Switch mode Power Supply
S82K

Ultimate DIN-track-mounting Power Supply with a Wide Power Range from 3 to 240 W



- Wide power range: 3 to 240 W
- Wide AC input voltage range: 100 to 240 V on one body.
- Undervoltage alarm function (indicator) incorporated as standard. (With the 240-W models, applicable only to the "-T" models.) 90 and 100-W models standardized with the alarm output.
- Output/input terminal parts separated on body upper/bottom side, respectively, for safe and smart wiring.
- Multiple pairs of output terminals;
  Three pairs for 90, 100, and 240-W models
  Two pairs for 30 and 50-W models
- Finger-safe terminal block with cover according to VDE0106/P100.
- Conforms to the stringent EN50081-1 standard for universal use in any environment subject to EMI conditions (except for 240-W models) in addition to EN50082-2 conformity for use at any EMS environment.
- DC output ports comply to EN55022 class A, thus ensuring use in any environment subject to EMI with recommended external filters (3- to 100-W models).
- Meets EN61000-3-2 (limits for harmonic current emissions) with PFC on 90, 100, and 240-W models.
- Parallel running operation (100 and 240-W models).
- Class 2 approved (except for 240-W models and 7.5-W dual output models).
- Approvals of various international safety standards for industrial control equipment and industrial computing systems (ITE/TE), in addition to other important approvals.
- Six-language instruction manual provided.

Model Number Structure

■ Model Number Legend

S82K - □ □□□ □□ □
1 2 3 4

1. Power Factor Correction
None: No
P: Yes

2. Power Ratings
003: 3 W
007: 7.5 W
015: 15 W
030: 30 W
050: 50 W
090: 90 W

3. Output Voltage
05: +5 VDC
12: +12 VDC
15: +15 VDC
24: +24 VDC
27: ±12 VDC
28: ±15 VDC

4. Undervoltage alarm indicator/output
<For 3- to 100-W models>
None: Yes
<For 240-W models>

Ordering Information

■ List of Models

Power ratings	Output voltage	Output current	Function Configuration			Models
			Output	Undervoltage alarm indicator/ output	PFC	
3 W	5 V	0.6 A	Single output	Yes	No	S82K-00305
	12 V	0.25 A				S82K-00312
	15 V	0.2 A				S82K-00315
	24 V	0.13 A				S82K-00324
7.5 W	5 V	1.5 A				S82K-00705
	12 V	0.6 A				S82K-00712
	15 V	0.5 A				S82K-00715
	24 V	0.3 A				S82K-00724
	+V12/–V12	0.3 A/0.2 A	Dual output			S82K-00727
	+V15/–V15	0.2 A/0.2 A				S82K-00728
15 W	5 V	2.5 A	Single output			S82K-01505
	12 V	1.2 A				S82K-01512
	24 V	0.6 A				S82K-01524
30 W	5 V	5.0 A				S82K-03005 (see note 1)
	12 V	2.5 A				S82K-03012
	24 V	1.3 A				S82K-03024
50 W	24 V	2.1 A				S82K-05024
90 W	24 V	3.75 A			Yes	S82K-P09024
					No (see note 4)	S82K-09024
100 W	24 V	4.2 A (see note 2)			Yes	S82K-P10024
					No (see note 4)	S82K-10024
240 W	24 V	10 A (see note 3)			No	S82K-24024T
				No	Yes	S82K-P24024
					No	S82K-24024

Note: 1. The output capacity of the S82K-03005 is 25 W.
2. The output current during parallel operation is 3.78 A.
3. The output current during parallel operation is 9 A.
4. Comply to EN61000-3-2 A14

■ Accessories (Order Separately)

Mounting Track	50 cm (l) × 7.3 mm (t)	PFP-50N
	1 m (l) × 7.3 mm (t)	PFP-100N
	1 m (l) × 16 mm (t)	PFP-100N2
Noise Filter	for 3- to 50-W models	S82Y-JF3-N
	for 90-W and 100-W models	S82Y-JF6-N

Specifications

■ Ratings/Characteristics

3- to 240-W models without PFC

Item			Single output		Dual outputs	Single output					
			3 W	7.5 W	7.5 W	15 W	30 W	50 W	90 W	100 W	240 W
Efficiency (typical)			60% to 80% (Varies depending on specifications.)								
Input	Voltage (see note 1)	AC	100 to 240 V (85 to 264 V)						100 V (85 to 132 V)/ 200 V (170 to 264 V) Selectable		100 V (85 to 132 V)/ 200 V (170 to 253 V) Selectable
		DC	90 to 350 V (see note 2)				Not possible				
	Frequency		50/60 Hz (47 to 450 Hz)								
	Current (see note 3)	100-V input	0.15 A max.	0.25 A max.		0.45 A max.	0.9 A max.	1.3 A max.	2.5 A max.		5.5 A max.
		200-V input				0.25 A max.	0.6 A max.	0.8 A max.	1.5 A max.		3.5 A max.
	Power factor		---								
	Leakage current (see note 3)	100-V input	0.5 mA max.								
		200-V input	1 mA max.								
	Inrush current (see note 3)	100-V input	15 A max.				25 A max.				
		200-V input	30 A max.				50 A max.				
	Noise filter		Yes								

Note: 1. Use with DC voltage input is beyond the conditions of approval or conformance to applicable safety standards.

2. Use the 7.5-W single-output models under the load of 90% max. if the voltage range is between 90 and 110 VDC.

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

3- to 240-W models without PFC

Item		Single output		Dual outputs	Single output					
		3 W	7.5 W	7.5 W	15 W	30 W	50 W	90 W	100 W	240 W
Output (see note 2)	**Voltage adjustment range**	±10% (V.ADJ)		Not possible (see note 3)	±10% (V.ADJ); −10% to 15% for S82K-03012/-03024/-05024					
	Ripple (see note 1)	2% (p-p) max.								
	Input variation influence	0.5% max. (at 85 to 264 VAC input, 100% load)						0.5% max. (at 85 to 132 VAC/170 to 264 VAC input, 100% load)		0.5% max. (at 85 to 132 VAC/ 170 to 253 VAC input, 100% load)
	Load variation influence	1.5% max. (0 to 100% load)		+V: 1.5% max. −V: 3% max. (0 to 100% load)	1.5% max. (0 to 100% load)					1.5% max. (10 to 100% load)
	Temperature variation influence (see note 1)	0.05%/°C max.								
	Start up time	100 ms max. (up to 90% of output voltage at rated input and output)						200 ms max.		300 ms max.
	Hold time (see note 1)	20 ms min.								
Additional function	**Overload protection**	105% to 160% of rated load current, inverted L drop, automatic reset (see note 4)		105% to 250% of rated load current, inverted L drop, automatic reset	105% to 160% of rated load current, inverted L drop, automatic reset (30-W, 50-W models: inverted L drop, intermittent, automatic reset)			101% to 111% of rated load current, inverted L drop, automatic reset (see note 5)	105% to 160% of rated load current, inverted L drop, automatic reset	
	Overvoltage protection (see note 6)	No								S82K-24024T model only
	Undervoltage alarm indicator (DC LOW indicator)	Yes (color: red)								S82K-24024T model only
	Undervoltage alarm output (DC LOW output)	No						Yes		S82K-24024T model only
	Parallel operation	Impossible							Possible (2 units max.) (see note 7)	

Note: 1. Defined with a 100% load and the rated input voltage (100 or 200 VAC).

2. The output specification is defined at the power supply output terminals.

3. The settings for the output voltage must be within the following range:
+V: ±1% of the rated value
−V: ±5% of the rated value

4. When using the 7.5-W single-output models within the input voltage range between 90 and 110 VDC, the protection function will operate at a current of 95% to 160% of the rated load current.

5. When the ambient temperature exceeds 25°C, the protection function will operate at a current of 92% to 111% of the rated load current.

6. Circuit-breaker type. To reset, turn the input power supply OFF, then after 1 min has elapsed, turn the input power supply ON again.

7. Parallel operation is set with the Parallel/Single Operation Selector Switch. (This setting is not required for S82K-10024 models.)

