

# Power Supplies

## JAH Series

AC Input

Single Output, General-Purpose

### FEATURES

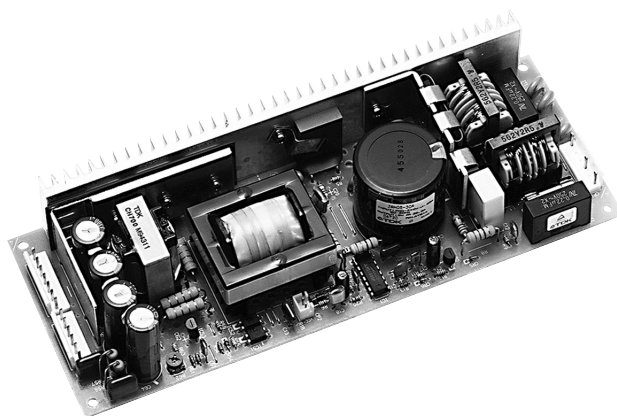
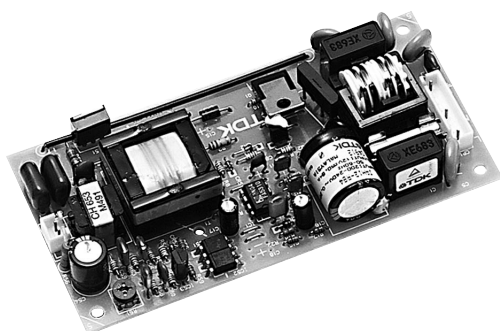
- Low profile, single output AC.200V input power supply.
- Small open frame.
- These low noise power supplies are FCC/VDE class B standards compliant.
- Low price.

### PART NUMBERS AND RATINGS

Output voltage(V)	10W type		15W type		25W type	
	Current(A)	Part No.	Current(A)	Part No.	Current(A)	Part No.
5	2	JAH05-2R0	3	JAH05-3R0	5	JAH05-5R0
12	0.84	JAH12-R84	1.3	JAH12-1R3	2.1	JAH12-2R1
15	0.67	JAH15-R67	1	JAH15-1R0	1.7	JAH15-1R7
24	0.42	JAH24-R42	0.63	JAH24-R63	1.1	JAH24-1R1

Output voltage(V)	50W type		100W type		150W type	
	Current(A)	Part No.	Current(A)	Part No.	Current(A)	Part No.
5	10	JAH05-10R	20	JAH05-20R	30	JAH05-30R
12	4.2	JAH12-4R2	8.4	JAH12-8R4	12.5	JAH12-13R
15	3.4	JAH15-3R4	6.7	JAH15-6R7	10	JAH15-10R
24	2.1	JAH24-2R1	4.2	JAH24-4R2	6.3	JAH24-6R3



# Power Supplies

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AC Input

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### SPECIFICATIONS

#### 10W TYPE

Part No.	JAH05-2R0	JAH12-R84	JAH15-R67	JAH24-R42
Output voltage, current*1	5V • 2A	12V • 0.84A	15V • 0.67A	24V • 0.42A
Maximum output power	W 10	10.1	10.1	10.1
Input requirements				
Input voltage Eac*2	V	170 to 265[Rating:200-240]		
Input frequency	Hz	47 to 66[Single phase]		
Input current	A	0.2max.[200V]		
Fuse rating	A	1.25[Internal]		
Surge current	A	20max.[200V]		
Leakage current	mA	0.75max.[240V, operating]		
Efficiency	%	71typ.	73typ.	73typ.
Output characteristics				
Output voltage	V	5	12	15
Voltage variable range	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5
Maximum output current*1	A	2	0.84	0.67
Overvoltage threshold	V	5.6 to 6.9	13.4 to 15.7	16.7 to 19
Overcurrent threshold	A	2.1min.	0.9min.	0.7min.
Voltage stability	Input variation	% 2max.(1typ.)[Within the input voltage range]		
	Load variation	% 2max.(1typ.)[10 to 100% load]		
	Temperature variation	% 2max.(1typ.)[0 to +40°C]		
	Drift	% 0.5max.(0.1typ.)[After input voltage ON for 30min to 8h]		
	Dynamic load	%/ms ±4max./1max.[50 to 100% sudden load change]		
Ripple noise Ep-p	mV	120max.	190max.	220max.
Start up time	ms	400max.[200V]		
Hold up time	ms	30min.(42typ.)[200V]		
Accessory equipment				
Operation indicator	None			
Overvoltage protection	Voltage shielding type, recovers upon reset(interval approx. 40s).			
Overcurrent protection	Fixed current and voltage threshold type, automatic recovery, but overcurrent of 1s min. is shielded.			
Remote ON-OFF	None			
Remote sensing	None			
Output voltage external variable function	None			
Standards				
Safety standards	EN60950(TUV) approved.			
Noise terminal voltage	VCCI class 2, FCC class B, VDE class B compliant.			
Construction				
External dimensions H×W×L	mm	21×60×120		
Weight	g	110max.		
Mounting method	1 side (Open frame)			

