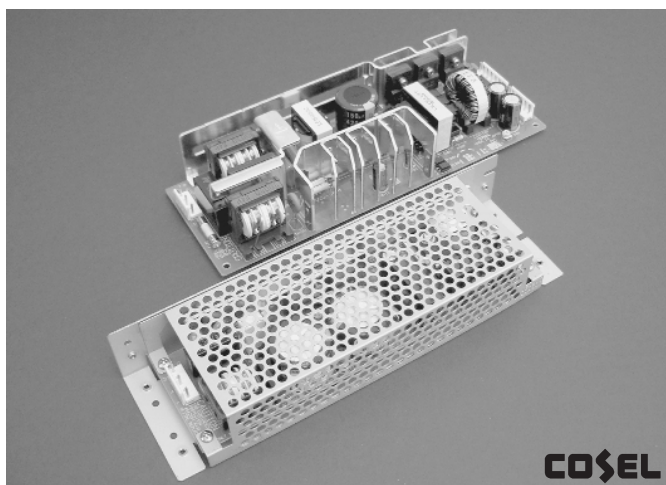


AC-DC Open Frame

10-150 Watts CPA Series



THE **XP**ERTS IN POWER

- 85-264 VAC Universal Input
-
- Small, Compact PCB Format
-
- High Quality
-
- Low Profile
-
- Low Cost
-
- Surface Mount Technology
-
- Cover, Connecting & Loom Kits Available

Specification

Input

Input Voltage	85-264 VAC (120-370 VDC) 85-132/170-264 V AC autoranging CPA100USXX & CPA150USXX
Input Frequency	47-440 Hz (47-63 Hz PFC models)
Inrush Current	Typically 30 A at 230 V input & full load (cold start)
Power Factor	Typically 0.93 (opt. on 50 W & above)
Earth Leakage Current	0.75 mA max at 230 VAC 60Hz

Output

Output Voltage	See Table
Output Voltage Adjustment	±10%
Minimum Load	No minimum load required
Start Up Time	500 ms max
Hold Up Time	10/20 ms min at 110/230 VAC
Line Regulation	0.4% max over specified input range
Load Regulation	0.8% max for a 100% load change
Ripple & Noise	Typically 80 mV pk-pk (180 mV pk-pk max)
Short Circuit & Overload Protection	- Operates >105% of rating - auto recovery (approximates to constant current)
Overvoltage Protection	- Operates 115% to 140% of rating - recycle input to reset (CPA10 & 15 zener diode clamp)
Drift	±0.6% max
Remote ON/OFF (Optional)	Apply 4.5-12.5 V between RC(+) & RC(-) (or leave open circuit) to enable unit

General

Efficiency	Typically 72-82% for 5 to 24 V outputs
Isolation	3000 VAC Input to Output 2000 VAC Input to Earth 500 VAC Output to Earth
Switching Frequency	45-500 kHz CPA10 & 15 140 kHz CPA30USXX to CPA150USXX 80/130 kHz CPAXXPSXX

Environmental

Operating Temperature	-10 °C to +70 °C (derate above +50 °C, use +40 °C max for 150 W models) see derating curves
Storage Temperature	-20 °C to +75 °C
Relative Humidity	20-90% non-condensing
Shock	20 G for 11 ms, once on X, Y & Z axis
Vibration	10-55 Hz at 2 G, 3 mins period for 60 mins along X, Y & Z axis

EMC & Safety

Emissions	EN55022 Level B conducted, EN55022 Level B radiated
ESD Susceptibility	EN61000-4-2 Level 2 Air (Level 4 CPA10), Level 3 Contact (Level 4 CPA10)
Radiated Susceptibility	EN61000-4-3 Level 3
EFT/Burst Surge	- EN61000-4-4 Level 3 - EN61000-4-5 Level 3 line to line, Level 4 line to ground
Safety Approvals	UL1950, CSA C22.2 No. 234, IEC 950 (EN60950)