3- to 240-W models without PFC

Item		Single output		Dual outputs	Single output					
		3 W	7.5 W	7.5 W	15 W	30 W	50 W	90 W	100 W	240 W
Other	Ambient temperature	Operating: See the derating curve in the *Engineering Data* section (no condensation or icing) Storage: –25°C to 65°C (no condensation or icing)								
	Ambient humidity	Operating: 25% to 85% Storage: 25% to 90%								
	Dielectric strength	3,000 VAC at 50/60 Hz for 1 min (between all inputs and outputs) 2,000 VAC at 50/60 Hz for 1 min (between all inputs and GR terminal) 1,000 VAC at 50/60 Hz for 1 min (between all outputs and GR terminal) Alarm current: 10 mA (3- to 7.5-W models) 20 mA (15- to 100-W models) 25 mA (240-W models)								
	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								Malfunction: 10 to 55 Hz, 0.15-mm single amplitude for 2 hrs each in X, Y, and Z directions
	Shock resistance	Malfunction: 300 m/s², 3 times each in ±X, ±Y, and ±Z directions								
	Screw tightening torque	0.74 N • m max. (see note 2)								
	Output indicator	Yes (green)								
	Electromagnetic interference (see note 1)	Conforms to FCC class B						Conforms to FCC class A		
	EMC (see note 3)	3 to 100-W Models (EMI): EN50081-1 Emission Enclosure: EN55022 class B (equivalent to EN55011 class B) Emission AC Mains: EN55022 class B (equivalent to EN55011 class B) Emission Output Ports: EN55022 class A (with a recommended optional filter) (see note 3) 240-W Models (EMI): EN50081-2 Emission Enclosure: EN55011 class A Emission AC Mains: EN55011 class A Common to All Models (EMS): EN50082-2 Immunity ESD: EN61000-4-2: 4-kV contact discharge (level 2), 8-kV air discharge (level 3) Immunity Burst: EN61000-4-4: 2-kV power-line (level 3), 2-kV output line (level 4) Immunity Surge: EN61000-4-5: between 2-kV lines (except for 240-W models), between 4-kV line and FG (except for 240-W models)								
	Approved standards	Class 2 (UL 1310)/Class 2 (CSA C22.2 No. 950) (see notes 4 and 5) UL 508 (Listing)/1950 CSA C22.2 No.14/No.950, EN50178 (VDE0160), EN60950 Conforms to VDE0106/P100								UL 508 (Listing)/1012 CSA C22.2 No.14, CSA E.B. 1402C, EN50178 (VDE0160), EN60950 Conforms to VDE0106/P100
	Weight	150 g max.			260 g max.	380 g max.	400 g max.	600 g max.		1,800 g max.

Note: 1. Defined with a 100% load and the rated input voltage (100 or 200 VAC).

2. Do not press down on the terminal block with a force exceeding 75 N while tightening the terminals.

3. To ensure the emission ratings, a noise filter should be used on the output lines at the closest point. (3- to 50-W models: S82Y-JF3-N, 90- and 100-W models: S82Y-JF6-N)

4. Models other than dual output models satisfy the Class-2 requirements.

5. To meet Class-2 requirements with the 100-W model, either a fuse or circuit breaker that is UL listed or CSA certified, and rated at 4.2 A max. should be wired in series with the load to be connected to the power supply. Only then can the power supply output be considered as meeting Class 2.

90-/100-/240W models with PFC (S82K-P□□□24 models)

Item			Single output		
			90 W	100 W	240 W
Efficiency (typical)			60% to 80% (Varies depending on specifications.)		
Input	Voltage		100 V (85 to 132 VAC)/200 V (170 to 264 VAC) Selectable		100 to 230 V (85 to 253 VAC)
	Frequency		50/60 Hz (47 to 63 Hz)		
	Current (see note 1)	100-V input	2.5 A max.		4 A max.
		200-V input	1.0 A max.		2 A max.
	Power factor	100-V input	---		0.95 min.
		200-V input	0.7 min.		0.95 min.
	Leakage current (see note 1)	100-V input	0.5 mA max.		
		200-V input	1 mA max.		
	Inrush current (see note 1)	100-V input	25 A max.		
		200-V input	50 A max.		
	Noise filter		Yes		
Output (see note 2)	Voltage adjustment range		±10% (V.ADJ)		
	Ripple (see note 1)		2% (p-p) max.		
	Input variation influence		0.5% max. (at 85 to 132 VAC/170 to 264 VAC input, 100% load)		0.5% max. (at 85 to 253 VAC input, 100% load)
	Load variation influence		1.5% max. (0 to 100% load)		1.5% max. (10 to 100% load)
	Temperature variation		0.05%/°C max.		
	Startup time		200 ms max.		1,000 ms max.
	Hold time (see note 1)		20 ms min.		
Additional function	Overload protection		101% to 111% of rated load current, inverted L drop, automatic reset (see note 3)	105% to 160% of rated load current, inverted L drop, automatic reset	
	Overvoltage protection		No		
	Under voltage alarm indicator		Yes (color: red)		No
	Under voltage alarm output		Yes		No
	Parallel operation		Impossible	Possible (2 units max.) (see note 4)	

Note: 1. Defined with a 100% load and the rated input voltage (100 or 200 VAC)

2. The output specification is defined at the power supply output terminals.

3. When the ambient temperature exceeds 25°C, the protection function will operate at a current of 92% to 111% of the rated load current.

4. Parallel operation is set with the Parallel/Single Operation Selector Switch.

90-/100-/240W models with PFC (S82K-P□□□24 models)

Item		Single output		
		90 W	100 W	240 W
Other	Ambient temperature	Operating: See the derating curve in the Engineering Data section (No condensation or icing) Storage: –25°C to 65°C (no condensation or icing)		
	Ambient humidity	Operating: 25% to 85% Storage: 25% to 90%		
	Dielectric strength	3,000 VAC at 50/60 Hz for 1 min. (between all inputs and outputs) 2,000 VAC at 50/60 Hz for 1 min. (between all inputs and GR terminal) 1,000 VAC at 50/60 Hz for 1 min. (between all outputs and GR terminal) Alarm current: 20 mA (90- and 100-W models) 25 mA (240-W models)		
	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		Malfunction: 10 to 55 Hz, 0.15-mm single amplitude for 2 hrs each in X, Y, and Z directions
	Shock resistance	Malfunction: 150 m/s², 3 times each in ±X, ±Y, and ±Z directions		Malfunction: 300 m/s², 3 times each in ±X, ±Y, and ±Z directions
	Screw tightening torque	0.74 N • m max. (see note 2)		
	Output indicator	Yes (Green)		
	Electromagnetic interference (see note 1)	Conforms to FCC class A		
	EMC (see note 3, 4)	90-, 100-W Models (EMI): EN50081-1 Harmonic Current: EN61000-3-2 (200 VAC input only) Emission Enclosure: EN55022 class B Emission AC Mains: EN55022 class B Emission Output Ports: EN55022 class A (with a recommended optional filter) (see note 3) 240-W Model (EMI): EN50081-2 Harmonic Current: EN61000-3-2 Emission Enclosure: EN55011 class A (see note 4) Emission AC Mains: EN55011 class A Common to All Models (EMS): EN50082-2 Immunity ESD: EN61000-4-2: 4-kV contact discharge (level 2), 8-kV air discharge (level 3) Immunity Burst: EN61000-4-4: 2-kV power-line (level 3), 2-kV output line (level 4) Immunity Surge: EN61000-4-5: between 2-kV lines (except for 240-W models), between 4-kV line and FG (except for 240-W models)		
	Approved standards	Class 2 (UL1310)/Class 2 (CSA C22.2 No. 950) (see note 5) UL508 (Listing)/1950 CSA C22.2 No. 14/No. 950, EN50178 (VDE0160), EN60950 Conforms to VDE0106/P100		UL508 (Listing)/1012 CSA C22.2 No. 14/E.B. 1402C, EN50178 (VDE0160), EN60950, Conforms to VDE0106/P100
	Weight	1,000 g max.		2,200 g max.

