BALSEAL® Electric

BPQ Series DIN Rail Power Supply

Power Range：75-760W

Compact high-efficiency switching power supply

Features

- Full-range AC Input: 96-264VAC / 100-240VAC
- Rugged metal housing, suitable for harsh industrial environments
- Operating temperature up to 70°C
- Short circuit / Overload / Overvoltage protection
- DIN rail mounting / Natural cooling
- Ultra-low output ripple and noise
- Compliant with CE and RoHS standards
- High efficiency, long service life and high reliability
- Ultra-high conversion efficiency



Model Nomenclature

Select according to usage conditions.

Product Model Number

BPQ	24	120	*
Series code	Output voltage: V/DC 48:48VDC 36:36VDC 24:24VDC 12:12VDC	Power (W) 075: 75W 120:120W 160:160W 240:240W 360:360W 480:480W 760:760W	special request

Specifications and models

Input parameters	**BPQ24-075**	**BPQ24-120**	**BPQ24-160**
Control voltage range	96 - 264VAC		
frequency range	50-60Hz		
Efficiency (TYP) @ AC220V	90%	90%	90%
AC current	0.9A @ 100VAC, 0.37A @ 230VAC	1.4A @ 100VAC, 0.58A @ 230VAC	1.9A @ 100VAC, 0.78A @ 230VAC
surge current	110VAC/ 20A, 220VAC/ 40A (Ambient temperature at 25℃)		
Leakage current	<0.5mA/240VAC,50Hz		
Output parameters			
DC voltage	24V	24V	24V
Output voltage range	Adjustable range of rated output voltage: ±10%		
Output current	3.20A	5.00A	6.70A
Linear adjustment rate	±0.5%		
load regulation	±1%		
Ripple and noise	150mVp-p	150mVp-p	150mVp-p
Boot time	1000ms/230VAC ●1800ms/115VAC	500ms/230VAC ● 500ms/115VAC	500ms/230VAC ● 500ms/115VAC
Duration (Typ)	60ms/230VAC ●12ms/115VAC	36ms/230VAC ●32ms/115VAC	36ms/230VAC ●32ms/115VAC

Input parameters	**BPQ24-240**	**BPQ24-360**	**BPQ24-480**
Control voltage range	100 /240VAC	100 /240VAC	96 - 264VAC
frequency range	50-60Hz		
Efficiency (TYP) @ AC220V	90%	90%	90%
AC current	2.8A @ 100VAC, 1.15A @ 230VAC	4.2A @ 100VAC, 1.75A @ 230VAC	5.4A @ 100VAC, 2.25A @ 230VAC
surge current	110VAC/ 27A, 220VAC/ 45A (环境温度25℃时)		
Leakage current	<0.5mA/240VAC,50Hz		
Output parameters			
C voltage	24V	24V	24V
Output voltage range	Adjustable range of rated output voltage: ±10%		
Output current	10.00A	15.00A	20.00A
Linear adjustment rate	±0.5%		
load regulation	±1%		
Ripple and noise	150mVp-p	150mVp-p	150mVp-p
Boot time	800ms/230VAC ●800ms/100VAC	800ms/230VAC ● 800ms/100VAC	1500ms/230VAC ● 3000ms/100VAC
Duration (Typ)	24ms/230VAC ● 24ms/115VAC	24ms/230VAC ● 24ms/115VAC	30ms/230VAC ● 20ms/115VAC

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BPQ Series DIN Rail Power Supply

Power Range：75-760W

Specifications and models

Input parameters	BPQ12-075	BPQ12-120	BPQ12-160
Control voltage range	96 - 264VAC		
frequency range	50-60Hz		
Efficiency (TYP) @ AC220V	87%	87%	87%
AC current	0.9A @ 100VAC, 0.37A @ 230VAC	1.4A @ 100VAC, 0.58A @ 230VAC	1.9A @ 100VAC, 0.78A @ 230VAC
surge current	110VAC/ 20A, 220VAC/ 40A (Ambient temperature at 25℃)		
Leakage Current	<0.5mA/240VAC,50Hz		
Output parameters			
DC voltage	12V	12V	12V
Output voltage range	Adjustable range of rated output voltage: ±10%		
Output current	6.25A	10.00A	13.40A
Linear adjustment rate	±0.5%		
load regulation	±1%		
Ripple and noise	100mVp-p	100mVp-p	100mVp-p
Boot time	1000ms/230VAC • 1800ms/115VAC	500ms/230VAC • 500ms/115VAC	500ms/230VAC • 500ms/115VAC
Duration (Typ)	60ms/230VAC • 12ms/115VAC	36ms/230VAC • 32ms/115VAC	36ms/230VAC • 32ms/115VAC

