BALSEAL® Electric

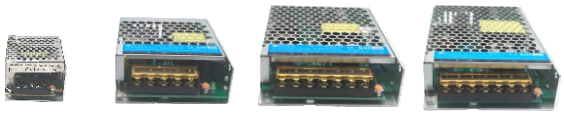
BPS Series of compact high-efficiency switching power supplies

Power range：15-150W

Compact high-efficiency switching power supply

Features

-Full-range AC input 96-264VAC/100-240VAC
-Small, ultra-thin, compact design
-Operating temperature up to 70℃
-Short circuit/overload/overvoltage protection
-CE and RoHS compliant
-High efficiency, long lifespan, and high reliability
-Low power consumption under no-load design



• Machine tools • Semiconductor manufacturing equipment • Injection molding machines • Food and packaging equipment • Automated parking systems
• Automotive equipment • Logistics handling equipment • Agricultural equipment • Energy-related equipment, etc.

Technical Data

project \ model	【15W】BPS*-015 12□/24□/48□VDC	【35W】 BPS*-035 12□/24□/48□VDC	【50W】 BPS*-050 12□/24□/48□VDC	【100W】BPS*-100 12□/24□/48□VDC	【150W】BPS*-150 12□/24□/48□VDC
input parameters					
Control voltage range	85-264VAC 120-373VAC				
frequency range	47-63Hz				
efficiency(TYP)					
5V	80%	82%	83%	83%	-
12V	82%	86%	86%	86%	87.5%
24V	88%	88%	88%	88%	89%
48V	85%	89%	90%	90%	90%
AC current	0.43A/115VAC 0.23A/230VAC	0.7A/115VAC 0.42A/230VAC	0.95A/115VAC 0.56A/230VAC	0.95A/115VAC 0.56A/230VAC	3A/115VAC 1.7A/230VAC
surge current	冷启动45A/230VAC	–	–	–	冷启动60A/230VAC
Leakage current	<0.75mA/240VAC	–	–	–	
Output parameters					
DC voltage	Rated current (A)	Rated current (A)	Rated current (A)	Rated current (A)	Rated current (A)
5V	3	7	10	18	–
12V	1.2	3	4.2	8.5	12.5
24V	0.63	1.5	2.1	4.5	6.5
48V	0.32	0.8	1.05	2.3	3.3
Ripple and noise					
5V	80mVp-p	80mVp-p	80mVp-	100mVp-p	-
12V	80mVp-p	80mVp-p	120mVp-p	120mVp-p	100mVp-p
24V	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p
48V	200mVp-p	200mVp-p	200mVp-p	200mVp-p	400mVp-p
Voltage adjustment range					
5V	4.5~5.5V				
12V	10.2~13.8V				
24V	21.6~28.8V				
48V	43.2~52.8V				
Voltage accuracy	±2.0%				
Linear adjustment rate	±0.5%				
load regulation	±0.5%				
Start-up and rise time	1000ms,30m/230VAC				
hold time(Typ)	30ms/230VAC				
Protect					
overload	The output is disconnected when it exceeds 110-150% (intermittent, automatic reset) of the rated output power, and resets upon reconnection.				
Overvoltage	Protection mode: Turn off output voltage, restart to resume.				
action display	LED (green)				

Withstand voltage		**Vibration resistance and impact resistance**
Input and output terminals	3,000V AC per minute	Frequency 10-55 Hz 2G fixed value, X/Y/Z directions, 2 hours each
Between input and ground terminals	2,000V AC per minute	Impact resistance: 200 m/s², 11 m/s, 6 directions, 1 time each
Between output and ground terminals	500VAC per minute	

Insulation resistance	Megohmmeter of 100MΩ or higher, 500V DC (at 25°C and 70%RH) (between input and output terminals, and between input and ground terminals).			
Use ambient temperature		**Use ambient humidity**	**Storage temperature and humidity**	**temperature coefficient**
-25～+70°C(No icing, with output rating decreasing characteristic)		20～90% RH (No condensation)	-40~+85℃ 10~95% RH. No condensation	±0.03%/℃ (0~50℃)

Safety Design and Standards

conform to EN55032(CLSPR32)Class 8,EN55014,EN61000-3-2,-3 GB/T 9254,BSMI CNS13438,EAC TP TC020 EN61000-4-2,3,4,5,6,8,11,EN61000-6-2(EN50082-2),EAC TP TC 020

