



Hangyu Power System (Shanghai) Co., Ltd.

## HY-PSP-ASU Series

Programmable Shift Phase Power Source



High Reliability Waveform Pure

Military quality power supply expert  
To provide customers with accurate, intelligent and convenient test  
power supply solutions



# HY-PSP-ASU Series Programmable Shift Phase Power Source



Waveform Pure, High Precision, High Reliability



## Application Field

- Smart grid
- Calibration of power instruments



## Product Features

- The output frequency is synchronized with the mains
- Output frequency mode: 45Hz-70Hz
- Input and output phase difference is adjustable, adjustable range: 0-359.99°
- The three-phase phase difference is adjustable
- Three-phase output voltage is independently adjustable
- Output capacity range 1 kVA-900 kVA
- Support front panel programming, without upper computer software control
- The voltage rise and fall slopes are adjustable
- Power output soft start function
- 16-bit D/A high precision converter for accurate output
- 16-bit A/D high precision converter, more accurate read back
- Multiple protection functions OVP, OCP, and OTP
- 19 inch standard rack size or floor type cabinet
- 7-inch ultra large LCD display screen
- Touch screen operation & digital key input
- Multi-stage adjustment knob
- The power input is controlled by circuit breaker, which is more secure
- Output the ON/OFF button
- Fan intelligent speed control design, reduce noise
- Support modbus protocol
- Standard interface: RS-485&RS-232
- Choose buy interface: LAN&CAN

GPIO

Analog quantity programming and monitoring

(Isolation type)

PSP-ASU

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# HY-PSP-ASU Series Product Selection Table

## Product Model Naming Rules

| Product Series                                                                                                                                                          | Input Phase Number                             | Output Phase Number                             | Output Capacity         | Choose And Buy Function                                            | Choose And Buy Function                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------|-------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| HY-PSP-ASU                                                                                                                                                              | 1                                              | 3                                               | 003                     | -                                                                  | CF                                                                                                                 |
| Series name                                                                                                                                                             | 1: Input single phase<br>3: Input three phases | 1: Output single phase<br>3: Output three-phase | Output capacity<br>3kVA | The short for Choose And Buy Function, see Choose And Buy Function | - T2      Operating temperature -20°C to 45°C<br>- CF      User-defined features<br>(please specify when ordering) |
| Selection example:<br>Product model: HY-PSP-ASU 13003-CF<br>Input single-phase, output three-phase, output capacity 3kVA, Custom features that users choose to purchase |                                                |                                                 |                         |                                                                    |                                                                                                                    |

**In the selection table, special specifications outside the voltage/frequency/output capacity range are accepted for customization**

| Product Model    | Output Capacity | Input       | Output    | Product Model    | Output Capacity | Input       | Output      | Phase Voltage (L-N,Vrms)                                            | Output Frequency |
|------------------|-----------------|-------------|-----------|------------------|-----------------|-------------|-------------|---------------------------------------------------------------------|------------------|
| HY-PSP-ASU 11001 | 1kVA            | Monophase   |           | HY-PSP-ASU 1315L | 1.5kVA          | Monophase   |             |                                                                     |                  |
| HY-PSP-ASU 11002 | 2kVA            |             |           | HY-PSP-ASU 13003 | 3kVA            |             |             |                                                                     |                  |
| HY-PSP-A SU11003 | 3kVA            |             |           | HY-PSP-ASU 1345L | 4.5kVA          |             |             |                                                                     |                  |
| HY-PSP-ASU 11005 | 5kVA            |             |           |                  |                 |             |             |                                                                     |                  |
| HY-PSP-ASU 31010 | 10kVA           | Three phase | Monophase | HY-PSP-ASU 33009 | 9kVA            | Three phase | Three phase | 0-150V<br>0-300V<br>High and low<br>output<br>0-600V<br>(assorting) | 45Hz-70Hz        |
| HY-PSP-ASU 31015 | 15kVA           |             |           | HY-PSP-ASU 33015 | 15kVA           |             |             |                                                                     |                  |
| HY-PSP-ASU 31030 | 30kVA           |             |           | HY-PSP-ASU 33030 | 30kVA           |             |             |                                                                     |                  |
| HY-PSP-ASU 31045 | 45kVA           |             |           | HY-PSP-ASU 33045 | 45kVA           |             |             |                                                                     |                  |
| HY-PSP-ASU 31060 | 60kVA           |             |           | HY-PSP-ASU 33060 | 60kVA           |             |             |                                                                     |                  |
| HY-PSP-A SU31075 | 75kVA           |             |           | HY-PSP-ASU 33075 | 75kVA           |             |             |                                                                     |                  |
| HY-PSP-ASU 31100 | 100kVA          |             |           | HY-PSP-ASU 33090 | 90kVA           |             |             |                                                                     |                  |
| HY-PSP-ASU 31120 | 120kVA          |             |           | HY-PSP-ASU 33120 | 120kVA          |             |             |                                                                     |                  |
| HY-PSP-ASU 31150 | 150kVA          |             |           | HY-PSP-ASU 33150 | 150kVA          |             |             |                                                                     |                  |
| HY-PSP-ASU 31180 | 180kVA          |             |           | HY-PSP-ASU 33180 | 180kVA          |             |             |                                                                     |                  |
| HY-PSP-ASU 31200 | 200kVA          |             |           | HY-PSP-ASU 33210 | 210kVA          |             |             |                                                                     |                  |
| HY-PSP-ASU 31250 | 250kVA          |             |           | HY-PSP-ASU 33240 | 240kVA          |             |             |                                                                     |                  |
| HY-PSP-ASU 31300 | 300kVA          |             |           | HY-PSP-ASU 33300 | 300kVA          |             |             |                                                                     |                  |
| HY-PSP-ASU 31450 | 450kVA          |             |           | HY-PSP-ASU 33450 | 450kVA          |             |             |                                                                     |                  |
| HY-PSP-ASU 31500 | 500kVA          |             |           | HY-PSP-ASU 33600 | 600kVA          |             |             |                                                                     |                  |
|                  |                 |             |           | HY-PSP-ASU 33900 | 900kVA          |             |             |                                                                     |                  |

