# specification

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| **Project N0.** | **PYW000356-21010** | **Model.** | BEH-400SX |
| **Rev.** | **S01** | **Engineer.** | **Dabiao Huang** |

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|---|---|---|---|
| **Prepare** | | **Date** | |
| **Check** | | **Date** | |
| **Approve** | | **Date** | |

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| **Change Reason and content:** |

**PYW Electronic technology co. LTD**

## ■特点：

- Global AC input：180～264Vac
- Protection functions:output overcurrent /overvoltage/ overload /short functions
- Ultra wide working temperature range (-40℃～65℃)
- 100% full load burn-in test
- High efficiency, long life and high reliability

## ■规格

★ Pictures for your reference

| Modelnote 注 1 | | | BEH-400S3.8 | BEH-400S4.2 | BEH-400S4.5 | BEH-400S4.6 | BEH-400S5 |
|---|---|---|---|---|---|---|---|
| Output | Rated output voltage | | 3.8V | 4.2V | 4.5V | 4.6V | 5V |
| | Output voltage setting range （Input 220Vac/ LOAD：0A） | | 3.80-3.90V | 4.20-4.30V | 4.50-4.60V | 4.60-4.70V | 5.00-5.10V |
| | Adjustable output range@25℃ | | 3.9V~5.10V | | | | |
| | Rated output current | | 80A | | | | |
| | Rated output power | | 400W | | | | |
| | Ripple note 2 TA the ambient temperature | 25 ＜ Ta ≤ 70℃ | Peak≤150mV （Test after 15 minutes of work） | | | | |
| | | 0 ＜ Ta ≤ 25℃ | Peak≤200mV （Test after 15 minutes of work） | | | | |
| | Voltage accuracy @-40~70℃ | | ±2% （The voltage is measured at the power output port） | | | | |
| | Source adjustment rate @-40~70℃ | | ±0.5% | | | | |
| | Load Regulation@-40~70℃ | | ±2% | | | | |
| | Temperature Coefficient @-40~70℃ | | ±0.03%/℃ | | | | |
| | Start-up time | | ≤1S (220VAC input, Full load)& ≤2.5S (110VAC input, Full load) | | | | |
| | Hold-up time | | ≥10mS (80% load) | | | | |
| | Overshoot | | <10% | <10% | <5% | <5% | <5% |
| | Dynamic characteristics 0＜Ta≤65℃ | | 8A-80A:<±500mV 40A-80A: <±400mV 8A-40A:<±300mV | | | | |
| Input | Voltage range | | 180Vac~264Vac | | | | |
| | Rated voltage | | 200Vac~240Vac / 47Hz~63Hz | | | | |
| | Starting voltage | | 180VAC | | | | |
| | Power factor | | ≥0.93 @ 230Vac；≥0.95@ 120Vac | | | | |
| | Efficiency (Type) (220VAC 80% load) | | 89.5% | 90% | 90% | 90% | 90.5% |
| | Input current (Max.) | | <3.5A | | | | |
| | Start-up Inrush Current | | <80A@220Vac Cold start | | | | |
| Protection | Output OPP Hiccup mode | | 319.2~380W | 352.8~420W | 378~450W | 386.4~460W | 420~500W |
| | Output OCP | | 84~100A（Hiccup mode） | | | | |
| | Output OVP | | / | | | | |
| | SCP | | Use a copper wire with a sufficient cross-sectional area and a length of 15cm±5cm directly to short-circuit the output port of the power supply, which can be short-circuit for a long time, and automatically recover after eliminating the short circuit | | | | |
| | OTP | | The detection element of the overtemperature protector is fixed on the housing. When the temperature rise of the power housing is too high due to abnormal conditions, such as overload, the thermostat will act and turn off the power output; The operating temperature of the thermostat is 105℃±5℃,The recovery point is 75° ±5° | | | | |

