

Compact and low price device-embedded type

TDK Switching Power Supply

J SERIES JAK

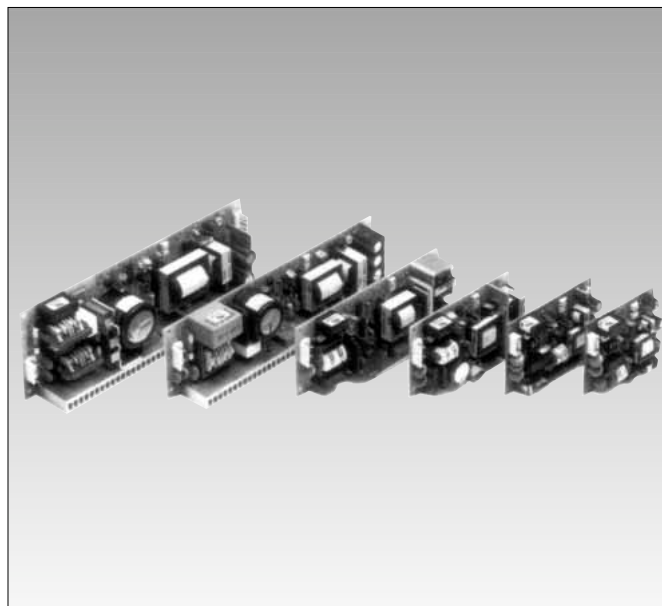
UL approved (50W min. type)

[FEATURES]

- AC.100V input thin-type single output power supply.
- Compact open frame.
- Low price.
- Low noise (FCC class B compliant).

[SUMMARY]

The J series JAK products are device-embedded type power supplies characterized by the compact size of 19 to 40mm in thickness and low price. They satisfy various requirements such as low price, safety standards, and EMI countermeasures as well as the compact configuration. TDK answers a wide variety of customer needs with a full product lineup of 22 models covering six types of 10W to 150W.



PART NUMBERS AND RATINGS

JAK series : AC.100V input (UL approved 50W min.)

Output voltage(V)	10W Type ^{*1}		15W Type ^{*1}		25W Type ^{*1}		50W Type		100W Type		150W Type	
	Current(A)	Part No.	Current(A)	Part No.	Current(A)	Part No.	Current(A)	Part No.	Current(A)	Part No.	Current(A)	Part No.
5	2	JAK05-2R0	3	JAK05-3R0	5	JAK05-5R0	10	JAK05-10R	20	JAK05-20R	30	JAK05-30R
12	0.84	JAK12-R84	1.3	JAK12-1R3	2.1	JAK12-2R1	4.2	JAK12-4R2	8.4	JAK12-8R4	12.5	JAK12-13R
15	0.67	JAK15-R67	1	JAK15-1R0	1.7	JAK15-1R7	3.4	JAK15-3R4				
24	0.42	JAK24-R42	0.63	JAK24-R63	1.1	JAK24-1R1	2.1	JAK24-2R1	4.2	JAK24-4R2	6.3	JAK24-6R3

^{*1} Discontinued

J SERIES JAK10W TYPE (Discontinued)

SPECIFICATIONS AND STANDARDS

PART NO.		JAK05-2R0	JAK12-R84	JAK15-R67	JAK24-R42
Rated output voltage and 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 CONDITIONS					
Input voltage*2 Eac	V	85 to 132[Rating: 100 to 120]			
Input frequency	Hz	47 to 66[Rating: 50 to 60](Single phase)			
Input current	A	0.3max.[Input and output ratings]			
Fuse rating	A	1.6[Built-in]			
Surge current	A	40max.[Input and output ratings]			
Leakage current	mA	0.5max.[Input and output ratings]			
Efficiency	%	70typ.	72typ.	73typ.	74typ.
OUTPUT CHARACTERISTICS					
Output voltage Edc	V	5	12	15	24
Voltage variable range Edc	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4
Maximum output current	A	2	0.84	0.67	0.42
Overvoltage threshold Edc	V	5.6 to 6.9	13.4 to 15.7	16.7 to 19	26.7 to 30.5
Overcurrent threshold	A	2.1min.	0.9min.	0.7min.	0.44min.
Voltage stability	Input variation	%	2max.(1typ.)(Within the input voltage range)		
	Load variation	%	2max.(1typ.)(10 to 100% load)		
	Temperature variation	%	2max.(1typ.)(Ambient temperature: 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.[Input and output ratings]		
Hold up time		ms	15min.(17typ.)(Input and output ratings)		

AUXILIARY FUNCTIONS

Indicator display	No
Overvoltage protection	Voltage shut-down 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	No
Remote sensing	No
Output voltage external variable function	No

STANDARDS

Safety standards	—
Noise terminal voltage	VCCI class 2, FCC class B compliant.

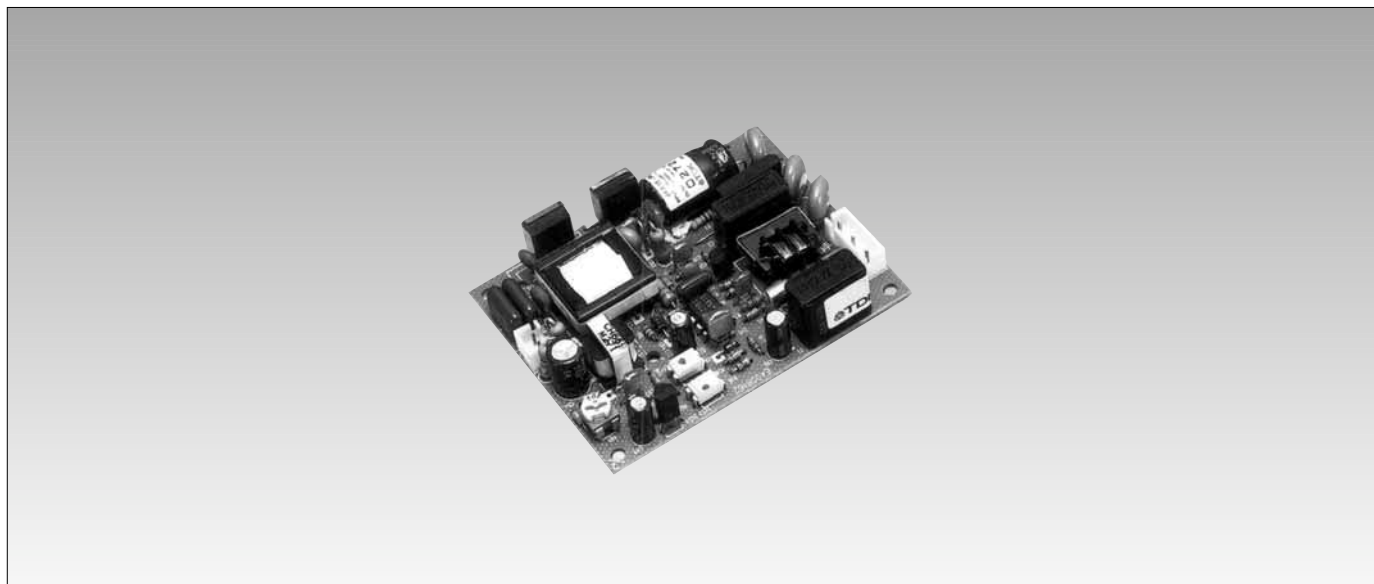
CONSTRUCTIONS

External dimensions	mm	19×60×77[H×W×L]
Weight	g	65max.
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.

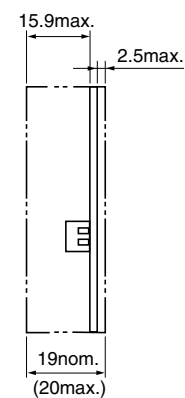
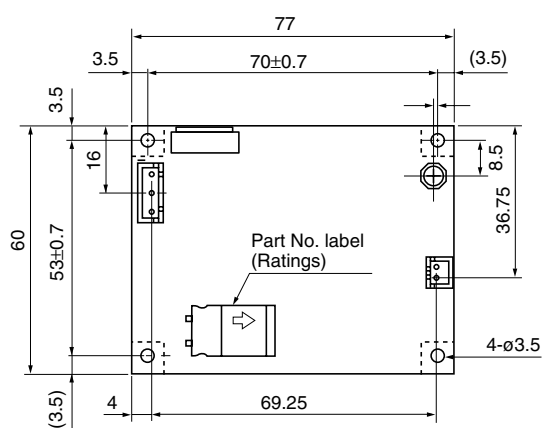
*2 When under load, output is cut off if the input voltage is below the minimum input voltage continuously for more than 1s.