CPA

Voltage Power	3 Volts ⁽¹⁾	5 Volts	9 Volts	12 Volts	15 Volts	18 Volts	24 Volts	30 Volts	48 Volts
Non-PFC 10 Watts	CPA10US03 3 V @ 2 A	CPA10US05 5 V @ 2 A	-	CPA10US12 12 V @ 0.9 A	CPA10US15 15 V @ 0.7 A	-	CPA10US24 24 V @ 0.5 A	-	-
Non-PFC 15 Watts	CPA15US03 3 V @ 3 A	CPA15US05 5 V @ 3 A	-	CPA15US12 12 V @ 1.3 A	CPA15US15 15 V @ 1 A	-	CPA15US24 24 V @ 0.7 A	-	-
Non-PFC 30 Watts	CPA30US03 3 V @ 6 A	CPA30US05 5 V @ 6 A	-	CPA30US12 12 V @ 2.5 A	CPA30US15 15 V @ 2 A	-	CPA30US24 24 V @ 1.3 A	-	-
Non-PFC PFC 50 Watts	CPA50US03 CPA50PS03 3 V @ 10 A	CPA50US05 CPA50PS05 5 V @ 10 A	CPA50US09 CPA50PS09 9 V @ 5.5 A	CPA50US12 CPA50PS12 12 V @ 4.3 A	CPA50US15 CPA50PS15 15 V @ 3.5 A	CPA50US18 CPA50PS18 18 V @ 2.75 A	CPA50US24 CPA50PS24 24 V @ 2.1 A	CPA50US30 CPA50PS30 30 V @ 1.7 A	- CPA50PS48 48 V @ 1.1 A
Non-PFC PFC 75 Watts	CPA75US03 CPA75PS03 3 V @ 15 A	CPA75US05 CPA75PS05 5 V @ 15 A	CPA75US09 CPA75PS09 9 V @ 8.5 A	CPA75US12 CPA75PS12 12 V @ 6.3 A	CPA75US15 CPA75PS15 15 V @ 5 A	CPA75US18 CPA75PS18 18 V @ 4.2 A	CPA75US24 CPA75PS24 24 V @ 3.2 A	CPA75US30 CPA75PS30 30 V @ 2.5 A	- CPA75PS48 48 V @ 1.6 A
Non-PFC PFC 100 Watts	CPA100US03 CPA100PS03 3 V @ 20 A	CPA100US05 CPA100PS05 5 V @ 20 A	CPA100US09 CPA100PS09 9 V @ 11.5 A	CPA100US12 CPA100PS12 12 V @ 8.5 A	CPA100US15 CPA100PS15 15 V @ 6.7 A	CPA100US18 CPA100PS18 18 V @ 5.6 A	CPA100US24 CPA100PS24 24 V @ 4.3 A	CPA100US30 CPA100PS30 30 V @ 3.5 A	CPA100US48 CPA100PS48 48 V @ 2 A
Non-PFC PFC 150 Watts	CPA150US03 CPA150PS03 3 V @ 30 A	CPA150US05 CPA150PS05 5 V @ 30 A	CPA150US09 CPA150PS09 9 V @ 17 A	CPA150US12 CPA150PS12 12 V @ 12.5 A	CPA150US15 CPA150PS15 15 V @ 10 A	CPA150US18 CPA150PS18 18 V @ 8.5 A	CPA150US24 CPA150PS24 24 V @ 6.3 A	CPA150US30 CPA150PS30 30 V @ 5 A	CPA150US48 CPA150PS48 48 V @ 3 A

Notes

1. CPAXXPS03 models have a nominal output voltage of 3.3 V.

Application Details

Earthing: 'FG' Terminal should be used as AC Input Earth.

It is isolated from DC output terminals, either output terminal + or - may be connected to 'FG'.

