

# BWT-SX-U

AC/DC Power supply  
Single output

# 30W



BW-series is an open frame board with cover as option. Simplified circuit design enabled cost performance and miniaturized. Safety design is applied to UL, CUL and VDE.



## Features

Wide input voltage range: 85-264Vac  
110-370Vdc  
High efficiency & reliability  
Output voltage +/-10%  
MTBF: 580'000 hours  
Switching Frequency: 50 / 60kHz  
Leakage Current: 1mA  
Warranty: 2 years

## Mechanical features

Dimension (WxLxH): 55x133x26mm  
Weight: 170g  
Connector: JST connectors  
Closed or open frame type  
Option: Wire harness for JST connectors (add -WH)  
Cover (add -P)

## Standards

Safety: EN 60950; UL1950; C-UL (CSA) C22.2 No.950;  
IEC950; VDE 805  
EMI : EN 55022/B; FCC part 15-B classB;  
VCCI classB;

## Possibly applications

Process control  
Office equipment  
Computer peripherals  
Telecommunications  
Industrial electronics&machines

## Control features

Over voltage protection: Output shutdown  
Over current protection: Current limiting, aut. recovery



Specifications<AC/DC>	Model						
BWT**SX-U 30WATTS / SINGLE	BWT-3.3SX-U	BWT-05SX-U	BWT-12SX-U	BWT-15SX-U	BWT-24SX-U	BWT-36SX-U	BWT-48SX-U
<b>Input Characteristic</b>							
Input Voltage	AC100-230V						
Input Current	0.7A at AC100V / 0.4A at AC230V						
Input Range	AC85-264V (DC110-370V)						
Input Frequency	50/60Hz						
Input Frequency Range	47-440Hz						
Phase	Single						
Inrush Current *1	15A(maximum) at AC100V / 30A(maximum) at AC230V						
Efficiency [%] (typical) *2	70	75	78	80	81	81	84
<b>Output Characteristic</b>							
Output Voltage [V]	3.3	5.0	12.0	15.0	24.0	36.0	48.0
Output Current [A]	6.0	6.0	2.5	2.0	1.3	0.9	0.7
Voltage Adjust Range	+/- 10% of Rated Output Voltage(at no load within the input range)						
Ripple and Noise [mVp-p](maximum) *3	83	100	170	200	290	410	530
<b>Regulation</b>							
a.Statistic Line Regulation [mV](maximum)	26.4	40	96	120	192	288	384
b.Statistic Load Regulation [mV](maximum)	29.7	45	108	135	216	324	432
c.Temperature Coefficient *4	0.03%/°C						
d.Drift[mV] (maximum) *5	31.5	40	75	90	135	195	255
e.Dynamic Load Regulation [mV](typical) *6	99	150	360	450	720	1080	1440
f.Recovery Time *6	0.3mS(typical)						
Rise up time	200mS(maximum) at 25°C and rated input/output						
Hold up time	20mS(typical) at 25°C and rated input/output						
<b>Functions</b>							
Over current Protection	Current Limiting with automatic recovery						
>110% of Rated Output Current[A]	6.6	6.6	2.75	2.2	1.43	0.99	0.77
Over voltage Protection	Zener diode clamping						
>115% of Rated Output Voltage[V]	3.8	5.75	13.8	17.3	27.6	41.4	55.2
Remote Sense	not available						
Remote On/Off	not available						
<b>Environmental</b>							
Operating Temperature *7	Open board type:-10 to +50°C (-30 to +70°C) / enclosed type: -10 to +40°C						
Operating Humidity	20 to 90%RH(non-condensing)						
Storage Temperature	-20 to +85°C						
Storage Humidity	20 to 90%RH(non-condensing)						
Withstanding Voltage	Primary-Secondary AC3,000V for 1minute						
	Primary-Frame Ground AC2500V for 1minute						
	Secondary-Frame Ground AC500V for 1minute						
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester						
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s <sup>2</sup> ,20minutes, period for 60minutes each along X,Y,Z axes(non-operating)						
Shock	294m/s <sup>2</sup>						
Cooling	Convection						
Leakage Current	1mA (maximum) at 25°C,rated input/output and rated input frequency						
Line Conducted Noise	FCC Part15-B Class B						
	VCCI Class B						
	EN55022 Class B						
Safety	UL: UL1950						
	C-UL: CSA C22.2 No.950						
	VDE: EN60950, IEC950, VDE0805						
Weight (typical)	Open board type: 135g/ enclosed type:285g						
MTBF [H]	580'000						
Switching Frequency[kHz](typical) *8	60	50	50	50	50	50	50