J SERIES JAK10W TYPE (Discontinued)



SHAPES AND DIMENSIONS JAK10W TYPE

Dimensions in mm
±1mm : without specified dimensions



J SERIES JAK15W TYPE (Discontinued)

SPECIFICATIONS AND STANDARDS

PART NO.		JAK05-3R0	JAK12-1R3	JAK15-1R0	JAK24-R63
Rated output voltage and current*1		5V • 3A	12V • 1.3A	15V • 1A	24V • 0.63A
Maximum output power	W	15	15.6	15	15.1
INPUT CONDITIONS					
Input voltage*2 Eac	V	85 to 132[Rating: 100 to 120]			
Input frequency	Hz	47 to 66[Rating: 50 to 60](Single phase)			
Input current	A	0.4max.[Input and output ratings]			
Fuse rating	A	1.6[Built-in]			
Surge current	A	40max.[Input and output ratings, 25°C, cold start]			
Leakage current	mA	0.5max.[Input and output ratings]			
Efficiency	%	71typ.	72typ.	73typ.	74typ.
OUTPUT CHARACTERISTICS					
Output voltage Edc	V	5	12	15	24
Voltage variable range Edc	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4
Maximum output current	A	3	1.3	1	0.63
Overvoltage threshold Edc	V	5.6 to 6.9	13.4 to 15.7	16.7 to 19	26.7 to 30.5
Overcurrent threshold	A	3.2min.	1.4min.	1.05min.	0.66min.
Voltage stability	Input variation	%	2max.(1typ.)(Within the input voltage range)		
	Load variation	%	2max.(1typ.)(10 to 100% load)		
	Temperature variation	%	2max.(1typ.)(Ambient temperature: 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.[Input and output ratings]		
Hold up time		ms	15min.(17typ.)(Input and output ratings)		

AUXILIARY FUNCTIONS

Indicator display	No
Overvoltage protection	Voltage shut-down 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	No
Remote sensing	No
Output voltage external variable function	No

STANDARDS

Safety standards	—
Noise terminal voltage	VCCI class 2, FCC class B compliant.

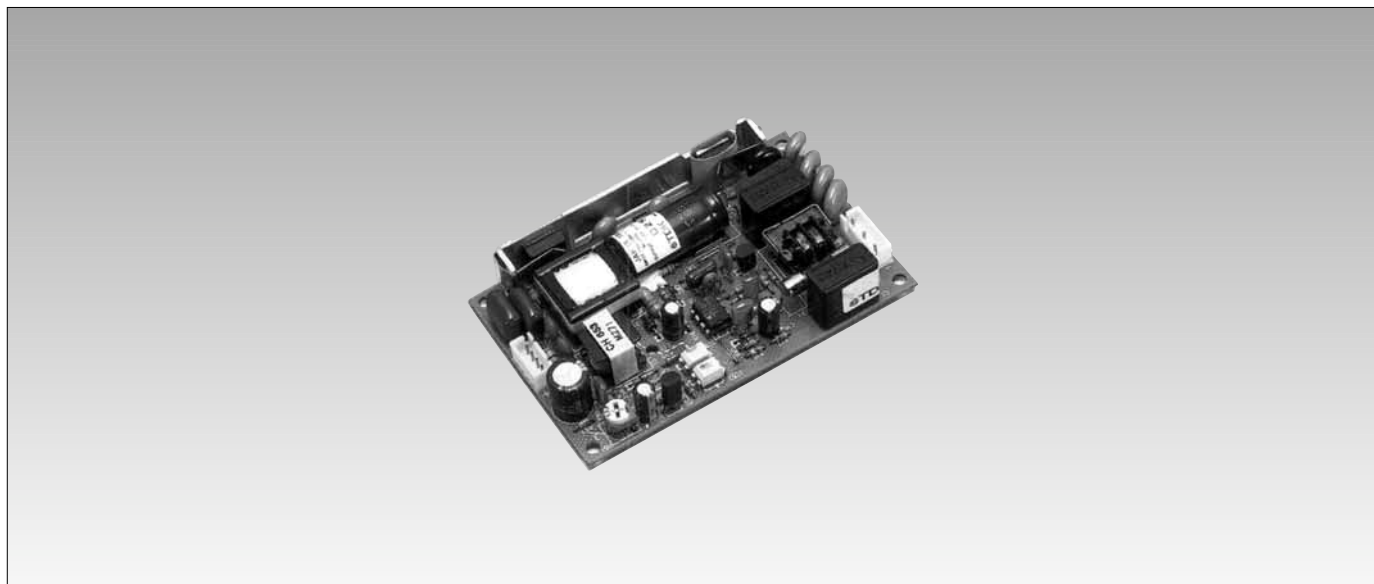
CONSTRUCTIONS

External dimensions	mm	19×60×95[H×W×L]
Weight	g	85max.
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.

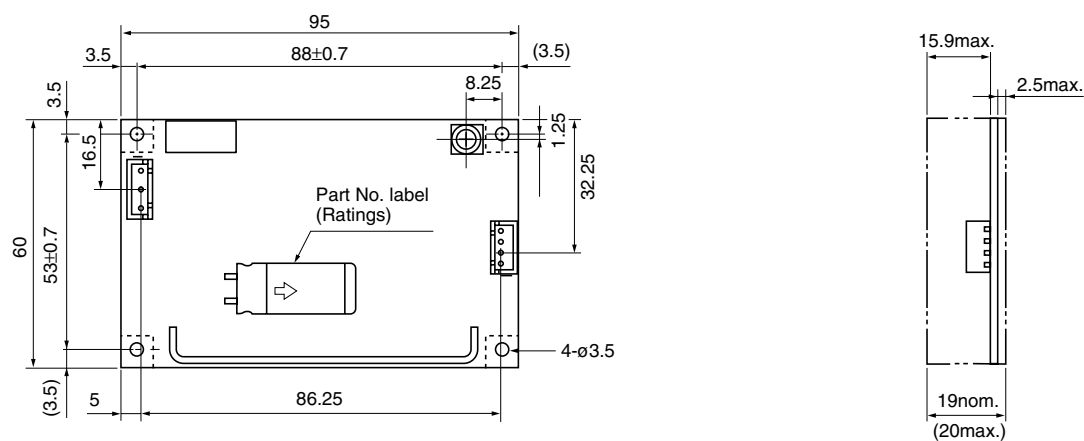
*2 When under load, output is cut off if the input voltage is below the minimum input voltage continuously for more than 1s.

J SERIES JAK15W TYPE (Discontinued)



SHAPES AND DIMENSIONS JAK15W TYPE

Dimensions in mm
±1mm : without specified dimensions



J SERIES JAK25W TYPE (Discontinued)

SPECIFICATIONS AND STANDARDS

PART NO.		JAK05-5R0	JAK12-2R1	JAK15-1R7	JAK24-1R1
Rated output voltage and 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 CONDITIONS					
Input voltage*2 Eac	V	85 to 132[Rating: 100 to 120]			
Input frequency	Hz	47 to 66[Rating: 50 to 60](Single phase)			
Input current	A	0.65max.[Input and output ratings]			
Fuse rating	A	2.5[Built-in]			
Surge current	A	40max.[Input and output ratings, 25°C, cold start]			
Leakage current	mA	0.5max.[Input and output ratings]			
Efficiency	%	78typ.	79typ.	81typ.	82typ.
OUTPUT CHARACTERISTICS					
Output voltage Edc	V	5	12	15	24
Voltage variable range Edc	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4
Maximum output current	A	5	2.1	1.7	1.1
Overvoltage threshold Edc	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.)(Ambient temperature: 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.[Input and output ratings]		
Hold up time		ms	15min.(17typ.)(Input and output ratings)		

AUXILIARY FUNCTIONS

Indicator display	No
Overvoltage protection	Voltage shut-down 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	No
Remote sensing	No
Output voltage external variable function	No

STANDARDS

Safety standards	—
Noise terminal voltage	VCCI class 2, FCC class B compliant.