Options: -C : Cover fitted

-G : Low leakage current CPA50-150 PFC versions only

-R : Remote ON/OFF CPA50-150 PFC versions only

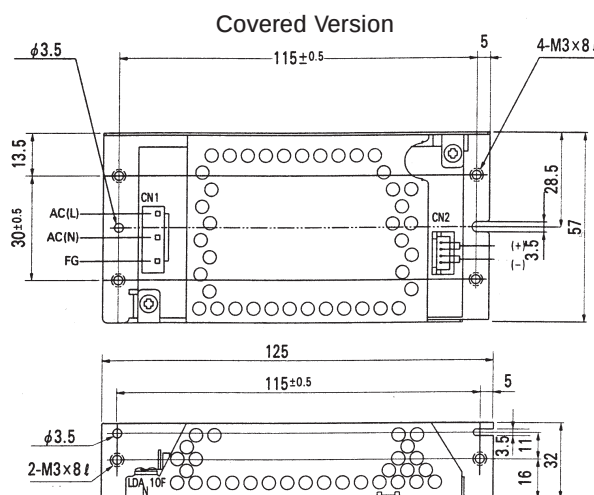
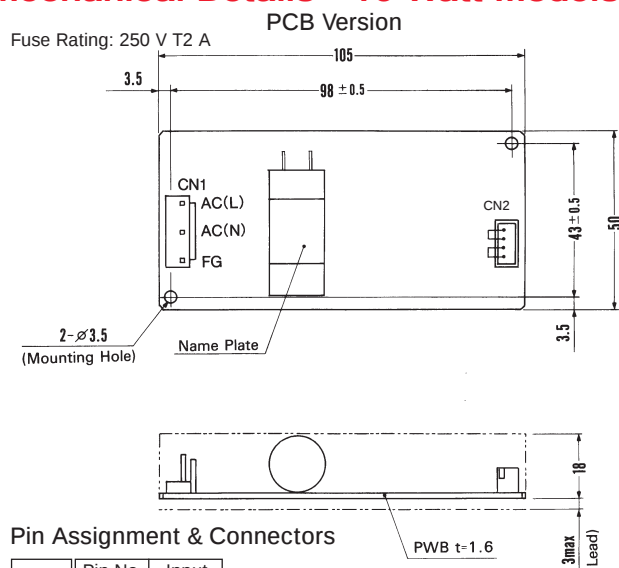
-J2 : Screw terminals CPA50-150 PFC versions only

-H : Gives a peak of Inom +16% on CPAXXPS24 models for 10 secs max.

Mating input and output connectors, loom kits and covers are available at the time of ordering units - See Mechanical Details .

Loom kits comprise of two 300 mm length cable looms, one terminated with a mating connector for input & the other for output terminals.

Mechanical Details - 10 Watt Models



Pin Assignment & Connectors

CN1	Pin No.	Input
	1	AC(L)
	2	
	3	AC(N)
	4	
	5	FG

CN2	Pin No.	Input
	1	- V
	2	- V
	3	+ V
	4	+ V

Cover fitted add suffix '- C' to model number eg. CPA10US05-C.

Cover kit: Order CPA10/COVER KIT.

Mating connector kit order CPA10/15 CON KIT.

Loom kit order CPA10/15 LOOM KIT.

* Weight: 75g or less

* Tolerance: ± 1

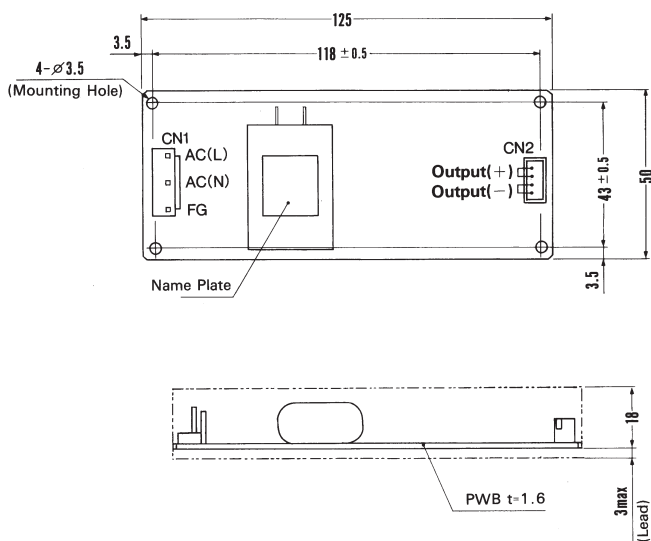
* Dimensions in mm.

