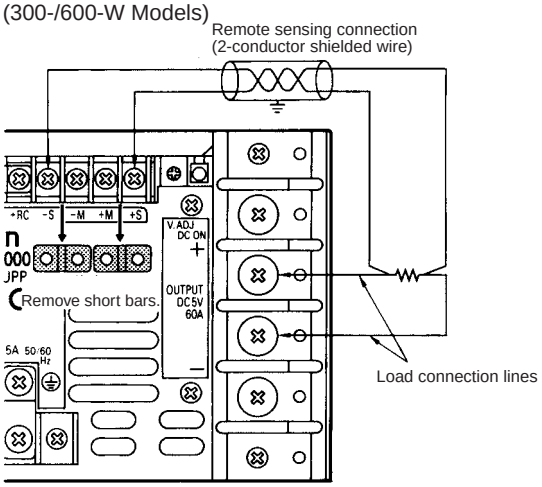
■ Remote Sensing Function

The remote sensing function makes it possible to compensate for voltage drops caused by load lines. To use this function, remove the short bar from the remote sensing terminals and wire the Power Supply and load as shown in the following illustration. The remote sensing terminals are short-circuited with the short bar before shipping.

(100-/150-W Models)



(300-/600-W Models)

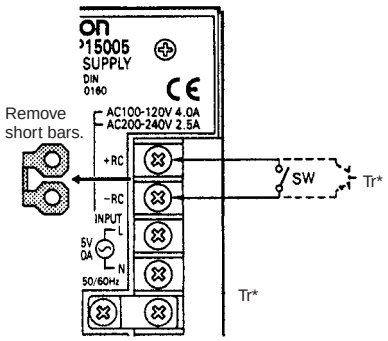


Note: 1. When the voltage drop in the load wiring is large, the overvoltage protection function might engage just from the increase in voltage to correct the voltage drop, so be sure to use high capacity wiring.

2. If the remote sensing terminals are left unconnected, the high voltage protection function will engage and the output voltage will be cut off. Be sure to firmly tighten the terminal screws.

■ Remote Control Function

The remote control function enables external signals to turn the output of the Power Supply ON and OFF. To use this function, remove the short bar from the remote control terminals and connect a switch or transistor to the Power Supply as shown in the following illustration. The remote control terminals are short-circuited with the short bar before shipping.



*Use a transistor with V_{CE} > 20 V and I_C > 5 mA.

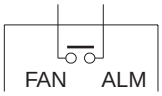
Level	Output voltage
L (0.8 V max.)	ON
H (2 V min.)	OFF

Note: No output will be produced if the terminals are left unconnected. Be sure to firmly tighten the terminal screws.

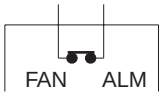
■ Fan Alarm Function (300- and 600-W Models Only)

When the speed of the internal fan drops, the fan alarm output (SPST-NO) will turn ON (shorted) and after 5 seconds, the output voltage will be turned off.

The relay contacts must be used with 1 A at 30 V or 1 A (125 VA) at 250 VAC.



Normal condition



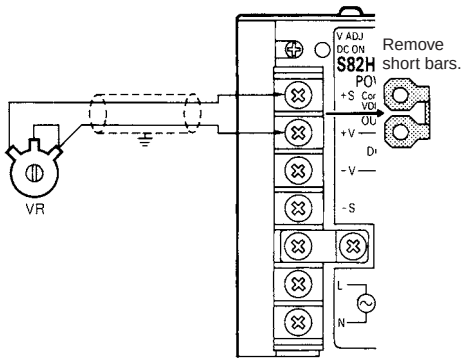
Alarm condition

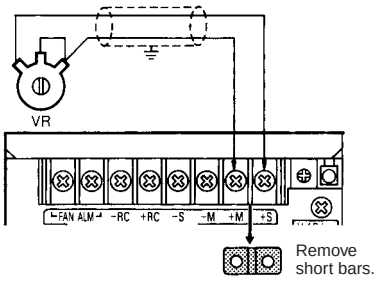
■ Remote Voltage Adjustment Function

Output voltage can be varied externally by inserting a variable resistor between the +V and +S terminals (+M and +S terminals for 300- and 600-W models) of the remote sensing terminals.

Use a variable resistor with a capacity of 0.5 W min. and ensure the resistances shown in the following table.

Output voltage	Capacity	
	100 W, 150 W	300 W, 600 W
5 VDC	2 kΩ	50 Ω
12 VDC	5 kΩ	
15 VDC	5 kΩ	
24 VDC	10 kΩ	

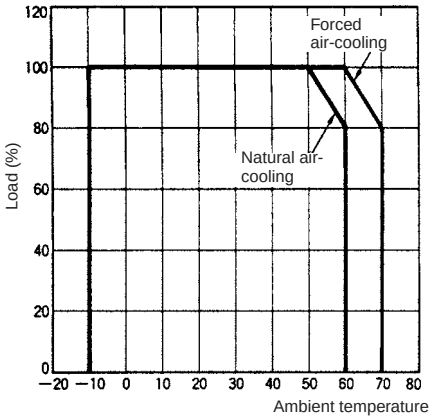
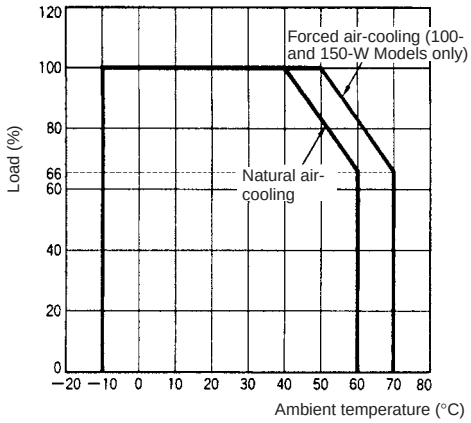
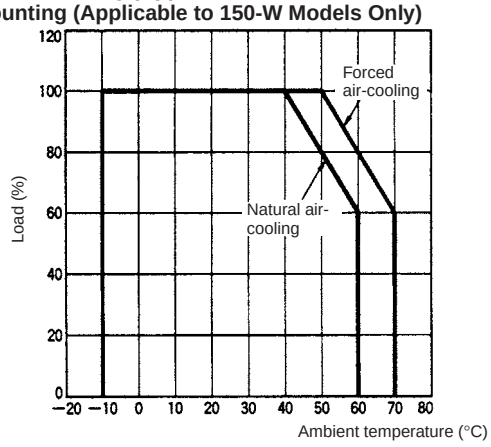
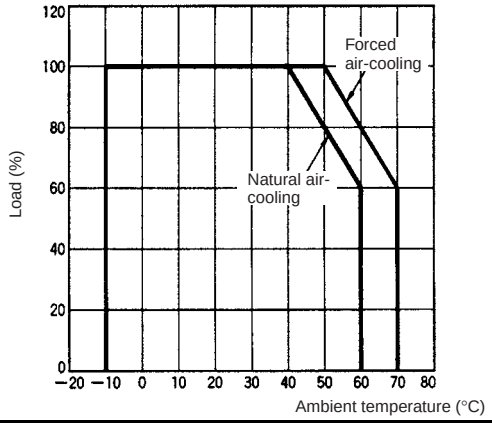




Engineering Data

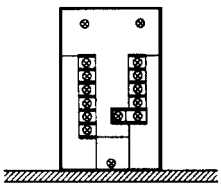
■ Derating Curve

Units cannot be mounted vertically.