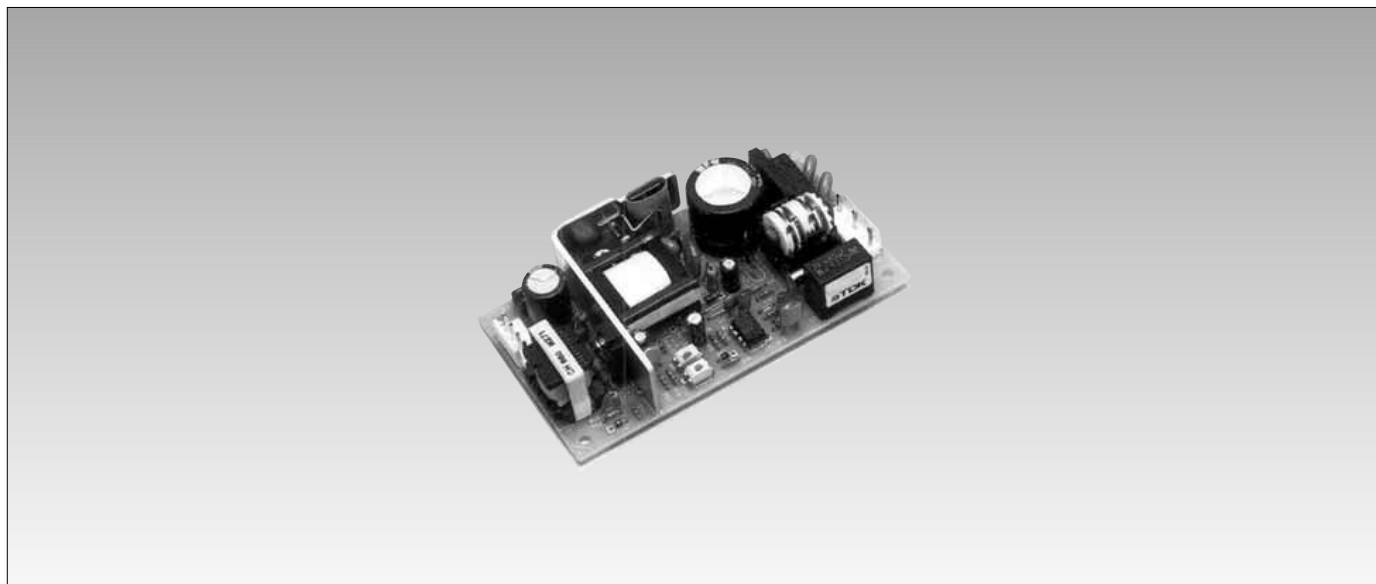
CONSTRUCTIONS

External dimensions	mm	25×60×110[H×W×L]
Weight	g	150max.
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.

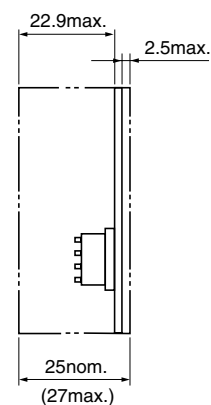
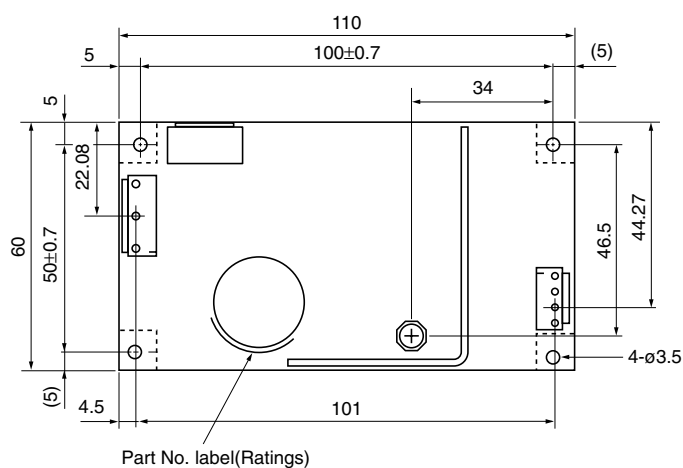
*2 When under load, output is cut off if the input voltage is below the minimum input voltage continuously for more than 1s.

J SERIES JAK25W TYPE (Discontinued)



SHAPES AND DIMENSIONS JAK25W TYPE

Dimensions in mm
±1mm : without specified dimensions



J SERIES JAK50W TYPE

UL approved

SPECIFICATIONS AND STANDARDS

PART NO.		JAK05-10R	JAK12-4R2	JAK15-3R4	JAK24-2R1
Rated output voltage and current*1		5V • 10A	12V • 4.2A	15V • 3.4A	24V • 2.1A
Maximum output power	W	50	50.4	51	50.4
INPUT CONDITIONS					
Input voltage*2 Eac	V	85 to 132[Rating: 100 to 120]			
Input frequency	Hz	47 to 66[Rating: 50 to 60](Single phase)			
Input current	A	1.3max.[Input and output ratings]			
Fuse rating	A	3.15[Built-in]			
Surge current	A	40max.[Input and output ratings, 25°C, cold start]			
Leakage current	mA	0.5max.[Input and output ratings]			
Efficiency	%	77typ.	79typ.	79typ.	81typ.
OUTPUT CHARACTERISTICS					
Output voltage E _{dc}	V	5	12	15	24
Voltage variable range E _{dc}	V	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4
Maximum output current	A	10	4.2	3.4	2.1
Overvoltage threshold E _{dc}	V	5.6 to 6.9	13.4 to 15.7	16.7 to 19	26.7 to 30.5
Overcurrent threshold	A	10.5min.	4.4min.	3.5min.	2.2min.
Voltage stability	Input variation	%	2max.(1typ.)(Within the input voltage range)		
	Load variation	%	2max.(1typ.)(10 to 100% load)		
	Temperature variation	%	2max.(1typ.)(Ambient temperature: 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 E _{p-p}		mV	120max.	190max.	220max.
Start up time		ms	500max.[Input and output ratings]		
Hold up time		ms	15min.(17typ.)(Input and output ratings)		

AUXILIARY FUNCTIONS

Indicator display	No
Overvoltage protection	Voltage shut-down 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	No
Remote sensing	No
Output voltage external variable function	No

STANDARDS

Safety standards	UL1950-3 approved, Electrical Appliance And Material Control Law compliant.
Noise terminal voltage	VCCI class 2, FCC class B compliant.

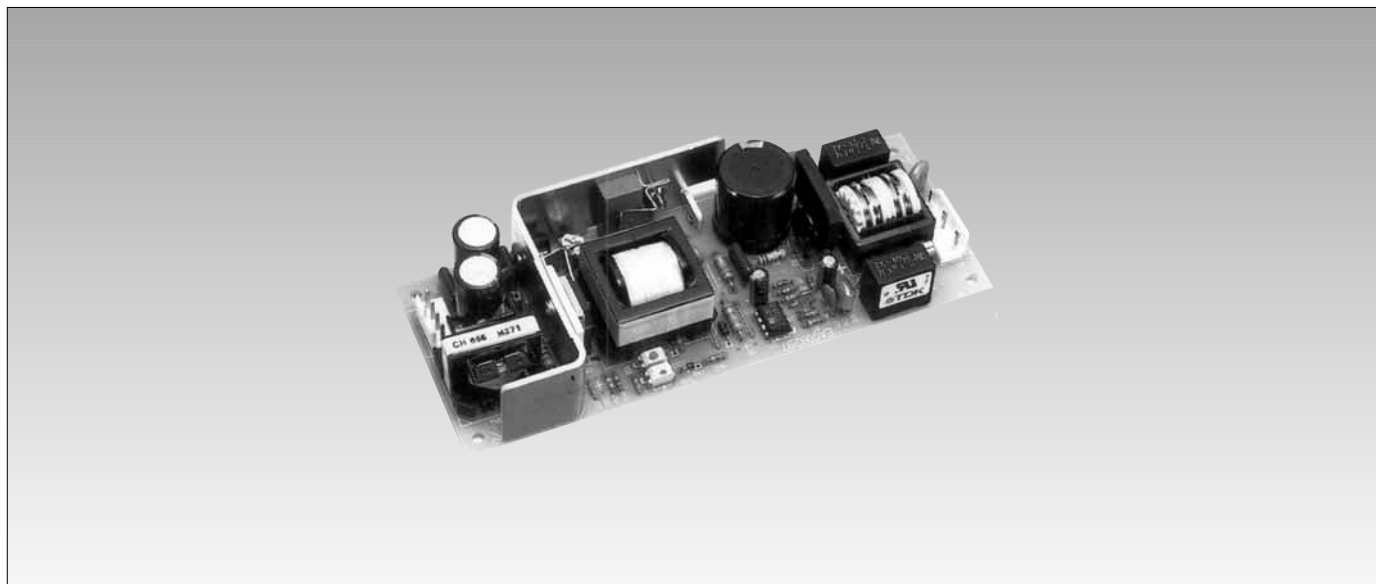
CONSTRUCTIONS

External dimensions	mm	30×60×156[H×W×L]
Weight	g	220max.
Mounting method		1 side(Open frame)