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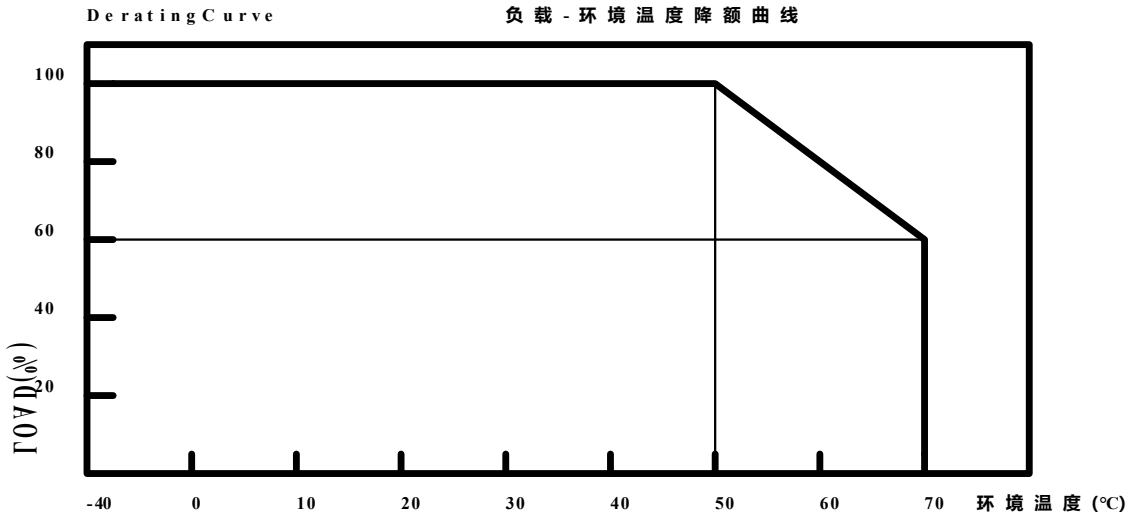
| Work enviro nment | Working Tem. & humidity note 3 | | -40℃~65℃; 20%~90%RH No condensing （For details, see temperature derating curve) |
| | Storage Tem. & humidity | | -40℃~85℃; 10%~95%RH No condensing |
| | Vibration | | 10 ~ 500Hz, 2G 10min./1cycle, period for60min. each along X,Y, Z axes |
| | To attack | | 20G/11mS pulse ,3 times at each X,Y,Z axes |
| | Altitude | | 3000m |
| Safety & EMC | Safety standards | | Design meets EN62368 /GB4943 and other safety standards |
| | Leakage current | | P-S≤0.25mA P-PE≤3.5mA |
| | Insulation strength | | Primary-Secondary：3.0KVac/10mA/ 1min Primary-PE：1.5KVac/10mA/ 1min Secondary-PE：500Vac/10mA/ 1min |
| | Insulation impedance | | Primary-Secondary: ≥50M ohms@500Vdc Primary-PE: ≥50M ohms@500Vdc Secondary-PE: ≥50M ohms@500Vdc |
| | 谐波 Harmaonic current | | EN61000-3-2 CLASS D |
| | EMI | CE | / |
| | | RE | / |
| | EMS | CS | EN61000-4-6 Level3 criterionB |
| | | RS | EN61000-4-3 Leve3 criterionB |
| | | 工频骚扰 | EN61000-4-8 Level3 criterionB |
| | | ESD | EN61000-4-2 Level4 criterionB |
| | | EFT | EN61000-4-4 Level4 criterionB |
| | | Surge | EN61000-4-5 Level4 criterionB |
| | | DIPS | EN61000-4-11 criterionC |
| Other | Dimensions (L*W*H) | | 235mm×60mm×30mm |
| | Connection | | Inputt : 3-bit 95 terminal block Output:4-bit 95 terminal block |
| | Cooling way | | Natural cooling |
| Reliab ility | MTBF | | 100,000Hrs AT 25℃, MIL-217 Method 2 Components Stress Method |
| | Life span | | 2 years@50℃ FULL Load and Units Continuously Working |
| Notes | Note 1: Unless otherwise specified, all parameters are tested after 15min in the oven at room temperature.<br>Note 2: For details, see the derating curve, positioning diagram, and installation mode description.<br>Note 3: Ripple noise is connected using 12# twisted pair, and at 20MHz bandwidth, 0.1uF and 10uF capacitors in parallel. | | |