\*1 Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

\*2 Output can stop if input voltage drops below the minimum value continuously for over 1s during supply of power to load.

# Power Supplies

## JAH Series

AC Input

Single Output, General-Purpose

### SPECIFICATIONS

#### 15W TYPE

Part No.	JAH05-3R0	JAH12-1R3	JAH15-1R0	JAH24-R63
Output voltage, current*1	5V • 3A	12V • 1.3A	15V • 1A	24V • 0.63A
Maximum output power	W	15	15.6	15
Input requirements				
Input voltage Eac*2	V	170 to 265[Rating:200-240]		
Input frequency	Hz	47 to 66[Single phase]		
Input current	A	0.25max.[200V]		
Fuse rating	A	1.25[Internal]		
Surge current	A	20max.[200V, 25°C, cold start]		
Leakage current	mA	0.75max.[240V, operating]		
Efficiency	%	72typ.	76typ.	77typ.
Output characteristics				
Output voltage	V	5	12	15
Voltage variable range	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5
Maximum output current*1	A	3	1.3	1
Overvoltage threshold	V	5.6 to 6.9	13.4 to 15.7	16.7 to 19
Overcurrent threshold	A	3.2min.	1.4min.	1.05min.
Voltage stability	Input variation	%	2max.(1typ.)[Within the input voltage range]	
	Load variation	%	2max.(1typ.)[10 to 100% load]	
	Temperature variation	%	2max.(1typ.)[0 to +40°C]	
	Drift	%	0.5max.(0.1typ.)[After input voltage ON for 30min to 8h]	
	Dynamic load	%/ms	±4max./1max.[50 to 100% sudden load change]	
Ripple noise Ep-p	mV	120max.	190max.	220max.
Start up time	ms	400max.[200V]		310max.
Hold up time	ms	18min.(25typ.)[200V]		
Accessory equipment				
Operation indicator		None		
Overvoltage protection		Voltage shielding type, recovers upon reset(interval approx. 40s).		
Overcurrent protection		Fixed current and voltage threshold type, automatic recovery, but overcurrent of 1s min. is shielded.		
Remote ON-OFF		None		
Remote sensing		None		
Output voltage external variable function		None		
Standards				
Safety standards		EN60950(TUV3) approved.		
Noise terminal voltage		VCCI class 2, FCC class B, VDE class B compliant.		
Construction				
External dimensions H×W×L	mm	21×60×120		
Weight	g	110max.		
Mounting method		1 side (Open frame)		

