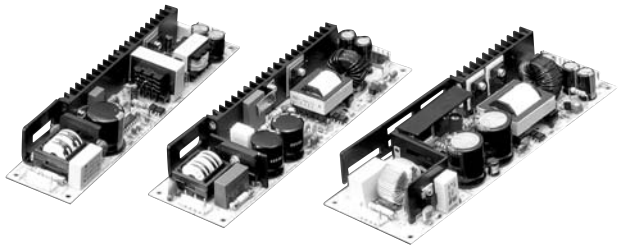
TDK

AC Input
Single Output, General-Purpose, UL/C-UL Approved

Conformity to RoHS Directive

J Series JBK(75 to 150W)

FEATURES



- Compact, slim and light-weight AC.100V input standard power supply that is energy-efficient and environmentally friendly.
- Low-cost design.
- Approved by safety standards (UL, C-UL). Conforms to the Electrical Appliance and Material Safety Law(conforms to Appendix No. 8 creepage, spatial distance).
- Conforms to VCCI-B, EN55022-B regulations for radiating and transmission noise.
- Conforms to Immunity EN61000-4-2, 3, 4, 5 and 8.
- 24V output can carry peak loads.
- Lead-free.
- Warranty period: 3 years
- It is a product conforming to RoHS directive.

PART NUMBERS AND RATINGS

Output voltage	75W type		100W type		150W type	
(V)	Current(A)	Part No.	Current(A)	Part No.	Current(A)	Part No.
3.3	15	JBK03-15R	20	JBK03-20R	30	JBK03-30R
5	15	JBK05-15R	20	JBK05-20R	30	JBK05-30R
12	6.3	JBK12-6R3	8.5	JBK12-8R5	12.5	JBK12-12R
15	5.0	JBK15-5R0	7.0	JBK15-7R0	10	JBK15-10R
24	3.2	JBK24-3R2	4.3	JBK24-4R3	6.3	JBK24-6R3
48	1.6	JBK48-1R6	2.2	JBK48-2R2	3.2	JBK48-3R2

• 3.3 and 48V models are made to order.