BALSEAL® Electric

BPS Series of compact high-efficiency switching power supplies

Power range：15-150W

Model and naming

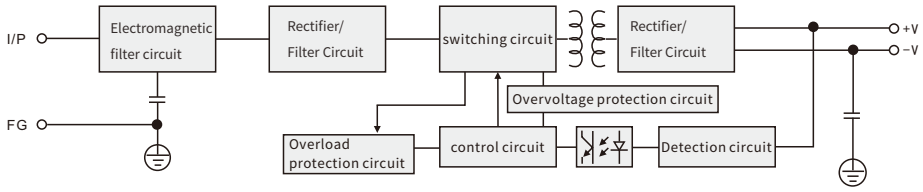
■ Select according touapplication requirements.

■ Product model code

BPS	24	—	035	*
Series code	Output voltage: V/DC 05:5VDC 12:12VDC 24:24VDC 48:48VDC		Power (W) 015:15W 035:35W 050:50W 075:75W 100:100W 150:150W	special request

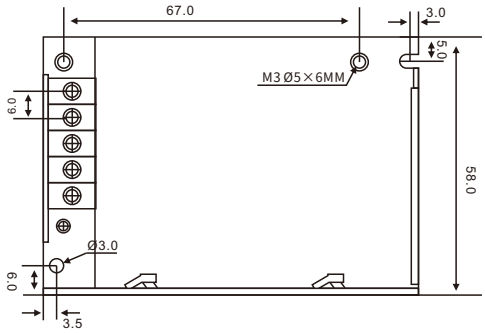
block diagram

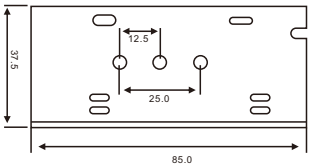
Oscillation frequency: 115VAC :75KHz /230VAC :110KHz



Dimensions

●BPS(15W) /Dimensional drawing(mm)





Wiring and connections

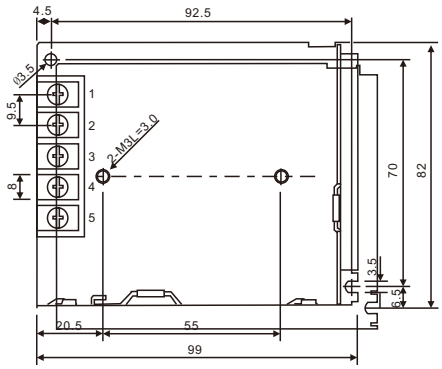
input		output	
L	Wire	V⁻	out-
N	neutral	V⁺	out+
⏚	Ground wire		

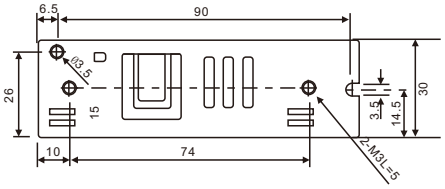
BPS Series of compact high-efficiency switching power supplies

Power range：15-150W

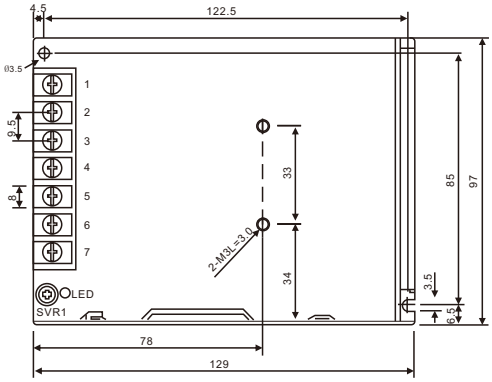
Dimensions

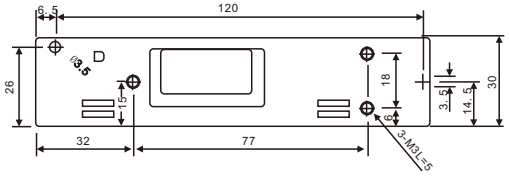
●BPS(35W、50W、75W) Dimensional drawing(mm)