Note: 1. Defined with a 100% load and the rated input voltage (100 or 200 VAC)

2. Do not press down on the terminal block with a force exceeding 75 N while tightening the terminals.

3. To ensure the Emission Enclosure ratings, a noise filter should be used on the output lines at the closest point. (90- and 100-W models: S82Y-JF6-N)

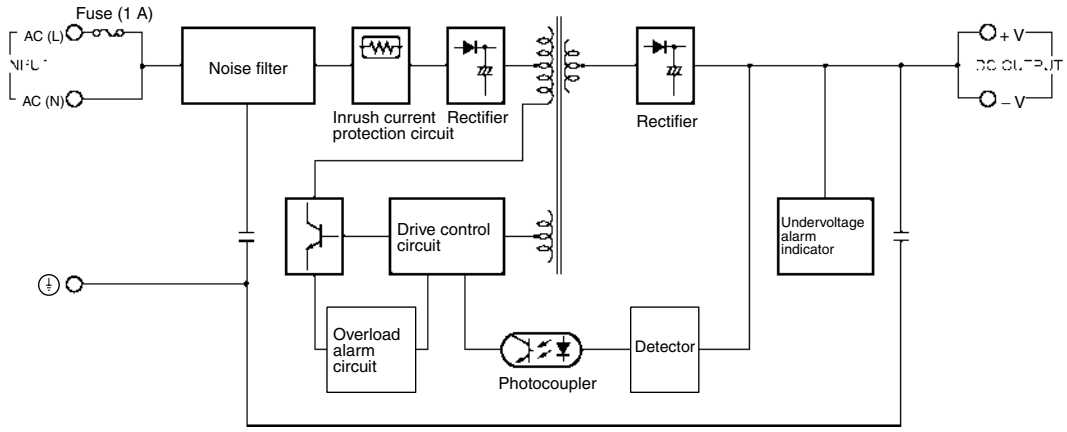
4. To ensure the Emission Enclosure rating, a ferrite ring core should be used on all cables.

5. To meet Class-2 requirements with the 100-W model, either a fuse or circuit breaker that is UL listed or CSA certified, and rated at 4.2 A max. should be wired in series with the load to be connected to the power supply. Only then can the power supply output be considered as meeting Class 2.

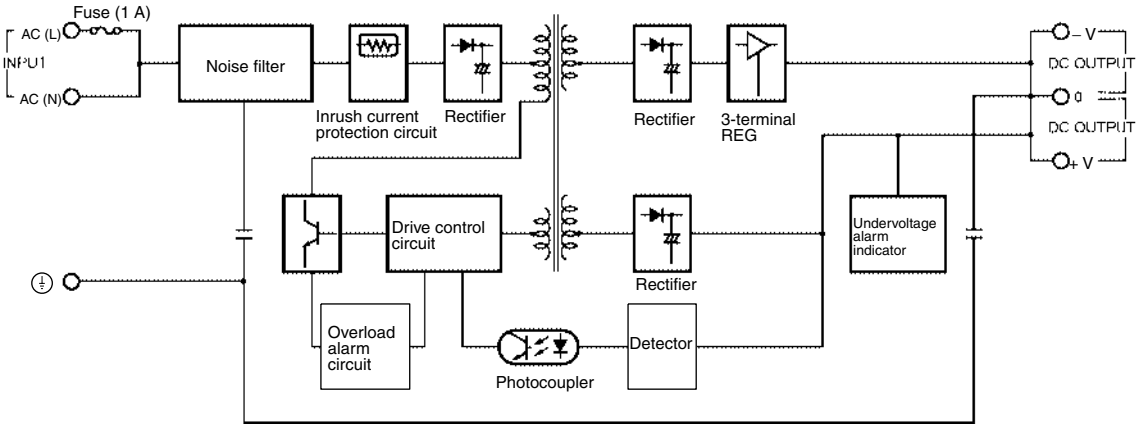
Connections

■ Block Diagrams

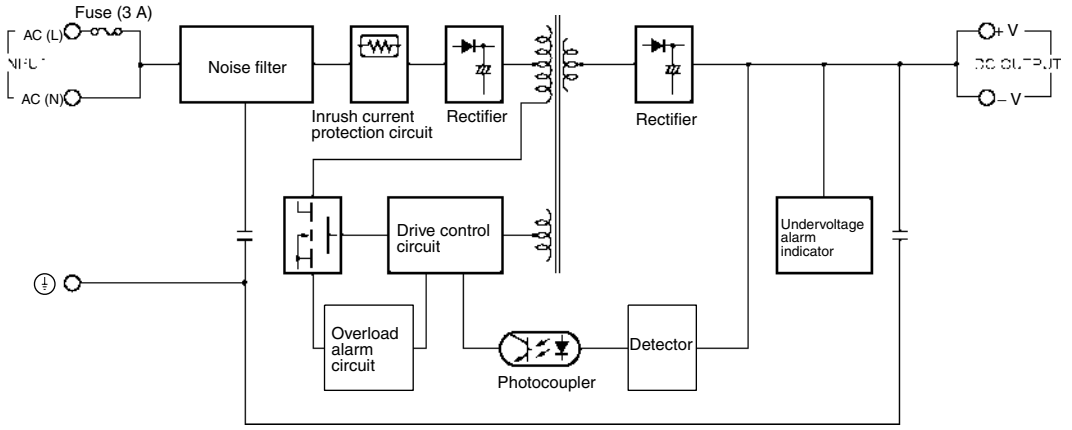
S82K-003□□ (3 W)
S82K-007□□ (7.5 W, Single Output)



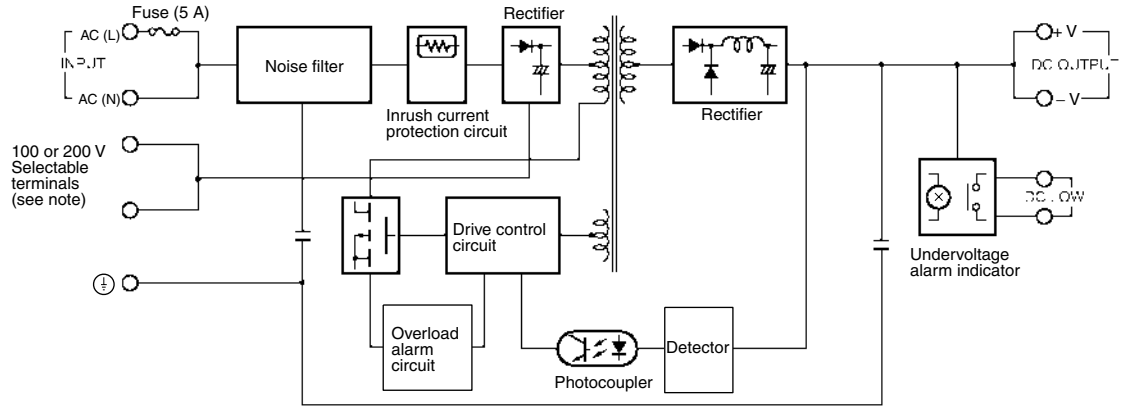
S82K-007□□ (7.5 W, Dual Outputs)



S82K-015□□ (15 W)
S82K-030□□ (30 W)
S82K-05024 (50 W)

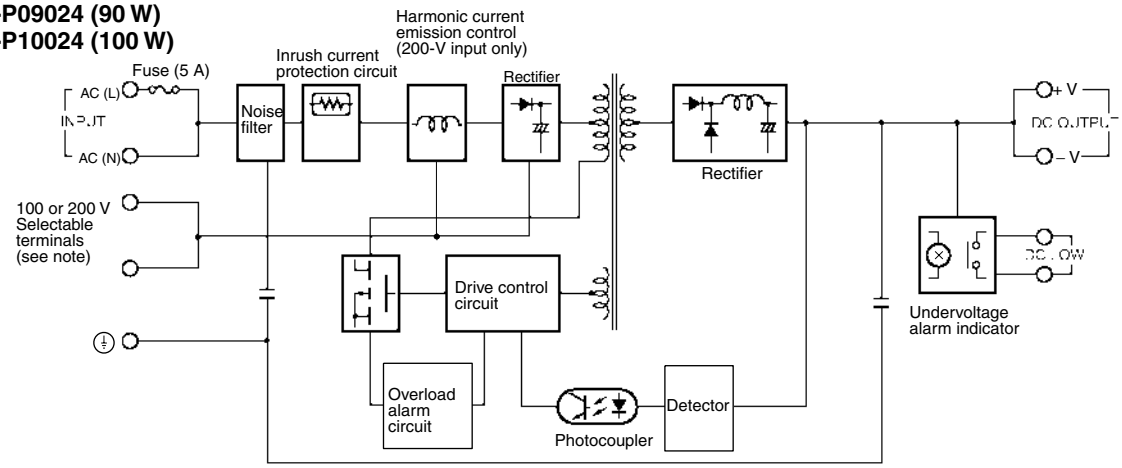


S82K-09024 (90 W)
S82K-10024 (100 W)



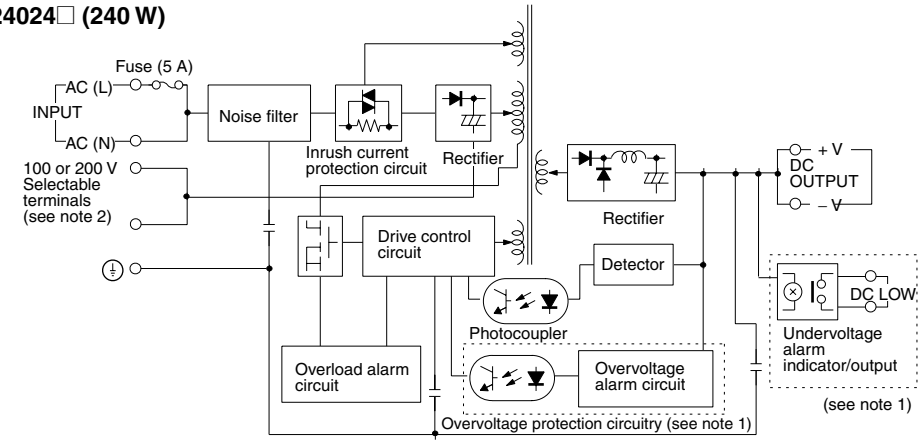
Note: Use the short bar to short-circuit terminals 7 and 8 to select 100 to 120 VAC and remove the short bar to select 200 to 240 VAC.