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

JBK75W Type

SPECIFICATIONS AND STANDARDS

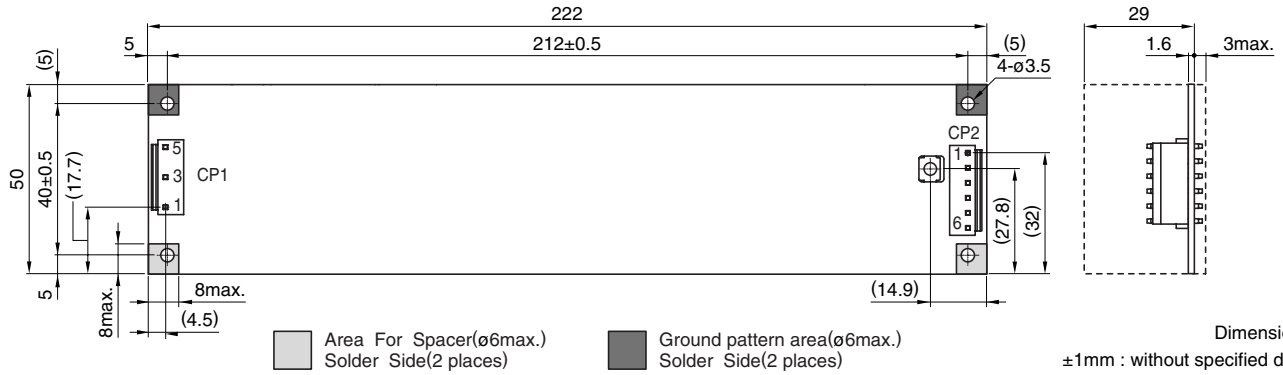
Part No.		JBK03-15R	JBK05-15R	JBK12-6R3	JBK15-5R0	JBK24-3R2	JBK48-1R6
Input voltage Eac/Edc	V	AC.85 to 132/DC.110 to 170V					
Input current	A	1.6typ./2.3max.	1.6typ./2.3max.	1.6typ./2.3max.	1.6typ./2.3max.	1.6typ./2.3max.	1.6typ./2.3max.
Input frequency	Hz	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC
Surge current	A	30typ./60max.	30typ./60max.	30typ./60max.	30typ./60max.	30typ./60max.	30typ./60max.
Leakage current	mA	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.
Power factor		0.60typ.	0.60typ.	0.60typ.	0.60typ.	0.60typ.	0.60typ.
Rated output voltage Edc	V	3.3	5	12	15	24	48
Rated output current	A	15	15	6.3	5.0	3.2	1.6
Output voltage setting	V	3.3±0.16	5±0.25	12±0.6	15±0.75	24±1.2	48±1.2
Voltage variable range	V	2.85 to 3.6	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4	43.2 to 52.8
Maximum output current	A	15	15	6.3	5.0	3.2(Peak4.2)	1.6
Maximum output power	W	49.5	75	75.6	75	76.8	76.8
Efficiency*1	%	72typ.	79typ.	81typ.	83typ.	84typ.	84typ.
Ripple Ep-p	mV	80	80	120	120	120	200
Ripple noise Ep-p	mV	120	120	150	150	150	400
Start up time	ms	150typ./200max.[AC.100V]					
Hold up time	ms	20typ.[AC.100V]					
Overvoltage protection*2		Output shut-down type[Latch]					
Overcurrent protection		Rectangular type, automatic recovery.					
Electrostatic discharge immunity		EN 61000-4-2 Level4, without operation abnormality.					
Discharge magnetic field immunity		EN 61000-4-3 Level3, without operation abnormality.					
Burst immunity		EN 61000-4-4 Level3, without operation abnormality.					
Surge immunity		EN 61000-4-5 Level4, without operation abnormality.					
Conductive immunity		EN 61000-4-6 Level3, without operation abnormality.					
Parallel operation		Impossible					
Safety standards		UL60950-1, CSA C22.2 No.60950-1(C-UL) approved, Electrical Appliance and Material Safety Law ("DENAN") meet (Compliant with creepage surface and air clearance in Attachment 8).					
Noise terminal voltage		FCC-Class B, VCCI-Class B meet.					
Case material		CEM3					
External dimensions	mm	32×50×222[H×W×L]					
Weight	g	280max.					
Mounting method		Can be attached to 1 side					

*1 AC.100V

*2 After an input cutoff, recovers upon reset(Recovering time: 1 min max.).

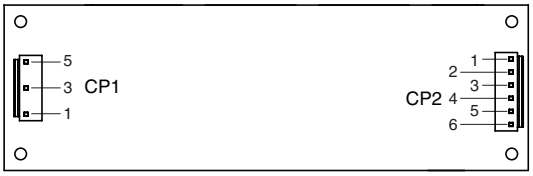
JBK75W Type

SHAPES AND DIMENSIONS



Dimensions in mm
±1mm : without specified dimensions

TERMINAL DESIGNATIONS



CP1

P1	L
P3	N
P5	⏚

· Japan Solderless Terminal Co., Ltd.
VH Series B3P5-VH-B

CP2

P1	
P2	−
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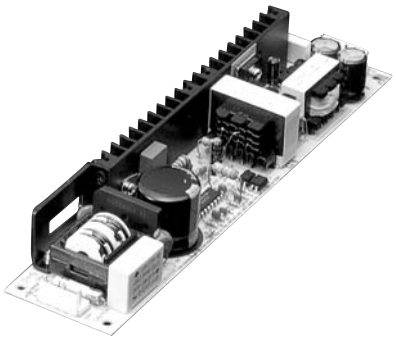
P4	
P5	+
P6	

