

## BEO-5100MC

500 Watt

- ✓ Universal input range 80...264 VAC
- ✓ High efficiency up to 94.5%
- ✓ 3" x 5" compact size
- ✓ 390 W natural, 470...500 W conduction convection
- ✓ Peak Power 600W for 5 sec
- ✓ No load power consumption <0.5 W
- ✓ PS\_ON / PS\_Off Remote Control
- ✓ PG (Power Good) / PF (Power Fail)
- ✓ +5V standby, 12V fan output
- ✓ Active PFC
- ✓ 2x MOPP
- ✓ Class I-II



**NEW**



Also available as open frame model  
Art. No. BEO-5100M



### Technical data

Input voltage	80...264 VAC (100...240 VAC nominal), active PFC 0.93 @ 230VAC		
Input frequency	47...63 Hz (50...60 Hz nominal)		
Max. input current	6 A (100% load, $V_{IN} = 100$ VAC)		
Inrush current	<9 A @ +25°C (240 VAC)		
Efficiency	92.5...94.5% depending on model		
Standby consumption	<0.5 W at 0 A load		
Hold up time	App. 16 ms (115 VAC)		
Protection	Overcurrent protection: switch off with auto recovery 120...190% Short circuit protection: switch off with auto recovery Overtemperature protection: auto recovery Overvoltage protection: latch off (AC recycle to reset)		
Insulation voltage	Input / Output 4000 VAC / 1 min Input / FG: 1800VAC / 1 min Output / FG: 1800VAC / 1 min		
Insulation resistance	100 MΩ Input / Output		
Line regulation	±0.5 % at rated load and input voltage change from 90 to 264 VAC		
Load regulation	±1 % (5 Vsb; ±5 %) measured from 10...100% load		
Load capacitance	1. $V_{IN} = 115$ VAC and 230 VAC	BEO-5100M-120	42900 μF
	2. Output is 100% full load	BEO-5100M-180	28600 μF
	3. Ambient temperature = 25 °C	BEO-5100M-240	20800 μF
		BEO-5100M-360	14000 μF
		BEO-5100M-480	10800 μF
Shock	Meet MIL-STD-810F Table 516.5, Table 516.5-I 10ms, each axis 3 times (±X, ±Y, ±Z axis)	All	75 g
Vibration	Meet MIL-STD-810F, Table 514.5C-VIII, 15~2000 Hz, X, Y, Z axis, 1 h (each axis) Total 3 hrs	All	4 g
Leakage current	Touch <0.1mA / Earth <0.3 mA		
Safety/EMC	IEC/EN/UL60601-1 Edition 3.2; Class I (EMC class B) / Class II (EMC class A)		
Temperature	Operating: -40...+85°C / Storage: -40...+85°C		
Derating	See diagram		
Max. operation altitude	5000 m		
MTBF	200 000 h according to MIL-HDBK-217F at +25 °C / 115 VAC		
Humidity	Operating: 10...85 % RH, non-condensing / Storage: 10...93 % RH, non-condensing		
Dimension (WxDxH)	87 x 136 x 42.5 mm ±1 mm		
Weight (net)	0.635 kg		

## Product specific data

Remote sense voltage range	≤5 % of $V_{\text{nominal}}$
Adjustment range output voltage	±5 %
PS_ON	The PS_ON remote control is provided in CN3 pin4. PSU On: PS_ON (3) short to GND (1) or 0V to 2VDC (10mA max) PSU Off: PS_ON (3) open or >4VDC up to 60VDC
PG (Power Good) / PF (Power Fail)	100...500ms / 1...10ms @90% $V_{\text{OUT}}$
Peak Power*	600W for 5 sec

\*Peak Power should be less than 5 seconds, with a maximum 10% duty cycle, peak power function by 120% load 5sec and 75% load 45 sec. 390W natural, 470...500W conduction convection.