S82K-P09024 (90 W)
S82K-P10024 (100 W)



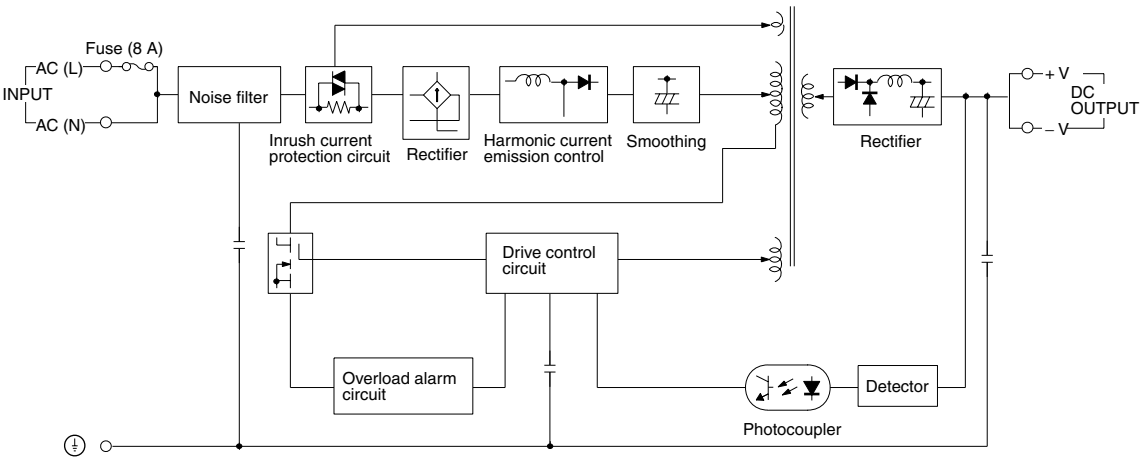
Note: Use the short bar to short-circuit terminals 7 and 8 to select 100 to 120 VAC and remove the short bar to select 200 to 240 VAC.

S82K-24024□ (240 W)



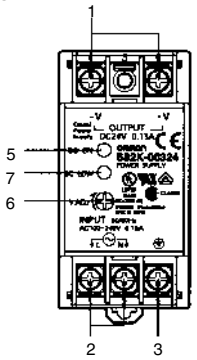
Note: **1.** The overvoltage protection circuitry and undervoltage alarm indicator are available in the S82K-24024T only.
2. Use the short bar to short-circuit terminals 7 and 8 to select 100 to 120 VAC and remove the short bar to select 200 to 230 VAC.

S82K-P24024 (240 W)

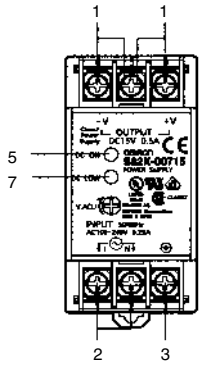


■ Installation

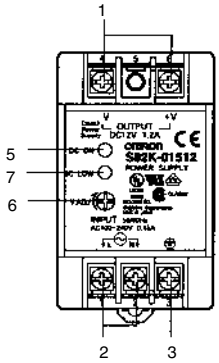
S82K-003□□/S82K-007□□ (Single Output)



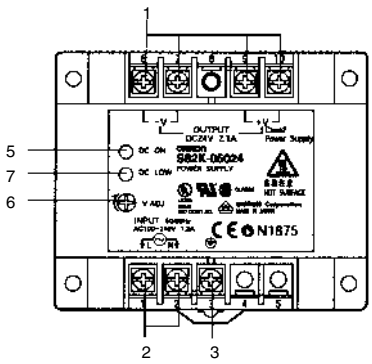
S82K-007□□ (Dual outputs)



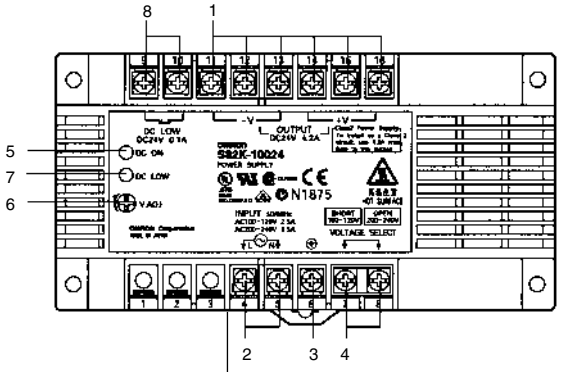
S82K-015□□



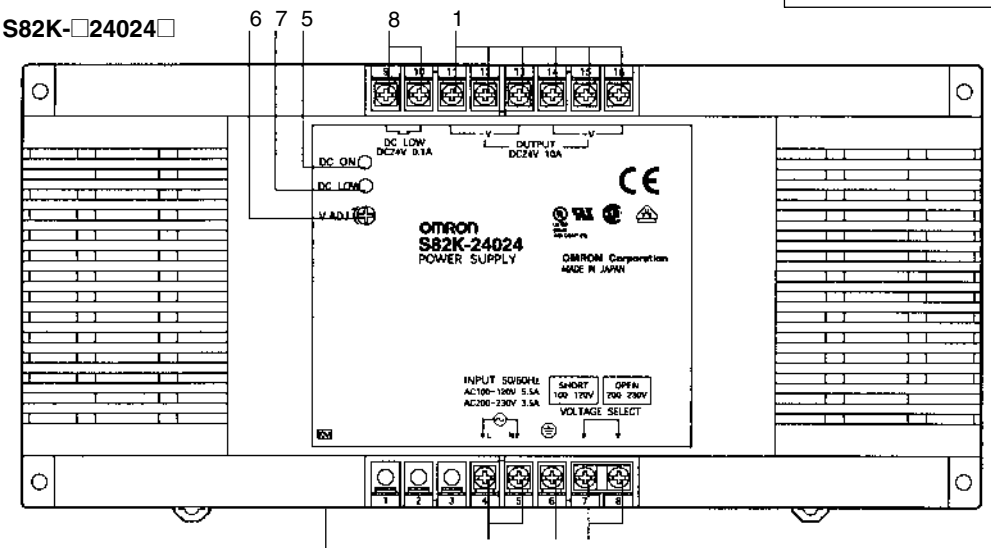
S82K-030□□/S82K-05024



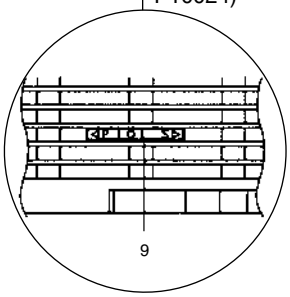
S82K-□09024/S82K-□10024



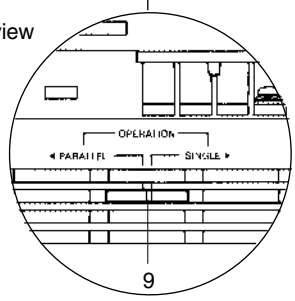
S82K-□24024□



Bottom view
(Only for S82K-P10024)



Bottom view



1. **DC Output Terminals:** Connect the load lines to these terminals.
2. **Input Terminals:** Connect the input lines to these terminals.
3. **Ground Terminal (GR):** Connect a ground line to this terminal.
4. **Input Voltage Selector Terminals:** Selects a 100 V or 200 V input voltage.
5. **Output Indicator (DC ON):** Lights while a Direct Current (DC) output is ON.
6. **Output Voltage Adjuster(V.ADJ):** It is possible to increase or decrease the output voltage.
7. **Undervoltage Alarm Indicator (DC LOW):** Other than S82K-24024 and S82K-P24024 models.
8. **Undervoltage Alarm Output (DC LOW):** S82K-□09024/-□10024/-24024T models only.
9. **Parallel/Single Operation Selector:** Set to "PARALLEL" or "P" for parallel operation.