\*1 Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

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# Power Supplies

## JAH Series

AC Input

Single Output, General-Purpose

### SPECIFICATIONS

#### 25W TYPE

Part No.	JAH05-5R0	JAH12-2R1	JAH15-1R7	JAH24-1R1
Output voltage, current*1	5V • 5A	12V • 2.1A	15V • 1.7A	24V • 1.1A
Maximum output power	W 25	25.2	25.5	26.4
Input requirements				
Input voltage Eac*2	V	170 to 265[Rating:200-240]		
Input frequency	Hz	47 to 66[Single phase]		
Input current	A	0.35max.[200V]		
Fuse rating	A	1.6[Internal]		
Surge current	A	30max.[200V, 1st surge current]		
Leakage current	mA	0.75max.[240V, operating]		
Efficiency	%	77typ.	77typ.	79typ. 80typ.
Output characteristics				
Output voltage	V	5	12	15 24
Voltage variable range	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5 21.6 to 26.4
Maximum output current*1	A	5	2.1	1.7 1.1
Overvoltage threshold	V	5.6 to 6.9	13.4 to 15.7	16.7 to 19 26.7 to 30.5
Overcurrent threshold	A	5.3min.	2.2min.	1.8min. 1.2min.
Voltage stability	Input variation	% 2max.(1typ.)[Within the input voltage range]		
	Load variation	% 2max.(1typ.)[10 to 100% load]		
	Temperature variation	% 2max.(1typ.)[0 to +40°C]		
	Drift	% 0.5max.(0.1typ.)[After input voltage ON for 30min to 8h]		
	Dynamic load	%/ms ±4max./1max.[50 to 100% sudden load change]		
Ripple noise Ep-p	mV	120max.	190max.	220max. 310max.
Start up time	ms	500max.[200V]		
Hold up time	ms	27min.(35typ.)[200V]		
Accessory equipment				
Operation indicator	None			
Overvoltage protection	Voltage shielding type, recovers upon reset(interval approx. 40s).			
Overcurrent protection	Fixed current and voltage threshold type, automatic recovery, but overcurrent of 1s min. is shielded.			
Remote ON-OFF	None			
Remote sensing	None			
Output voltage external variable function	None			
Standards				
Safety standards	EN60950(TUV) approved.			
Noise terminal voltage	VCCI class 2, FCC class B, VDE class B compliant.			
Construction				
External dimensions H×W×L	mm	25×60×143		
Weight	g	160max.		
Mounting method	1 side (Open frame)			

\*1 Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

\*2 Output can stop if input voltage drops below the minimum value continuously for over 1s during supply of power to load.

# Power Supplies

## JAH Series

AC Input

Single Output, General-Purpose

### SPECIFICATIONS

#### 50W TYPE

Part No.	JAH05-10R0	JAH12-4R2	JAH15-3R4	JAH24-2R1
Output voltage, current*1	5V • 10A	12V • 4.2A	15V • 3.4A	24V • 2.1A
Maximum output power	W 50	50.4	51	50.4
Input requirements				
Input voltage Eac*2	V	170 to 265[Rating:200-240]		
Input frequency	Hz	47 to 66[Single phase]		
Input current	A	0.65max.[200V]		
Fuse rating	A	2[Internal]		
Surge current	A	30max.[200V, 25°C, cold start]		
Leakage current	mA	0.75max.[240V, operating]		
Efficiency	%	80typ.	80typ.	82typ.
Output characteristics				
Output voltage	V	5	12	15
Voltage variable range	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5
Maximum output current*1	A	10	4.2	3.4
Overvoltage threshold	V	5.6 to 6.9	13.4 to 15.7	16.7 to 19
Overcurrent threshold	A	10.5min.	4.4min.	3.5min.
Voltage stability	Input variation	% 2max.(1typ.)[Within the input voltage range]		
	Load variation	% 2max.(1typ.)[10 to 100% load]		
	Temperature variation	% 2max.(1typ.)[0 to +40°C]		
	Drift	% 0.5max.(0.1typ.)[After input voltage ON for 30min to 8h]		
	Dynamic load	%/ms ±4max./1max.[50 to 100% sudden load change]		
Ripple noise Ep-p	mV	120max.	190max.	220max.
Start up time	ms	500max.[200V]		
Hold up time	ms	17min.(25typ.)[200V]		
Accessory equipment				
Operation indicator	None			
Overvoltage protection	Voltage shielding type, recovers upon reset(interval approx. 40s).			
Overcurrent protection	Fixed current and voltage threshold type, automatic recovery, but overcurrent of 1s min. is shielded.			
Remote ON-OFF	None			
Remote sensing	None			
Output voltage external variable function	None			
Standards				
Safety standards	EN60950(TUV) approved.			
Noise terminal voltage	VCCI class 2, FCC class B, VDE class B compliant.			
Construction				
External dimensions H×W×L	mm	30×60×185		
Weight	g	240max.		
Mounting method	1 side (Open frame)			

\*1 Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

\*2 Output can stop if input voltage drops below the minimum value continuously for over 1s during supply of power to load.

