

# PBB20C Series

10-1500 WATTS SINGLE OUTPUT AC/DC GENERAL

## Features

- Universal input 85-264VAC
- Small size and light weight
- Harmonic current regulation
- Fan alarm, remote ON/OFF and other function (300W-1500W)
- Parallel operation & current sharing (300W-1500W)
- DC Input all models
- Short circuit, over current protected



## Specifications

### INPUT

Voltage	85~264Vac / 120~370Vdc.
Frequency	47-63Hz.
Inrush current	PBB20C-D, F, H, J, L 30A typical PBB20C-M, R, T, X, W, V 40A typical.
Isolation	Input – output: 3000Vac Input – case: 2000Vac Output – case: 500Vac

### OUTPUT

Output voltage	See table.
Voltage adjustment 10W-30W:	3.3Vdc: 2.85Vdc to 3.60Vdc 5Vdc: 4.5Vdc to 5.5Vdc 9Vdc: 7.5Vdc to 10.0Vdc 12Vdc: 10Vdc to 13.2Vdc 15Vdc: 13.2Vdc to 18.0Vdc 24Vdc: 19.2Vdc to 27.0Vdc 48Vdc: 39.0Vdc to 53.0Vdc
50W-150W:	3.3Vdc: 2.85Vdc to 3.60Vdc 5Vdc: 4.0Vdc to 5.5Vdc 9Vdc: 7.5Vdc to 10.0Vdc 12Vdc: 10Vdc to 13.2Vdc 15Vdc: 13.2Vdc to 18.0Vdc 24Vdc: 19.2Vdc to 27.0Vdc 36Vdc: 28.8Vdc to 39.0Vdc 48Vdc: 39.0Vdc to 53.0Vdc
300W-1500W:	3.3Vdc: 2.64Vdc to 3.96Vdc 5Vdc: 3.96Vdc to 6.0Vdc 7.5Vdc: 5.25Vdc to 8.25Vdc 12Vdc: 8.25Vdc to 13.2Vdc 15Vdc: 10.5Vdc to 16.5Vdc 24Vdc: 16.5Vdc to 26.4Vdc 36Vdc: 25.2Vdc to 39.6Vdc 48Vdc: 38.4Vdc to 56.0Vdc
Output current	See table.
Minimum load	Unit will operate with zero load.
Ripple	3.3-5V output 80mV pk-pk 7.5-48V output 120-150mV pk-pk
Line regulation	Typically 0.4%
Load regulation	Typically 0.8%

Temperature drift	1% over 0°C to 50°C
Over Current protection	Works at approximately 105% of rated current with auto recovery
Over Voltage Protection	Model dependent 115%-140% Vout typical
Remote sense	Provided on PBB20C-T to V model
Remote inhibit	Provided on PBB20C-T to V model
Rise time	Model dependent 600ms max
Holdup time	20ms typical

### OPERATING

Efficiency	Model dependent 70% – 80%.
Thermal protection (300W-1500W)	Unit shuts down when temperature exceeds de-rating curve, when FAN stops or when air flow is interrupted
DC OK/ FAN alarm (300W-1500W)	Open Collector “Low DC OK” 0.5V “High DC not OK” 5V
Indicators	LED for V output

### ENVIRONMENTAL

Operating temperature	(10-150W) convection -10°C to 71°C derate 40°C to 71°C with cover, derate 50°C to 71°C no cover. (10-150W) convection -10°C to 71°C derate from 50°C to 71°C with cover, derate 60°C to 71°C no cover. (300-1500W) -20°C to 71°C derate linearly 50°C to 71°C to 50%.
Cooling	50W-150W models convection cooled. 300W-1500W models internal fan cooling.
Humidity	20%-90% non-condensing.
Vibration	10Hz-55Hz at 2G
Shock	20G 11ms X, Y, Z axis