Operation

■ Undervoltage Alarm Indicator and Output Function (All Models Except for S82K-24024/P24024)

If the output voltage at the output terminal drops to 75% to 90% of the rated voltage, the red indicator of the S82K (DC LOW indicator) will be lit. In the case of the S82K-□09024/□10024/24024T, a voltage drop alarm will be output via the relay available in the models (DC LOW output).

Note: This function detects the voltage at the output terminal of the Power Supply. To check the precise output voltage, measure the voltage at the terminal of the load.

Indicator	Voltage	Operation of □09024/□10024/ 24024T's output (DC LOW output) (see note 2)
Green: ● DC ON Red: ○ DC LOW	If the voltage at the output terminal is more than 82% of the rated voltage and operation is normal, the green indicator will be lit and the red indicator will not be lit.	
Green: ● DC ON Red: ● DC LOW (see note 1)	If the voltage at the output terminal drops to below 82% of the rated voltage, the red indicator will be lit. (See note 3.)	
Green: ○ DC ON Red: ○ DC LOW	If the voltage at the output terminal approaches 0 V, both the green and red indicators will not be lit.	

Note: 1. The more the voltage at the output terminal drops, the darker both the green and red indicators will be.

2. The relay contacts have a capacity of 0.1 A at 24 VDC.

3. The red indicator will actually first light at a voltage between 75% and 90% of the rated voltage.

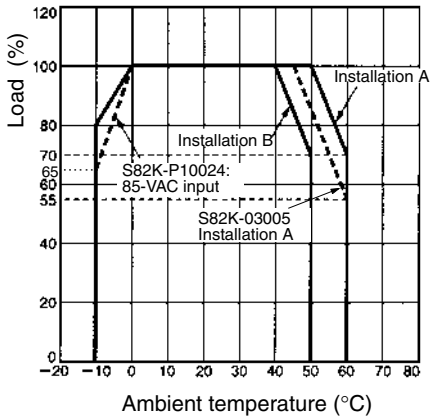
Engineering Data

■ Reference Value

Item	Value	Definition
Reliability (MTBF)	135,000 hrs min.	MTBF stands for Mean Time Between Failures, which is calculated according to the probability of accidental device failures, and indicates reliability of devices. Therefore, it does not necessarily represent a life of the product.
Life expectancy	8 yrs. min.	The life expectancy indicates average operating hours under the ambient temperature of 40°C and a load rate of 50%. Normally this is determined by the life expectancy of the built-in aluminum electrolytic capacitor.

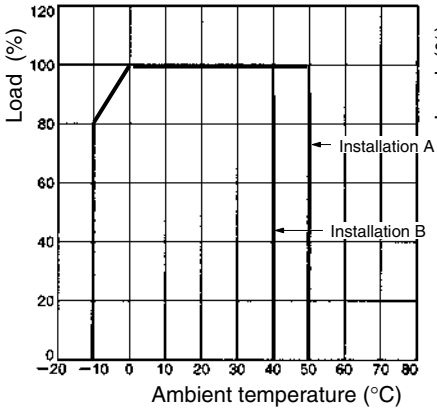
■ Derating Curve

3-/7.5-/15-/30-/50-/100-W Models
Single-Unit Operation

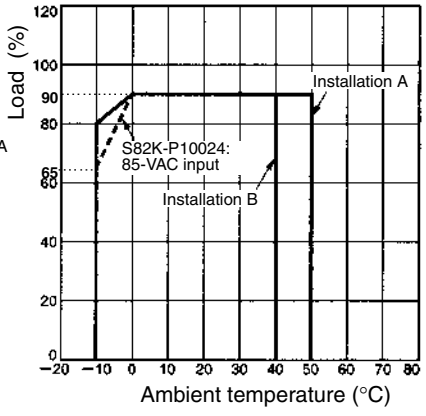


Note: When using the 7.5-W single-output models within the input voltage range between 90 and 110 VDC, the load rate will become 90% or less.

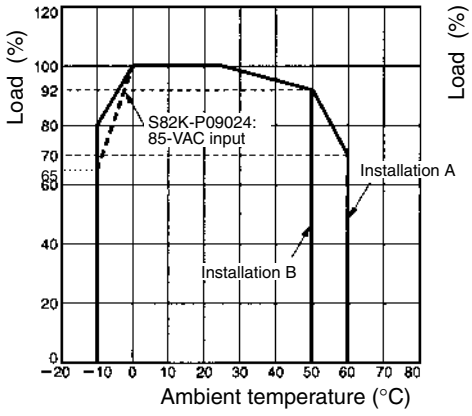
100-W Models without PFC
Parallel-Unit Operation



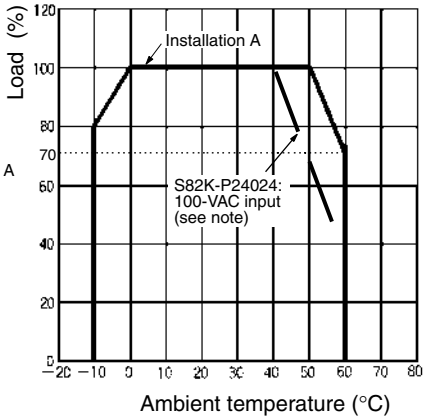
100-W Models with PFC
Parallel-Unit Operation



90-W Models
Single-Unit Operation

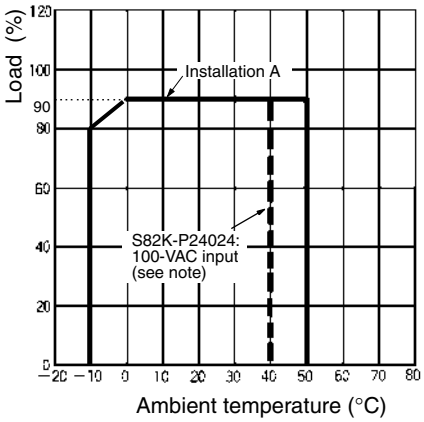


240-W Model
Single-Unit Operation



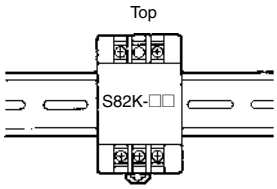
Note: 100-VAC input: 85 to 132 VAC

240-W Model
Parallel-Unit Operation

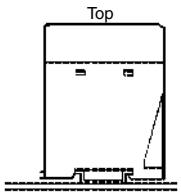


Note: 100-VAC input: 85 to 132 VAC

(A) Standard (Vertical) Installation



(B) Horizontal Installation



(Not permitted for 240-W models.)

Note: The derating curve above can be ensured for the above two kinds of installations.

■ 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 (refer to the table below), 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.

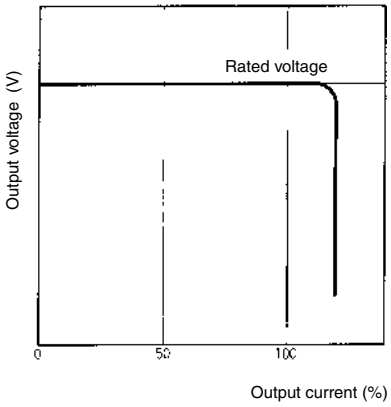
	Single output		Dual outputs	Single output					
	3 W	7.5 W	7.5 W	15 W	30 W	50 W	90 W	100 W	240 W
Set value	105% to 160% of rated load current (see note 1)		105% to 250% of rated load current	105% to 160% of rated load current			101% to 111% of rated load current (see notes 2 and 3)	105% to 160% of rated load current (see note 3)	
Operation	Inverted L drop type, automatic reset				Inverted L drop/intermittent operation type, automatic reset		Inverted L drop type, automatic reset		

Note: 1. When using the 7.5-W single-output models within the input voltage range between 90 and 110 VDC, the overload protection function will operate at currents from 95% to 160% of the rated load current.