Conditions:

\*1 At cold start

\*2 At DC130V input/ rated output and 25°C

\*3 Measured by a bayonet probe at the end of a pair of 20cm long wires terminated with a 47µF electrolytic capacitor and 0.1µF film capacitor in parallel at a 0 to 100MHz bandwidth

\*4 Open board type: At -10 to +50°C/ enclosed type: at -10 to +40°C

\*5 For 7hour period after 1hour warm-up at 25°C and rated input/output

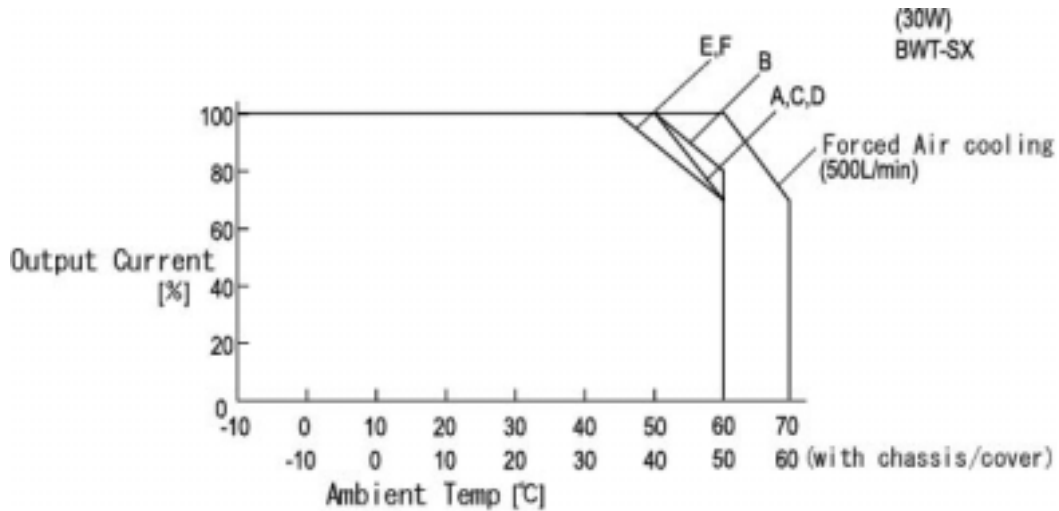
\*6 When output current changed from 25% to 75% of rated output current rapidly at rated input

\*7 Safety approved at 25°C (contact technical sales)