* PCB Material: Glass composite (CEM3)

Mechanical Details - 15 Watt Models

Fuse Rating: 250 V T2 A

PCB Version



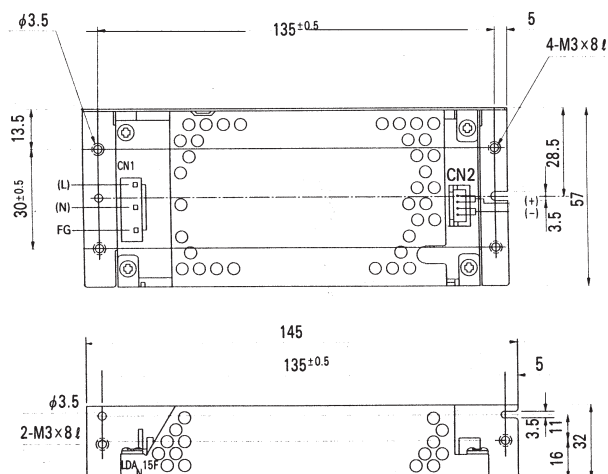
Pin Assignment

Pin No.	Input
1	AC(L)
2	AC(N)
3	AC(N)
4	FG
5	FG

Pin No.	Input
1	-V
2	-V
3	+V
4	+V

Cover fitted add suffix - C to model number eg. CPA15US24-C.
Cover kit: order CPA15/COVER KIT.
Mating connector kit order CPA10/15 CON KIT.
Loom kit order CPA10/15 LOOM KIT.

Covered Version

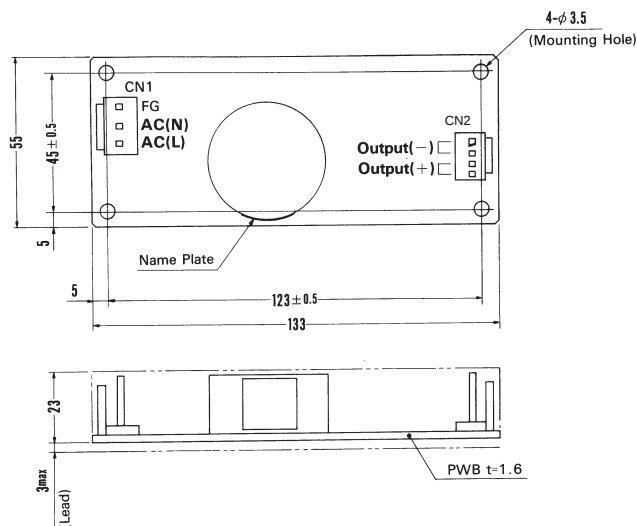


- * Weight: 95g or less
- * Tolerance: ± 1
- * Dimensions in mm.
- * PCB Material: Glass composite CEM3)

Mechanical Details - 30 Watt Models

Fuse Rating: 250 V T3 A

PCB Version



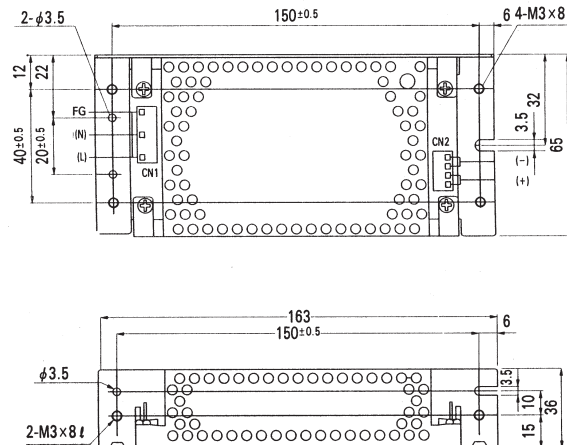
Pin Assignment

Pin No.	Input
1	AC(L)
2	AC(N)
3	AC(N)
4	FG
5	FG

Pin No.	Input
1	-V
2	-V
3	+V
4	+V

Cover fitted add suffix - C to model number eg. CPA30US24-C.
Cover kit: order CPA30/COVER KIT.
Mating connector kit order CPA30/50 CON KIT.
Loom kit order CPA30/50 LOOM KIT.