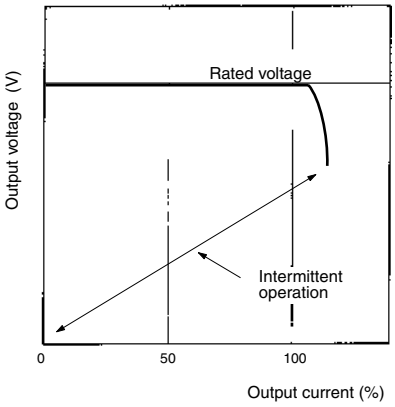
2. When using the 90-W model at an ambient temperature exceeding 25°C, the overload protection function will operate at currents from 92% to 111% of the rated load current.

3. When using the 100-W model with PFC in parallel operation, the overload protection function will operate at currents from 3.78 to 4.2 A.

3-/7.5-/15-/90-/100-/240-W Models



30-/50-W Models



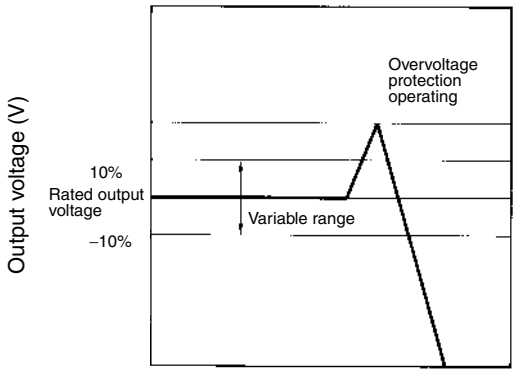
Note: Do not short-circuit the output terminals of the S82K or use the S82K with excessive output current for a long time, otherwise the internal circuitry of the S82K may be deteriorated or damaged.

When Using ± Output Models

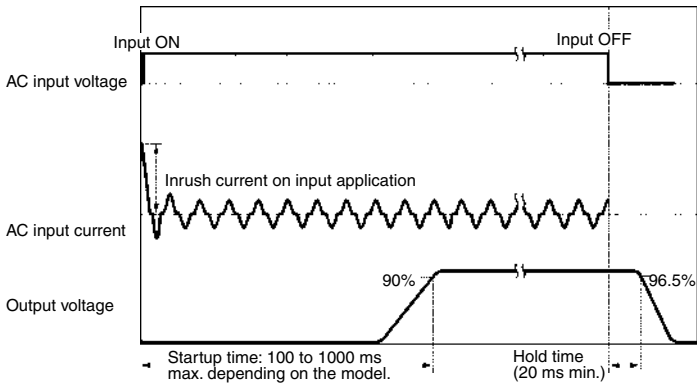
The +V output detects the total output power (+V output and -V output) to trigger the short-circuit protection against overcurrent. This protection varies depending on the -V output state. The -V output independently triggers the short-circuit protection.

■ Overvoltage Protection (S82K-24024T Models Only)

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, the protection function is triggered, shutting off the output voltage. If this occurs, reset the Power Supply by turning it off for 1 minute min. and then turning it on again.



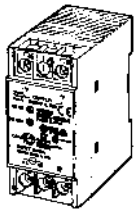
■ Inrush Current, Startup Time, Hold Time

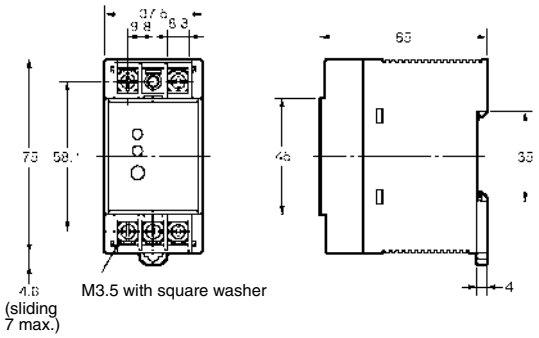


Dimensions

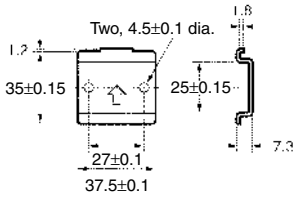
Note: All units are in millimeters unless otherwise indicated.

S82K-003□□ (3 W)
S82K-007□□ (7.5 W)

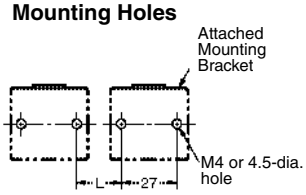




Mounting Brackets
(Supplied with the Switching Power Supply)
Used when not mounting the Power Supply directly on the DIN track.

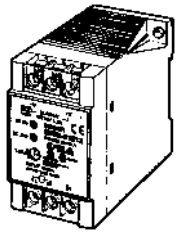


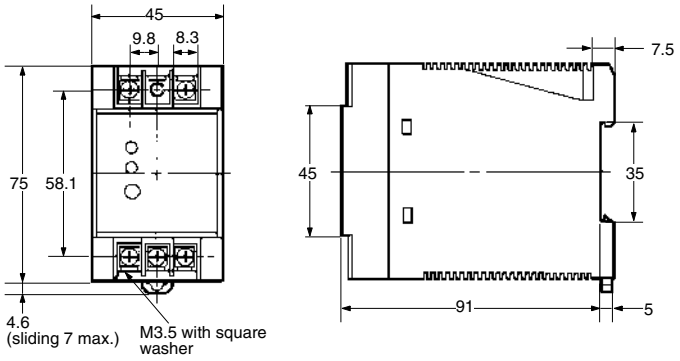
Mounting Holes



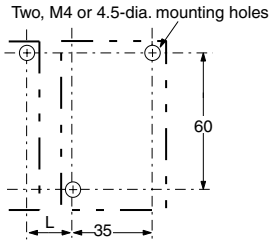
Note: If more than one Power Supply is installed in a row, keep a distance of 20 mm min. (L = 20 mm min.) between each adjacent Power Supply.

S82K-015□□ (15 W)



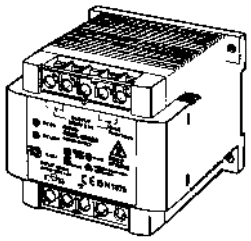


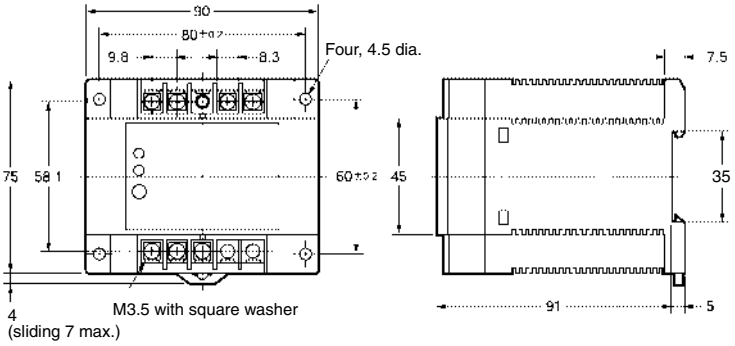
Mounting Holes



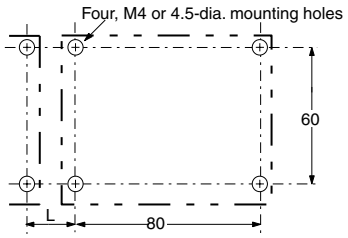
Note: If more than one Power Supply is installed in a row, keep a distance of 20 mm min. (L = 20 mm min.) between each adjacent Power Supply.