# HY-PSP-ASU Series Technical Parameters

## Single Phase Output

| Product Model |                                  | PSP-ASU 11001                                                                         | PSP-ASU 11002 | PSP-ASU 11003 | PSP-ASU 11005 | PSP-ASU 31010                                                              | PSP-ASU 31015 |
|---------------|----------------------------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|----------------------------------------------------------------------------|---------------|
| AC input      | Connection mode                  | Single phase two wire + ground wire                                                   |               |               |               | Three phase three wire + ground wire & three phase four wire + ground wire |               |
|               | Input voltage/ frequency         | 220Vrms±15%, 47Hz-63Hz                                                                |               |               |               | 380Vrms±15%, 47Hz-63Hz                                                     |               |
| AC output     | Phase number                     | Monophase 1Φ                                                                          |               |               |               |                                                                            |               |
|               | Capacity                         | 1kVA                                                                                  | 2kVA          | 3kVA          | 5kVA          | 10kVA                                                                      | 15kVA         |
|               | Rated current rms (High grade)   | 3.34A                                                                                 | 6.67A         | 10A           | 16.67A        | 33.34A                                                                     | 50A           |
|               | Rated current rms (Low grade)    | 6.67A                                                                                 | 13.34A        | 20A           | 33.34A        | 66.67A                                                                     | 100A          |
|               | Maximum current rms (High grade) | 4.8A                                                                                  | 8.34A         | 12.5A         | 20.84A        | 41.68A                                                                     | 62.5A         |
|               | Maximum current rms (Low grade)  | 8.34A                                                                                 | 16.68A        | 25A           | 41.68A        | 83.34A                                                                     | 125A          |
|               | Voltage setting range            | L-N 0-300 Vrmstunable (High grade) , L-N 0-150 Vrmstunable (Low grade) (customizable) |               |               |               |                                                                            |               |

| Product Model |                                  | PSP-ASU 31030                                                                         | PSP-ASU 31045 | PSP-ASU 31060 | PSP-ASU 31075 | PSP-ASU 31100 |
|---------------|----------------------------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|
| AC input      | Connection mode                  | Three phase three wire + ground wire & three phase four wire + ground wire            |               |               |               |               |
|               | Input voltage/frequency          | 380Vrms±15%, 47Hz-63Hz                                                                |               |               |               |               |
| AC output     | Phase number                     | Single phase two wire + ground wire                                                   |               |               |               |               |
|               | Capacity                         | 30kVA                                                                                 | 45kVA         | 60kVA         | 75kVA         | 100kVA        |
|               | Rated current rms (High grade)   | 100A                                                                                  | 150A          | 200A          | 250A          | 333.34A       |
|               | Rated current rms (Low grade)    | 200A                                                                                  | 300A          | 400A          | 500A          | 666.67A       |
|               | Maximum current rms (High grade) | 125A                                                                                  | 187.5A        | 250A          | 312.5A        | 416.68A       |
|               | Maximum current rms (Low grade)  | 250A                                                                                  | 375A          | 500A          | 625A          | 833.34A       |
|               | Voltage setting range            | L-N 0-300 Vrmstunable (High grade) , L-N 0-150 Vrmstunable (Low grade) (customizable) |               |               |               |               |

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# HY-PSP-ASU Series Technical Parameters