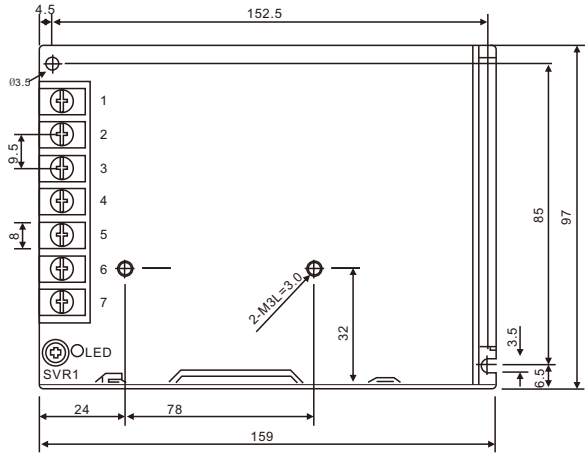


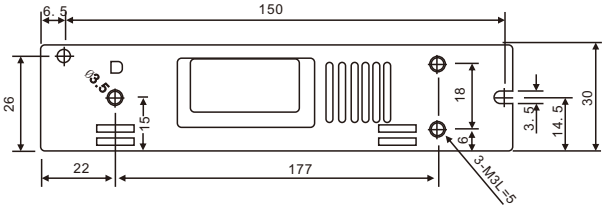
●BPS(100W) Dimensional drawing(mm)





●BPS(150W) Dimensional drawing(mm)





Precautions

* Operating temperature up to 70°C [158°F], with linear derating of 50°C to 70°C at half power [122°F to 158°F]. For more information, please contact your distributor.

BALSEAL® Electric

BPS Series Compact High-Efficiency Switching Power Supplies

Power range：200-450W

Compact high-efficiency switching power supply

Features

-Full-range AC input 96-264VAC/100-240VAC
-Small, ultra-thin, compact design
-Operating temperature up to 70℃
-Short circuit/overload/overvoltage protection
-CE and RoHS compliant
-High efficiency, long lifespan, and high reliability
-Low power consumption under no-load design



• Machine tools • Semiconductor manufacturing equipment • Injection molding machines • Food and packaging equipment • Automated parking systems
• Automotive equipment • Logistics handling equipment • Agricultural equipment • Energy-related equipment, etc.

Technical Data

model / project	【200W】BPS*-200 12□/24□/48□VDC	【250W】BPS*-250 12□/24□/48□VDC	【300W】BPS*-300 12□/24□/48□VDC	【350W】BPS*-350 12□/24□/48□VDC	【450W】BPS*-450 12□/24□/48□VDC
input parameters					
Control voltage range	176-240VAC 100/220VAC				
frequency range	47-63Hz				
efficiency(TYP)					
12V	87%	87%	87%	86%	86%
24V	91%	91%	92%	89%	89%
48V	90%	90%	91%	91%	91%
AC current	1.54A /230VAC	1.93A/230VAC	2.31A/230VAC	2.7A/230VAC	3.47A/230VAC
surge current	冷启动60A/230VAC	–	–	–	冷启动60A/230VAC
Leakage current	<2mA/230VAC	–	–	–	
Output parameters					
DC voltage	Rated current (A)	Rated current (A)	Rated current (A)	Rated current (A)	Rated current (A)
12V	17	21	25	29	37.5
24V	8.3	10.5	12.5	14.6	18.8
48V	4.2	5.2	6.3	7.3	9.3
Ripple and noise					
12V	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p
24V	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p
48V	400mVp-p	400mVp-p	400mVp-p	400mVp-p	400mVp-p
Voltage adjustment range					
12V	10.8~13.2V				
24V	22.6~26.4V				
48V	43.2~52.8V				
Voltage accuracy	±1.0%				
Linear adjustment rate	±0.5%				
load regulation	±0.5%				
Start-up and rise time	1300ms,50m/230VAC				
Duration (Typ)	16ms/230VAC				
Protect					
overload	The output power is disconnected when it exceeds 110-140% (intermittent, automatic reset) or 120% of the rated output power, and resets upon reconnection.				
Overvoltage	1.15% to 1.35% of rated output voltage; Output voltage off, recovers upon restart. • Protection mode: Output voltage off, recovers upon restart.				
action display	LED (green)				

Withstand voltage		**Vibration resistance and impact resistance**
Input and output terminals	3,000V AC per minute	Frequency 10-55 Hz 2G fixed value, X/Y/Z directions, 2 hours each
Between input and ground terminals	2,000V AC per minute	Impact resistance: 200 m/s², 11 m/s, 6 directions, 1 time each
Between output and ground terminals	500VAC per minute	