S82K-030□□ (30 W)
S82K-05024 (50 W)



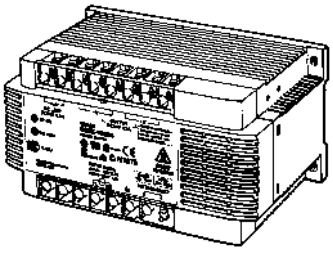


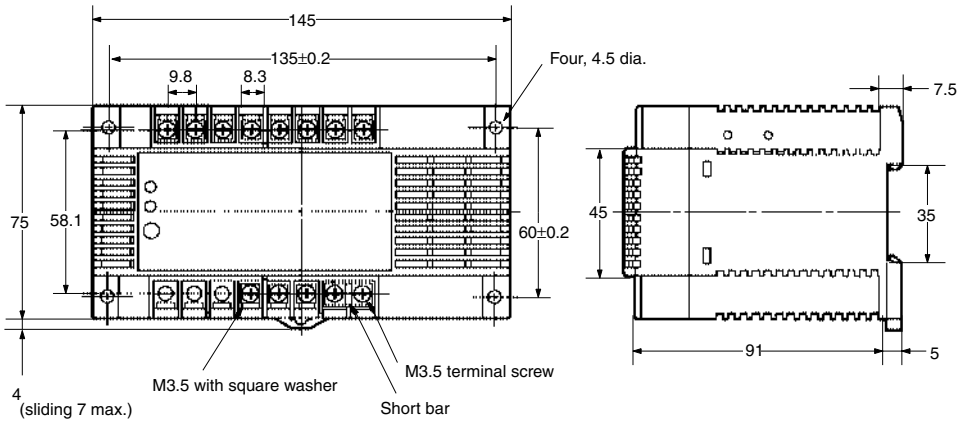
Mounting Holes



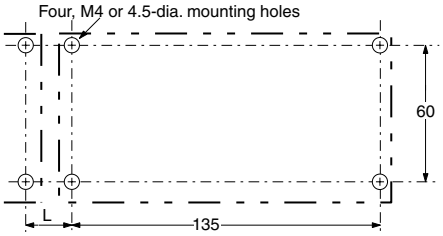
Note: If more than one Power Supply is installed in a row, keep a distance of 20 mm min. (L = 20 mm min.) between each adjacent Power Supply.

S82K-□09024 (90 W)
S82K-□10024 (100 W)



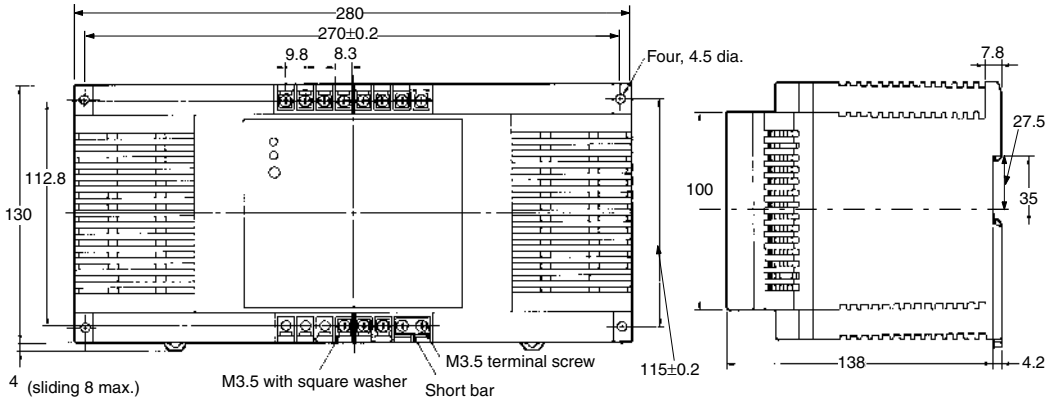


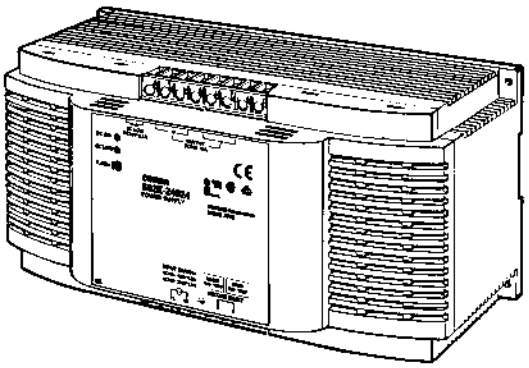
Mounting Holes



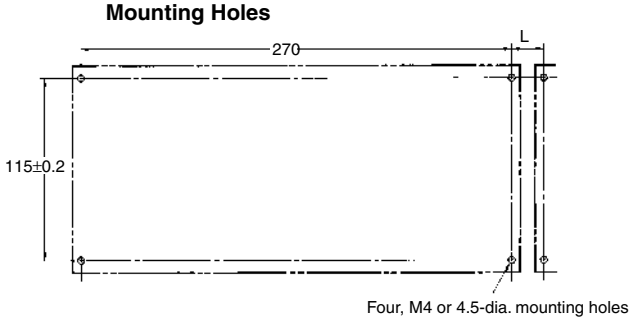
Note: If more than one Power Supply is installed in a row, keep a distance of 20 mm min. (L = 20 mm min.) between each adjacent Power Supply.

S82K-□24024□





Mounting Holes

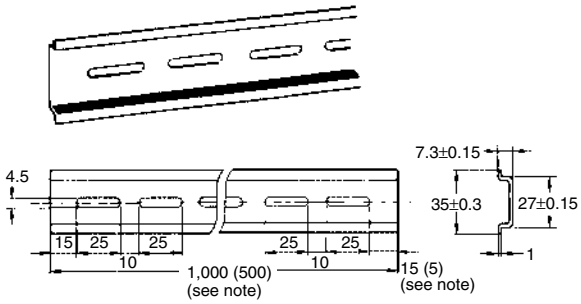


Note: If more than one Power Supply is installed in a row, keep a distance of 20 mm min. (L = 20 mm min.) between each adjacent Power Supply.

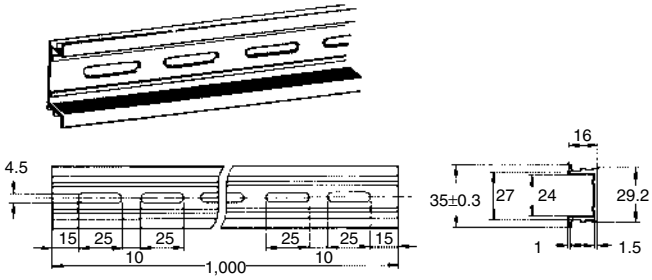
■ Accessories

Mounting Track (Order Separately)

PFP-100N/PFP-50N



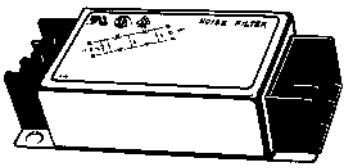
PFP-100N2

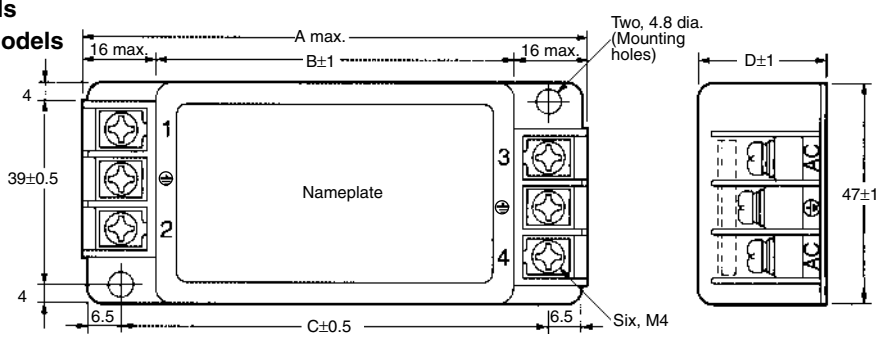


Note: The values shown in parentheses are for the PFP-50N.

Noise Filter (Order Separately)

S82Y-JF3-N for 3- to 50-W Models
S82Y-JF6-N for 90- and 100-W Models





Model	A	B	C	D
S82Y-JF3-N	107	75	90	26
S82Y-JF6-N	117	85	100	30

Precautions

⚠ Caution

Be sure to connect the grounding line. Not doing so may result in electric shock.

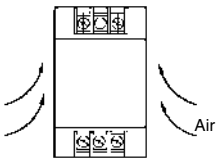
⚠ WARNING

Do not attempt to disassemble the Power Supply or touch its internal parts while power is being supplied. Doing so may result in electric shock.
Do not touch the terminals of the Power Supply within one minute after power has been turned OFF. Doing so may result in electric shock due to a residual voltage.
Do not touch the Power Supply Unit while power is being supplied or immediately after power has been turned OFF. Doing so may result in a skin burn due to high temperature of the Power Supply.

Mounting

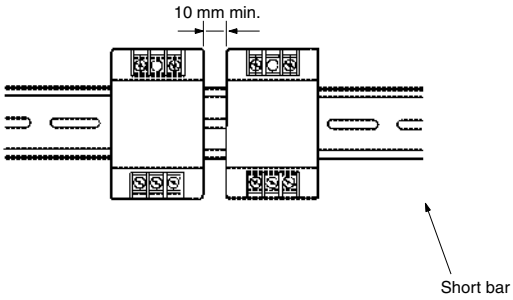
To improve and maintain the reliability of the Power Supply over a long period of time, adequate consideration must be given to heat radiation.