Covered Version

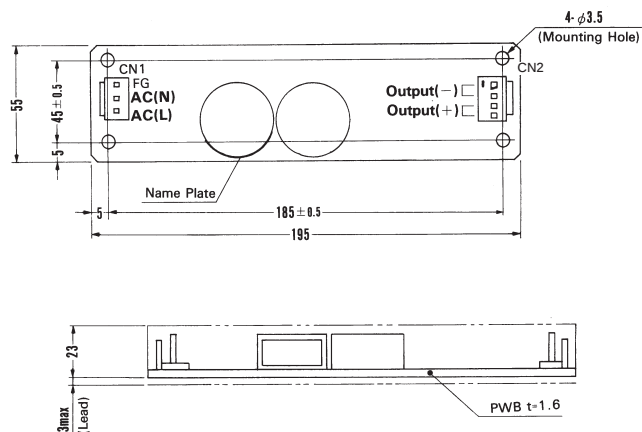


- * Weight: 200g or less
- * Tolerance: ± 1
- * Dimensions in mm.
- * PCB Material: Glass composite (CEM3)

Mechanical Details - 50 Watt Models

PCB Version

Fuse Rating: 250 V T3 A



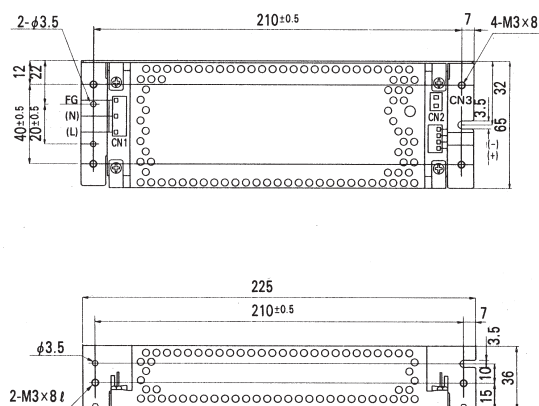
Pin Assignment

CN1	Pin No.	Input
	1	AC(L)
	2	AC(N)
	3	AC(N)
	4	FG

CN2	Pin No.	Input
	1	- V
	2	- V
	3	+ V

Cover fitted add suffix - C to model number eg. CPA50PS24-C.
Cover kit: order CPA50 COVER KIT
Mating connector kit order CPA30/50 CON KIT.
Loom kit order CPA30/50 LOOM KIT.

Covered Version

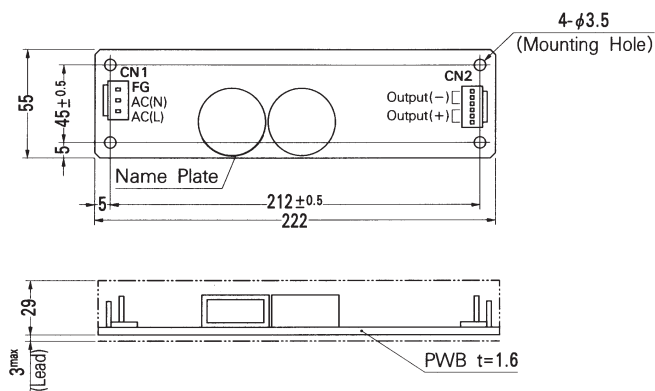


- * Weight: 250g or less
- * Tolerance: ±1
- * Dimensions in mm.
- * PCB Material: Glass composite (CEM3)