\*8 Variable on input voltage and load conditions

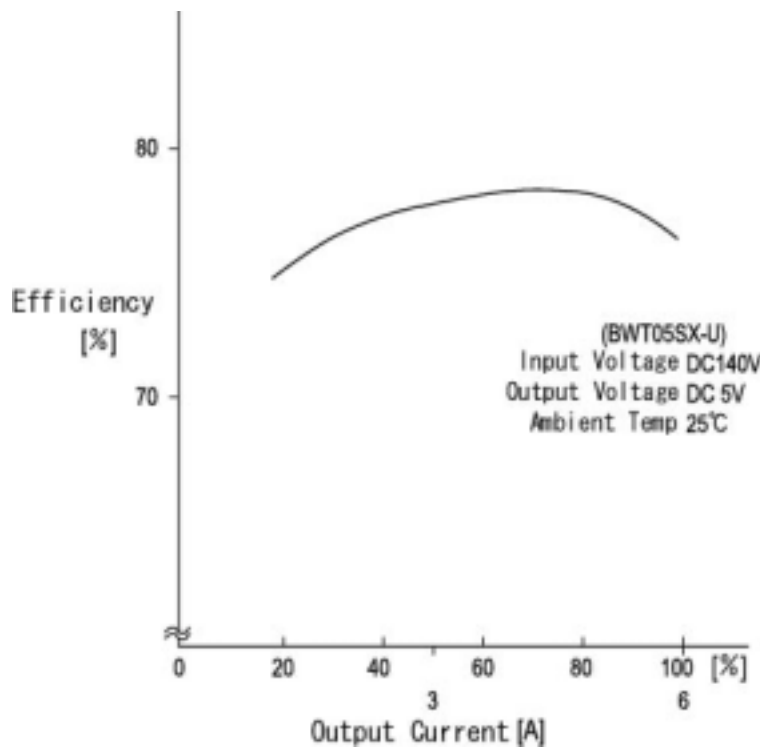


## Derating

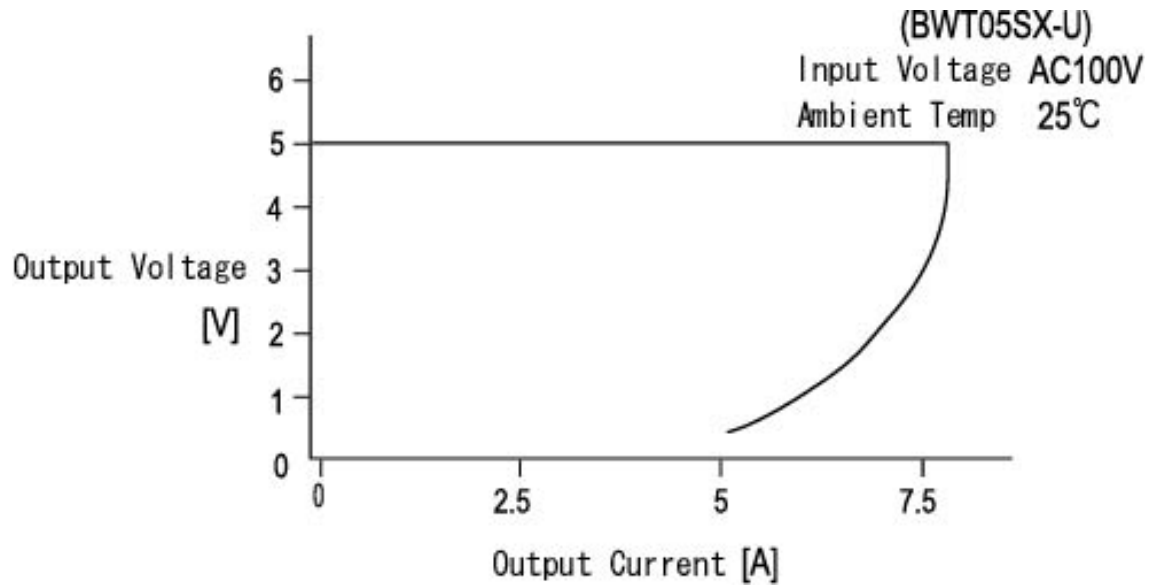


※ For safety specification, contact ETA Sales Representative