### STANDARDS

Safety	UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178, Complies with DEN-AN.
C-Tick	AS/NZS CISPR11 Group 1 Class A.
EMC compliances	EN61204-3, EN61000-6-2 EN61000-4-2,-3,-4,-5,-6,-8,-11
EMI compliances	Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B
CE marking	Complies with LVD and EMC Directives

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## Selection Table

MODEL NUMBER	OUTPUT	RIPPLE NOISE	EFFI.	POWER
PBB20C-5D	5V 2A	120mVp-p	74%	10W
PBB20C-12D	12V 0.9A	150mVp-p	76%	10W
PBB20C-24D	24V 0.5A	150mVp-p	77%	10W
PBB20C-3.3F	3.3V 3A	120mVp-p	68%	15W
PBB20C-5F	5V 3A	120mVp-p	75%	15W
PBB20C-9F	9V 1.7A	150mVp-p	77%	15W
PBB20C-12F	12V 1.3A	150mVp-p	78%	15W
PBB20C-15F	15V 1A	150mVp-p	80%	15W
PBB20C-24F	24V 0.7A	150mVp-p	78%	15W
PBB20C-48F	48V 0.35A	250mVp-p	78%	15W
PBB20C-3.3H	3.3V 6A	120mVp-p	69%	30W
PBB20C-5H	5V 6A	120mVp-p	77%	30W
PBB20C-9H	9V 3.4A	150mVp-p	77%	30W
PBB20C-12H	12V 2.5A	150mVp-p	78%	30W
PBB20C-15H	15V 2A	150mVp-p	81%	30W
PBB20C-24H	24V 1.3A	150mVp-p	81%	30W
PBB20C-48H	48V 0.65A	250mVp-p	81%	30W
PBB20C-3.3J	3.3V 10A	120mVp-p	76%	50W
PBB20C-5J	5V 10A	120mVp-p	82%	50W
PBB20C-9J	9V 5.6A	150mVp-p	81%	50W
PBB20C-12J	12V 4.3A	150mVp-p	82%	50W
PBB20C-15J	15V 3.5A	150mVp-p	83%	50W
PBB20C-24J	24V 2.2A	150mVp-p	84%	50W
PBB20C-36J	36V 1.4A	250mVp-p	85%	50W
PBB20C-48J	48V 1.1A	250mVp-p	85%	50W
PBB20C-3.3L	3.3V 15A	120mVp-p	78%	75W
PBB20C-5L	5V 15A	120mVp-p	83%	75W
PBB20C-9L	9V 8.4A	150mVp-p	82%	75W
PBB20C-12L	12V 6.3A	150mVp-p	83%	75W
PBB20C-15L	15V 5A	150mVp-p	84%	75W
PBB20C-24L	24V 3.2A	150mVp-p	85%	75W
PBB20C-36	36V 2.1A	250mVp-p	86%	75W
PBB20C-48L	48V 1.6A	250mVp-p	86%	75W
PBB20C-3.3M	3.3V 20A	120mVp-p	79%	100W
PBB20C-5M	5V 20A	120mVp-p	84%	100W
PBB20C-9M	9V 10.5	150mVp-p	82%	100W
PBB20C-12M	12V 8.5A	150mVp-p	83%	100W
PBB20C-15M	15V 7A	150mVp-p	86%	100W
PBB20C-24M	24V 4.5A	150mVp-p	86%	100W
PBB20C-36M	36V 2.8A	250mVp-p	86%	100W
PBB20C-48M	48V 2.1A	250mVp-p	86%	100W
PBB20C-3.3R	3.3V 30A	120mVp-p	82%	150W
PBB20C-5R	5V 30A	120mVp-p	86%	150W
PBB20C-9R	9V 16.7A	150mVp-p	85%	150W
PBB20C-12R	12V 13A	150mVp-p	86%	150W
PBB20C-15R	15V 10A	150mVp-p	87%	150W
PBB20C-24R	24V 6.5A	150mVp-p	88%	150W
PBB20C-36R	36V 4.3A	250mVp-p	88%	150W
PBB20C-48R	48V 3.3A	250mVp-p	88%	150W