Mechanical Details - 75 Watt Models

PCB Version

Fuse Rating: 250 V T5 A



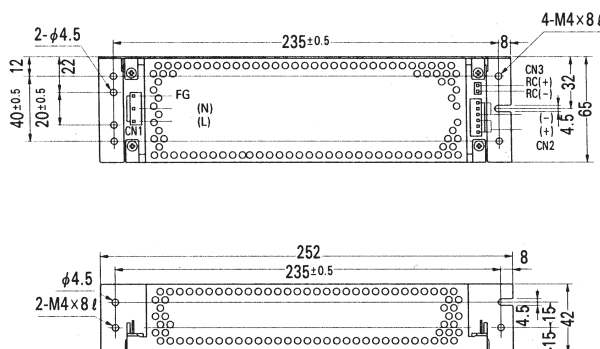
Pin Assignment

CN1	Pin No.	Input
	1	AC(L)
	2	AC(N)
	3	AC(N)
	4	FG

CN2	Pin No.	Input
	1-3	- V

Cover fitted add suffix - C to model number eg. CPA75PS24-C.
Cover kit: order CPA75 COVER KIT.
Mating connector kit order CPA75 CON KIT.
Loom kit order CPA75 LOOM KIT.

Covered Version

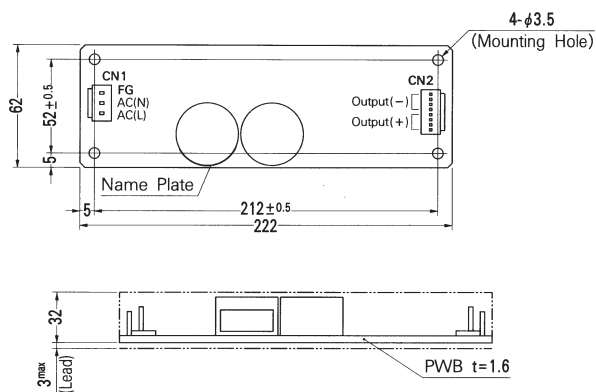


- * Weight: 320g or less
- * Tolerance: ±1
- * Dimensions in mm.
- * PCB Material: Glass composite (CEM3)

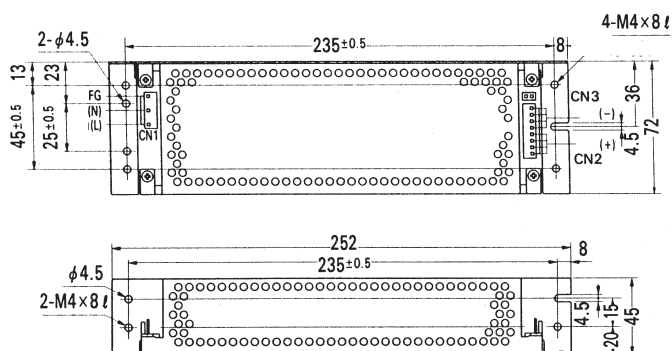
Mechanical Details - 100 Watt Models

PCB Version

Fuse Rating: 250 V T5 A



Covered Version



- * Weight: 360g or less
- * Tolerance: +1
- * Dimensions in mm.
- * PCB Material: Glass composite (CEM3)

Pin Assignment

Pin No.	Input
1	AC(L)
2	
3	AC(N)
4	
5	FG

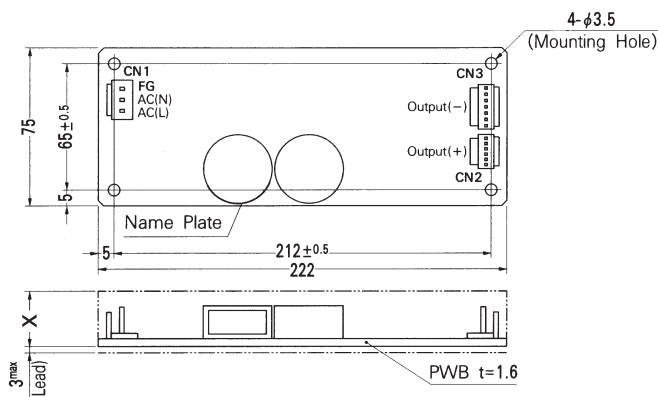
Pin No.	Input
1-4	- V
5-8	+ V

Cover fitted add suffix - C to model number eg. CPA100PS24-C.
Cover kit: order CPA100 COVER KIT.
Mating connector kit order CPA100 CON KIT.
Loom kit order CPA150 LOOM KIT.