Article No.	Output	Output voltage	Output current			Ripple & Noise*1	Efficiency
			min	fanless	max load (with 21CFM fan)		
BEO-5112MC	A1	+12 V	0 A	27.5 A	41.67 A	120 mV	92.5 % max
	A2	+5 $V_{\text{sb}}$	0 A	1 A	1.0 A	100 mV	
	A3	+12 $V_{\text{fan}}$	0 A	0.5 A*2	0.5 A	–	
BEO-5124MC	A1	+24 V	0 A	17.08 A	20.83 A	150 mV	94.5 % max
	A2	+5 $V_{\text{sb}}$	0 A	1 A	1.0 A	100 mV	
	A3	+12 $V_{\text{fan}}$	0 A	0.5 A*2	0.5 A	–	
BEO-5136MC	A1	+36 V	0 A	11.39 A	13.89 A	200 mV	94.5 % max
	A2	+5 $V_{\text{sb}}$	0 A	1 A	1.0 A	100 mV	
	A3	+12 $V_{\text{fan}}$	0 A	0.5 A*2	0.5 A	–	
BEO-5148MC	A1	+48 V*2	0 A	8.54 A	10.42 A	250 mV	94.5 % max
	A2	+5 $V_{\text{sb}}$	0 A	1 A	1.0 A	100 mV	
	A3	+12 $V_{\text{fan}}$	0 A	0.5 A*2	0.5 A	–	

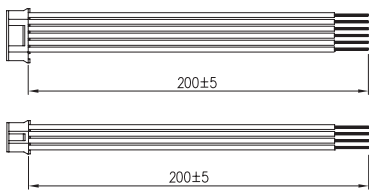
Note:

1. Add a 0.1  $\mu\text{F}$  ceramic capacitor and a 10  $\mu\text{F}$  E.L. capacitor to output for ripple & noise measuring at 20MHz BW.
2. Fan output can only operate normal when the stand-by output is above 0.5 A.

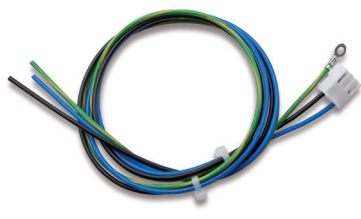
## Optional Accessories

▷▷▷ For detailed information please visit our website [www.bicker.de](http://www.bicker.de) and refer to the article number.