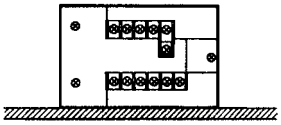
With No PFC	With PFC
Standard Mounting (100- and 150-W Models) 	**Standard Mounting (100-, 150-, 300-, and 600-W Models)** 
Horizontal Mounting (Applicable to 100- and 150-W Models) **Side Mounting (Applicable to 150-W Models Only)** 	**Horizontal Mounting (Applicable to 100- and 150-W Models Only)** **Side Mounting (Applicable to 150-W Models Only)** 

■ Mounting Position

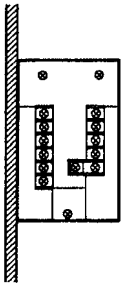
Standard Mounting



Horizontal Mounting (Applicable to 100- and 150-W Models Only)



Side Mounting (Applicable to 150-W Models Only)

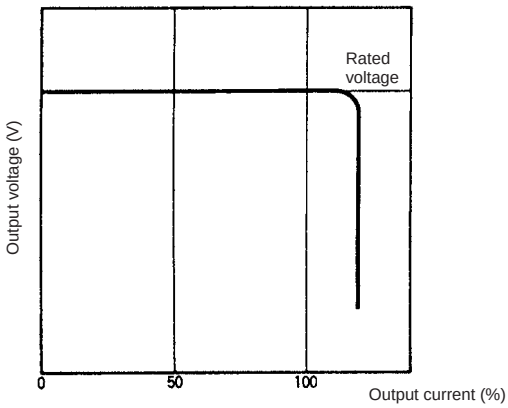


Note: Forced air-cooling must be applied at an minimum air capacity rate of 1 m^3/min.

■ Overload Protection

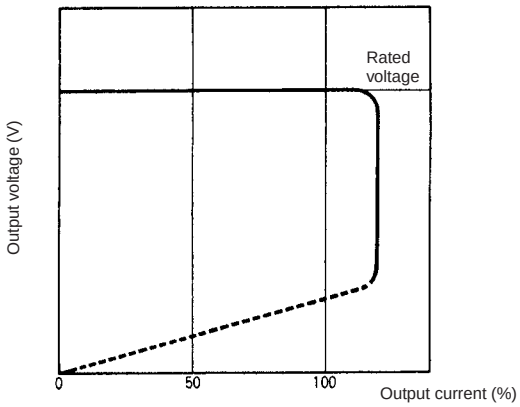
The Power Supply is provided with an overload protection function that protects the load and the power supply from possible damage by overcurrent. When the output current rises above a set value (105% of the rated output current for S82H), the protection function is triggered, decreasing the output voltage. When the output current falls within the rated range, the overload protection function is automatically cleared.

100- and 150-W Models



In addition to the protection described in the left column, in the case of the 300- and 600-W models, if the low voltage condition continues for more than 5 s, shut off the output. In this situation, reset is not automatic. The input power must be turned off for at least 1 minute, and then turned on again to reset the Power Supply.

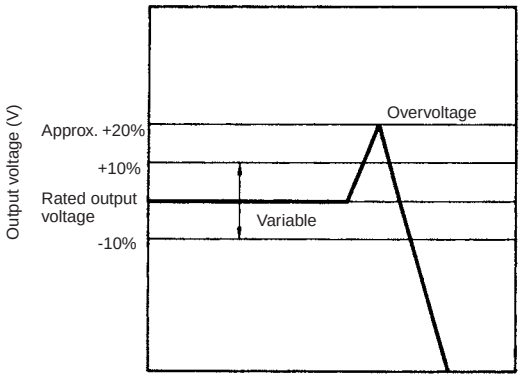
300- and 600-W Models



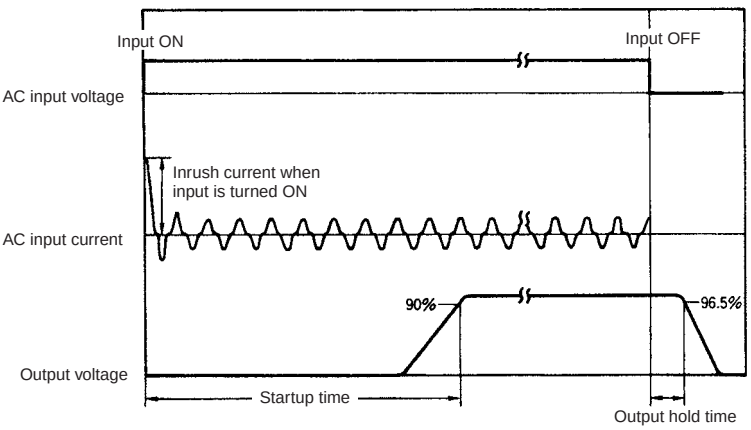
Note: If the product is continuously used under short-circuit or overcurrent conditions, deterioration or damage to internal elements may occur.

■ Overvoltage Protection

The Power Supply is provided with an overvoltage protection function that protects the load and the Power Supply from possible damage by overvoltage. When the output voltage rises above a set value (120% of the rated output voltage), the protection function is triggered, shutting off the output voltage. If this occurs, reset the S82H by turning it off for more than 1 minute and then turning it on again.



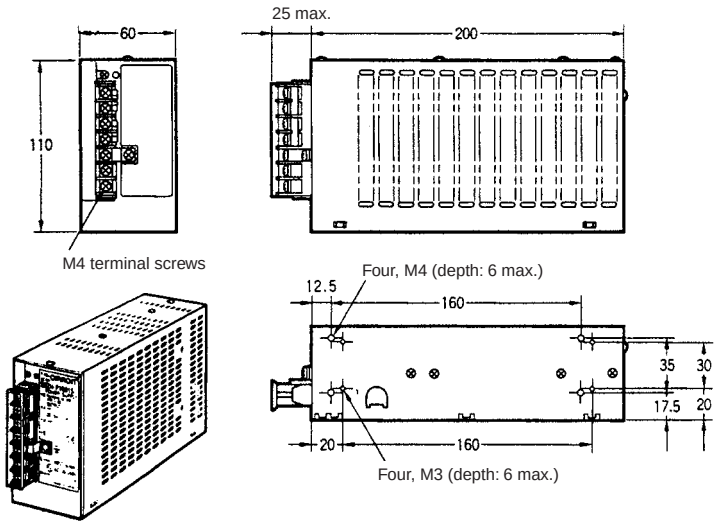
■ Inrush Current, Startup Time, Hold Time



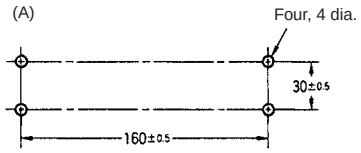
Dimensions

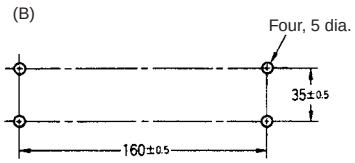
Note: All units are in millimeters unless otherwise indicated.