Insulation resistance	Megohmmeter of 100MΩ or higher, 500V DC (at 25°C and 70%RH) (between input and output terminals, and between input and ground terminals).		
Use ambient temperature	**Use ambient humidity**	**Storage temperature and humidity**	**temperature coefficient**
-30～+70℃(No icing, with output rating decreasing characteristic)	20～90% RH (No condensation)	-40~+85℃ 10~95% RH, No condensation	±0.03%/℃ (0~50℃)

Safety Design and Standards	
conform to	EN55032(CLSPR32)Class 8,EN55014,EN61000-3-2,-3 GB/T 9254,BSMI CNS13438,EAC TP TC020
	EN61000-4-2,3,4,5,6,8,11,EN61000-6-2(EN50082-2),EAC TP TC 020

Precautions
* Operating temperature up to 70°C [158°F], with linear derating of 50°C to 70°C at half power [122°F to 158°F]. For more information, please contact your distributor.

BALSEAL® Electric

BPS Series Compact High-Efficiency Switching Power Supplies

Power range：200-450W

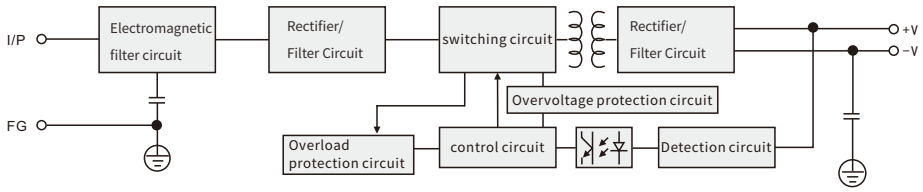
Model and naming

- Select according touapplication requirements.
- Product model code

BPS	24	—	200	*
Series code	**Output voltage: V/DC** 05 12 24 48		**Power (W)** 200:200W 250:250W 300:300W 350:350W 400:400W 450:450W	**special request**

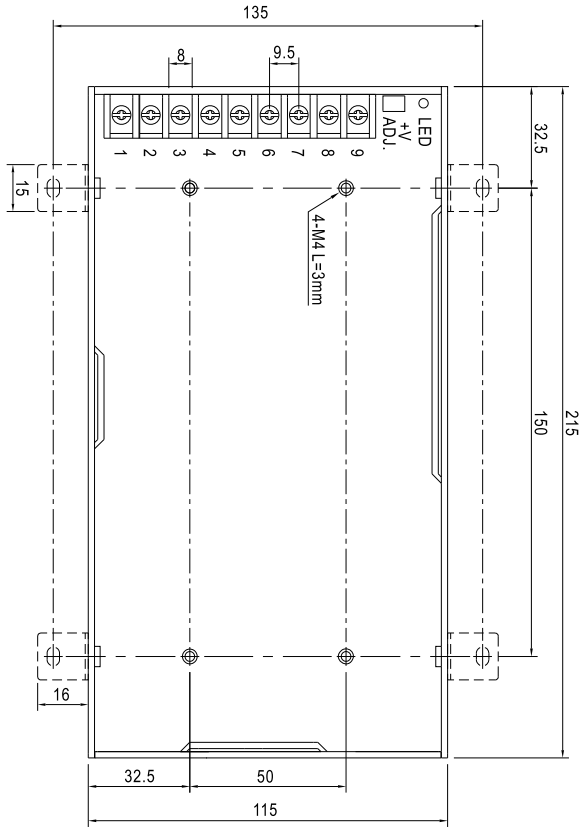
block diagram

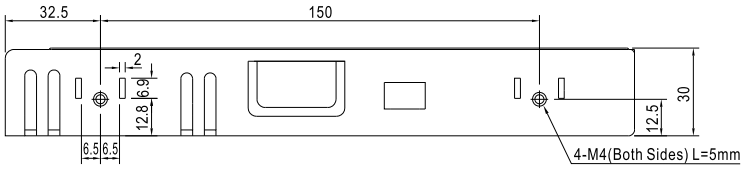
Oscillation frequency: 115VAC :75KHz /230VAC :110KHz



Dimensions

●BPS(200-450W) Dimensional drawing(mm)





Wiring and connections

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