BALSEAL

POWER SUPPLY

Instruction Manual

We sincerely thank you for purchasing BALSEAL products.
To ensure the safe and correct use of this product, please be sure to read this instruction manual carefully and fully understand it before use.
After reading, please keep it properly for reference at any time.

This instruction manual only describes the main precautions. (Please refer to the catalogue for details.)

Continuous operation

Save project costs.

Suitable for harsh environments.







MODEL: BPQSeries of economical rail-mounted switching power supplies.

INPUT:100-240VAC 50-60Hz

OUTPUT: 12VDC/24VDC/48VDC

POWER: 75W/120W/160W/240W/360W/480W

(Precautions for use)

- Precautions for installation

– During installation, please be careful not to use it in an environment surrounded by hot air. And pay full attention to the following matters.

– Ensure air convection for sufficient heat dissipation. Moreover, do not block the openings of the switching power supply.

– Around the switching power supply except for the upper and lower openings, there must be a gap of 20mm.

– In case of problems with the derating of rated values, perform forced air cooling.



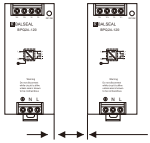
– Please use wires with a heat resistance temperature of more than 60℃ for wiring.

– The tightening torque of the input and output wiring screws is 0.8N.m. Please do not tighten with a torque of more than 1.8N.m.

– Please use copper wires for wiring.

- When installing switching power supplies in parallel, a spacing of more than 20mm must be maintained between them.

After confirming the ambient temperature, please use it according to the derating characteristics of the rated value.



More than 20mm.

- Adjustment of output voltage.
  - The output voltage can be adjusted by the “Adjust” knob (output voltage adjustment knob). Adjust within ±10% of the rated output voltage. Please be sure to use it within this range.
  - Rotating the knob to the right (in the direction of the arrow) increases the voltage, and rotating it to the left decreases the voltage. Note that if the input voltage is too high, the overvoltage protection may be activated.

- Overcurrent protection.
  - When an overcurrent occurs due to overloading, etc., the output decreases. After the load returns to normal, the output voltage also automatically returns to normal.
- Overvoltage protection.
  - Since the manual reset method with output disconnection is used, when the output voltage is reduced due to an applied overvoltage, first disconnect the AC input, and then reconnect the input after about one minute.

- Insulation and voltage withstand test.
  - When performing insulation and voltage withstand tests, short-circuit the input (between L and N) and output (between +V and -V) of the switching power supply. In addition, when suddenly applying or disconnecting the test voltage, disconnection will generate surge voltage, which may damage the

- Wiring of terminal part.

It is recommended to use crimp terminals for wiring.

Applicable crimp terminals (unit: mm).

(Safety Precautions)

- Please observe the following matters when using the switching power supply.
- This switching power supply is for industrial and general electronic equipment. Do not use it in mechanical installations where malfunctions and failures may directly harm or endanger human life.
- Be sure to use it within the power supply voltage and output current range recorded in the rated specification to avoid electric shock, fire and
- When applying input voltage, do not touch terminals, etc., to avoid the risk of electric shock.
- In the final machine assembly, possible protection measures such as malfunction or damage of the load when the switching power supply fails
- Do not use it in an environment exceeding the temperature range. Please confirm the derating of the rated temperature to avoid electric shock, fire and malfunctions.
- A blown fuse indicates an abnormality inside. Please contact the agent or BALSEAL. Do not replace the fuse by yourself and then use it to avoid electric shock, fire and malfunctions.
- Please avoid keeping the switching power supply in an overloaded or short-circuited state for a long time to prevent damage to internal components.
- There is a high-voltage part inside the switching power supply. Do not disassemble it, repair it by yourself or modify the switching power supply to avoid electric shock, fire and malfunctions.

(Product warranty matters)

- Free warranty period.
  - The warranty period of the switching power supply is three years after leaving the factory.