S82H-□100□□ (100 W)



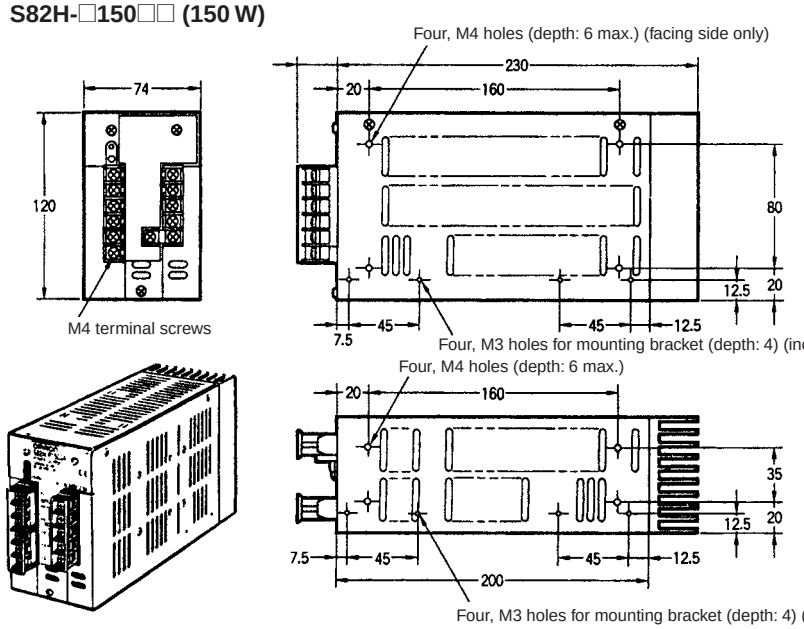
Mounting Holes





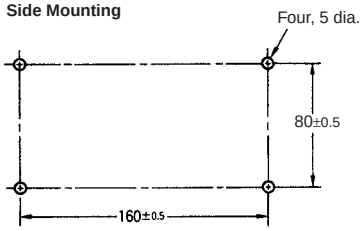
(A): Compatible with conventional S82H (100 W) models
(B): Compatible with S82P (100 W) discontinued models

S82H-□150□□ (150 W)

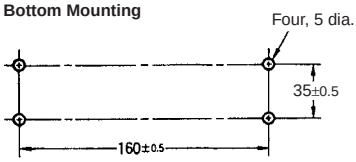


Mounting Holes

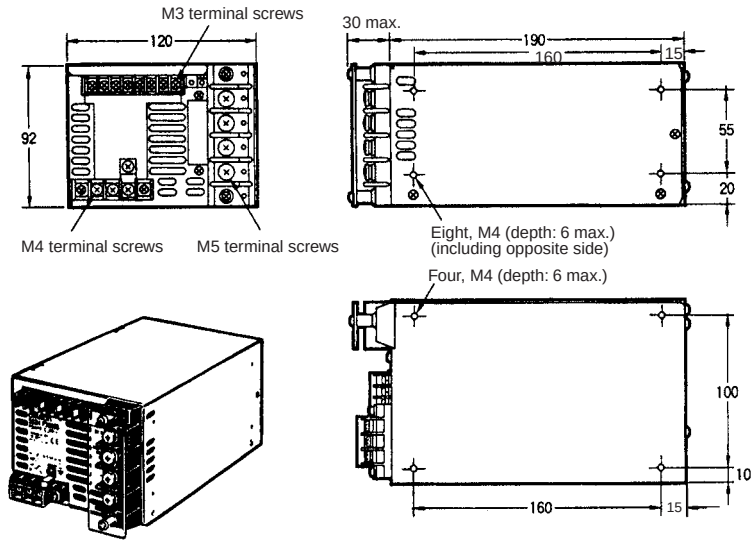
Side Mounting



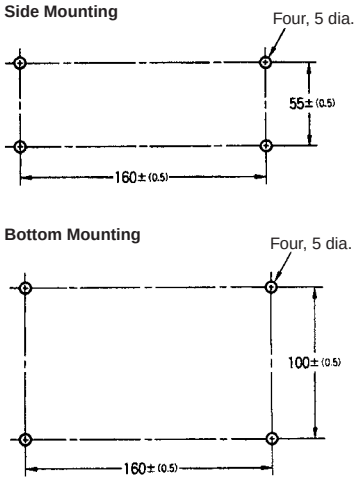
Bottom Mounting



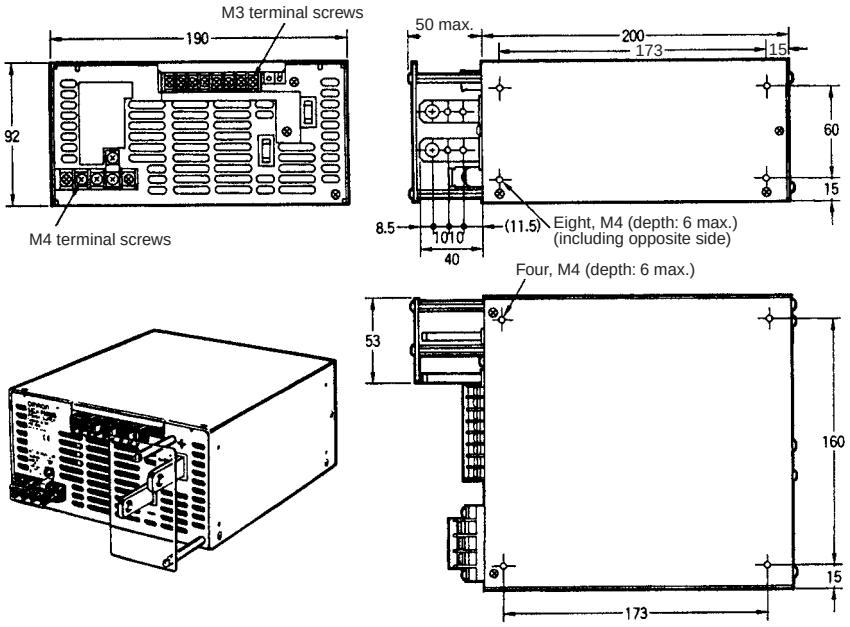
S82H-P300□□ (300 W)



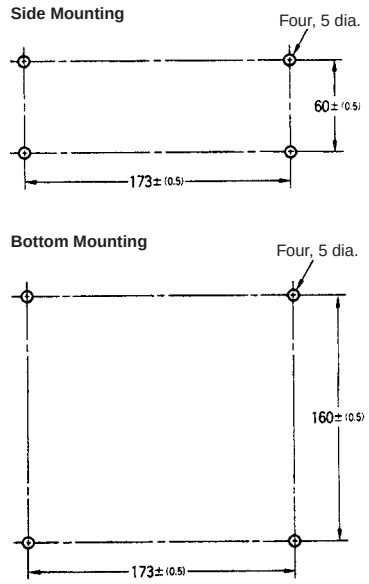
Mounting Holes



S82H-P600□□ (600 W)