# Power Supplies

## JAH Series

AC Input

Single Output, General-Purpose

### SPECIFICATIONS

#### 100W TYPE

Part No.	JAH05-20R	JAH12-8R4	JAH15-6R7	JAH24-4R2
Output voltage, current*1	5V • 20A	12V • 8.4A	15V • 6.7A	24V • 4.2A
Maximum output power	W 100	100.8	100.5	100.8
Input requirements				
Input voltage Eac	V 170 to 265[Rating:200-240]			
Input frequency	Hz 47 to 66[Single phase]			
Input current	A 1.5max.[200V]			
Fuse rating	A 3.15[Internal]			
Surge current	A 30max.[200V, 1st surge current, reset after roughly 10s min.]			
Leakage current	mA 0.75max.[240V, operating]			
Efficiency	% 81typ.	84typ.	85typ.	87typ.
Output characteristics				
Output voltage	V 5	12	15	24
Voltage variable range	V 4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4
Maximum output current*1	A 20	8.4	6.7	4.2
Overvoltage threshold	V 5.6 to 6.9	13.4 to 15.7	16.7 to 19	26.7 to 30.5
Overcurrent threshold	A 21min.	8.9min.	7.1min.	4.5min.
Voltage stability	Input variation	% 2max.(1typ.)[Within the input voltage range]		
	Load variation	% 2max.(1typ.)[10 to 100% load]		
	Temperature variation	% 2max.(1typ.)[0 to +40°C]		
	Drift	% 0.5max.(0.1typ.)[After input voltage ON for 30min to 8h]		
	Dynamic load	%/ms ±4max./1max.[50 to 100% sudden load change]		
Ripple noise Ep-p	mV 120max.	190max.	220max.	310max.
Start up time	ms 250max.[200V]			
Hold up time	ms 27min.(35typ.)[200V]			
Accessory equipment				
Operation indicator	None			
Overvoltage protection	Voltage shielding type, recovers upon reset(interval approx. 40s).			
Overcurrent protection*2	Fixed current and voltage threshold type, automatic recovery, but overcurrent of 1s min. is shielded.			
Remote ON-OFF	None			
Remote sensing	None			
Output voltage external variable function	None			
Standards				
Safety standards	EN60950(TUV) approved.			
Noise terminal voltage	VCCI class 2, FCC class B, VDE class B compliant.			
Construction				
External dimensions HxWxL	mm 35x75x222			
Weight	g 550max.			
Mounting method	1 side (Open frame)			

\*1 Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

\*2 The power supply can be damaged if output current exceeds the rated value, and the overload condition(output current that is greater than the output current rating and less than the overcurrent detection threshold) continues for 1min minimum.

# Power Supplies

## JAH Series

AC Input

Single Output, General-Purpose

### SPECIFICATIONS

#### 150W TYPE

Part No.		JAH05-30R	JAH12-13R	JAH15-10R	JAH24-6R3
Output voltage, current*1		5V • 30A	12V • 12.5A	15V • 10A	24V • 6.3A
Maximum output power	W	150	150	150	151.2
Input requirements					
Input voltage Eac	V	170 to 265[Rating:200-240]			
Input frequency	Hz	47 to 66[Single phase]			
Input current	A	1.95max.[200V]			
Fuse rating	A	3.15[Internal]			
Surge current	A	30max.[200V, 1st surge current, reset after roughly 10s min.]			
Leakage current	mA	0.75max.[240V, operating]			
Efficiency	%	82typ.	83typ.	84typ.	86typ.
Output characteristics					
Output voltage	V	5	12	15	24
Voltage variable range	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4
Maximum output current*1	A	30	12.5	10	6.3
Overvoltage threshold	V	5.6 to 6.9	13.4 to 15.7	16.7 to 19	26.7 to 30.5
Overcurrent threshold	A	31.5min.	13.2min.	10.5min.	6.7min.
Voltage stability	Input variation	% 2max.(1typ.)[Within the input voltage range]			
	Load variation	% 2max.(1typ.)[10 to 100% load]			
	Temperature variation	% 2max.(1typ.)[0 to +40°C]			
	Drift	% 0.5max.(0.1typ.)[After input voltage ON for 30min to 8h]			
	Dynamic load	%/ms ±4max./1max.[50 to 100% sudden load change]			
		Total variation ±3max.(±1typ.)			
Ripple noise Ep-p	mV	120max.	190max.	220max.	310max.
Start up time	ms	250max.[200V]			
Hold up time	ms	30min.(40typ.)[200V]			
Accessory equipment					
Operation indicator		None			
Overvoltage protection		Voltage shielding type, recovers upon reset(interval approx. 40s).			
Overcurrent protection*2		Fixed current and voltage threshold type, automatic recovery, but overcurrent of 1s min. is shielded.			
Remote ON-OFF		None			
Remote sensing		None			
Output voltage external variable function		None			
Standards					
Safety standards		EN60950(TUV) approved.			
Noise terminal voltage		VCCI class 2, FCC class B, VDE class B compliant.			
Construction					
External dimensions H×W×L	mm	40×85×222			
Weight	g	620max.			
Mounting method		1 side (Open frame)			