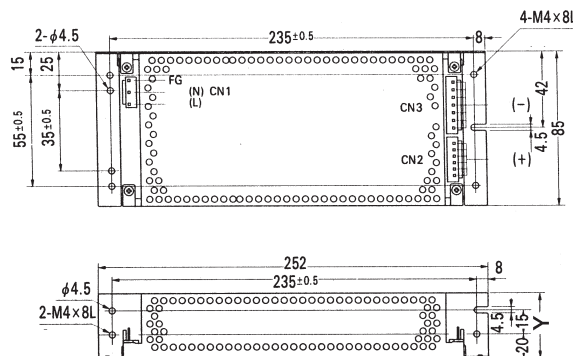
Mechanical Details - 150 Watt Models

PCB Version

Fuse Rating: 250 V T6.3 A



Covered Version



Dimensions	
X =	37 mm for CPA150PXXX
	= 34 mm for CPA150UXXX
Y =	51 mm for CPA150PXXX
	= 47 mm for CPA150UXXX

- * Weight: 510g or less
- * Tolerance: ±1
- * Dimensions in mm.
- * PCB Material: Glass composite (CEM3)

Pin Assignment

Pin No.	Input
1	AC(L)
2	
3	AC(N)
4	
5	FG

Pin No.	Input
1-6	+ V

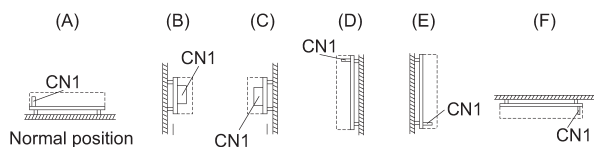
Pin No.	Input
1-7	- V

Cover fitted add suffix - C to model number eg. CPA150PS24-C.
Cover kit: order CPA150 COVER KIT.
Mating connector kit order CPA150 CON KIT.
Loom kit order CPA150 LOOM KIT.

MOUNTING ORIENTATIONS & DERATING CURVES

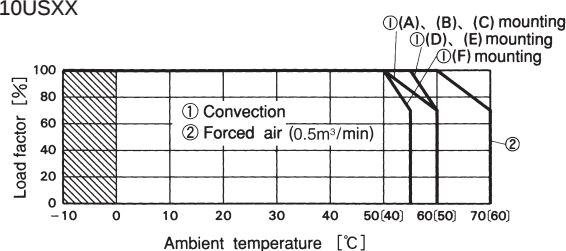
CPA

Mounting orientations

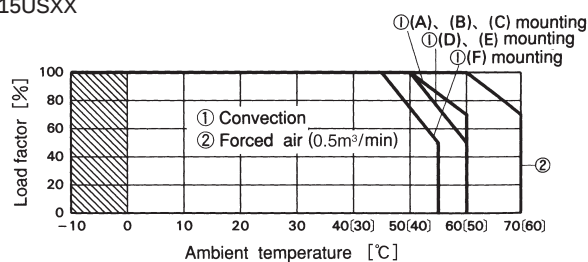


NOTE: Use [] derating information for units with cover fitted.