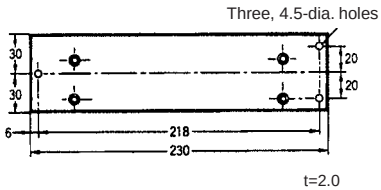
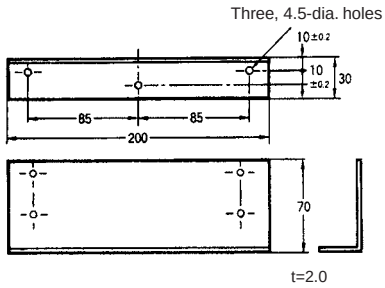
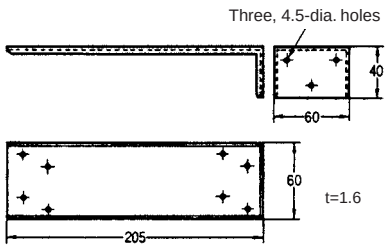
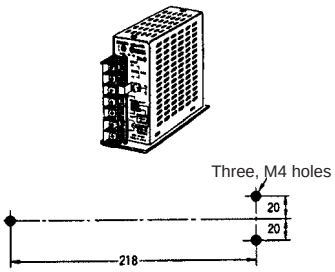
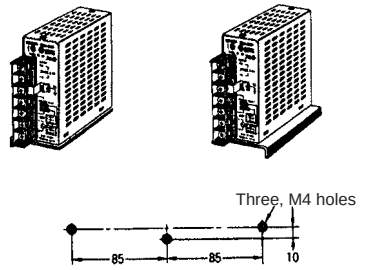
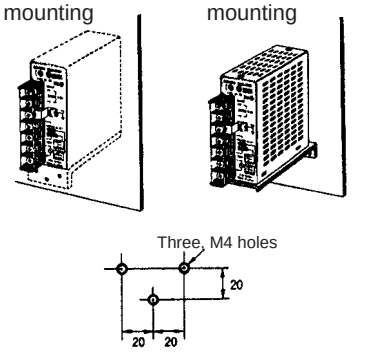


Mounting Holes



■ Mounting Bracket

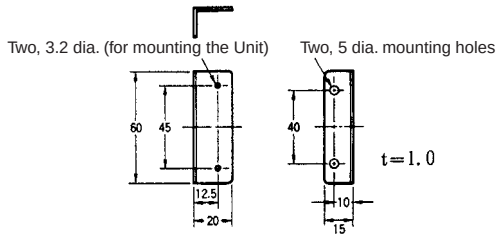
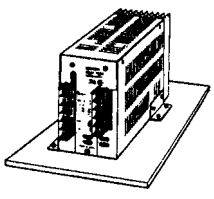
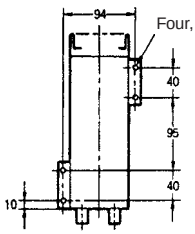
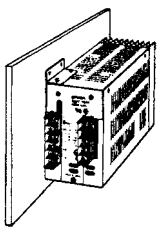
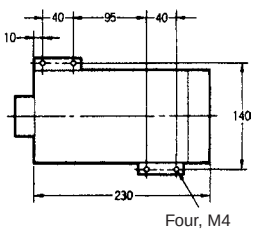
S82H-□100□□ (100 W) (Order Separately)

Type	B Type (Bottom-mounting bracket)	S Type (Side-mounting bracket)	F Type (Front-/Back-mounting bracket)
Model	S82Y-H10B	S82Y-H10S	S82Y-H10F
Dimensions			
Appearance and mounting holes			

S82H-□150□□ (150 W) (Accessories)

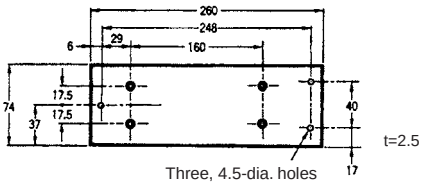
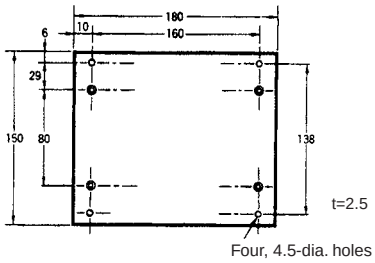
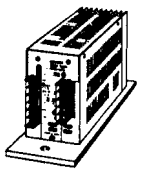
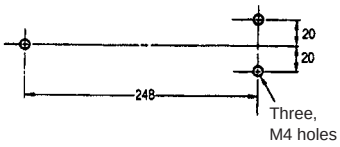
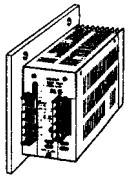
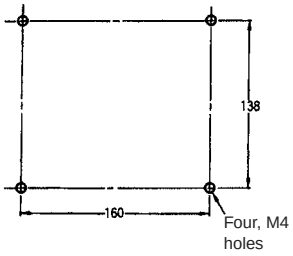
Using the Mounting Brackets supplied with the Unit, the Unit can be attached in two directions.

1. Attachment

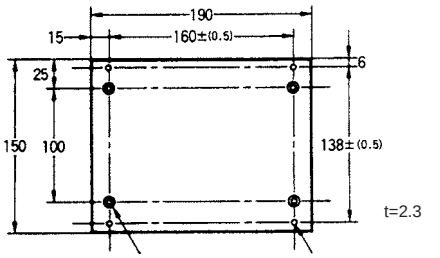
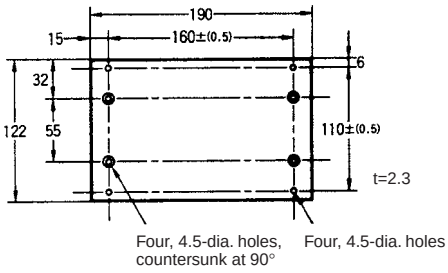
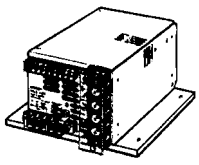
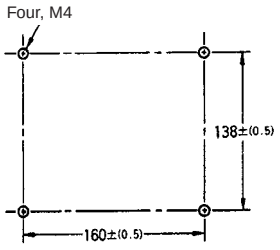
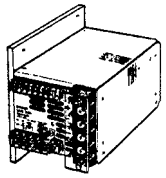
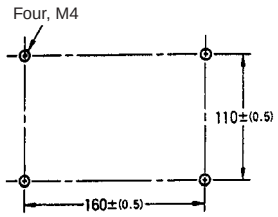
Dimensions		
Appearance and mounting holes	Bottom mounting  	Side mounting  

Note: Using two screws, attach the Mounting Bracket to the Unit and then attach it to the panel.

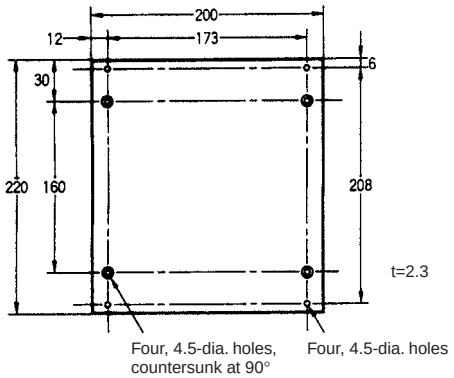
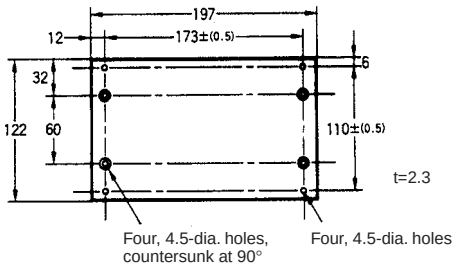
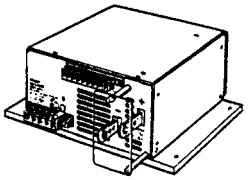
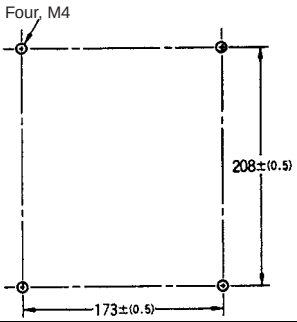
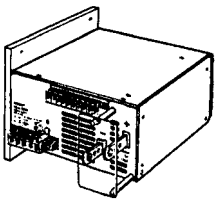
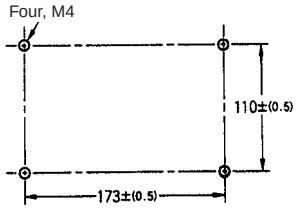
2. Order Separately