**PSZ-1113 | Wire set**  
Wire set CN2 and CN3




**CB-106-3-600 | AC input cable**  
3-pole, length 600 mm, AWG18, ends open



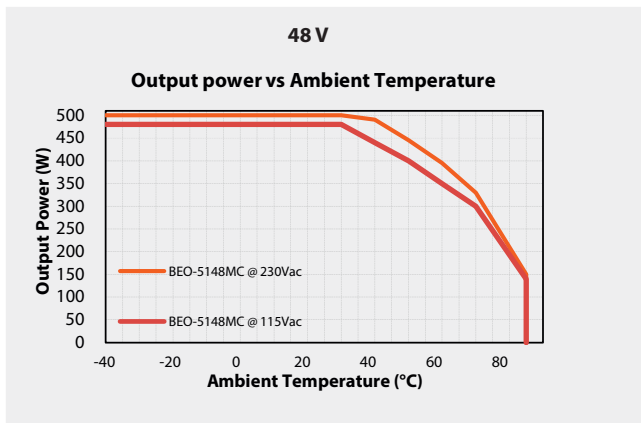
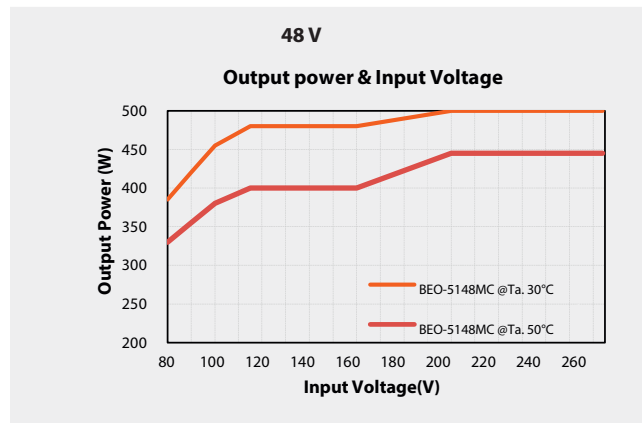
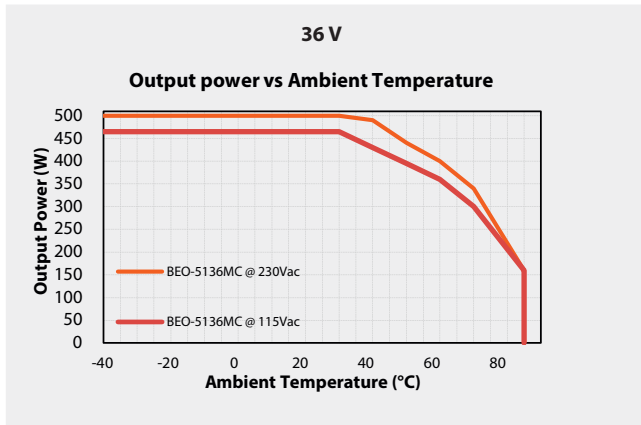