· Japan Solderless Terminal Co., Ltd.
VH Series B6P-VH-B

Option	Part No.
Input and output cable kits	4EU20G085



JBK100W Type

SPECIFICATIONS AND STANDARDS

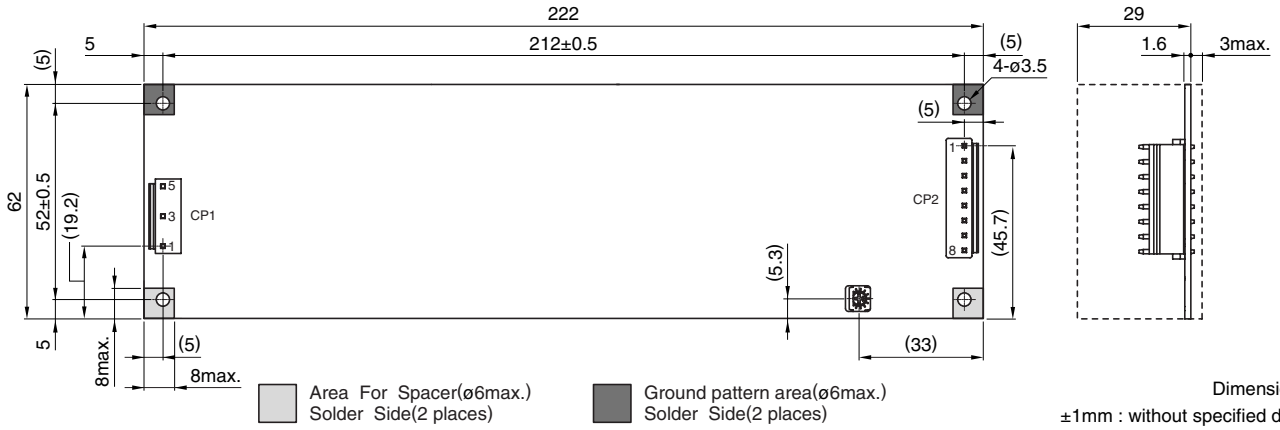
Part No.		JBK03-20R	JBK05-20R	JBK12-8R5	JBK15-7R0	JBK24-4R3	JBK48-2R2
Input voltage Eac/Edc	V	AC.85 to 132/DC.110 to 170V					
Input current	A	2.3typ./2.9max.	2.3typ./2.9max.	2.3typ./2.9max.	2.3typ./2.9max.	2.3typ./2.9max.	2.3typ./2.9max.
Input frequency	Hz	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC
Surge current	A	15typ./30max.	15typ./30max.	15typ./30max.	15typ./30max.	15typ./30max.	15typ./30max.
Leakage current	mA	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.
Power factor		0.55typ.	0.55typ.	0.55typ.	0.55typ.	0.55typ.	0.55typ.
Rated output voltage Edc	V	3.3	5	12	15	24	48
Rated output current	A	20	20	8.5	7.0	4.3	2.2
Output voltage setting	V	3.3±0.16	5±0.25	12±0.6	15±0.75	24±1.2	48±1.2
Voltage variable range	V	2.85 to 3.6	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4	43.2 to 52.8
Maximum output current	A	20	20	8.5	7	4.3(Peak7.0)	2.2
Maximum output power	W	66	100	102	105	103.2	105.6
Efficiency*1	%	74typ.	79typ.	83typ.	84typ.	85typ.	85typ.
Ripple Ep-p	mV	80	80	120	120	120	150
Ripple noise Ep-p	mV	120	120	150	150	150	350
Start up time	ms	150typ./200max.[AC.100V]					
Hold up time	ms	20typ.[AC.100V]					
Overvoltage protection*2		Output shut-down type[Latch]					
Overcurrent protection		Rectangular type, automatic recovery.					
Electrostatic discharge immunity		EN 61000-4-2 Level4, without operation abnormality.					
Discharge magnetic field immunity		EN 61000-4-3 Level3, without operation abnormality.					
Burst immunity		EN 61000-4-4 Level3, without operation abnormality.					
Surge immunity		EN 61000-4-5 Level4, without operation abnormality.					
Conductive immunity		EN 61000-4-6 Level3, without operation abnormality.					
Parallel operation		Impossible					
Safety standards		UL60950-1, CSA C22.2 No.60950-1(C-UL) approved, Electrical Appliance and Material Safety Law ("DENAN") meet (Compliant with creepage surface and air clearance in Attachment 8).					
Noise terminal voltage		FCC-Class B, VCCI-Class B meet.					
Case material		CEM3					
External dimensions	mm	32×62×222[H×W×L]					
Weight	g	340max.					
Mounting method		Can be attached to 1 side					

*1 AC.100V

*2 After an input cutoff, recovers upon reset(Recovering time: 1 min max.).