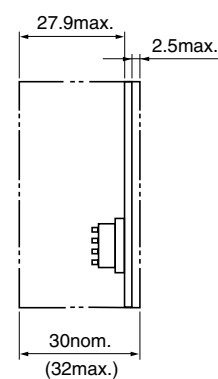
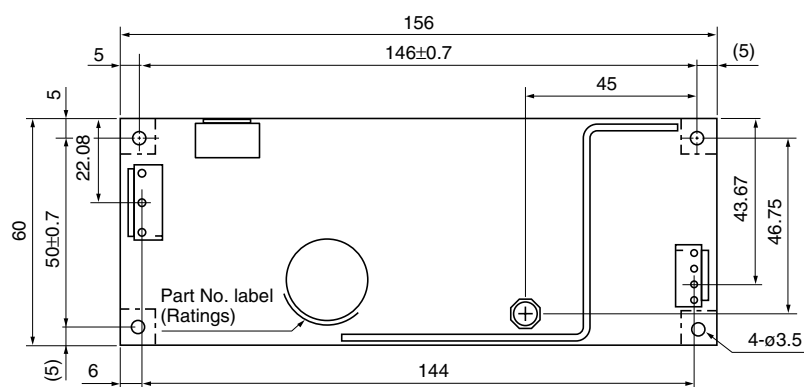
*1 Current rating(maximum output current) is determined for -10 to +40°C. Derating is required when used outside this temperature range.

*2 When under load, output is cut off if the input voltage is below the minimum input voltage continuously for more than 1s.

UL approved



Dimensions in mm
±1mm : without specified dimensions



J SERIES JAK100W TYPE

UL approved

SPECIFICATIONS AND STANDARDS

PART NO.		JAK05-20R	JAK12-8R4	JAK24-4R2
Rated output voltage and current*1		5V • 20A	12V • 8.4A	24V • 4.2A
Maximum output power	W	100	100.8	100.8
INPUT CONDITIONS				
Input voltage Eac	V	85 to 132[Rating: 100 to 120]		
Input frequency	Hz	47 to 66[Rating: 50 to 60](Single phase)		
Input current	A	2.5max.[Input and output ratings]		
Fuse rating	A	5[Built-in]		
Surge current	A	25max.[Input and output ratings] 1st surge current, reset after 10s minimum.		
Leakage current	mA	0.5max.[Input and output ratings]		
Efficiency	%	81typ.	83typ.	85typ.
OUTPUT CHARACTERISTICS				
Output voltage Edc	V	5	12	24
Voltage variable range Edc	V	4.5 to 5.5	10.8 to 13.2	21.6 to 26.4
Maximum output current	A	20	8.4	4.2
Overvoltage threshold Edc	V	5.6 to 6.9	13.4 to 15.7	26.7 to 30.5
Overcurrent threshold	A	21min.	8.9min.	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.)(Ambient temperature: 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.	310max.
Start up time	ms	500max.[Input and output ratings]		
Hold up time	ms	15min.(23typ.)(Input and output ratings)		

AUXILIARY FUNCTIONS

Indicator display	No
Overvoltage protection	Voltage shut-down 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	No
Remote sensing	No
Output voltage external variable function	No

STANDARDS

Safety standards	UL1950-3 approved, Electrical Appliance And Material Control Law compliant.
Noise terminal voltage	VCCI class 2, FCC class B compliant.

CONSTRUCTIONS

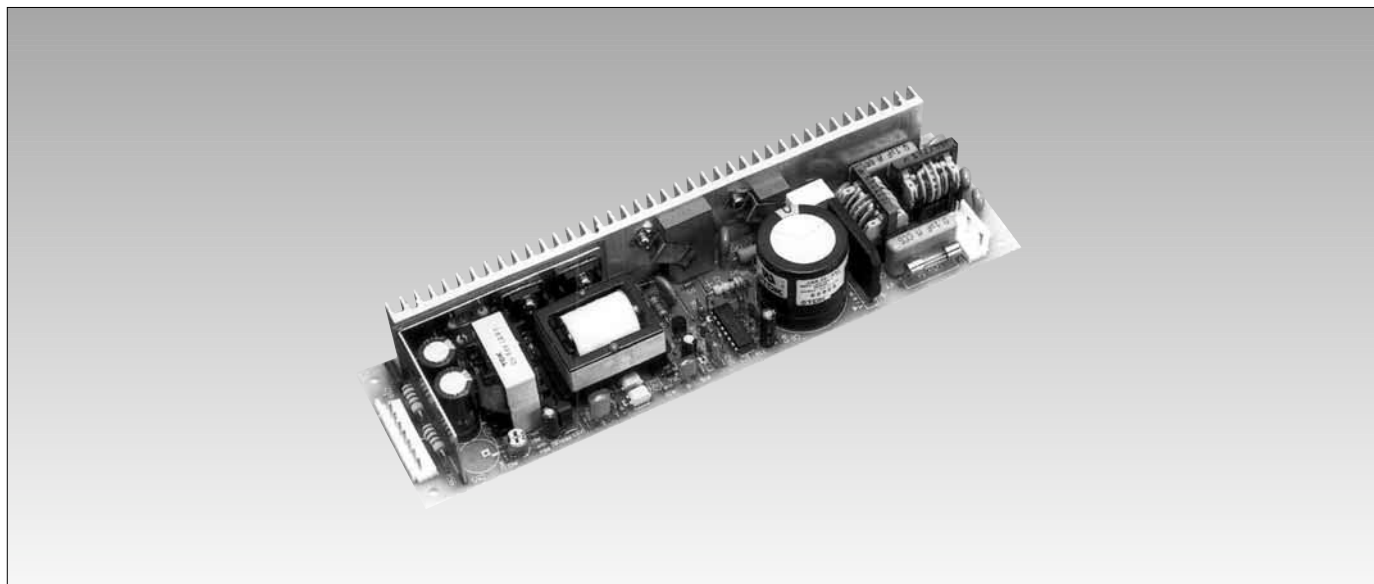
External dimensions	mm	35×60×222[H×W×L]
Weight	g	550max.
Mounting method		1 side(Open frame)