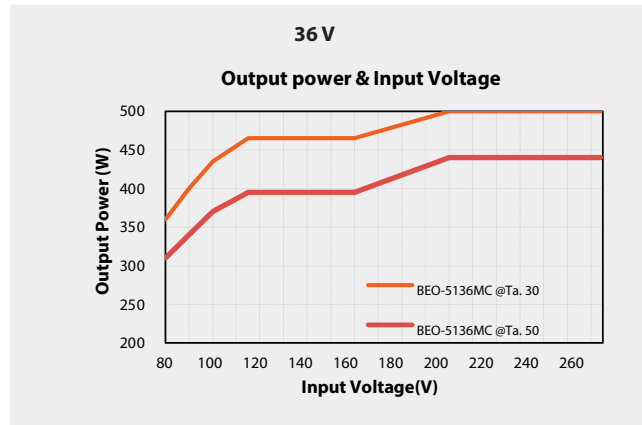
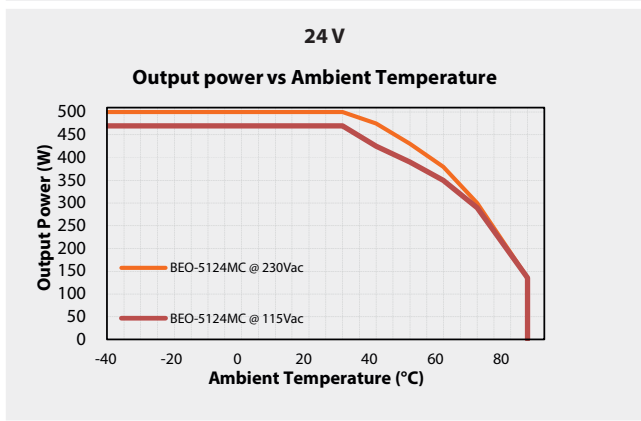
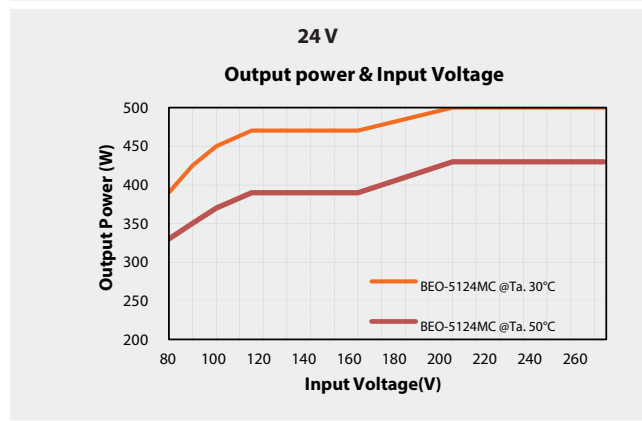
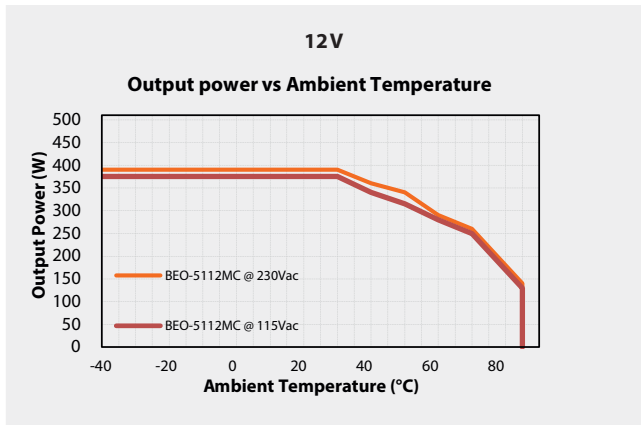
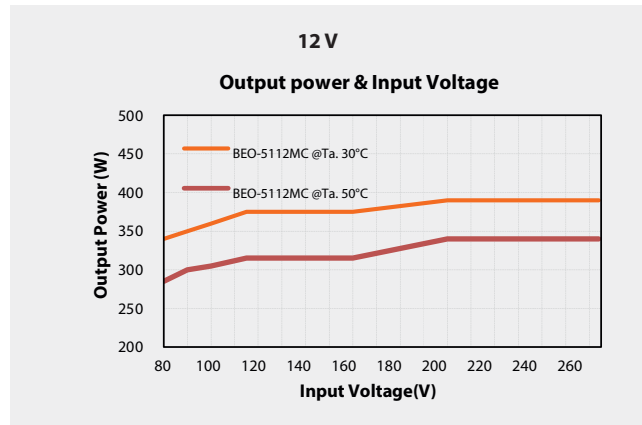
Protection Class I