\*1 Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

\*2 The power supply can be damaged if output current exceeds the rated value, and the overload condition(output current that is greater than the output current rating and less than the overcurrent detection threshold) continues for 1min minimum.

# Power Supplies

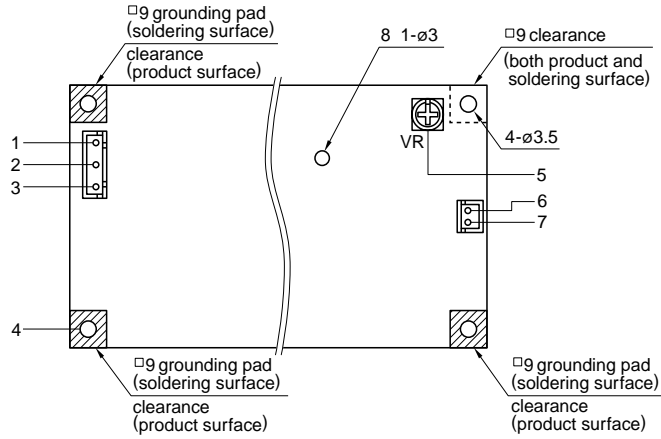
AC Input

Single Output, General-Purpose

# JAH Series

## TERMINAL DESIGNATIONS AND FUNCTIONS

### JAH10W



Terminal No. 1: Input terminal(No. 1 pin of CP1)

Live line. Fuse is built in.

Terminal No. 2: Input terminal(No. 4 pin of CP1)

Neutral line

Terminal No. 3: Input terminal(No. 8 pin of CP1)

Ground

Terminal No. 4: Ground

Connect with input terminal(No. 8 pin of CP1). If the power supply is connected electrically to equipment via the spacer, etc., the spacer material should be electrically conductive(spacer contact surface=6mm max. dia.).

Terminal No. 5: Output voltage adjustment

Clockwise rotation increases output voltage.

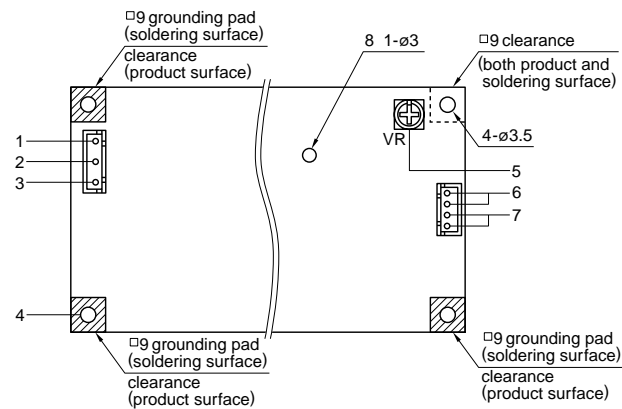
Terminal No. 6: + output terminal(No. 2 pin of CP51)

Terminal No. 7: - output terminal(No. 1 pin of CP51)

Terminal No. 8: Spacer mounting hole

A spacer should be used that is constructed from an insulating material(spacer contact surface=6mm max. dia.).

### JAH15W



Terminal No. 1: Input terminal(No. 1 pin of CP1)

Live line. Fuse is built in.

Terminal No. 2: Input terminal(No. 4 pin of CP1)

Neutral line

Terminal No. 3: Input terminal(No. 8 pin of CP1)

Ground

Terminal No. 4: Ground

Connect with input terminal(No. 8 pin of CP1). If the power supply is connected electrically to equipment via the spacer, etc., the spacer material should be electrically conductive(spacer contact surface=6mm max. dia.).