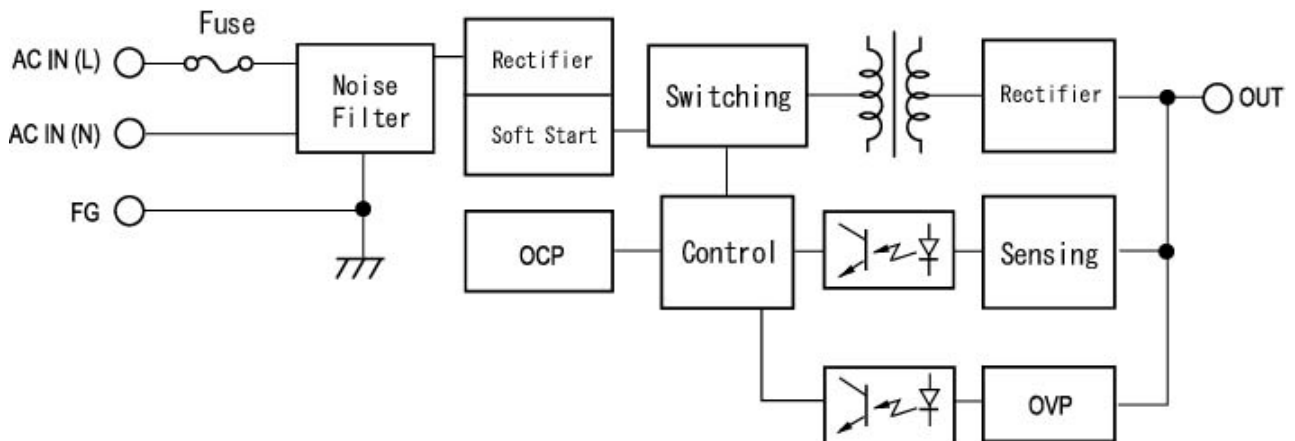
## Efficiency



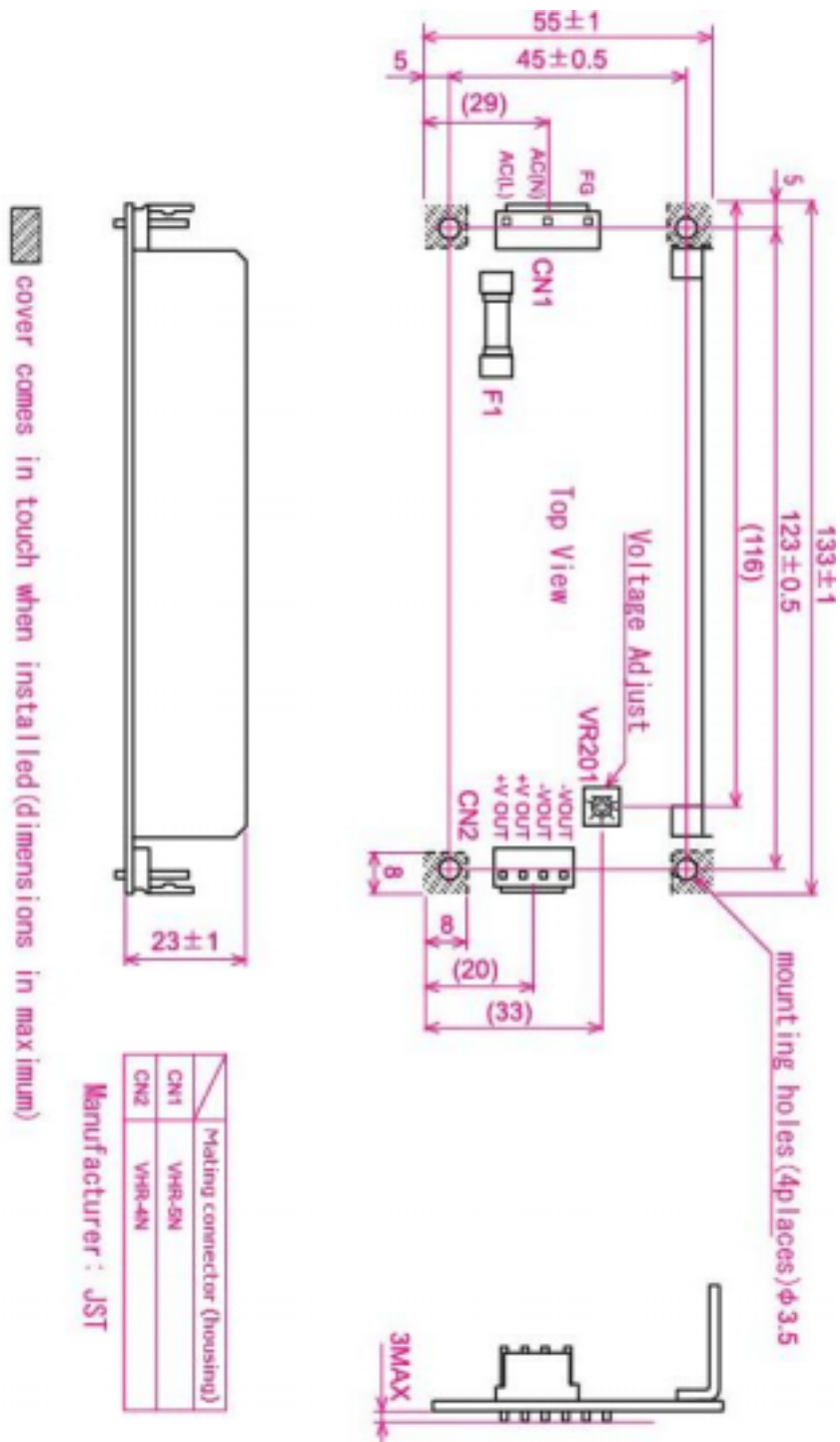
OCP



Block diagram



Dimension (without cover)



Dimension (with cover)

