BALSEAL® Electric

BPT Series DIN-Rail Switching Power Supply

Power range：25-100W

Compact high-efficiency switching power supply

Features

- Wide AC power input
- Smaller size, lower temperature rise, natural heat dissipation
- High-frequency PWM control, high conversion efficiency
- Soft-start current, effectively reducing instantaneous current surge
- LED Power indicator
- Protection types: short circuit, overload, overheat, overvoltage protection, etc.
- Compliant with CE and RoHS certifications

Model and naming

Select according touapplication requirements.

Product model code

BPT	24	100	*
Series code	**Output voltage: V/DC** 48:48VDC 36:36VDC 24:24VDC 12:12VDC	**Power (W)** 025:25W 035:35W 050:50W 060:60W 075:75W 100:100W	**special request**



Specifications and models

Input parameters	**BPT24-025**	**BPT24-035**	**BPT24-050**
Control voltage range	AC100 - 240(85 - 264VAC), 50/60Hz(47 - 63)		
frequency range	50-60Hz		
Efficiency (TYP)	80%	80%	83%
AC current	25A/220VAC		
surge current	110VAC / 20 A, 220VAC / 40A (At an ambient temperature of 25°C /When the ambient temperature is 25°C)		
Leakage current	<0.5mA/240VAC		
Output parameters			
DC voltage	24V	24V	24V
Output voltage range	±10%	±10%	±10%
Output current	1.05A	1. 46A	2. 10A
Load stability	±1%	±1%	±1%
load regulation	≤10mS	≤10mS	≤10mS
Ripple and noise	80mVp-p	120mV	120mV
Boot time	1000ms,30m/230VAC		
Duration (Typ)	30ms/230VAC 12ms/115VAC at full load		
Input parameters	BPT24 - 060	BPT24 - 075	BPT24 - 100
Control voltage range	AC100 - 240(85 - 264VAC), 50/60Hz(47 - 63)		
frequency range	50-60Hz		
Efficiency(TYP)AC220V	83%	91%	91%
AC current	25A/220VAC		
surge current	110VAC / 20 A, 220VAC / 40A (At an ambient temperature of 25°C)		
Leakage current	<0.5mA/240VAC		
Output parameters			
DC voltage	24V	24V	24V
Output voltage range	±10%	±10%	±10%
Output current	2. 50A	3. 13A	4. 20A
Load stability	±1%	±1%	±1%
load regulation	≤10mS	≤10mS	≤10mS
Ripple and noise	80mVp-p	120mV	120mV
Boot time	1000ms,30m/230VAC		
Hold-up time (Duration (Typ)	30ms/230VAC 12ms/115VAC at full load		

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Specifications and models

Input parameters	BPT12-025	BPT12-035	BPT12-050
Control voltage range	AC100 - 240(85 - 264VAC), 50/60Hz(47 - 63)		
frequency range	50-60Hz		
efficiency (TYP)AC220V	80%	80%	80%
AC current	25A/220VAC		
surge current	110VAC / 20 A，220VAC / 40A (环境温度25℃ 时)		
Leakage current	<0.5mA/240VAC		
Output parameters			
DC voltage	12V	12V	12V
Output voltage range	±10%	±10%	±10%
Output current	2. 1A	2. 92A	4. 2A
Load stability	±1%	±1%	±1%
load regulation	≤10mS	≤10mS	≤10mS
Ripple and noise	80mVp-p	100mV	100mV
Boot time	1000ms,30m/230VAC		
Hold time(Typ)	30ms/230VAC 12ms/115VAC at full load		

Duration (Typ)	BPT12-060	BPT12-075	BPT12-100
Control voltage range	AC100 - 240(85 - 264VAC), 50/60Hz(47 - 63)		
Frequency range	50-60Hz		
Hold time(TYP)AC220V	83%	91%	91%
AC current	25A/220VAC		
Surge current	110VAC / 20 A，220VAC / 40A (环境温度25℃ 时)		
Leakage current	<0.5mA/240VAC		
Output Parameters			
DC voltage	12V	12V	12V
Output voltage range	±10%	±10%	±10%
Output current	5. 00A	6. 25A	8. 40A
Load regulation	±1%	±1%	±1%
Load regulation	≤10mS	≤10mS	≤10mS
Ripple and Noise	150mVp-p	150mV	100mV
Power-on time	1000ms,30m/230VAC		
Hold time (Typ)	30ms/230VAC 12ms/115VAC at full load		

Protection

Overload	Automatically recovers after the abnormal condition of 110%–150% of the rated output power is removed.
Overvoltage	Protection mode activates at 115%–140% of rated output power; restart required.
Short circuit protection	Automatically protects against output short circuit (LED turns off) and automatically recovers after the short circuit is removed.

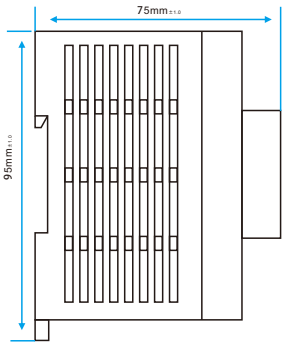
Safety

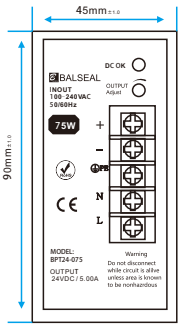
Safety standards	CE-EN60950,UL508,UL60950,TUV-60950
Withstand Voltage	I/P-0/P:3KVA,I/P-FG:0/P-FG:0.5KVA 1min

Electromagnetic Compatibility

Insulation Resistance	I/P-O/P, I/P-FG, O/P-FG；100M Ohms/500VDC/25℃/70% RH
Conduction and Radiation Standards	En55015 EN61547 EN61000-3-2 EN61000-3-3
EMCStandard	EN55011,EN55022,EN-61000-4-2,3,4,5,6,8,11,EN61000-6-2

Dimensions





Wiring and connections

input		output	
L	Wire	V−	out-
N	neutral	V+	out+
⏚	Ground wire		

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Product guarantee

Warranty Period
The warranty period for the switching power supply is 18 months from the date of manufacture

Scope of Warranty
The following conditions of use are covered by the free warranty.However, the maximum output power shall be used within the range specified in the "Output Current vs. Ambient Temperature Characteristics".

1、 The average operating ambient temperature (ambient temperature around the switching power supply unit) shall be below 40°C.
2、 Average load rate shall be below 80%.
3、 Input voltage shall be the rated input voltage.
4、 Installation method shall be in standard mounting condition.

For failures occurring within the aforementioned warranty period, free repair or replacement with an alternative product will be provided if the fault is attributable to our company.
However, any consequential damages caused by product failures are not covered by the warranty.

· In addition, please note that the following situations are not covered by the warranty.

1、 Improper use by the user, or use outside the specified specifications.
2、 Modification or repair carried out without authorization by our company.
3、 The failure is not caused by our company' s switching power supply.
4、 Failures caused by other reasons, natural disasters, or other circumstances not attributable to our company.

Things to note

Precautions
*Rated load and rated input voltage, TA = 25°C
*Ripple, noise, and rated load measurements are conducted at rated input voltage, TA = 25°C, using a 20 MHZ oscilloscope.

*Use 300 mm twisted-pair wires in parallel with a 0.1 μF film capacitor and a 47 μF electrolytic capacitor.For more information, please contact your distributor.

Product Certification

CE RoHS