Terminal No. 5: Output voltage adjustment

Clockwise rotation increases output voltage.

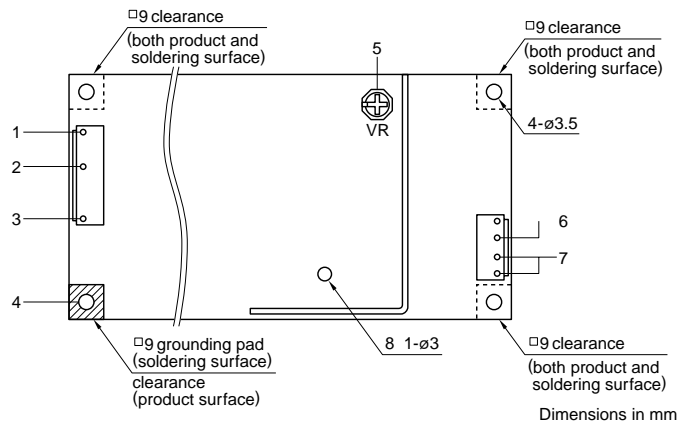
Terminal No. 6: + output terminals(No. 3 and 4 pins of CP51)

Terminal No. 7: - output terminals(No. 1 and 2 pins of CP51)

Terminal No. 8: Spacer mounting hole

A spacer should be used that is constructed from an insulating material(spacer contact surface=6mm max. dia.).

### JAH25W



Terminal No. 1: Input terminal(No. 6 pin of CP1)

Live line. Fuse is built in.

Terminal No. 2: Input terminal(No. 4 pin of CP1)

Neutral line

Terminal No. 3: Input terminal(No. 1 pin of CP1)

Ground

Terminal No. 4: Ground

Connect with input terminal(No. 1 pin of CP1). If the power supply is connected electrically to equipment via the spacer, etc., the spacer material should be electrically conductive(spacer contact surface=6mm max. dia.).

Terminal No. 5: Output voltage adjustment

Clockwise rotation increases output voltage.

Terminal No. 6: + output terminals(No. 1 and 2 pins of CP51)

Terminal No. 7: - output terminals(No. 3 and 4 pins of CP51)

Terminal No. 8: Spacer mounting hole

A spacer should be used that is constructed from an insulating material(spacer contact surface=6mm max. dia.).



# Power Supplies

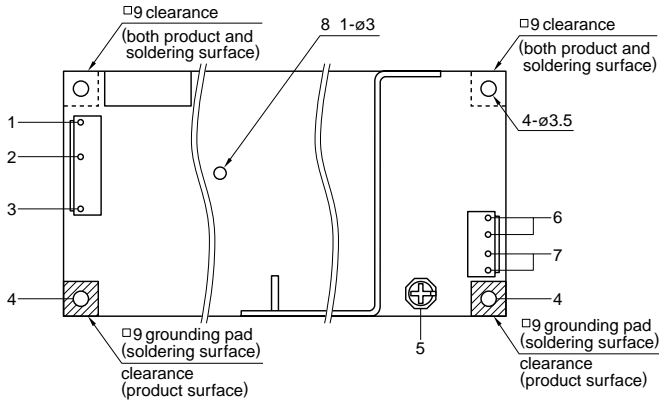
AC Input

Single Output, General-Purpose

# JAH Series

## TERMINAL DESIGNATIONS AND FUNCTIONS

### JAH50W



Terminal No. 1: Input terminal(No. 6 pin of CP1)

Live line. Fuse is built in.

Terminal No. 2: Input terminal(No. 4 pin of CP1)

Neutral line

Terminal No. 3: Input terminal(No. 1 pin of CP1)

Ground

Terminal No. 4: Ground

Connect with input terminal(No. 1 pin of CP1). If the power supply is connected electrically to equipment via the spacer, etc., the spacer material should be electrically conductive(spacer contact surface=6mm max. dia.).

Terminal No. 5: Output voltage adjustment

Clockwise rotation increases output voltage.