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

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

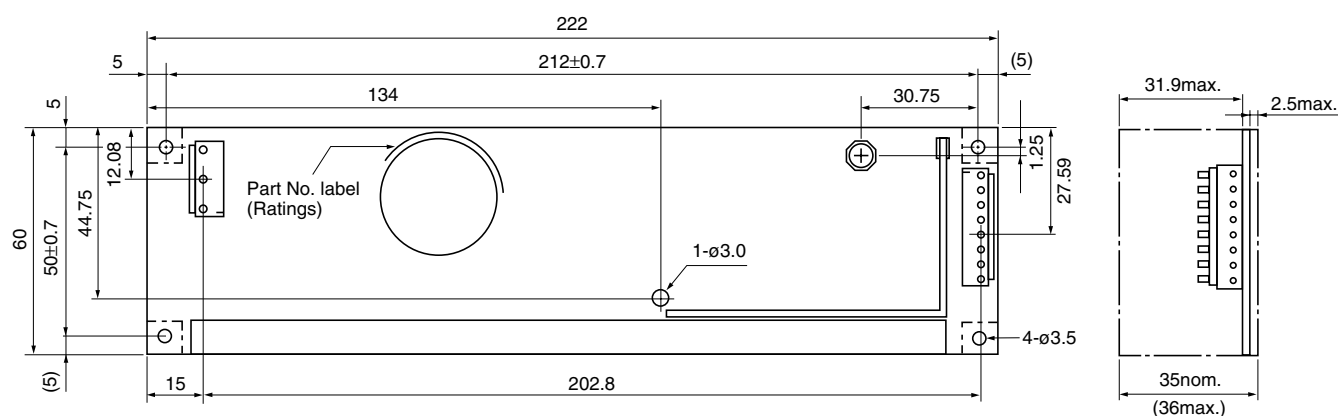
J SERIES JAK100W TYPE

UL approved



SHAPES AND DIMENSIONS JAK100W TYPE

Dimensions in mm
±1mm : without specified dimensions



J SERIES JAK150W TYPE

UL approved

SPECIFICATIONS AND STANDARDS

PART NO.		JAK05-30R	JAK12-13R	JAK24-6R3
Rated output voltage and current*1		5V • 30A	12V • 12.5A	24V • 6.3A
Maximum output power	W	150	150	151.2
INPUT CONDITIONS				
Input voltage Eac	V	85 to 132[Rating: 100 to 120]		
Input frequency	Hz	47 to 66[Rating: 50 to 60](Single phase)		
Input current	A	3.5max.[Input and output ratings]		
Fuse rating	A	6.3[Built-in]		
Surge current	A	25max.[Input and output ratings] 1st surge current, reset after 10s minimum.		
Leakage current	mA	0.5max.[Input and output ratings]		
Efficiency	%	80typ.	83typ.	85typ.
OUTPUT CHARACTERISTICS				
Output voltage Edc	V	5	12	24
Voltage variable range Edc	V	4.5 to 5.5	10.8 to 13.2	21.6 to 26.4
Maximum output current	A	30	12.5	6.3
Overvoltage threshold Edc	V	5.6 to 6.9	13.4 to 15.7	26.7 to 30.5
Overcurrent threshold	A	31.5min.	13.2min.	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.)(Ambient temperature: 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.	310max.
Start up time	ms	500max.[Input and output ratings]		
Hold up time	ms	15min.(23typ.)(Input and output ratings)		

AUXILIARY FUNCTIONS

Indicator display	No
Overvoltage protection	Voltage shut-down type, recovers upon reset(interval approx. 60s).
Overcurrent protection*2	Fixed current and voltage threshold type, automatic recovery, but overcurrent of 1s min. is shielded.
Remote ON-OFF	No
Remote sensing	No
Output voltage external variable function	No

STANDARDS

Safety standards	UL1950-3 approved, Electrical Appliance And Material Control Law compliant.
Noise terminal voltage	VCCI class 2, FCC class B compliant.

CONSTRUCTIONS

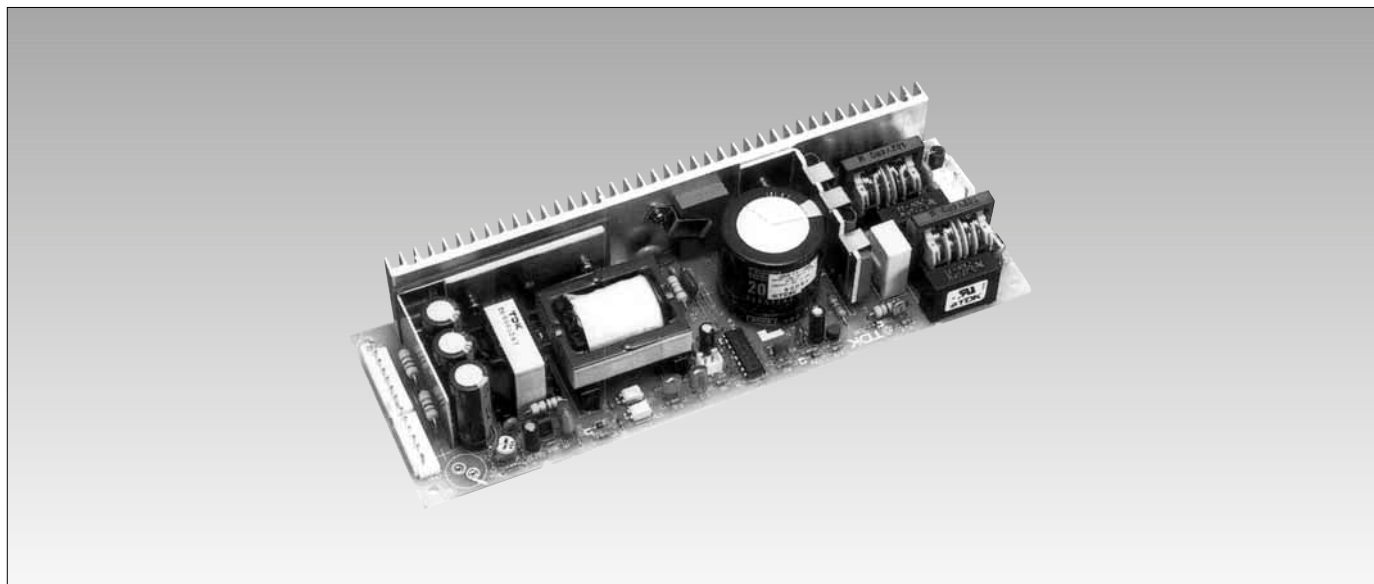
External dimensions	mm	40×75×222[H×W×L]
Weight	g	700max.
Mounting method		1 side(Open frame)

*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 1min during supply of power to load.