**X1-054 | AC input cable**  
2-pole, length 600 mm, AWG18, ends open



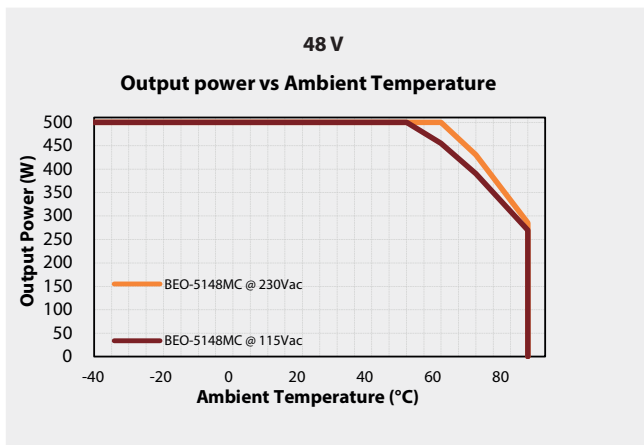
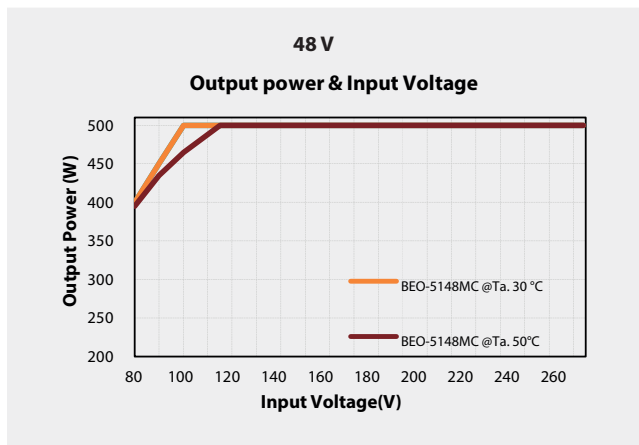
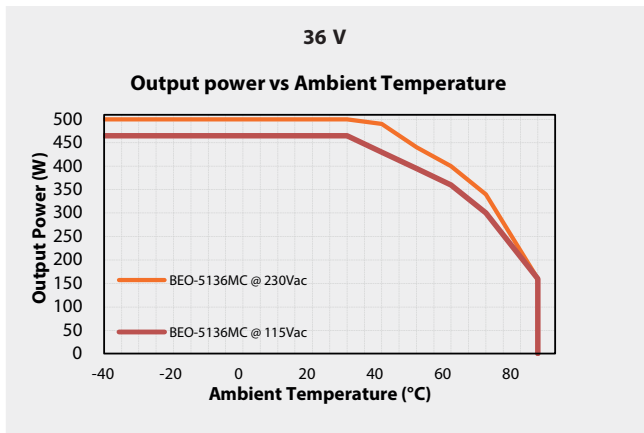