## Three-phase Output

| Product Model |                                  | PSP-ASU 1315L                                                                         | PSP-ASU13003 | PSP-ASU 1345L | PSP-ASU 33009                                                              | PSP-ASU33015 |
|---------------|----------------------------------|---------------------------------------------------------------------------------------|--------------|---------------|----------------------------------------------------------------------------|--------------|
| AC input      | Connection mode                  | Single phase two wire + ground wire                                                   |              |               | Three phase three wire + ground wire & three phase four wire + ground wire |              |
|               | Input voltage/ frequency         | 220Vrms± 15%, 47Hz-63Hz                                                               |              |               | 380Vrms± 15%, 47Hz-63Hz                                                    |              |
| AC output     | Phase number                     | Three phase 3Φ                                                                        |              |               |                                                                            |              |
|               | Capacity                         | 1.5kVA                                                                                | 3kVA         | 4.5kVA        | 9kVA                                                                       | 15kVA        |
|               | Rated current rms (High grade)   | 1.67A                                                                                 | 3.34A        | 5A            | 10A                                                                        | 16.67A       |
|               | Rated current rms (Low grade)    | 3.34A                                                                                 | 6.67A        | 10A           | 20A                                                                        | 33.34A       |
|               | Maximum current rms (High grade) | 2.09A                                                                                 | 4.18A        | 6.25A         | 12.5A                                                                      | 20.84A       |
|               | Maximum current rms (Low grade)  | 4.18A                                                                                 | 8.34A        | 12.5A         | 25A                                                                        | 41.68A       |
|               | Voltage setting range            | L-N 0-300 Vrmstunable (High grade) , L-N 0-150 Vrmstunable (Low grade) (customizable) |              |               |                                                                            |              |

| Product Model |                                  | PSP-ASU 33030                                                                         | PSP-ASU 33045 | PSP-ASU 33060 | PSP-ASU 33075 | PSP-ASU 33090 |
|---------------|----------------------------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|
| AC input      | Connection mode                  | Three phase three wire + ground wire & three phase four wire + ground wire            |               |               |               |               |
|               | Input voltage/frequency          | 380Vrms±15%, 47Hz-63Hz                                                                |               |               |               |               |
| AC output     | Phase number                     | Three phase 3Φ                                                                        |               |               |               |               |
|               | Capacity                         | 30kVA                                                                                 | 45kVA         | 60kVA         | 75kVA         | 90kVA         |
|               | Rated current rms (High grade)   | 33.34A                                                                                | 50A           | 66.67A        | 83.34A        | 100A          |
|               | Rated current rms (Low grade)    | 66.67A                                                                                | 100A          | 133.34A       | 166.67A       | 200A          |
|               | Maximum current rms (High grade) | 41.68A                                                                                | 62.5A         | 83.34A        | 104.18A       | 125A          |
|               | Maximum current rms (Low grade)  | 83.34A                                                                                | 125A          | 166.68A       | 208.34A       | 250A          |
|               | Voltage setting range            | L-N 0-300 Vrmstunable (High grade) , L-N 0-150 Vrmstunable (Low grade) (customizable) |               |               |               |               |

## AC Output

|                           |                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------|
| Frequency setting range   | 45Hz-70Hz continuously adjustable                                                                               |
| Input adjustment rate     | ≤ 0.5% F.S. (Resistance )                                                                                       |
| Load adjustment rate      | ≤ 1% F.S. (Resistance test, 45 HZ-200 Hz output); ≤ 2% F.S. (Resistance test, > 200 Hz output)                  |
| Waveform distortion (THD) | Sinusoidal wave, THD≤0.3% (resistance test)* Test when the output voltage is more than 50% of the rated voltage |
| Voltage crest coefficient | 1.414±0.05                                                                                                      |

# HY-PSP-ASU Series Technical Parameters

## Programming And Readback Accuracy & Resolution

|                                       |                  |
|---------------------------------------|------------------|
| Voltage output programming accuracy   | $\pm 0.5\%F.S.$  |
| Frequency output programming accuracy | $\pm 0.01\%F.S.$ |
| Voltage setting resolution            | 0.01V            |
| Frequency setting resolution          | 0.01Hz           |
| Voltage output read-back accuracy     | $\pm 0.5\%F.S.$  |
| Current output read back accuracy     | $\pm 0.5\%F.S.$  |
| Frequency output read-back accuracy   | $\pm 0.01\%F.S.$ |
| Voltage read back resolution          | 0.01V            |
| Current read back resolution          | 0.01A            |
| Frequency read back resolution        | 0.01Hz           |

## Protection Function

|                     |                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|
| Overload capacity   | 125% current 15s, 150% current 5s, 200% current 2s, 300% current stop immediately |
| Protection function | Overvoltage, overcurrent, internal overheating, short circuit                     |