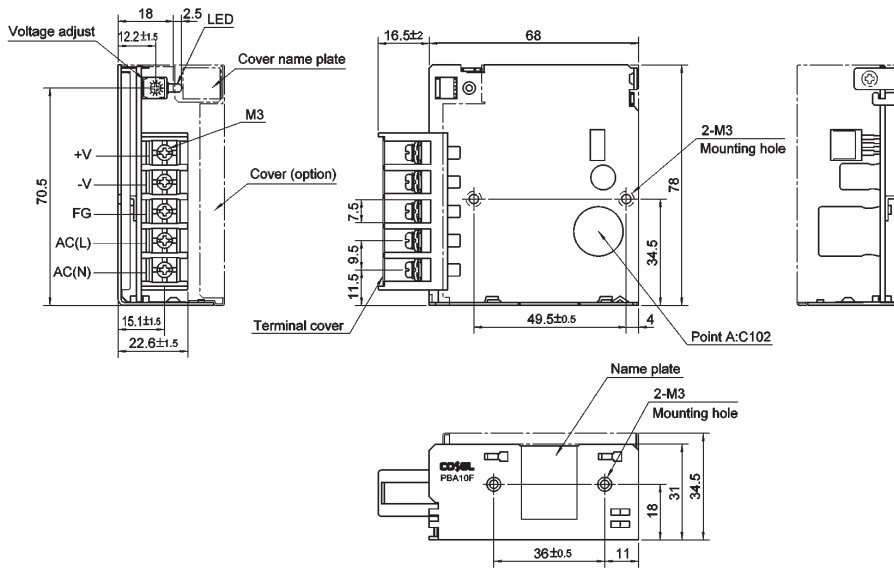
MODEL NUMBER	OUTPUT	RIPPLE NOISE	EFFI.	POWER
PBB20C-3.3T	3.3V 60A	120mVp-p	71%	300W
PBB20C-5T	5V 60A	120mVp-p	77%	300W
PBB20C-7.5T	7.5V 40A	150mVp-p	79%	300W
PBB20C-12T	12V 27A	150mVp-p	81%	300W
PBB20C-15T	15V 22A	150mVp-p	81%	300W
PBB20C-24T	24V 14A	150mVp-p	82%	300W
PBB20C-36T	36V 9A	200mVp-p	84%	300W
PBB20C-48T	48V 7A	200mVp-p	82%	300W
PBB20C-3.3X	3.3V 120A	120mVp-p	72%	600W
PBB20C-5X	5V 120A	120mVp-p	77%	600W
PBB20C-7.5X	7.5V 80A	150mVp-p	79%	600W
PBB20C-12X	12V 53A	150mVp-p	82%	600W
PBB20C-15X	15V 43A	150mVp-p	82%	600W
PBB20C-24X	24V 27A	150mVp-p	84%	600W
PBB20C-36X	36V 18A	200mVp-p	84%	600W
PBB20C-48X	48V 13A	200mVp-p	83%	600W
PBB20C-3.3W	3.3V 200A	120mVp-p	76%	1000W
PBB20C-5W	5V 200A	120mVp-p	81%	1000W
PBB20C-7.5W	7.5V 134A	150mVp-p	83%	1000W
PBB20C-12W	12V 88A	150mVp-p	84%	1000W
PBB20C-15W	15V 70A	150mVp-p	84%	1000W
PBB20C-24W	24V 44A	150mVp-p	86%	1000W
PBB20C-36W	36V 29A	200mVp-p	86%	1000W
PBB20C-48W	48V 22A	200mVp-p	86%	1000W
PBB20C-3.3V	3.3V 300A	120mVp-p	75%	1500W
PBB20C-5V	5V 300A	120mVp-p	81%	1500W
PBB20C-7.5V	7.5V 200A	150mVp-p	83%	1500W
PBB20C-12V	12V 125A	150mVp-p	84%	1500W
PBB20C-15V	15V 100A	150mVp-p	86%	1500W
PBB20C-24V	24V 70A	150mVp-p	87%	1500W
PBB20C-36V	36V 47A	200mVp-p	87%	1500W
PBB20C-48V	48V 35A	200mVp-p	87%	1500W