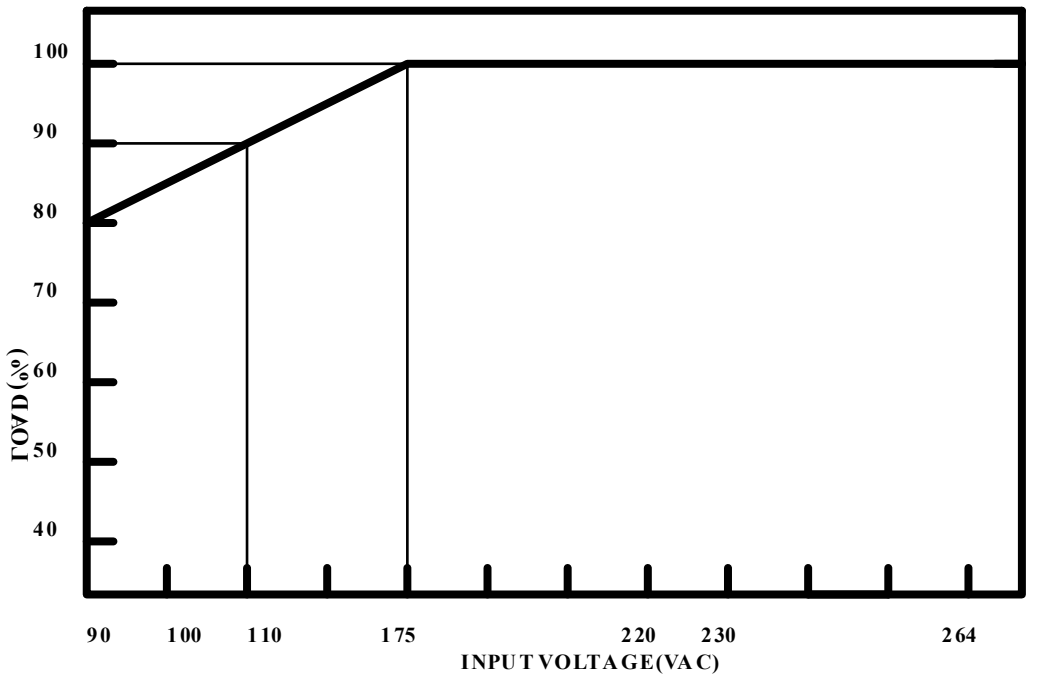
## Derating Curve:

■ **1.** Load current-ambient temperature derating curve: (To ensure reliable operation of the power supply, please use 80% of the rated load, combined with the derating curve)