Input parameters	BPQ12-240	BPQ12-360	BPQ12-480
Control voltage range	100 /240VAC	100 /240VAC	96 - 264VAC
frequency range	50-60Hz		
Efficiency (TYP) @ AC220V	87%	87%	87%
AC current	2.8A @ 100VAC, 1.15A @ 230VAC	4.2A @ 100VAC, 1.75A @ 230VAC	5.4A @ 100VAC, 2.25A @ 230VAC
surge current	110VAC/ 27A, 220VAC/ 45A (Ambient temperature at 25℃)		
Leakage current	<0.5mA/240VAC,50Hz		
Output Parameters			
DC voltage	12V	12V	12V
Output voltage range	Adjustable range of rated output voltage: ±10%		
Output current	20.00A	30.00A	40.00A
Linear adjustment rate	±0.5%		
load regulation	±1%		
Ripple and noise	100mVp-p	100mVp-p	100mVp-p
Boot time	800ms/230VAC • 800ms/100VAC	800ms/230VAC • 800ms/100VAC	800ms/230VAC •800ms/100VAC
Duration (Typ)	24ms/230VAC • 24ms/115VAC	24ms/230VAC • 24ms/115VAC	24ms/230VAC •24ms/115VAC

Protect

overload	115% ~ 150%, Automatic recovery Protection mode: hiccup mode, **auto-recovery automatically after abnormal condition removed**
Overvoltage	115% ~ 140%, Automatic recover)
over temperature	Protection Mode: Output voltage shuts down, and it will automatically recover when the temperature returns to normal.

Safety regulations

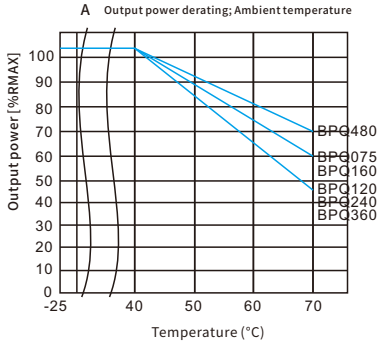
safety regulations	CE-EN60950,UL508,UL60950,TUV-60950
Pressure resistant	I/P-0/P:3KVA, I/P-FG: 1.5KVA, 0/P-FG: 0.5KVA, Imin

electromagnetic compatibility

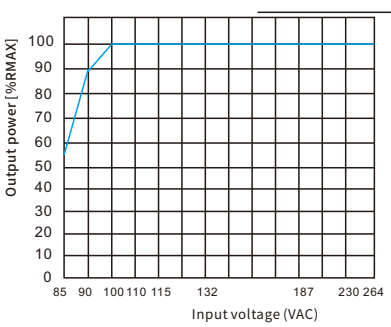
Insulation resistance	I/P-O/P,I/P-FG,O/P-FG;100M Ohms/500VDC/25℃/70% RH
Conducted and radiated standards	EN55011,EN55022,EN61000-4-2,3,4,5,6,8,11,EN61000-6-2
Electromagnetic compatibility immunity	FCC PART 15 KN55015 KN61547

Output power derating

A Output power derating; Ambient temperature



B Output power derating and input voltage



Note:
Unless otherwise stated, all specifications are valid at nominal input voltage, full load, warm-up time, and +25°C.

BPQ Series DIN Rail Power Supply

Power Range：75-760W

Dimensions

●BPQ(75-120W) Dimensional drawing(mm)

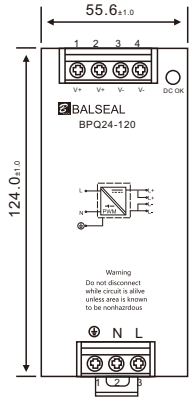
BPQ12-75/BPQ12-120/BPQ12-160

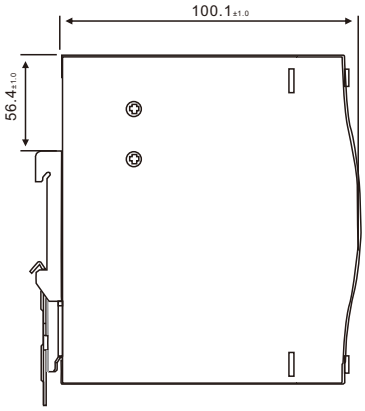
BPQ24-75/BPQ24-120/BPQ24-160

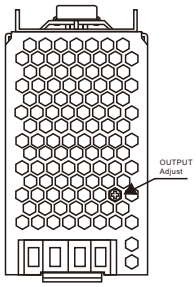
BPQ36-75/BPQ36-120/BPQ36-160

BPQ48-75/BPQ48-120/BPQ48-160

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







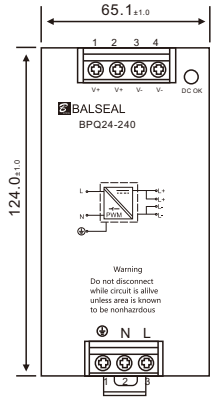
●BPQ(240-360W) Dimensional drawing(mm)