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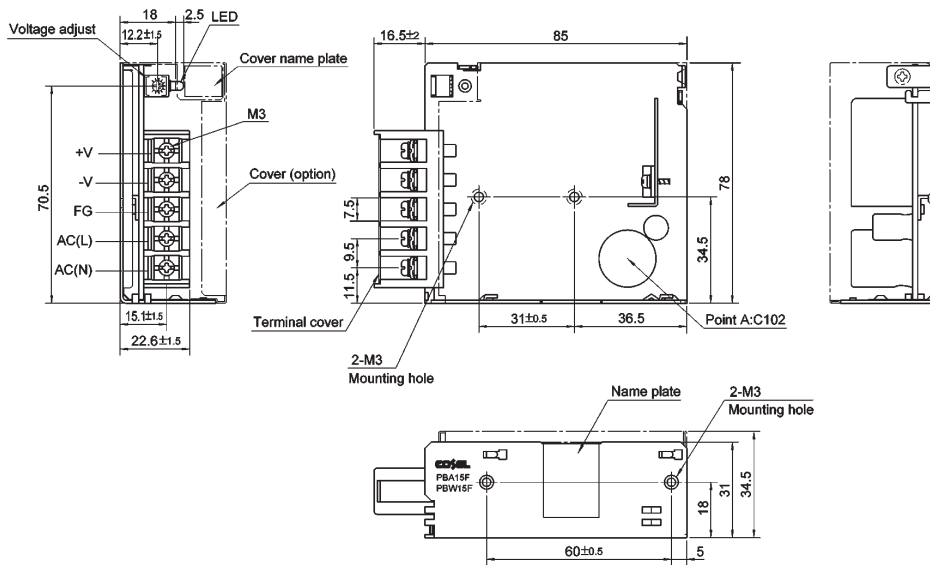
10-1500 WATTS SINGLE OUTPUT AC/DC GENERAL

## Technical Illustrations

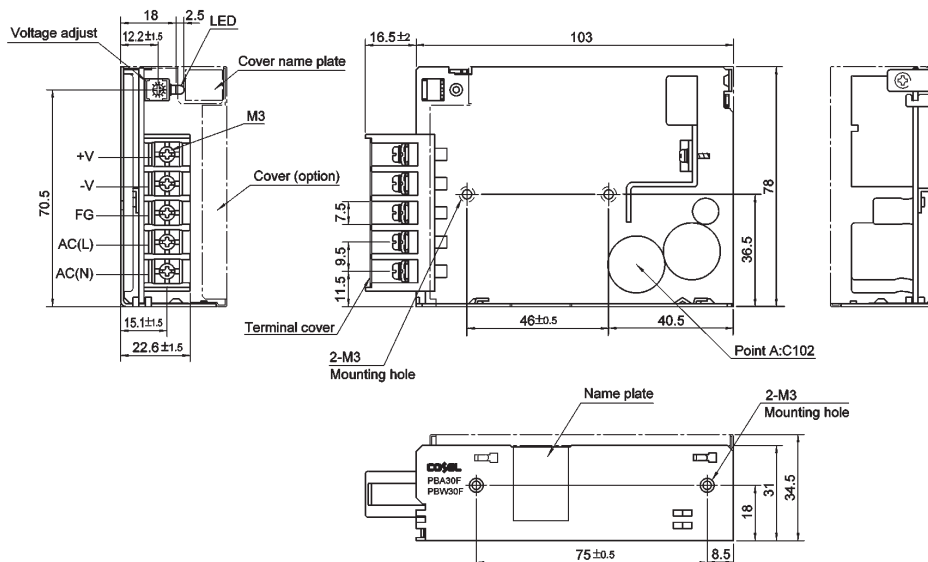
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### PBB20C-F