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.

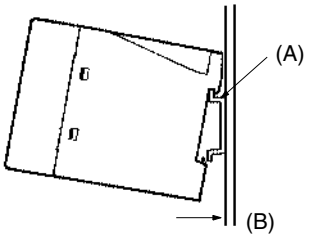


When mounting two or more Power Supplies side-by-side, allow at least 10 mm spacing between them, as shown in the following illustration.

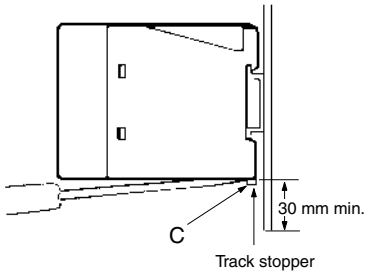
Forced air-cooling is recommended.



To mount the Power Supply on a DIN track, hook portion (A) of the Power Supply to the track and press the Power Supply toward direction (B).



To dismount the Power Supply, pull down portion (C) with a flat-blade screwdriver and pull out the Power Supply.



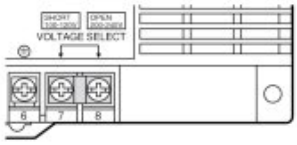
When tightening the terminals, do not tighten the terminal block to a torque greater than 75 N.

Selection of 100 or 200 VAC Input Voltage (S82K-□09024/-□10024/-24024/-24024T)

Select a 100 V or 200 V input by shorting or opening the Input Voltage Selector Terminals, as shown in the following diagram.

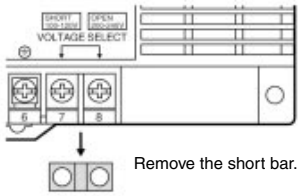
The default setting is 200 V.

100 V Input



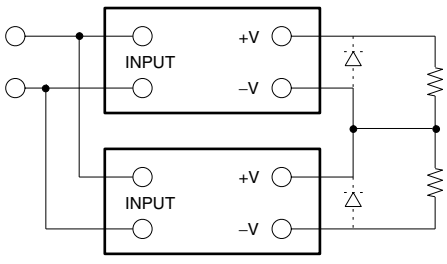
Use the short bar to short-circuit terminals 7 and 8.

200 V Input



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.



When connecting the Power Supplies in series with an operation amplifier, connect diodes to the output terminals as shown by the dotted lines in the figure. No diodes are required with S82K 90-W/100-W/240-W models.

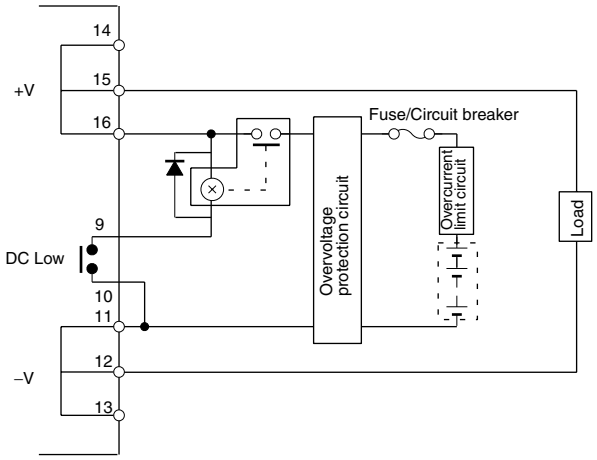
Wiring

Carefully wire the input/output terminals while paying attention to their polarities so as to prevent incorrect wiring.

Battery Charging/Backup

With S82K-□09024/-□10024/-24024T models, a reduction in lifetime due to over discharge of the battery can be prevented using the DC LOW output. (Discharge can be interrupted at 0.75 to 0.9 × 24 V.)

Example: Lead Storage Battery Backup Circuit



Note: 1. For details of charging voltages and charging currents, refer to the specifications for the battery.

2. In order to prevent overvoltage to the battery, install an overvoltage protection circuit (90/100-W models).

3. To protect the battery in the event of incorrect operation, such as load short-circuiting, be sure to install a fuse or circuit breaker.

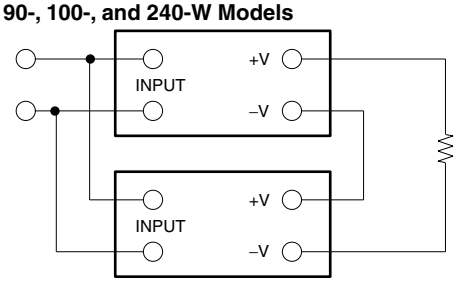
4. To limit the level of charging current to the battery, install an overcurrent limit circuit.

With other models, when connecting a battery to the load, install an overcurrent limit circuit and overvoltage protection circuit.

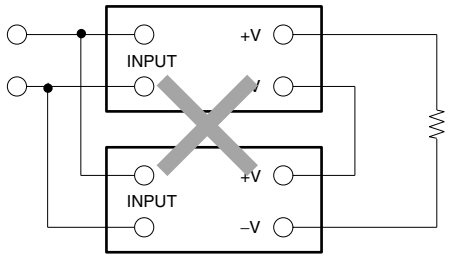
Series Operation

S82K 90-W/100-W/240-W model can be operated in series.
It must be noted that the + output of the 7.5-W dual output model cannot be connected in series to its – output.

90-, 100-, and 240-W Models



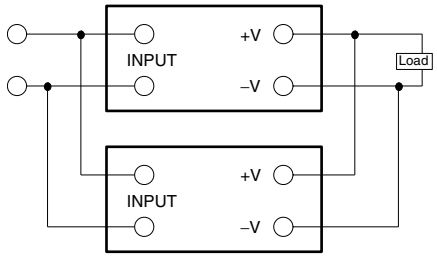
3-, 7.5-, 15-, 30-, 50-W Models



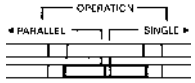
Parallel Operation

S82K 100-W/240-W models can be operated in parallel.
Perform parallel operation with power supplies satisfying the same specifications.

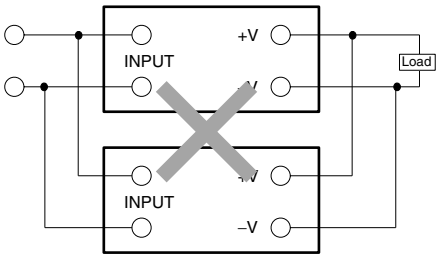
100- and 240-W Models



Note: When operating the S82K-P10024 or S82K-□24024□ in parallel operation, set the switch to "PARALLEL." Refer to the derating curve for the rated current under this operation.



3-, 7.5-, 15-, 30-, 50- and 90-W Models



Parallel Operation Precautions

- The length and thickness of each wire connected to the load must be the same so that there is no difference in voltage drop value between the load and the output terminals of each Power Supply.
- Adjust the output voltage of each Power Supply so that there will be no difference in output voltage between each Power Supply.
- If the S82K-P10024 or S82K-□24024□ models are used in single operation under the parallel operation setting, the overcurrent protection will be actuated at an output of 90% to 95% (in current), and will not allow a 100% output.
- If the S82K-P10024 or S82K-□24024□ models are used in parallel operation under the single operation setting, one of them will operate at 110% output, causing severe heat derating and shortening the service life.

Minimum Output Current

The minimum output current of the S82K-00727 and S82K-00728 is restricted by the output voltage and control method.

Note: All the outputs of the S82K-00727 and S82K-00728 are controlled by the +V output. If the +V output current falls to 10% or less of the rated output, the –V output voltage may drop.

Operating and Storage Environments

Do not use or store the Unit in the following places, otherwise the Unit may malfunction or the characteristics of the Unit may deteriorate.

- Locations subject to direct sunlight.
- Locations subject to ambient operating temperatures outside the range indicated by the derating curve.
- Locations subject to ambient operating humidity outside the range of 25% to 85%.
- Locations subject to condensation as the result of severe changes in temperature.
- Locations subject to ambient storage temperatures outside the range of –25°C to 65°C.
- Locations subject to corrosive or flammable gases.
- Locations subject to dust (especially iron dust) or salts.
- Locations subject to shock or vibration.
- Locations subject to exposure to water, oil, or chemicals.

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. M048-E1-06

In the interest of product improvement, specifications are subject to change without notice.