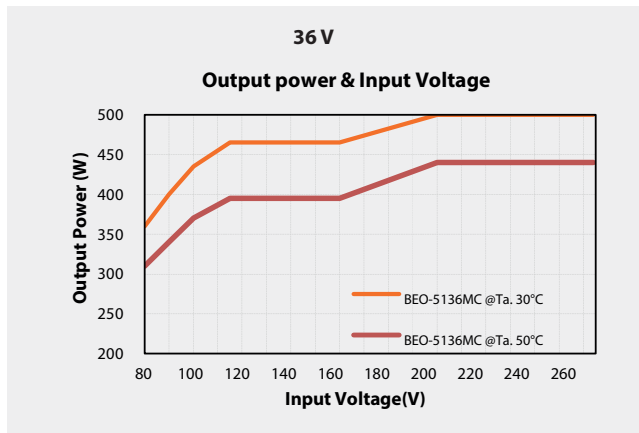
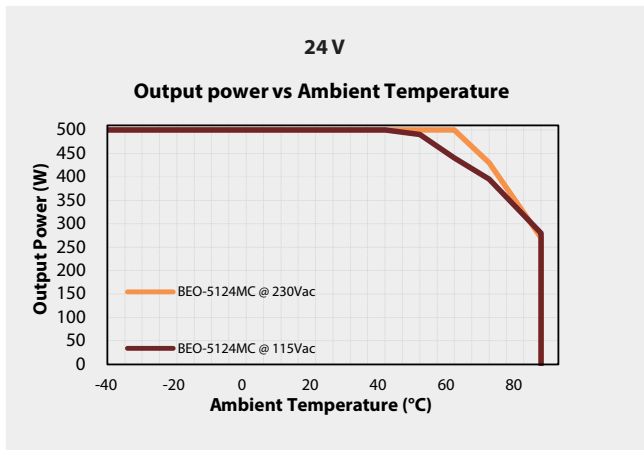
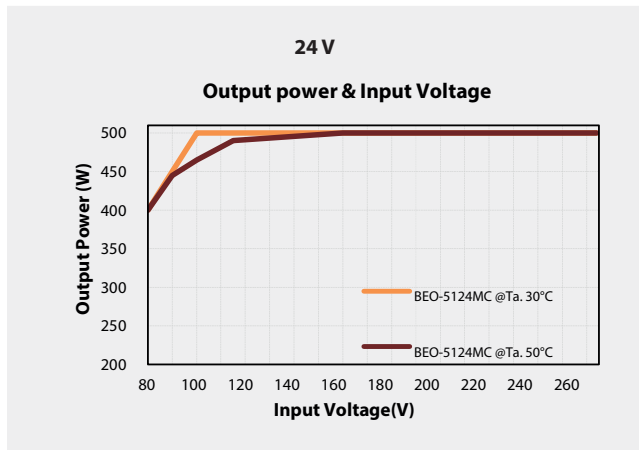
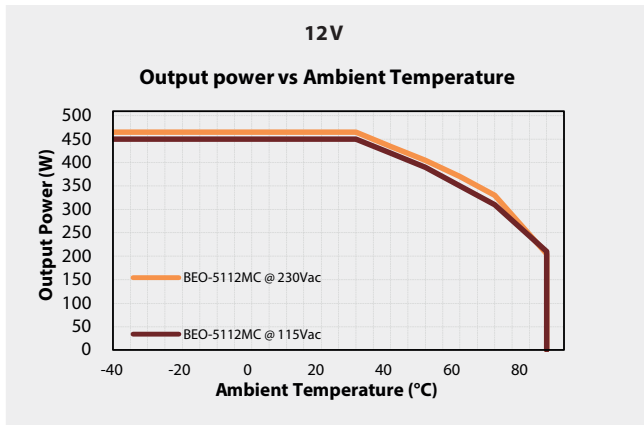
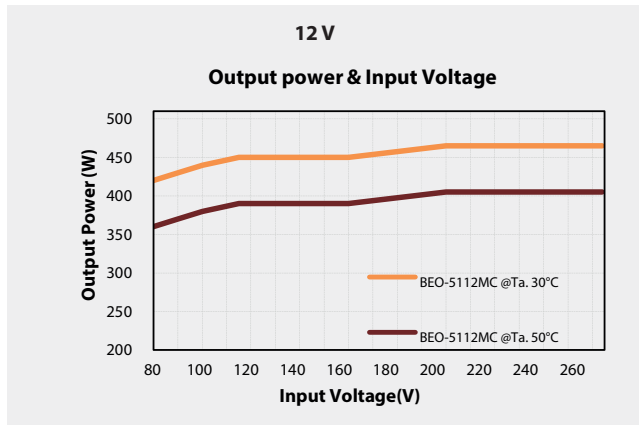
Protection Class II