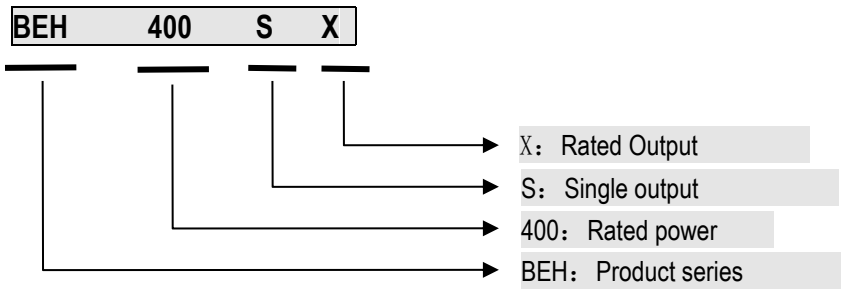


**2.** Load current-input voltage derating curve:

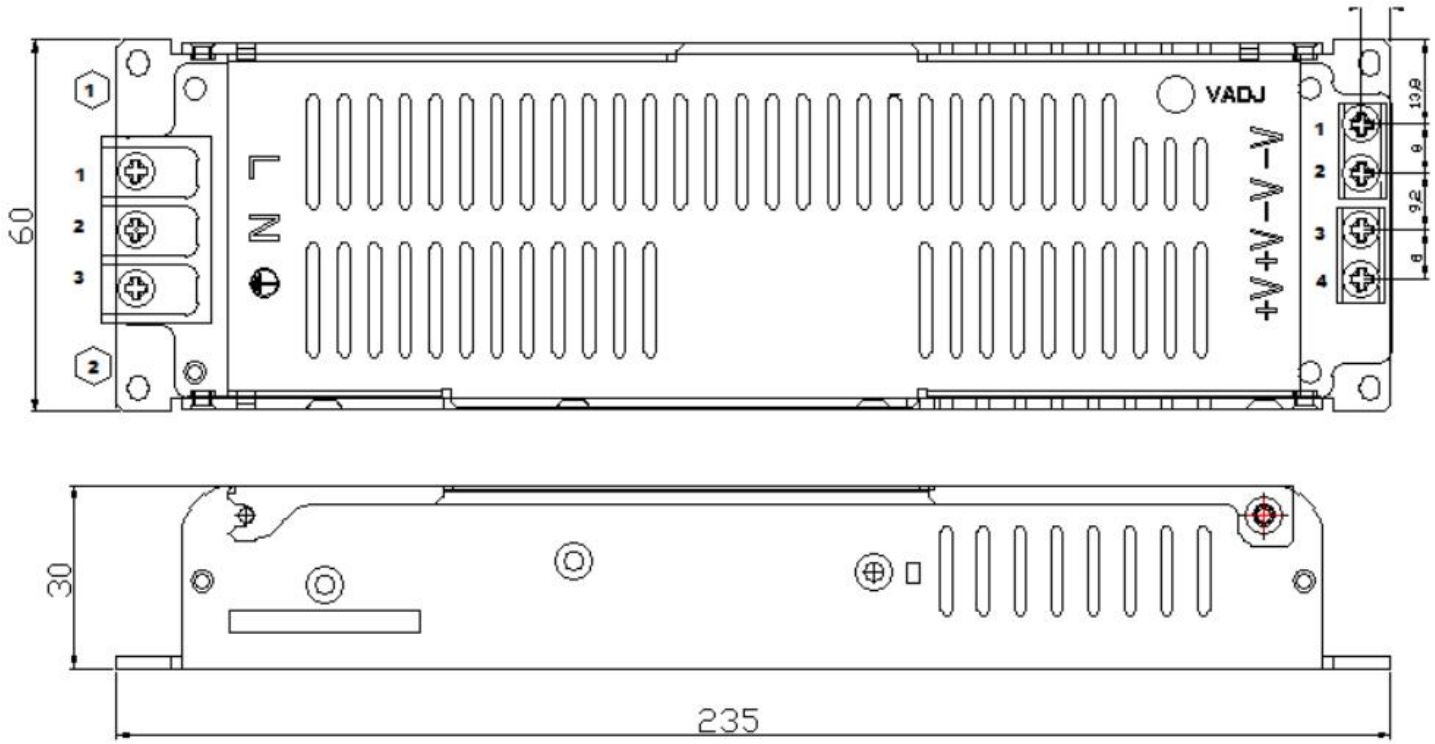
**Ouput Derating VS Input Voltage** **Ta=25℃**




## ■ Specification code description：



■ **Location map：** **Unit: mm / Contour tolerance ±1.0**



## ■ Product installation and instruction：

1. Refer to the mechanical to select the appropriate installation. If necessary， the diameter of the kelly wire is no less than AWG #1.
2. Make the electrical connection is correct, to avoid damage to the SPS or equipment : Input & Output, Ac & DC, Positive & negative, Input Voltage Range.
3. Do not touch circuit board to avoid electric shock when SPS is working. Do not touch to avoid heat in three minutes after working. Do not touch the soldering side.
4. Let it work at ventilated conditions to improve reliability. Do not make it ON/OFF too quickly . Any condition is out of the rated range, please contact FAE for suggestion.
5. If the SPS works abnormally, do not open to repair except professional, contact FAE for support.

## ■ Packaging, transportation, storage：

1. **Package**:Unless customer's special demand, Product name, model, manufacturer logo in the box; Date of production can be traced back.
2. **Transport:** Product packaging is suitable for road, railway, air shipping and sea shipping, etc. Be to civilized handling, waterproof, anti-fall, and to avoid severe impact.
3. **Storage**: Do not disassemble or take off the packing box when the product is not in use. Keep 20cm away from ground, and 50cm away from Wall, heat source and air inlet. The storage temperature and relative humidity shall be in accordance with the specifications， and Avoid strong mechanical vibration, shock and strong magnetic field. If the storage period is more than two years, it should be tested again before use.

## ■ Reference standard：

1. **GB4943/EN60950/ EN62368**：Safety of Information Technology Equipment.
2. **GB2324**：Basic environmental testing procedures for electric and electronic products.
3. **EN55022/ EN55024**：Information technology equipment – Radio disturbance characteristics - Limits and methods of measurement
4. **IEC61000-4**：Electromagnetic compatibility (EMC) test and measurement techniques.
5. **IEC 61000-6-1 :** Standard and measurement of electromagnetic immunity for residential, commercial and light industrial environments.
6. **IEC 61000-6-2** ： Standard and measurement of electromagnetic immunity for products used in industrial environment.
7. **GB 17625.1-1998**： The limits for the harmonic current from low-voltage electrical and electronic equipment (equipment input current≤16A per phase ).
8. **GB/T 17626**： Electromagnetic compatibility testing and measurement techniques.
9. **GB/T14714**：General specification for switching power supply of micro computer system equipment.
10. **GB/T9254-2008:** Radio disturbance limits and methods of measurement for information technology equipment.
11. DONGGUAN PYW ELECTRONICS TECH. CO.,LTD. Enterprise standard.

## ■ Statement

# Class A statement

**Warning**

**In a residential environment, running this device may cause radio interference.**