### PBB20C-H

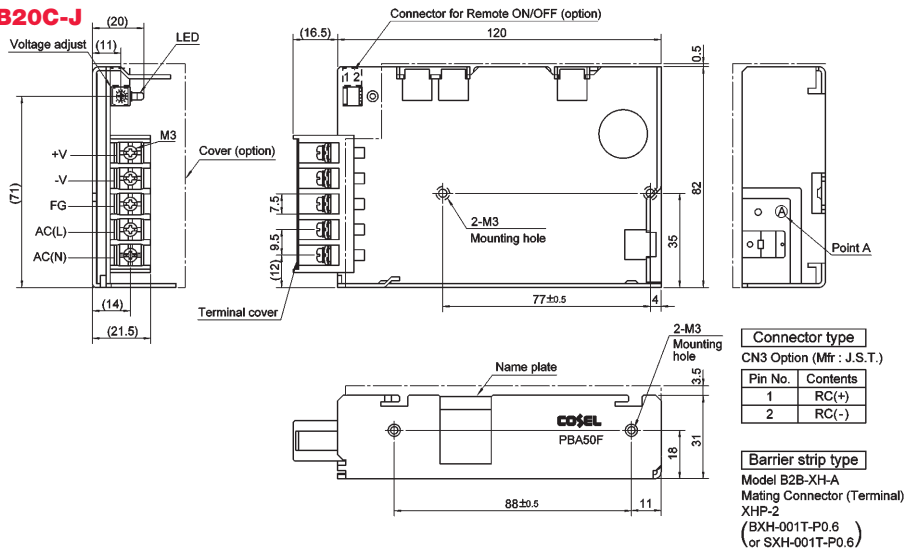


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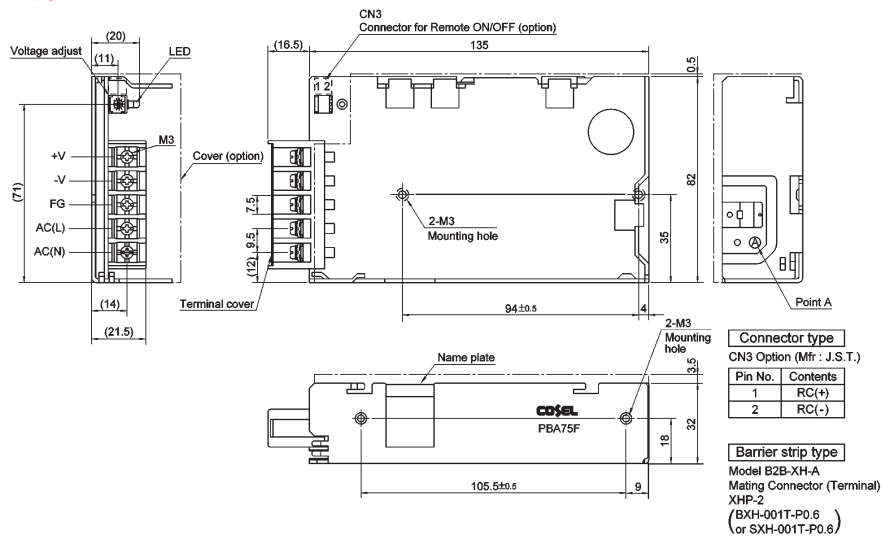
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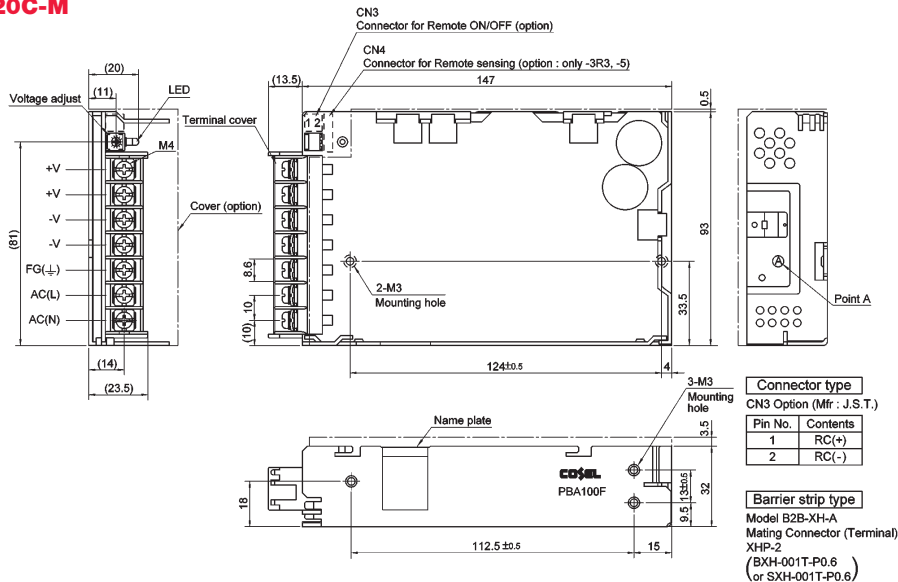
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### PBB20C-L