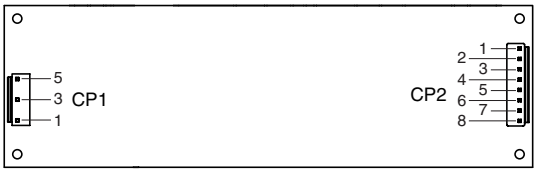
JBK100W Type

SHAPES AND DIMENSIONS



Dimensions in mm
±1mm : without specified dimensions

TERMINAL DESIGNATIONS



CP1

P1	L
P3	N
P5	⏚

· Japan Solderless Terminal Co., Ltd.
VH Series B3P5-VH-B

CP2

P1	−
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P5	+
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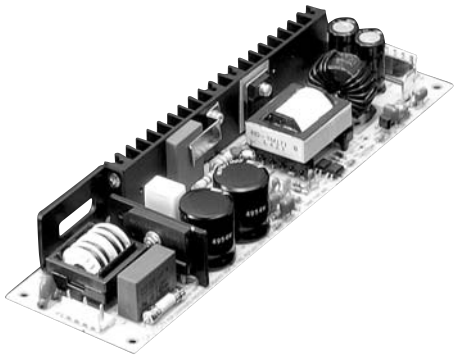
· Japan Solderless Terminal Co., Ltd.
VH Series B8P-VH-B