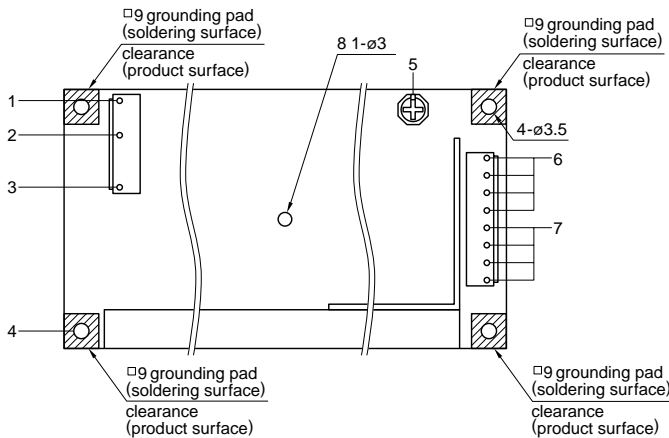
Terminal No. 6: + output terminals(No. 1 and 2 pins of CP51)

Terminal No. 7: - output terminals(No. 3 and 4 pins of CP51)

Terminal No. 8: Spacer mounting hole

A spacer should be used that is constructed from an insulating material(spacer contact surface=6mm max. dia.).

### JAH100W



Terminal No. 1: Input terminal(No. 6 pin of CP1)

Live line. Fuse is built in.

Terminal No. 2: Input terminal(No. 4 pin of CP1)

Neutral line

Terminal No. 3: Input terminal(No. 1 pin of CP1)

Ground

Terminal No. 4: Ground

Connect with input terminal(No. 1 pin of CP1). If the power supply is connected electrically to equipment via the spacer, etc., the spacer material should be electrically conductive(spacer contact surface=6mm max. dia.).

Terminal No. 5: Output voltage adjustment

Clockwise rotation increases output voltage.

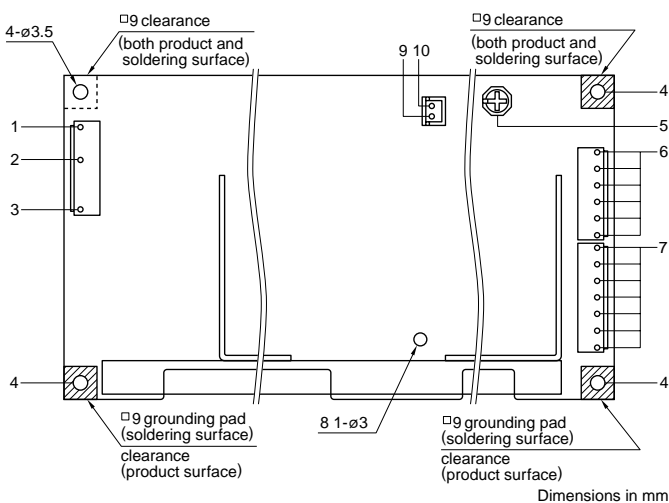
Terminal No. 6: + output terminals(No. 1 to 4 pins of CP51)

Terminal No. 7: - output terminals(No. 5 to 8 pins of CP51)

Terminal No. 8: Spacer mounting hole

A spacer should be used that is constructed from an insulating material(spacer contact surface=6mm max. dia.).

### JAH150W



Terminal No. 1: Input terminal(No. 6 pin of CP1)

Live line. Fuse is built in.

Terminal No. 2: Input terminal(No. 4 pin of CP1)

Neutral line

Terminal No. 3: Input terminal(No. 1 pin of CP1)

Ground

Terminal No. 4: Ground

Connect with input terminal(No. 1 pin of CP1). If the power supply is connected electrically to equipment via the spacer, etc., the spacer material should be electrically conductive(spacer contact surface=6mm max. dia.).

Terminal No. 5: Output voltage adjustment

Clockwise rotation increases output voltage.

Terminal No. 6: + output terminals(No. 1 to 6 pins of CP51)

Terminal No. 7: - output terminals(No. 1 to 7 pins of CP52)

Terminal No. 8: Spacer mounting hole

A spacer should be used that is constructed from an insulating material(spacer contact surface=6mm max. dia.).

Terminal No. 9: VCC terminal(No. 1 pin of CP2)

VCC+

Terminal No. 10: VCC terminals(No. 2 pin of CP2)

VCC-

15±2V should be applied to the VCC terminals if JAH power supplies are used in parallel. An isolated external DC power supply should be used to apply this voltage to the VCC terminals.