Type	B Type (Bottom-mounting bracket)	S Type (Side-mounting bracket)
Model	S82Y-F15B	S82Y-F15S
Dimensions	 **Note:** Use countersunk screws of M4 x 8 max. when attaching to the Unit.	 **Note:** Use countersunk screws of M4 x 8 max. when attaching to the Unit.
Appearance and mounting holes	 	 

S82H-P300□□ (300 W) (Order Separately)

Type	B Type (Bottom-mounting bracket)	S Type (Side-mounting bracket)
Model	S82Y-D30B	S82Y-D30S
Dimensions	 **Note:** Use countersunk screws of M4 x 8 max. when attaching to the Unit.	 **Note:** Use countersunk screws of M4 x 8 max. when attaching to the Unit.
Appearance and mounting holes	 	  **Note:** Be careful not to impose any excessive vibration or impact.

S82HP600□□ (600 W) (Order Separately)

Type	B Type (Bottom-mounting bracket)	S Type (Side-mounting bracket)
Model	S82Y-D60B	S82Y-D60S
Dimensions	 **Note:** Use countersunk screws of M4 x 8 max. when attaching to the Unit.	 **Note:** Use countersunk screws of M4 x 8 max. when attaching to the Unit.
Appearance and mounting holes	 	  **Note:** Be careful not to impose any excessive vibration or impact.

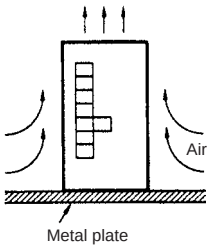
Precautions

Mounting

To improve and maintain the reliability of the Power Supply over a long period of time, adequate consideration must be given to heat radiation.

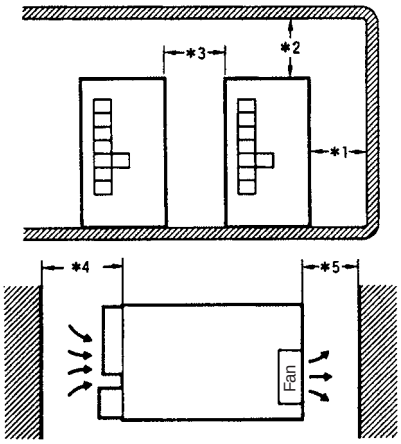
The Power Supply is designed to radiate heat by means of natural air-flow. Therefore, mount the Power Supply so that air flow takes place around the Power Supply.

It is recommended that the Power Supply be mounted on a metal plate.



Provide at least the spaces listed in the following table.

Model	*1	*2	*3	*4	*5
100W, 150W	30 mm	50 mm	20 mm	20 mm	20 mm
300W	30 mm	50 mm	20 mm	50 mm	40 mm
600W	30 mm	50 mm	20 mm	70 mm	50 mm



Forced air-cooling is recommended.

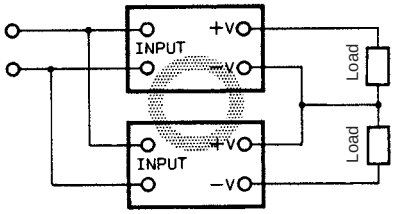
Don't expose the product to the direct sunlight.

Be careful not to allow any machining chips or dust into the product while fabricating mounting plates.

Don't use the product where fluids, foreign matter, or corrosive gases may enter the product.

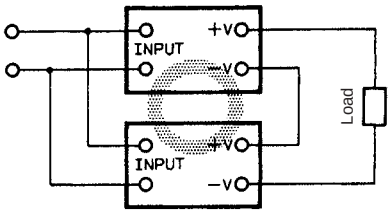
Generating Output Voltage (±)

An output of ± can be generated by using two Power Supplies, as shown below, because the Power Supply produces a floating output.



Series Operation

The output of two Power Supplies can be combined in series.

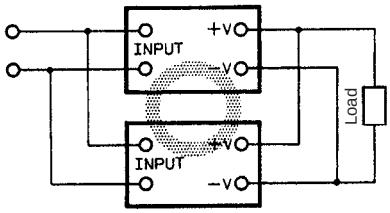


Parallel Operation

Parallel operation is possible by simply connecting the output terminals in parallel. (Other than 100 W models)

Using the output voltage adjustment trimmer, adjust the output of each power supply to the same value.

Operate the Power Supplies connected in parallel at 80% of the rated output current.

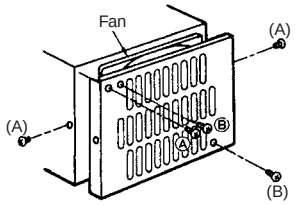


Fan Replacement

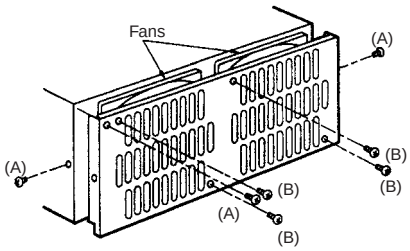
The fan must be replaced when a fan alarm is output. Contact your OMRON representative for details about fan replacement.

When replacing the fan, unscrew the case fixing screws (A) to remove the rear plate and then unscrew the fan fixing screws (B) to remove the fan.

300 W



600 W

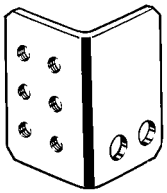


Note: The 600-W models incorporate two fans.

Terminal Expansion Bracket

The maximum current density should be 20 A per one M4 terminal screw.

A terminal expansion bracket is available for use with the 600-W Power Supply when several loads need to be connected.



S82Y-D60T

Brackets: 2
M4 x 8 terminal screws: 12
M5 x 12 terminal screws: 4

Wiring Precautions

The Power Supply is provided with reinforced insulation between the primary and secondary terminals. When using the secondary circuit as an SELV circuit, the circuit connected to the output terminals and auxiliary function terminals must be an SELV circuit.

Switching Power Supply
S82H-3

Used with Both 100 and 200 VAC Input Voltages

- Wide AC input voltage range: 85 to 132 and 170 to 264 VAC.
- Three types using classification of power ratings: 15, 30 and 50 W.
  Also, four types using classification of output voltage: 5, 12, 15, and 24 V.
- Noise resistance which meets the stringent FCC Class B.