Option	Part No.
Input and output cable kits	4EU20G062



JBK150W Type

SPECIFICATIONS AND STANDARDS

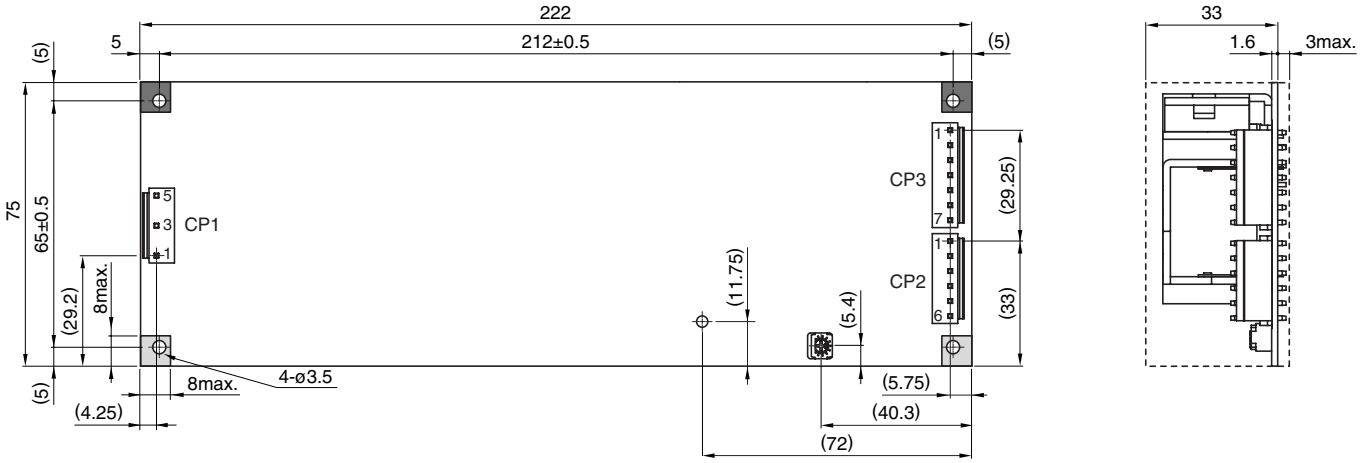
Part No.		JBK03-30R	JBK05-30R	JBK12-12R	JBK15-10R	JBK24-6R3	JBK48-3R2
Input voltage Eac/Edc	V	AC.85 to 132/DC.110 to 170V					
Input current	A	3.3typ./4.0max.	3.3typ./4.0max.	3.3typ./4.0max.	3.3typ./4.0max.	3.3typ./4.0max.	3.3typ./4.0max.
Input frequency	Hz	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC	47 to 440 or DC
Surge current	A	15typ./30max.	15typ./30max.	15typ./30max.	15typ./30max.	15typ./30max.	15typ./30max.
Leakage current	mA	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.	0.35typ./0.75max.
Power factor		0.55typ.	0.55typ.	0.55typ.	0.55typ.	0.55typ.	0.55typ.
Rated output voltage Edc	V	3.3	5	12	15	24	48
Rated output current	A	30	30	12.5	10	6.3	3.2
Output voltage setting	V	3.3±0.16	5±0.25	12±0.6	15±0.75	24±1.2	48±1.2
Voltage variable range	V	2.85 to 3.6	4.5 to 5.5	10.8 to 13.2	13.5 to 16.5	21.6 to 26.4	43.2 to 52.8
Maximum output current	A	30	30	12.5	10	6.3(Peak10)	3.2
Maximum output power	W	99	150	150	150	151.2	153.6
Efficiency*1	%	72typ.	80typ.	84typ.	85typ.	86typ.	85typ.
Ripple Ep-p	mV	80	80	120	120	120	150
Ripple noise Ep-p	mV	120	120	150	150	150	350
Start up time	ms	300typ./380max. [AC.100V]					
Hold up time	ms	30typ.[AC.100V]					
Overvoltage protection*2		Output shut-down type[Latch]					
Overcurrent protection		Rectangular type, automatic recovery.					
Electrostatic discharge immunity		EN 61000-4-2 Level4, without operation abnormality.					
Discharge magnetic field immunity		EN 61000-4-3 Level3, without operation abnormality.					
Burst immunity		EN 61000-4-4 Level3, without operation abnormality.					
Surge immunity		EN 61000-4-5 Level4, without operation abnormality.					
Conductive immunity		EN 61000-4-6 Level3, without operation abnormality.					
Parallel operation		Impossible					
Safety standards		UL60950-1, CSA C22.2 No.60950-1(C-UL) approved, Electrical Appliance and Material Safety Law ("DENAN") meet (Compliant with creepage surface and air clearance in Attachment 8).					
Noise terminal voltage		FCC-Class B, VCCI-Class B meet.					
Case material		CEM3					
External dimensions	mm	36×75×222[H×W×L]					
Weight	g	450max.					
Mounting method		Can be attached to 1 side					

*1 AC.100V

*2 After an input cutoff, recovers upon reset(Recovering time: 1 min max.).

JBK150W Type

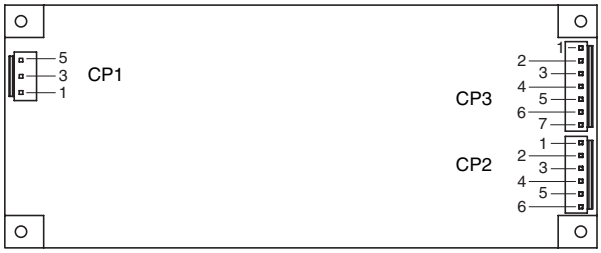
SHAPES AND DIMENSIONS



Dimensions in mm

±1mm : without specified dimensions

TERMINAL DESIGNATIONS



CP1

P1	L
P3	N
P5	⏚

· Japan Solderless Terminal Co., Ltd.
VH Series B3P5-VH-B

CP2

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· Japan Solderless Terminal Co., Ltd.
VH Series B6P-VH-B