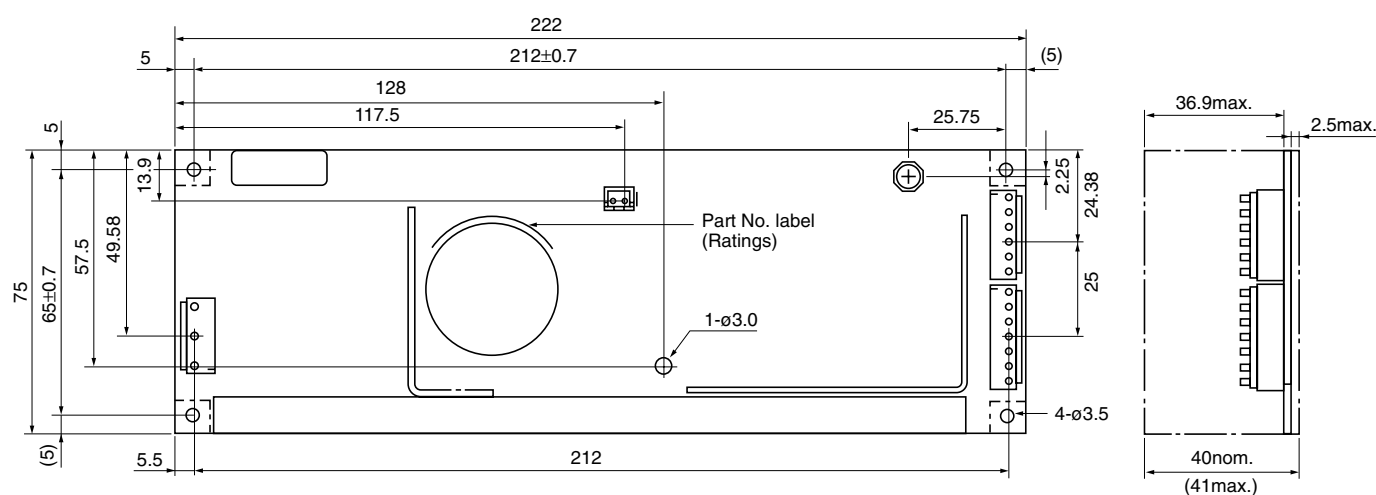
J SERIES JAK150W TYPE

UL approved



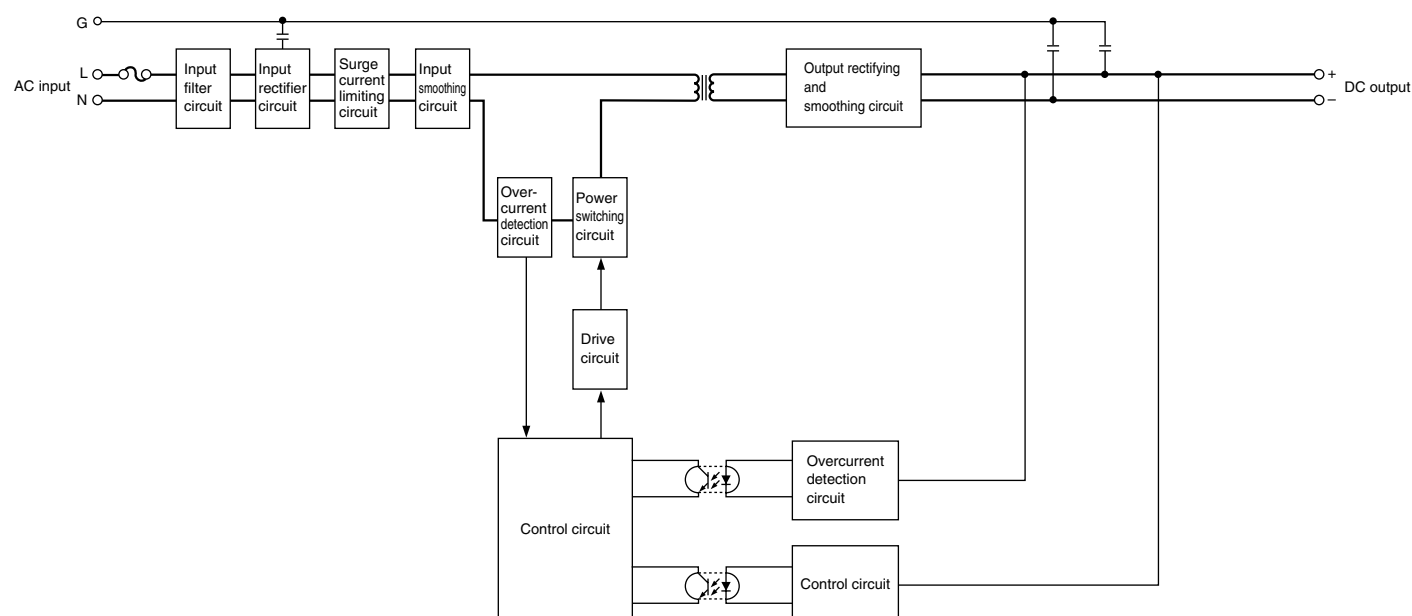
SHAPES AND DIMENSIONS JAK150W TYPE

Dimensions in mm
±1mm : without specified dimensions



Characteristics, Functions, and Applications

BLOCK DIAGRAM



COMMON SPECIFICATIONS

Temperature and humidity

Temperature range	Operating(°C)	-10 to +60 Derating is necessary when operating environment temperature exceed 40°C.
	Storage(°C)	-25 to +75
Humidity range	Operating(%)RH	20 to 95[Maximum wet-bulb temperature: 35°C, without dewing]
	Storage(%)RH	

Amplitude and vibration

Amplitude	5 to 10Hz	All amplitude 10mm[3 directions, each 1h]
	10 to 200Hz	Acceleration 29.4m/s ² [3G, 3 directions, each 1h]
Vibration	Acceleration	588m/s ² [60G, 3 directions, each 3 times]
	Vibration time	11±5ms

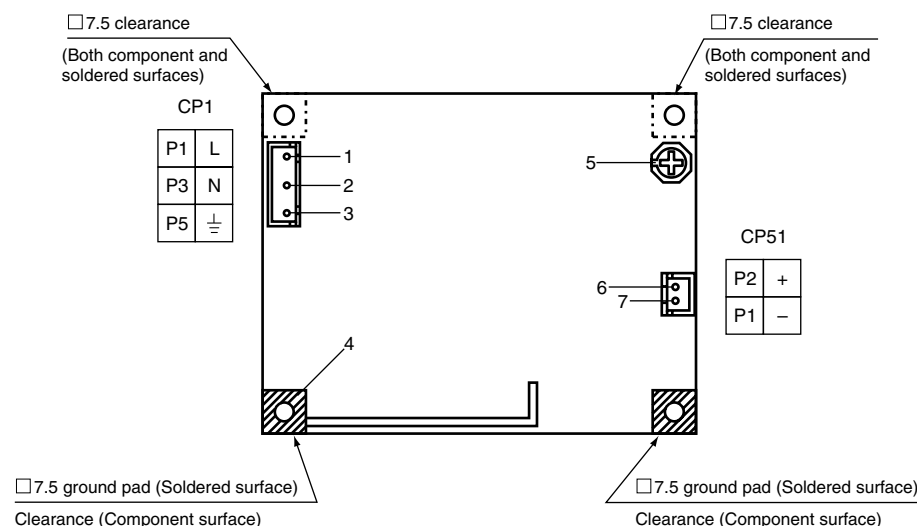
Withstand voltage and insulation resistance

Withstand voltage	Input terminal to ground terminal	Eac(kV)2, 1min[Normal temperature, normal humidity, cutout current 10mA]
	Input terminal to output terminal	
	Input terminal to ground terminal	
Insulation resistance	Input terminal to output terminal	Edc(V)500, 100MΩ min. [Normal temperature, normal humidity]
	Output terminal to ground terminal	

Characteristics, Functions, and Applications

TERMINAL DESIGNATIONS AND FUNCTIONS

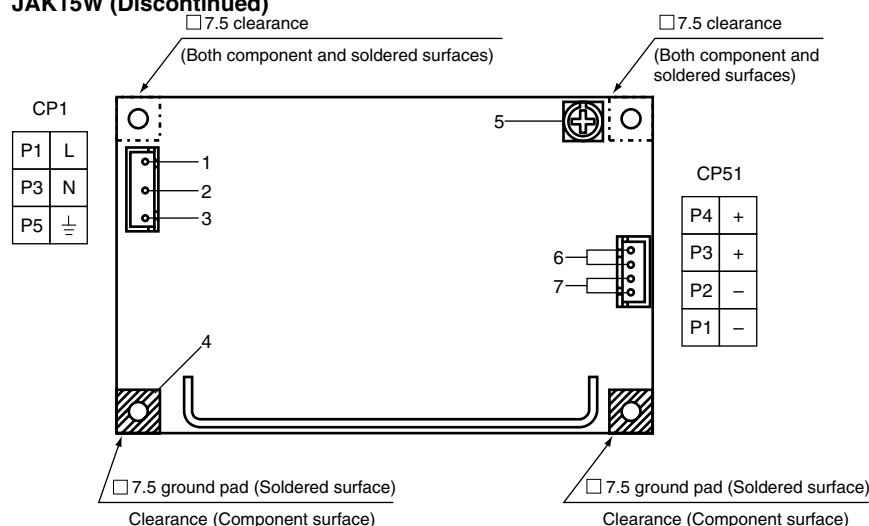
JAK10W (Discontinued)



- 1 Input terminal (CP1 pin 1)**
Live line (Fuse contained).
- 2 Input terminal (CP1 pin 3)**
Neutral line.
- 3 Input terminal (CP1 pin 5)**
Ground.
- 4 Ground**
Connected to an input terminal (CP1 pin 5).
To conduct to the device with spacers or the like, use spacers made of conductive material (Mounting surface of spacer: $\phi 6$ max.).
- 5 Output voltage adjustment volume control**
Clockwise rotation of this control increases an output voltage.
- 6 +Output terminal (CP51 pin 2)**
- 7 -Output terminal (CP51 pin 1)**

Connector made by Japan Solderless Terminal Co., Ltd. XH Series	Power supply side connector	Load cable side	
		Housing	Terminal
Input connector(CP1)	B3(5-2.4)B-XH-A	XHP-5	SXH-001T-P0.6
Output connector(CP51)	B2B-XH-A	XHP-2	SXH-001T-P0.6

JAK15W (Discontinued)



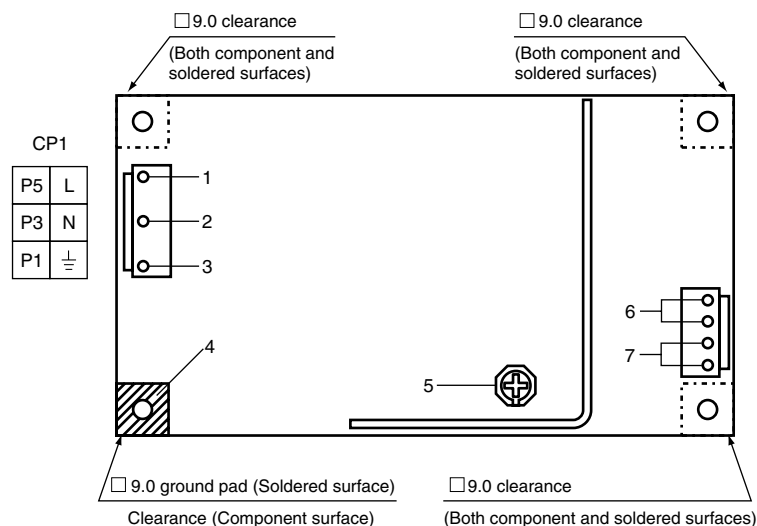
- 1 Input terminal (CP1 pin 1)**
Live line (Fuse contained).
- 2 Input terminal (CP1 pin 3)**
Neutral line.
- 3 Input terminal (CP1 pin 5)**
Ground.
- 4 Ground**
Connected to an input terminal (CP1 pin 5).
To conduct to the device with spacers or the like, use spacers made of conductive material (Mounting surface of spacer: $\phi 6$ max.).
- 5 Output voltage adjustment volume control**
Clockwise rotation of this control increases an output voltage.
- 6 +Output terminal (CP51 pin 3 and pin 4)**
- 7 -Output terminal (CP51 pin 1 and pin 2)**