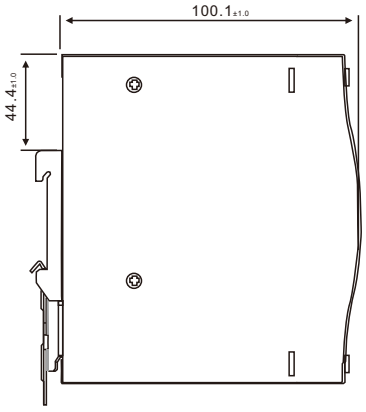
BPQ12-240/BPQ12-360

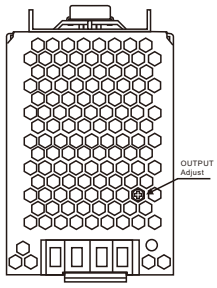
BPQ24-240/BPQ24-360

BPQ36-240/BPQ36-360

BPQ48-240/BPQ48-360







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Power Range：75-760W

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

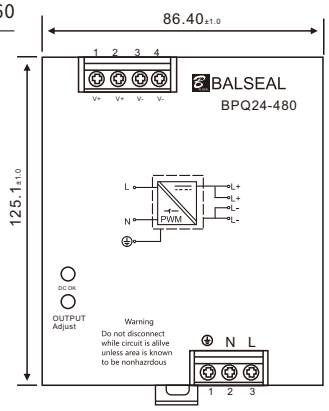
●BPQ(480-760W) Dimensional drawing(mm)

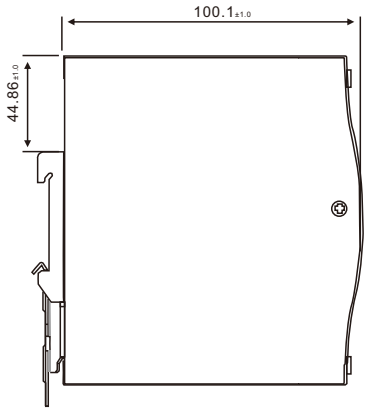
BPQ12-48/BPQ12-760

BPQ24-480/BPQ24-760

BPQ36-480/BPQ36-760

BPQ48-480/BPQ48-760





Product guarantee

• Warranty Period
The warranty period for the switching power supply is 18 months from the date of manufacture.
• Warranty Scope
The following usage conditions are covered by the warranty free of charge. However, the maximum output power should be used within the range of "output current - ambient temperature characteristics".
1. Average ambient temperature (ambient temperature of the switching power supply body) below 40℃
2. Average load rate below 80%
3. Input voltage is the rated input voltage
4. Installation method is standard installation condition.
For failures occurring within the above warranty period, if the failure is the responsibility of our company, we will repair it free of charge or replace it with a replacement. However, damages induced by product failure are not covered by the warranty.
• Additionally, the following situations are not covered by the warranty. Please note:
1. Improper use by the user, or use outside the specifications.
2. Not modified or repaired by our company.
3. The cause of the failure is not caused by our switching power supply.
4. Failures caused by other reasons, natural disasters, or other reasons not attributable to our company.

Installation method

Mounting

The BPQ power supply is designed for mounting on a DIN rail. Allow a minimum of 80 mm (3.15 inches) of space on each side for air convection. To attach the device to the DIN rail, hook the top of the clamp onto the rail and push it inwards until you hear a click. To remove, use an insulated flathead screwdriver.

Connect the power supply to the DIN rail.

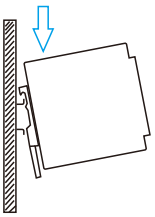


Fig. 2.1

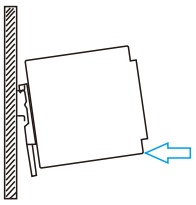


Fig. 2.1

Remove the power supply from the DIN rail.

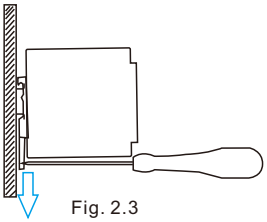


Fig. 2.3

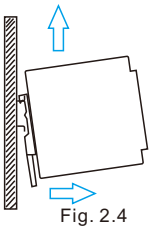


Fig. 2.4