CP3

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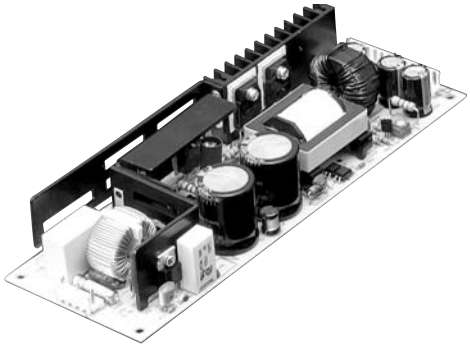
· Japan Solderless Terminal Co., Ltd.
VH Series B7P-VH-B

Option	Part No.
Input and output cable kits	4EU00G062



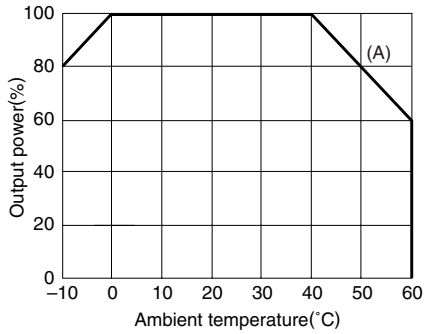
Characteristics, Functions, and Applications

COMMON SPECIFICATIONS

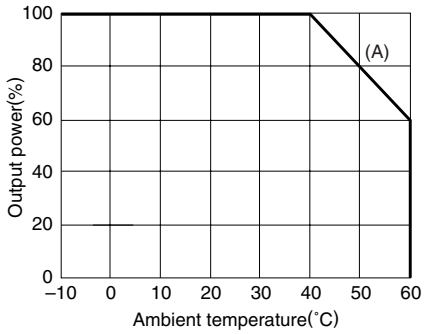
Temperature range	Operating(°C)	–10 to +60
	Storage(°C)	–30 to +75
Humidity range	Operating(%)RH	10 to 90[Maximum wet-bulb temperature: 35°C, without dewing]
	Storage(%)RH	
Vibration	5 to 10Hz	All amplitude 10mm[3 directions, each 1h]
	10 to 200Hz	Acceleration 19.6m/s^2 (2G)[3 directions, each 1h]
Shock	Acceleration	588m/s^2 (60G)[3 directions, each 3 times, half sine wave]
	Pulse duration	11±5ms
Withstand voltage	Input terminal to output terminal	Eac: 2.0kV, 1min[Normal temperature, normal humidity, cutout current 10mA]
	Input terminal to ground terminal(G)	Eac: 2.0kV, 1min[Normal temperature, normal humidity, cutout current 10mA]
	Output terminal to ground terminal(G)	Eac: 500V, 1min[Normal temperature, normal humidity, cutout current 10mA]

OUTPUT POWER-AMBIENT TEMPERATURE(DERATINGS)

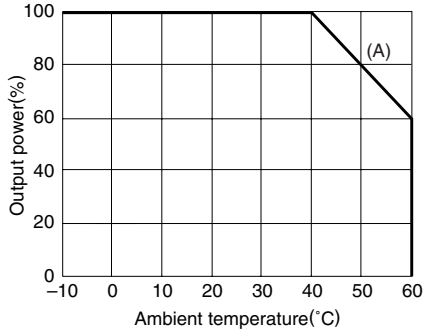
JBK75W TYPE



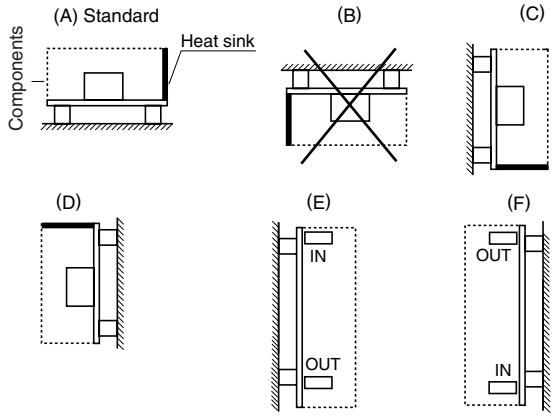
JBK100W TYPE



JBK150W TYPE



INSTALLATIONS



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.