Model Number Structure

■ Model Number Legend:

S82H - □ □ □□
1 2 3

1. Input Voltage
3: 100 or 200 VAC (selectable)

2. Power Ratings
1: 15 W
3: 30 W
5: 50 W

3. Output Voltage
05: 5 V
12: 12 V
15: 15 V
24: 24 V

Ordering Information

■ List of Models

Rated input voltage	Power ratings	Output voltage	Output current	Models
100 or 200 VAC (selectable)	15 W	5 V	3 A	S82H-3105
		12 V	1.2 A	S82H-3112
		15 V	1 A	S82H-3115
		24 V	0.6 A	S82H-3124
	30 W	5 V	6 A	S82H-3305
		12 V	2.5 A	S82H-3312
		15 V	2 A	S82H-3315
		24 V	1.3 A	S82H-3324
	50 W	5 V	10 A	S82H-3505
		12 V	4.5 A	S82H-3512
		15 V	3.4 A	S82H-3515
		24 V	2.3 A	S82H-3524

Specifications

■ Ratings/Characteristics

Item			15 W	30 W	50 W
Efficiency (typical)			65% min.		70% min.
Input	**Voltage**		100 V (85 to 132 VAC)/200 V (170 to 264 VAC) selectable		
	Frequency		47 to 450 Hz		
	Current (see note 2)	**100-VAC input**	0.5 A max.	0.9 A max.	1.3 A max.
		200-VAC input	0.3 A max.	0.6 A max.	0.8 A max.
	Leakage current (see note 2)	**100-VAC input**	0.5 mA max.		
		200-VAC input	1 mA max.		
	Inrush current (see note 2)	**100-VAC input**	25 A max.		
		200-VAC input	50 A max.		
	Noise filter		Yes		
Output	**Voltage adjustment range**		±10% (adjustable with variable resistor (V.ADJ))		
	Ripple (see note 2)		2% (p-p) max.		
	Input variation influence		0.5% max. (at 85 to 132 VAC/170 to 264 VAC input, 100% load)		
	Load variation influence		2% max. (with rated input, 10 to 100% load)		
	Temperature variation influence		0.05%/°C max. (with rated I/O at an ambient temperature range between 0°C to 40°C)		
	Startup time		200 ms max. (up to 90% of output voltage at rated input and output)		
	Hold time (see note 2)		20 ms min. (up to 90% of output voltage at rated input and output)		
Additional function	**Overload protection**		105% min. of rated load current (typical), inverted L drop type, automatic reset		
	Overvoltage protection		No		
	Remote sensing		No		
	Remote control		No		
Other	**Ambient temperature**		Operating: See the derating curve in the *"Engineering Data"* section Storage: –20°C to 85°C		
	Ambient humidity		Operating: 30% to 90% Storage: 20% to 95%		
	Dielectric strength		2,000 VAC, 50/60 Hz for 1 min (between all inputs and all outputs/GR terminal) (see note 1) 500 VDC, 50/60 Hz for 1 min (between all outputs and all inputs/GR terminal)		
	Insulation resistance		100 MΩ min. at 500 VDC (between all outputs and all inputs/GR terminal)		
	Vibration resistance		Malfunction: 10 to 55 Hz, 0.375-mm single amplitude for 2 hrs each in X, Y, and Z directions		
	Shock resistance		Malfunction: 294 m/s^2 (approx. 30G), 3 times each in ±X, ±Y, and ±Z directions		
	Output indicator		Yes (red)		
	Common mode noise		4 V p-p max.		
	Electromagnetic interference (see note 2)		Conforms to FCC class B		
	Approved standards		UL1012, CSA E.B.1402C		
	Weight		400 g max.	520 g max.	660 g max.

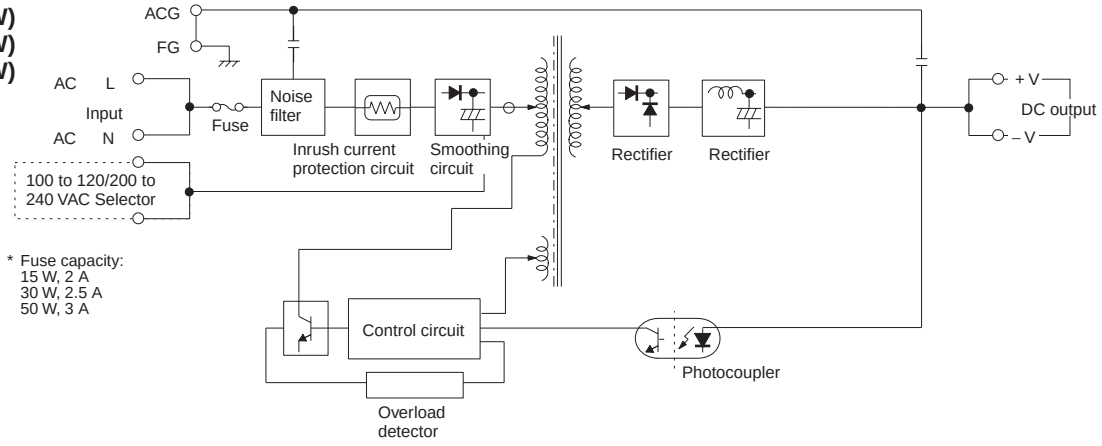
Note: 1. A surge absorber is provided for the input circuit. To test the dielectric strength and insulation resistance of the power supply, remove the short bar attached across the FG and ACG terminals.

2. Defined with a 100% load and the rated input voltage (100 or 200 VAC).

Connections

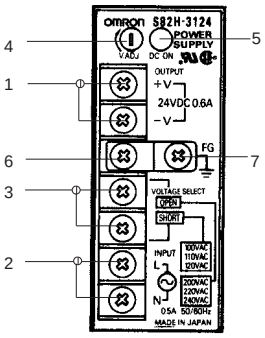
■ Block Diagrams

S82H-31□□ (15 W)
S82H-33□□ (30 W)
S82H-35□□ (50 W)



■ Installation

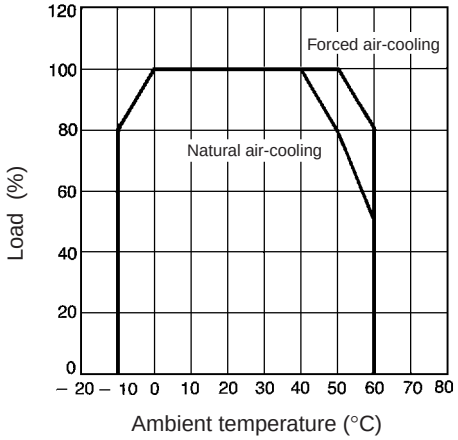
S82H-31□□ (15 W)
S82H-33□□ (30 W)
S82H-35□□ (50 W)



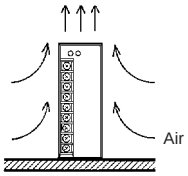
1. **DC Output Terminals (+V, -V):** Connect the load lines to these terminals.
2. **Input Terminals (L, N):** Connect the input lines to these terminals.
3. **Input Voltage Selector:** Selects an input voltage using the short bar (short-circuited: 100 VAC, opened: 200 VAC).
4. **V. ADJ Adjuster:** Adjusts the output voltage.
5. **Output Indicator (DC ON):** Lights while a Direct Current (DC) output is ON.
6. **ACG Terminal:** The intermediate point of the input filter. Shorted to FG terminal for normal operation.
7. **FG Terminal:** Shorted to the housing and connected to a ground line.