- Scope of free warranty.
  - The following usage conditions are within the scope of free warranty. The maximum output power should be within the range of "output current - operating ambient temperature characteristics".
    1. The average operating ambient temperature (the ambient temperature of the switching power supply main body) is below 40°C.
    2. The average load factor is below 80%.
    3. The input voltage is the rated input voltage.
    4. The installation method is in the standard installation state.
  - For faults occurring within the above warranty period, if it is the responsibility of our company, free repair or replacement with a substitute will be provided.
  - In addition, please note that the following situations are not within the warranty scope:
    1. Improper use by the user or use outside the specification range.
    2. Modification or repair without the consent of our company.
    3. The cause of the fault is not caused by our company's switching power
    4. Faults caused by other reasons, natural disasters, etc. and not the responsibility of our company.

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Global customer support
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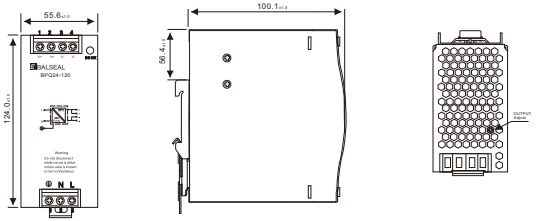
Made In China

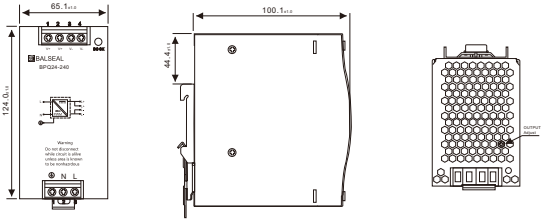
BPQ12-75/BPQ12-120/BPQ12-160
BPQ24-75/BPQ24-120/BPQ24-160
BPQ36-75/BPQ36-120/BPQ36-160
BPQ48-75/BPQ48-120/BPQ48-160

Wiring and connection		
Input	output	
L	V−	−
N	V+	+
⏚		



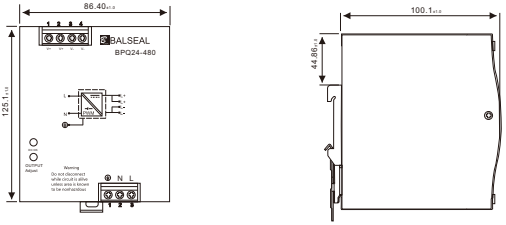
BPQ12-240/BPQ12-360
BPQ24-240/BPQ24-360
BPQ36-240/BPQ36-360
BPQ48-240/BPQ48-360

Wiring and connection		
Input	output	
L	V−	−
N	V+	+
⏚		



Wiring and connection		
Input	output	
L	V−	−
N	V+	+
⏚		

BPQ12-480
BPQ24-480
BPQ36-480
BPQ48-480



BPQ Series Installation method and method

Mounting

BPQ power supply is specifically designed for installation on a DIN rail. Please allow a minimum available space of 20 millimeters (3.15 inches) to 50 millimeters (1.97 inches) on both sides for air convection. To install the device on the DIN rail, hook the top of the clip onto the DIN rail and then push inward until you hear a clicking sound. To remove it, use an insulated flat-head screwdriver on the clip

Install the power supply on the DIN rail.

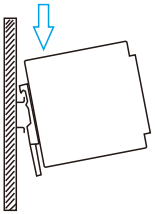


Fig. 2.1

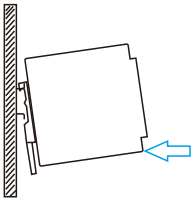


Fig. 2.2

Remove the power supply from the DIN rail.

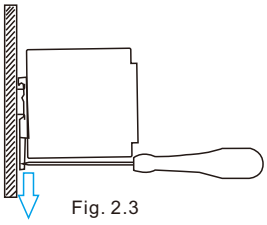


Fig. 2.3

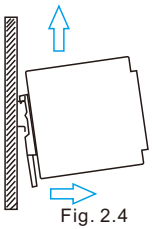


Fig. 2.4