### PBB20C-M

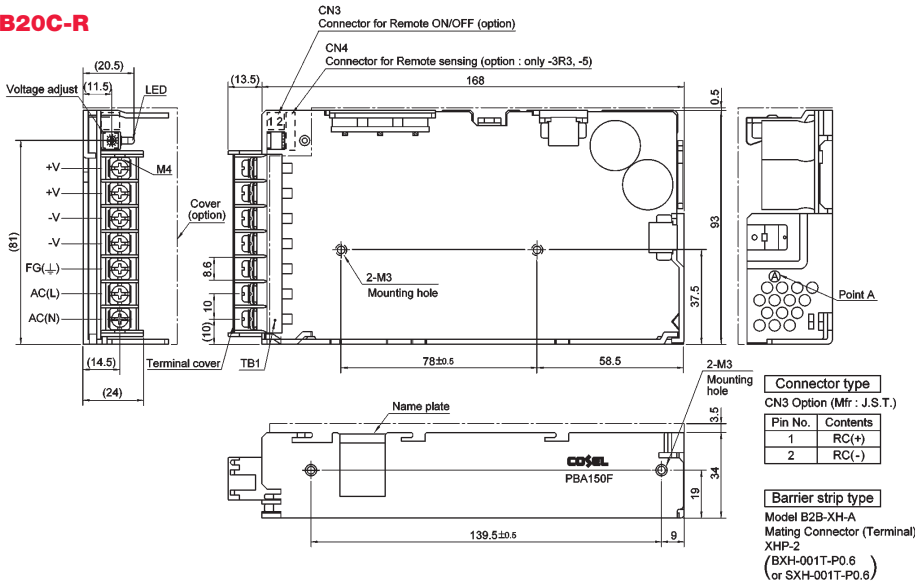


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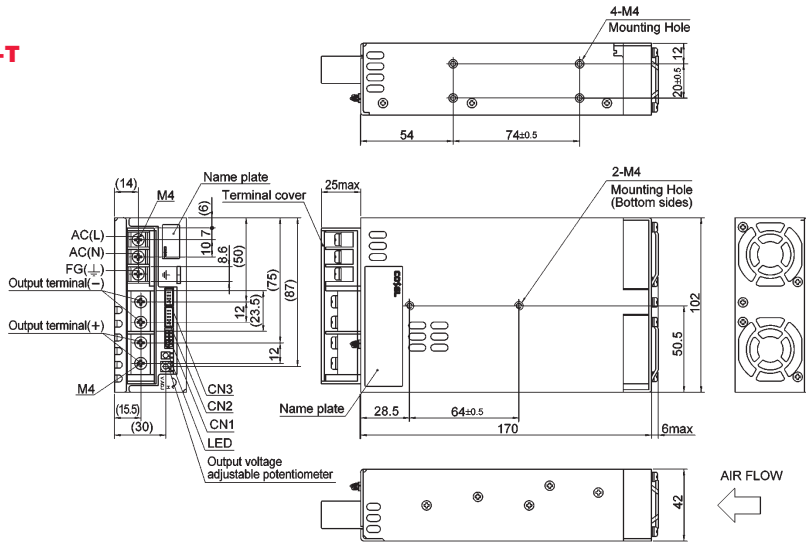
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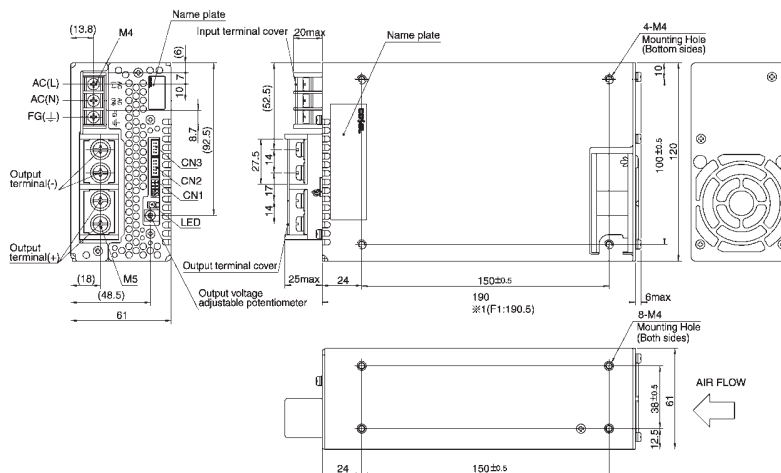