Engineering Data

■ Derating Curve



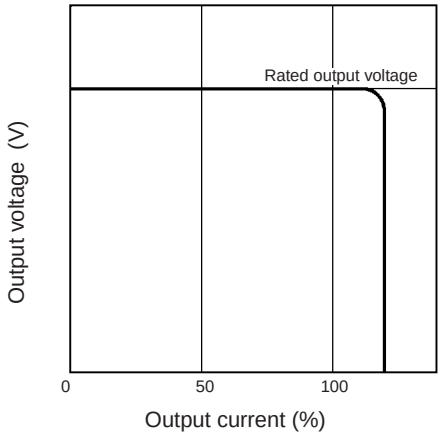
Standard Mounting Position



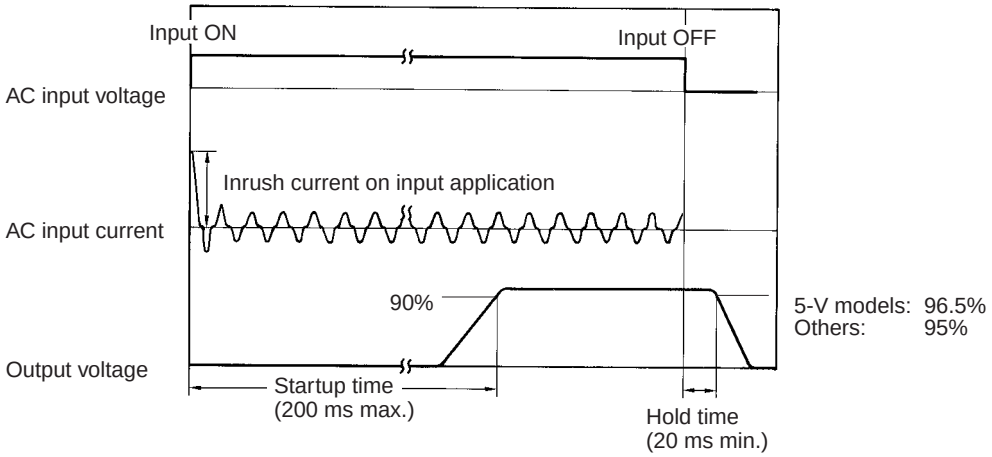
Note: The derating curve depends on the mounting position of the Power Supply.

■ Overload Protection

The Power Supply is provided with an overload protection function that protects the load and the power supply from possible damage by overcurrent. When the output current rises above a set value (105% of the rated output current), the protection function is triggered, decreasing the output voltage. When the output current falls within the rated range, the overload protection function is automatically cleared.



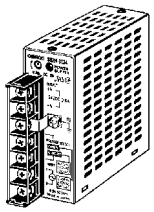
■ Inrush Current, Startup Time, Hold Time

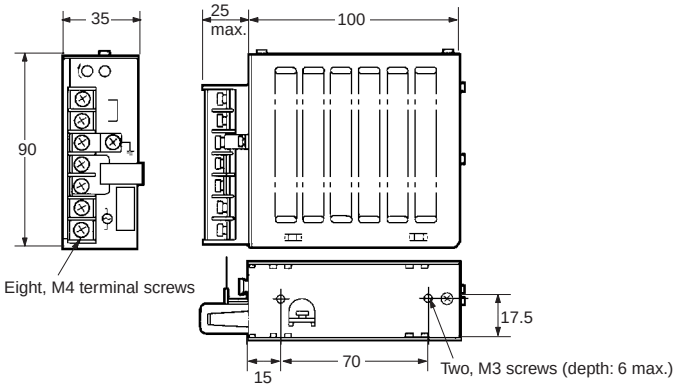


Dimensions

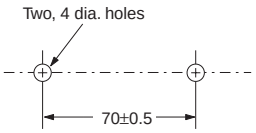
Note: All units are in millimeters unless otherwise indicated.

S82H-31□□ (15 W)

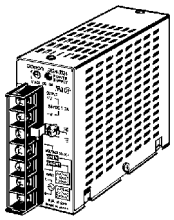


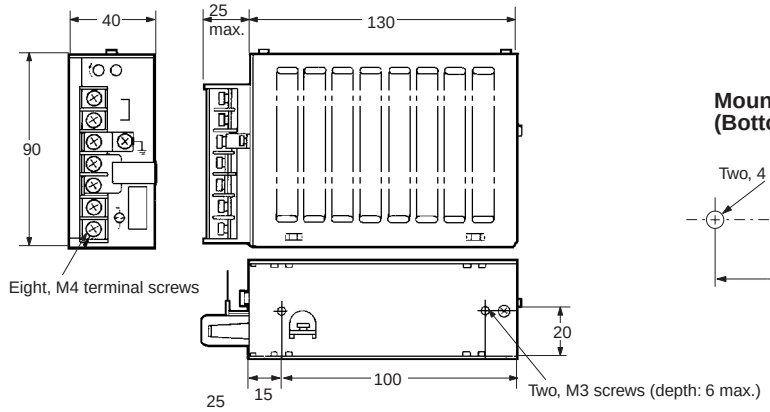


Mounting Holes (Bottom Mounting)

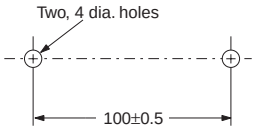


S82H-33□□ (30 W)

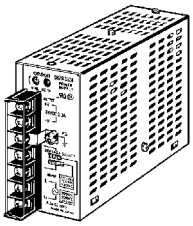


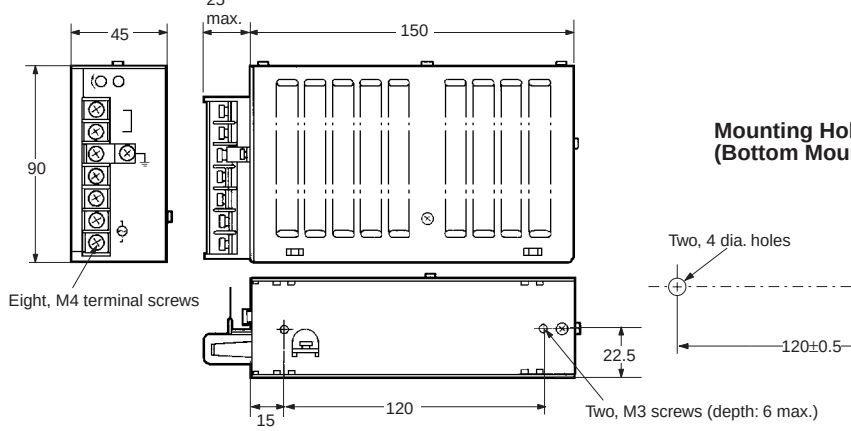


Mounting Holes (Bottom Mounting)



S82H-35□□ (50 W)

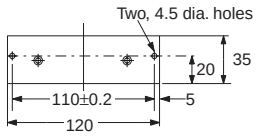
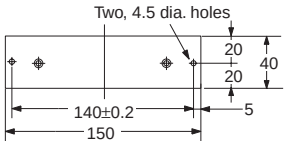
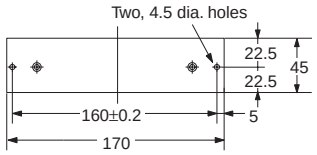
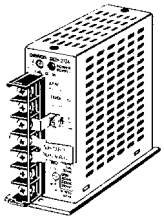
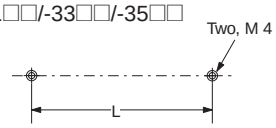




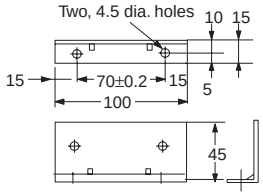
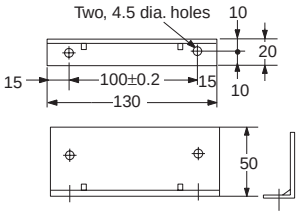
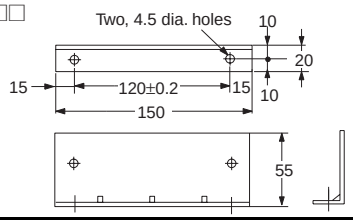
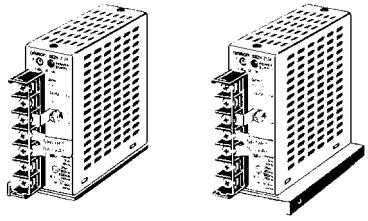
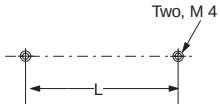
Mounting Holes (Bottom Mounting)