Connector made by Japan Solderless Terminal Co., Ltd. XH Series	Power supply side connector	Load cable side	
		Housing	Terminal
Input connector(CP1)	B3(5-2.4)B-XH-A	XHP-5	SXH-001T-P0.6
Output connector(CP51)	B4B-XH-A	XHP-4	SXH-001T-P0.6

Characteristics, Functions, and Applications

TERMINAL DESIGNATIONS AND FUNCTIONS

JAK25W (Discontinued)



1 Input terminal (CP1 pin 5)

Live line (Fuse contained).

2 Input terminal (CP1 pin 3)

Neutral line.

3 Input terminal (CP1 pin 1)

Ground.

4 Ground

Connected to an input terminal (CP1 pin 5). To conduct to the device with spacers or the like, use spacers made of conductive material (Mounting surface of spacer: $\phi 6$ max.).

5 Output voltage adjustment volume control

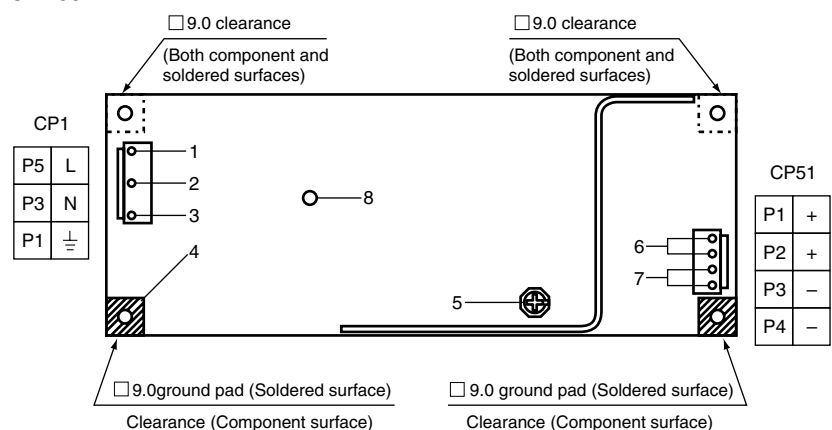
Clockwise rotation of this control increases an output voltage.

6 +Output terminal (CP51 pin 1 and pin 2)

7 -Output terminal (CP51 pin 3 and pin 4)

Connector made by Japan Solderless Terminal Co., Ltd. VH Series	Power supply side connector	Load cable side	
		Housing	Terminal
Input connector (CP1)	B3P5-VH	VHR-5N	SVH-21T-P1.1
Output connector (CP51)	B4P-VH	VHR-4N	SVH-21T-P1.1

JAK50W



1 Input terminal (CP1 pin 5)

Live line (Fuse contained).

2 Input terminal (CP1 pin 3)

Neutral line.

3 Input terminal (CP1 pin 1)

Ground.

4 Ground

Connected to an input terminal (CP1 pin 1). To conduct to the device with spacers or the like, use spacers made of conductive material (Mounting surface of spacer: $\phi 6$ max.).

5 Output voltage adjustment volume control

Clockwise rotation of this control increases an output voltage.

6 +Output terminal (CP51 pin 1 and pin 2)

7 -Output terminal (CP51 pin 3 and pin 4)

8 Spacer mounting hole

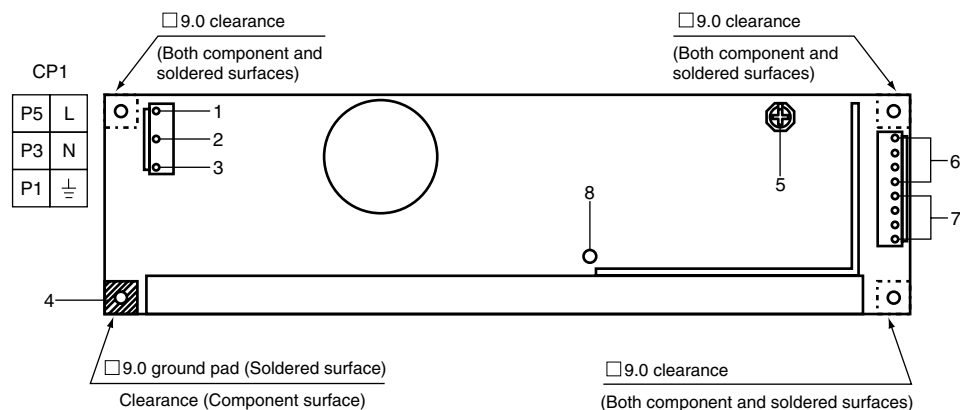
Use insulator as for material of the spacer.

Connector made by Japan Solderless Terminal Co., Ltd. VH Series	Power supply side connector	Load cable side	
		Housing	Terminal
Input connector (CP1)	B3P5-VH	VHR-5N	SVH-21T-P1.1
Output connector (CP51)	B4P-VH	VHR-4N	SVH-21T-P1.1

Characteristics, Functions, and Applications

TERMINAL DESIGNATIONS AND FUNCTIONS

JAK100W



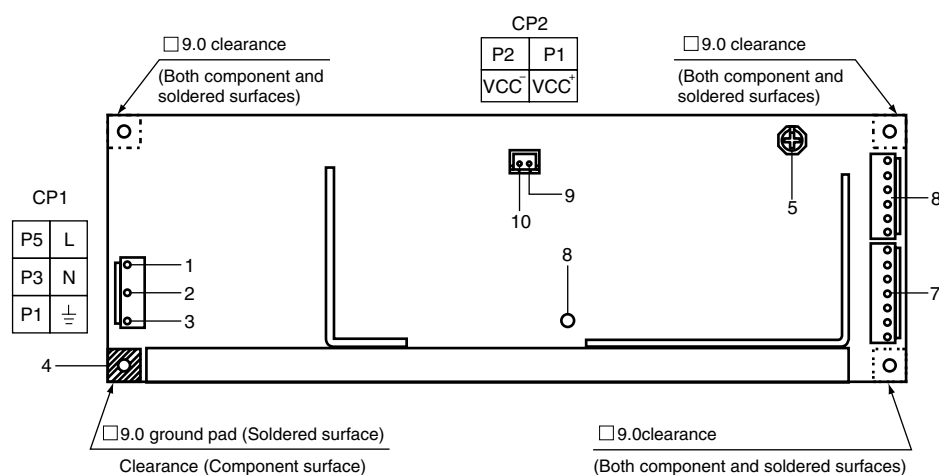
Connector made by Japan Solderless Terminal Co., Ltd. VH Series	Power supply side connector	Load cable side	
		Housing	Terminal
Input connector(CP1)	B3P5-VH	VHR-5N	SVH-21T-P1.1
Output connector(CP51)	B8P-VH	VHR-8N	SVH-21T-P1.1

- 1 Input terminal (CP1 pin 5)**
Live line (Fuse contained).
- 2 Input terminal (CP1 pin 3)**
Neutral line.
- 3 Input terminal (CP1 pin 1)**
Ground.
- 4 Ground**
Connected to an input terminal (CP1 pin 1). To conduct to the device with spacers or the like, use spacers made of conductive material (Mounting surface of spacer: $\phi 6$ max.).

- 5 Output voltage adjustment volume control**
Clockwise rotation of this control increases an output voltage.

- 6 +Output terminal(CP51 pin 1 to pin 4)**
- 7 -Output terminal (CP51 pin 5 and pin 8)**
- 8 Spacer mounting hole**
Use insulator as for material of the spacer (Mounting surface of spacer: $\phi 6$ max.).