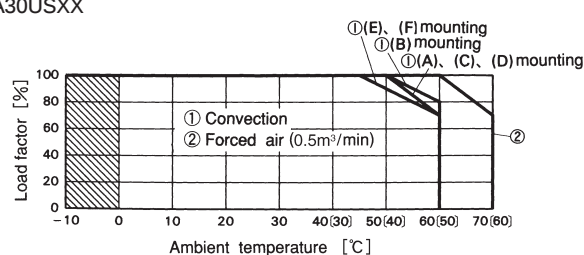
CPA10USXX



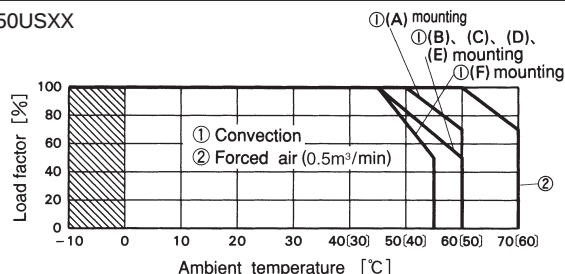
CPA15USXX



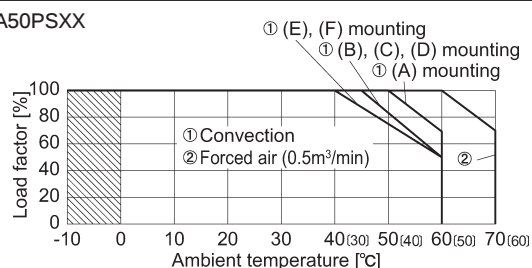
CPA30USXX



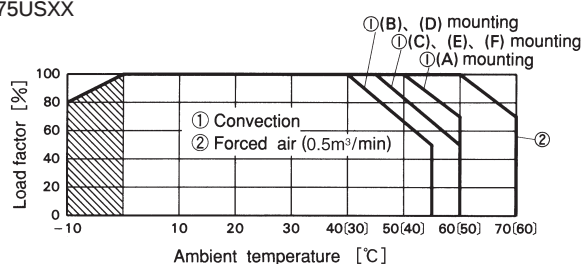
CPA50USXX



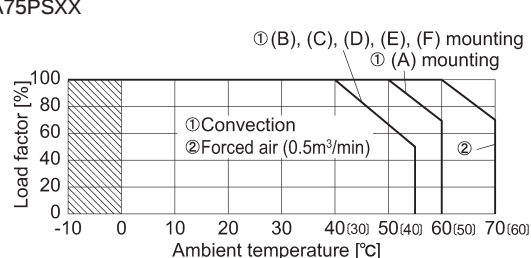
CPA50PSXX



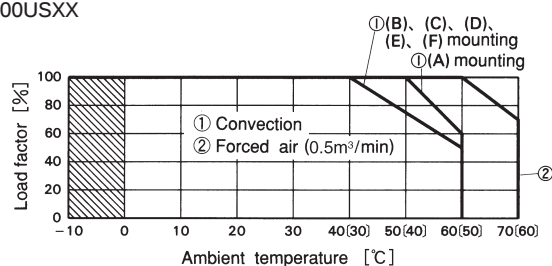
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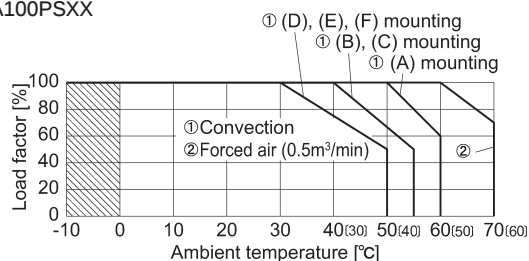
CPA75PSXX



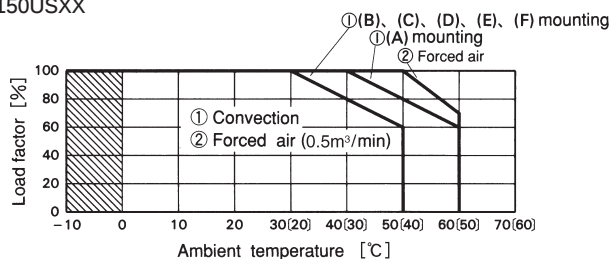
CPA100USXX



CPA100PSXX



CPA150USXX



CPA150PSXX