■ Mounting Bracket (Order Separately)

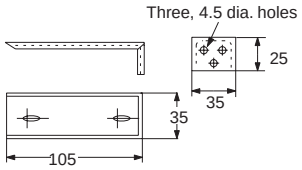
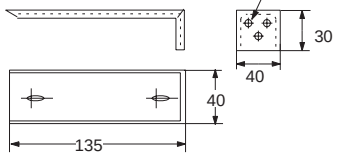
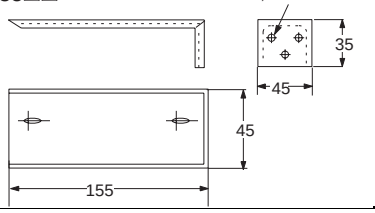
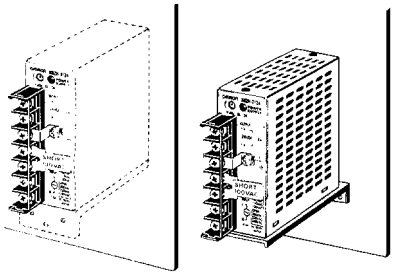
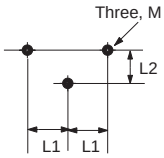
Bottom Mounting Bracket

Model	Dimensions	Appearance and mounting holes
S82Y-H01B S82Y-H03B S82Y-H05B	For S82H-31□□  For S82H-33□□  For S82H-35□□ 	 For S82H-31□□/-33□□/-35□□  | | 15 W | 30 W | 50 W | | L | 100 | 140 | 160 |

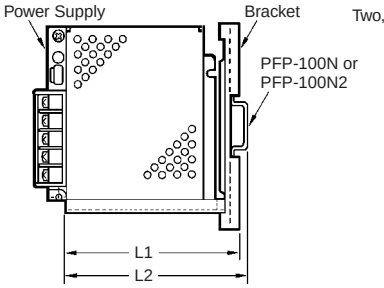
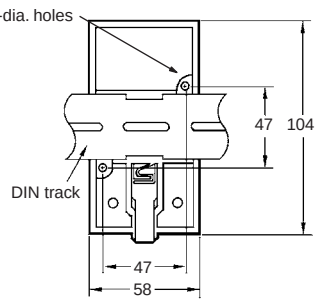
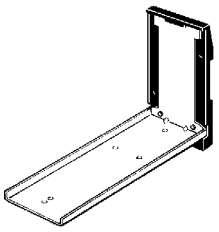
Side Mounting Bracket

Model	Dimensions	Appearance and mounting holes
S82Y-H01S S82Y-H03S S82Y-H05S	For S82H-31□□  For S82H-33□□  For S82H-35□□ 	Left-side mounting Right-side mounting  For S82H-31□□/-33□□/-35□□  | | 15 W | 30 W | 50 W | | L | 70 | 100 | 120 |

Front/Flush Mounting Bracket

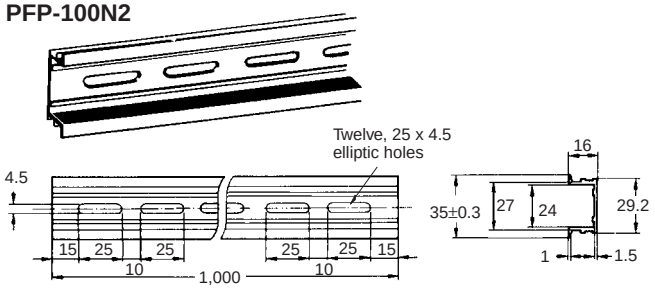
Model	Dimensions	Appearance and mounting holes
S82Y-H01F S82Y-H03F S82Y-H05F	For S82H-31□□  For S82H-33□□  For S82H-35□□ 	Flush mounting Front mounting   **15 W / 30 W / 50 W** L1: 10 / 10 / 15 L2: 10 / 15 / 20

Track Mounting Bracket (Order Separately)

Item	S82Y-01N	S82Y-03N	S82Y-05N
Applicable supply unit	S82H-31□□	S82H-33□□	S82H-35□□
Dimensions			
Dimensions: L1	113 mm	143 mm	163 mm
L2	114.8 mm	144.8 mm	164.8 mm

Mounting Track (Order Separately)

PFP-100N2

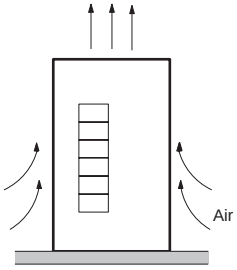


Precautions

Mounting

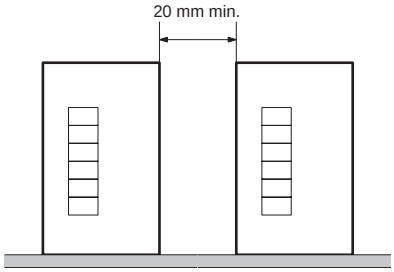
To improve and maintain the reliability of the Power Supply over a long period of time, adequate consideration must be given to heat radiation.

The Power Supply is designed to radiate heat by means of natural air-flow. Therefore, mount the Power Supply so that air flow takes place around the Power Supply.



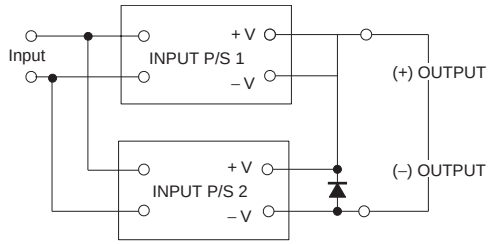
When mounting two or more Power Supplies side-by-side, allow at least 20 mm spacing between them, as shown in the following illustration.

Forced air-cooling is recommended.



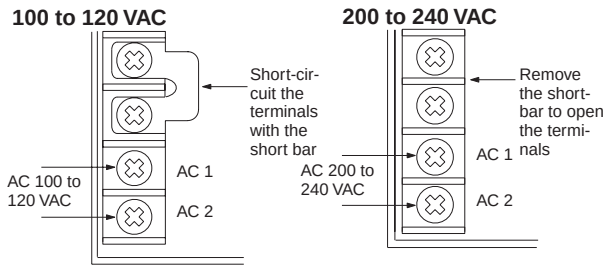
Generating Output Voltage (±)

An output of ± can be generated by using two Power Supplies, as shown below, because the Power Supply produces a floating output.



Selection of Input Voltage

Select a 100 to 120 VAC or 200 to 240 VAC input by shorting or opening the Input Voltage Selector Terminals, as shown in the following diagram (factory-set to 200 to 240 V).



Note: Extra short bar is included with each Unit.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. T023-E1-03 **In the interest of product improvement, specifications are subject to change without notice.**

OMRON Corporation
Industrial Automation Company

Measuring and Control Division
Shiokoji Horikawa, Shimogyo-ku,
Kyoto, 600-8530 Japan
Tel: (81)75-344-7108/Fax: (81)75-344-7189

Printed in Japan
1102-0.3M