JAK150W



Connector made by Japan Solderless Terminal Co., Ltd. VH Series	Power supply side connector	Load cable side	
		Housing	Terminal
Input connector(CP1)	B3P5-VH	VHR-5N	SVH-21T-P1.1
Output connector(CP51)	B6P-VH	VHR-6N	SVH-21T-P1.1
Output connector(CP52)	B7P-VH	VHR-7N	SVH-21T-P1.1
VCC(CP2)application*	B2B-XH-A	XHP-2	SXH-001T-P0.6

* Apply DC.15V from an external power supply in the parallel operation.

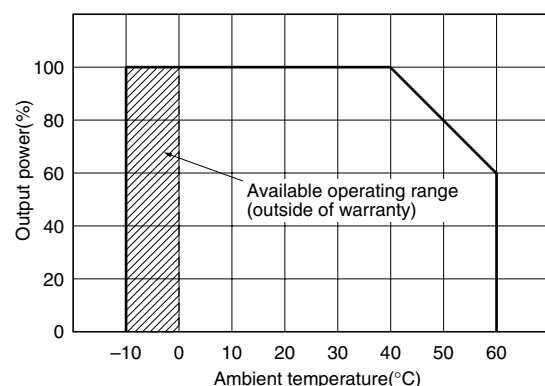
- 1 Input terminal (CP1 pin 5)**
Live line (Fuse contained).
- 2 Input terminal (CP1 pin 3)**
Neutral line.
- 3 Input terminal (CP1 pin 1)**
Ground.
- 4 Ground**
Connected to an input terminal (CP1 pin 1). To conduct to the device with spacers or the like, use spacers made of conductive material (Mounting surface of spacer: $\phi 6$ max.).

- 5 Output voltage adjustment volume control**
Clockwise rotation of this control increases an output voltage.

- 6 +Output terminal(CP51 pin 1 to pin 6)**
- 7 -Output terminal (CP52 pin 1 to pin 7)**
- 8 Spacer mounting hole**
Use insulator as for material of the spacer (Mounting surface of spacer: $\phi 6$ max.).
- 9 VCC terminal (CP2 pin 1) VCC+**
- 10 VCC terminal (CP2 pin 2) VCC-**
Externally apply $15 \pm 2V$ in the parallel operation (Use an insulated DC power supply for VCC).

Characteristics, Functions, and Applications

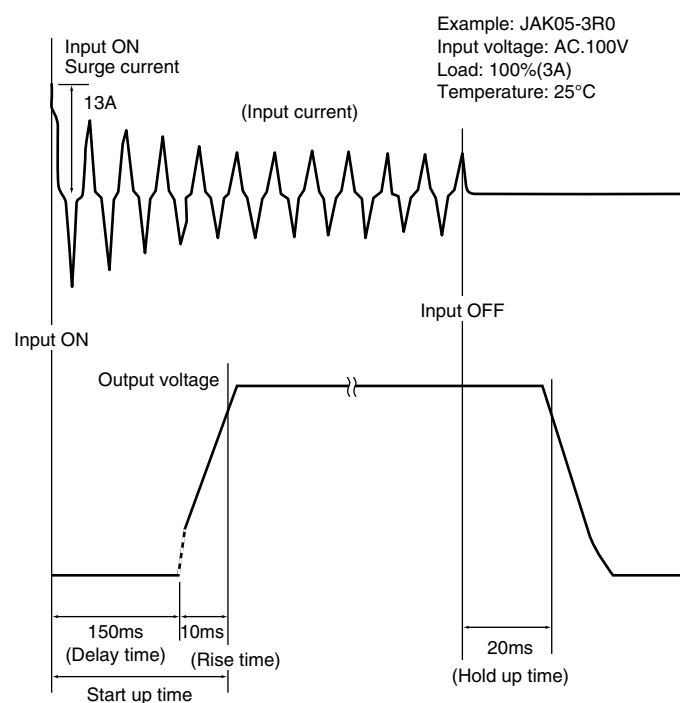
OUTPUT POWER-AMBIENT TEMPERATURE(DERATING)



The values in this catalog result in the following in the -10 to 0°C temperature range:

- Ripple: Doubled
- Start up time: Doubled
- Hold up time: 0.8 times

SURGE CURRENT AND START UP TIME • HOLD UP TIME



OPTION

- Input or output cable kits are sold separately.

- JAK series cable kit

Cable length: 1m in all types (15mm at cable end soldered)

Line color

Input	Output	Parallel use
Black(L)	Red(+)	Red(+)
White (N)	Black(-)	Black(-)
Green/yellow(G)		

Details of content

10W	Part name: 4EU50B162
	Input: AWG22,UL1007 Output: AWG22,UL1007
15W	Part name: 4EU30B295
	Input: AWG22,UL1007 Output: AWG22,UL1007
25W 50W	Part name: 4EU50B297
	Input: AWG20,UL1015 Output: AWG18,UL1007
100W	Part name: 4EU30B298
	Input: AWG20,UL1015 Output: AWG18,UL1007
150W	Part name: 4EU70B299
	Input: AWG20,UL1015 Output: AWG18,UL1007 Parallel use: AWG22,UL1007

* Place an order with a part name in the above.

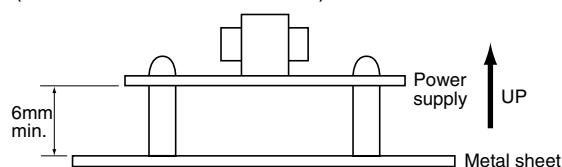
PARALLEL USE

- Disabled: 10 to 100W
- Enabled: Only for 150W (Voltage of 15±2V can be externally applied to the connector CP2 (for VCC) on the PC board.)

INSTALLATION

- Fix the power supply at the four corners with metal spacers.
- For 50W to 150W types, mounting holes for spacers are provided in the central portion of the PC board. Use insulating spacers for the mounting.
- Lay an insulating sheet under the power supply in case a 6mm installation space cannot be secured.

(Standard installation direction)

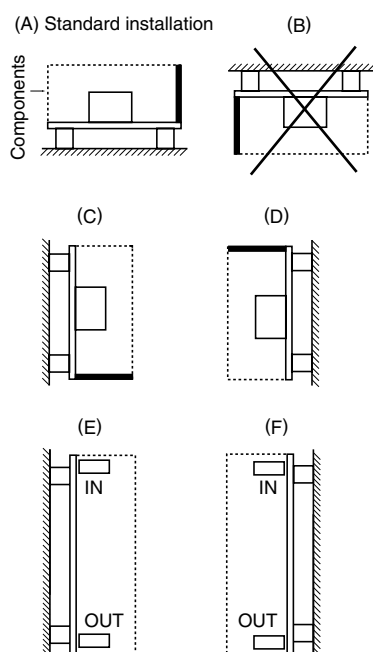


Characteristics, Functions, and Applications

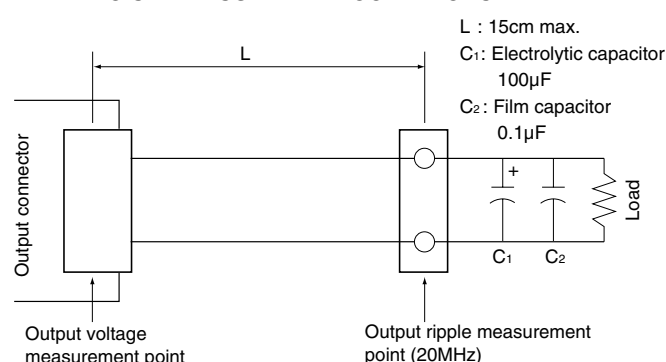
(Other installation direction)

There are installation directions (B) to (F) as shown below in addition to the standard installation direction (A) for mounting the power supply on an apparatus. The installation (B), however, is inhibited because it will cause heat to be trapped inside the power supply.

Derating of the output voltage and the ambient temperature for the installation directions (C) to (F) are not the same as for the direction (A). Please consult us if you need.



RIPPLE NOISE MEASUREMENT CONDITIONS



OTHERS

1. Unless conditions are otherwise specified in the specifications or standards, 25°C and rated input-output should be applied.
2. Ripple and noise(250MHz max.) should be specified at a temperature within a range of 0 to +40°C.