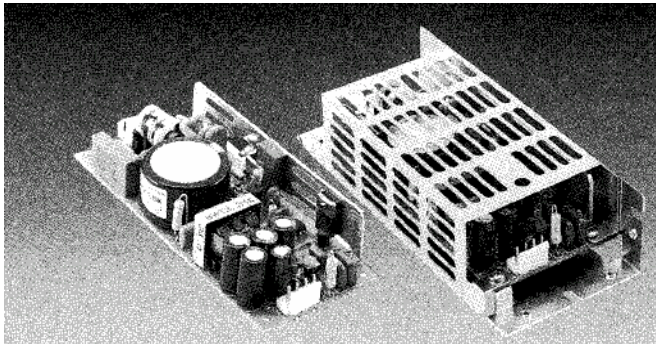


# 30 WATT AC-DC CONVERTER

## BWT/BWTE-SX SERIES



### General Description

BW-series is an open board, low profile, low price switcher without chassis and cover. It is designed for small size and low cost applications world-wide. The output power can be boosted 15% to 30% above nominal.

Dimensions: 55x163x36 mm



### Options

Cover (Add suffix "-P" ex. BWT05SX-PU)  
40cm long wire harness

### Features

1. Open frame type
2. EMI: Complies with EN55022B, FCC/B
3. Low cost
4. Option: Chassis + cover
5. Mountable on any axis
6. Universal Input 85-264 VAC
7. BWTE now applying for safety approval

Specifications<AC/DC>	Model						
BWT/BWTE**SX-U	BWT3.3SX-U	BWT05SX-U	BWT12SX-U	BWT15SX-U	BWT24SX-U	BWT36SX-U	BWT48SX-U
<b>30WATTS/SINGLE</b>	BWTE3.3SX	BWTE05SX	BWTE12SX	BWTE15SX	BWTE24SX	BWTE36SX	BWTE48SX
<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

## BWT/BWTE\*\*SX Specification

Specifications<AC/DC>	Model						
BWT/BWTE**SX-U 30WATTS/SINGLE	BWT3.3SX-U BWTE3.3SX	BWT05SX-U BWTE05SX	BWT12SX-U BWTE12SX	BWT15SX-U BWTE15SX	BWT24SX-U BWTE24SX	BWT36SX-U BWTE36SX	BWT48SX-U BWTE48SX
<b>Output Characteristic</b>							
Output Voltage [V]	3.3	5	12	15	24	36	48
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°Cand rated input/output						
Hold up time	20mS(minimum) at 25°Cand rated input/output						
<b>Functions</b>							
Overcurrent Protection $\geq$ 10% of Rated Output Current[A]	Current Limiting with automatic recovery						
	6.6	6.6	2.75	2.2	1.43	0.99	0.77
Overvoltage Protection $\geq$ 15% of Rated Output Voltage[V]	Zener diode clamping						
	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	open board type:-10 to +50°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 AC2,500V for 1minute						
	Secondary-Frame Ground AC500V for 1minute						
Isolation Resistance	Primary-Secondary-Frame Ground 50MQ(minimum) by DC500V insulation tester						
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6rms <sup>2</sup> 20minutes' period for 60minutes each along X,Y,Z axes (non-operating)						
Shock	294rms <sup>2</sup>						
Cooling	Convection						
? Leakage Current	1mA(maximum) at 25°Cated input/output and rated input frequency						
? Conducted Line Noise	Built to meet FCC Part15-B Class B						
	Built to meet VCCI Class B						
	Built to meet EN55022 Class B						
? Safety	UL: UL1950(Except BWTE)						
	C-UL: CSA C22.2 No.950(Except BWTE)						
	VDE: EN60950, IEC950, VDE0805(Except BWTE)						
Weight (typical)	open board type:135g /enclosed type:285g						
? MTBF [H]	580,000						
? Switching Frequency[kHz](typical) *7	60	50	50	50	50	50	50

Conditions:

\*1at cold start

\*2 at DC130V input/rated output

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

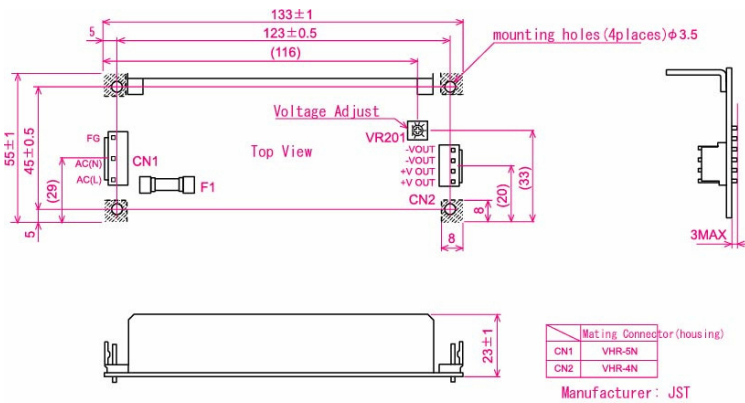
\*4 open board type: at -10 to +50°Cenclosed type: at -10 to +40°C

\*5 for 7hour period after 1hour warm-up at 25°Cand rated input/output

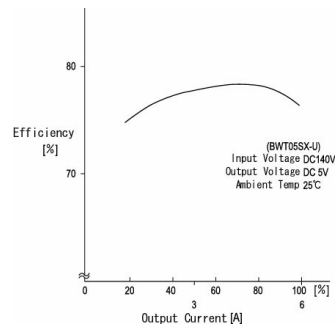
\*6 when output current changed from 25% of rated output current to 75% rapidly at rated input

\*7 variable on input voltage and load conditions

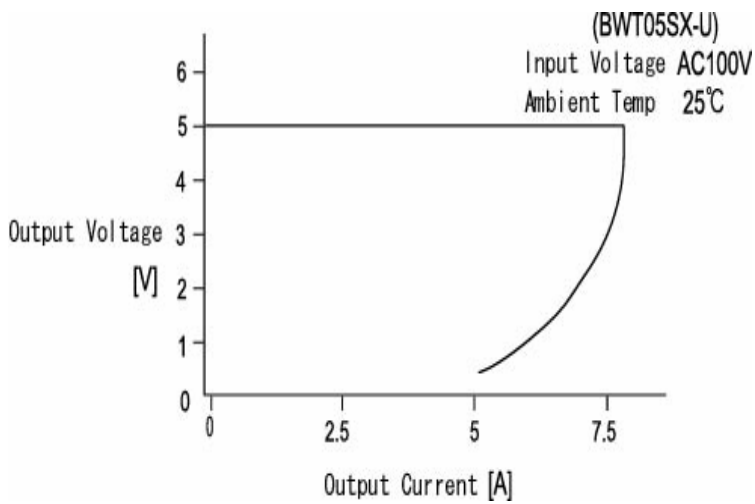
### Dimension (mm)



### Efficiency Curve



### OCP Curve



### Derating Curve