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### PBB20C-T



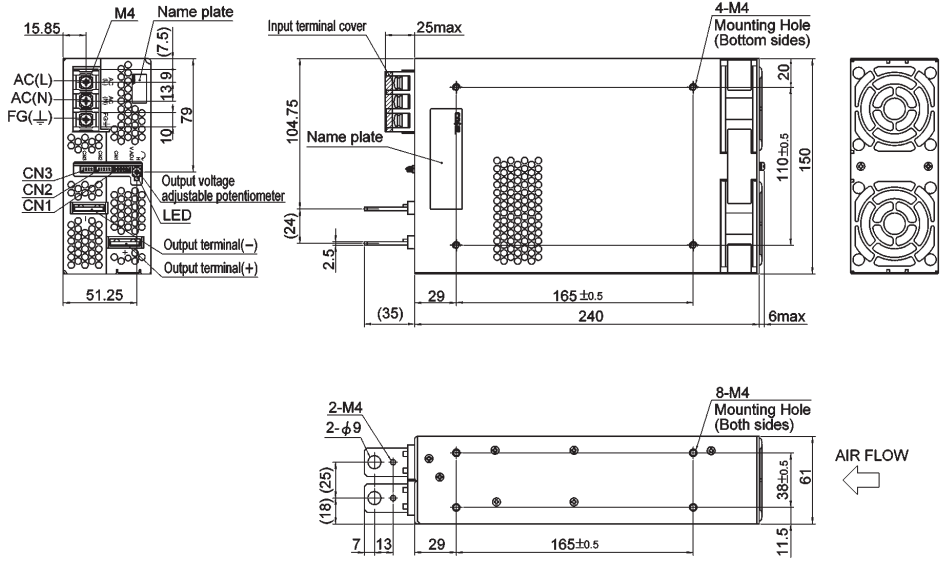
### PBB20C-X



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## Technical Illustrations PBB20C-W



## PBB20C-V