## Natural Convection



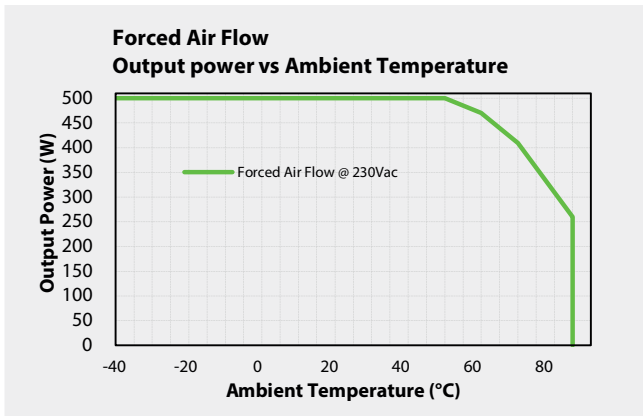
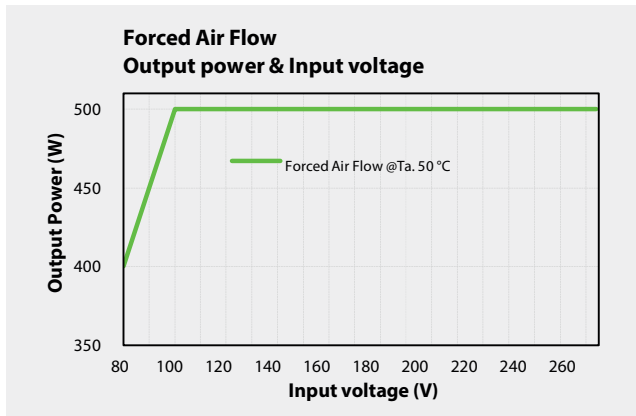
Power supplies

## Conduction Convection with external baseplate (48x24.8x0.12 cm)

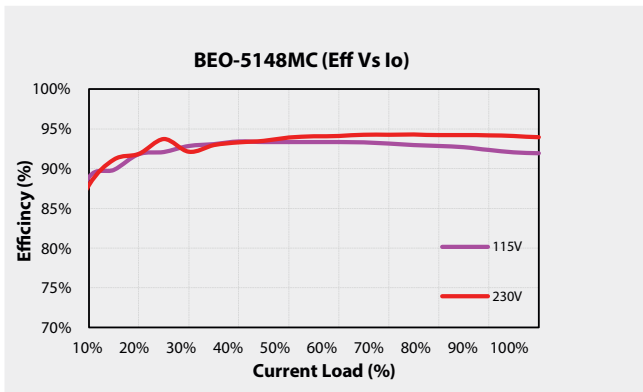
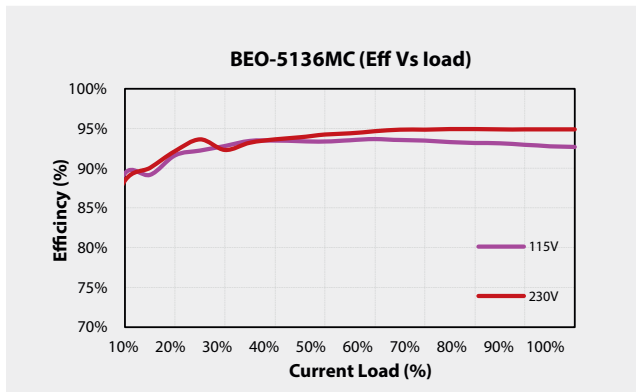
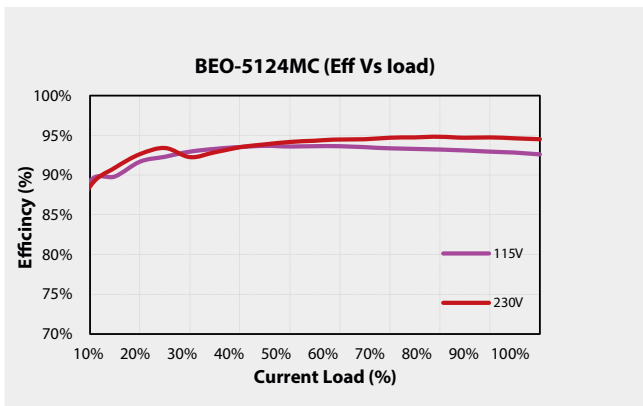
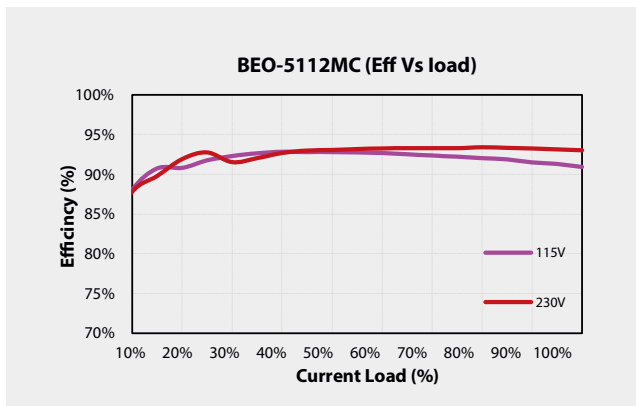


Power supplies

## Performance Data

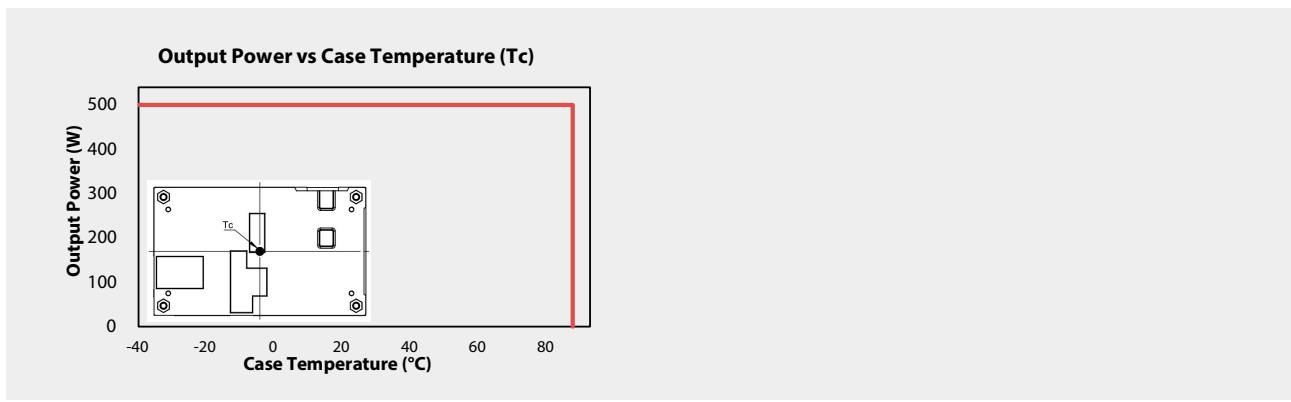


## Performance Data with airflow



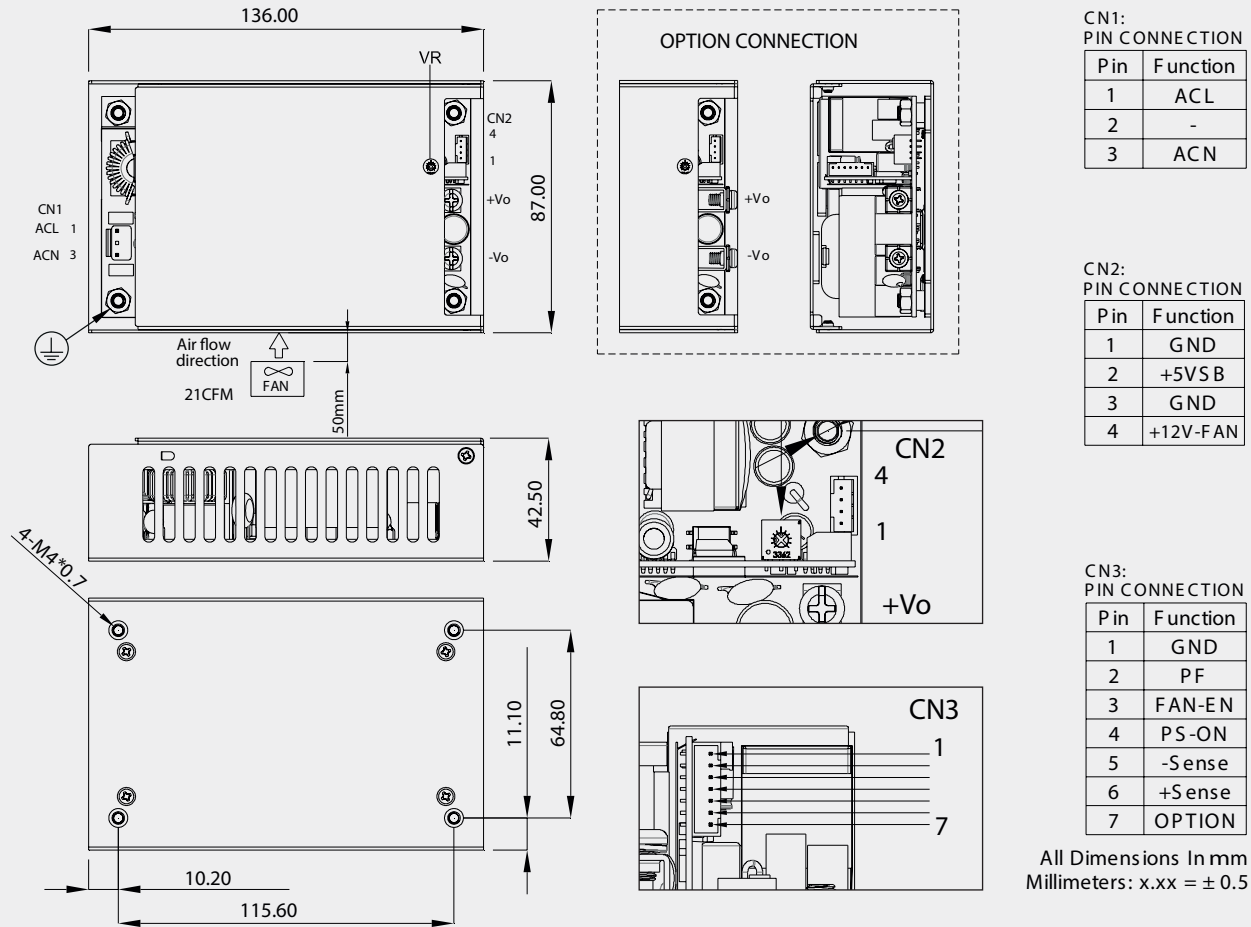
Power supplies

## Output Power vs Case Temperature (Tc)



## Drawing BEO-5100MC

Tolerance  $\pm 1$  mm



**CN1:** Input connector wafer with JST B2P3-VH and mate with JST housing VHR-3N or equivalent. Terminal JST SVH-41T-P1.1 or equivalent.

**CN2:** Output connector wafer with TAIWAN KING PIN TKP P1 10I-04 or equivalent and mate with JST housing PHR-4 or equivalent. Terminal JST SPH-002T-P0.5L or equivalent.

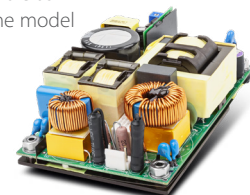
**CN3:** Output connector wafer with TAIWAN KING PIN TKP P1 10L-07 or equivalent and mate with JST housing PHR-7 or equivalent. Terminal JST SPH-002T-P0.5L or equivalent.

**V<sub>o+</sub> & V<sub>o-</sub>:** Output connectors mate with round terminal and round terminal of the max outer diameter is 8.0 mm, max inner diameter is 4.3 mm.

**DC Output Connector:** KANG YANG PCB-58M4 or equivalent.

Function	The screw locked torque
V <sub>o-</sub>	M4 7kgf-cm
V <sub>o+</sub>	M4 7kgf-cm

Also available as open frame model



Art.No. BEO-5100M

Power supplies