## Environmental Ondition

|                               |                                                                                                                                                                                                                            |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment                   | Indoor use; Installation overvoltage class: II; Pollution level: P2; Class II equipment                                                                                                                                    |
| Operating ambient temperature | 0°C to 45°C; Choose from -20°C to 45°C                                                                                                                                                                                     |
| Storage ambient temperature   | -20°C to 65°C                                                                                                                                                                                                              |
| Working ambient humidity      | 20%-90%RH, no condensation, continuous operation                                                                                                                                                                           |
| Storage environment humidity  | 10%-95%RH, no condensation                                                                                                                                                                                                 |
| Altitude                      | Above 2000 meters above sea level, the power is reduced by 2% per 100 meters, or the maximum working ambient temperature is reduced by 1°C per 100 meters;When not in operation, it can reach an altitude of 12,000 meters |
| Cooling                       | Forced air cooling, intelligent speed regulating fan, front/side air inlet, rear air outlet                                                                                                                                |
| Noise                         | $\leq 65dB(A)$ , use 1m to weigh the measurement                                                                                                                                                                           |

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# HY-PSP-ASU Series Technical Parameters

| Control Panel           |                                                                                                                                                                                                                                          |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display                 | 7 inches, LCD LCD display, touch screen                                                                                                                                                                                                  |
| Display item            | Phase voltage/Line voltage (set value & measured value), current measurement value, frequency set value, working time, cumulative working time,current time and date                                                                     |
| Control function        | Digital key input, multi-stage adjustment knob (outer ring coarse adjustment/inner ring fine adjustment)<br>Output ON/OFF switch, Lock keyboard and touch lock, Reset restart<br>Status indicator (Shift/Local/Remote/Alarm/Lock/Output) |
| Communication Interface |                                                                                                                                                                                                                                          |
| Standard configuration  | RS-485 & RS-232                                                                                                                                                                                                                          |
| Choose and buy          | LAN, CAN, GPIB, Analog quantity programming and monitoring (Isolation type)                                                                                                                                                              |
| Appearance Color & Size |                                                                                                                                                                                                                                          |
| Colour                  | RAL 7035                                                                                                                                                                                                                                 |
| Size                    | 10U, standard 19-inch rack type, or floor type (with movable universal casters and brakes);<br>18U and above, floor type cabinets, with movable universal casters and brakes.                                                            |

## Appearance & Size

10U 440(W)\*600(D)\*445(H)mm



18U 600(W)\*800(D)\*920(H)mm



Size

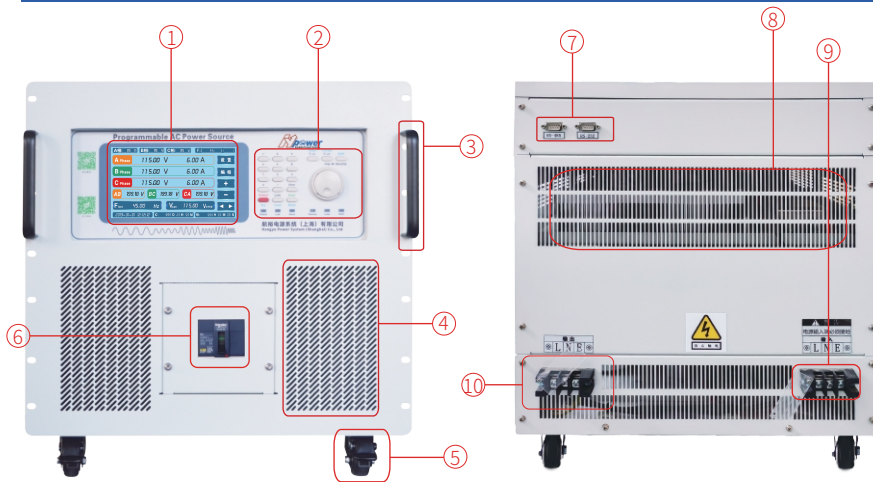
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## Appearance & Size

24U 600(W)\*800(D)\*1190(H)mm  
30U 600(W)\*800(D)\*1453(H)mm  
36U 600(W)\*800(D)\*1718(H)mm

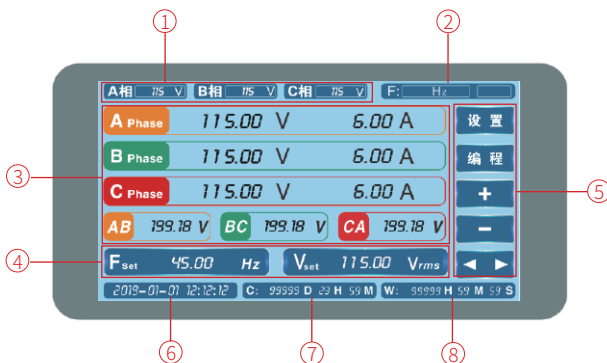


## Front Panel & Rear Panel



- ① LCD display (7 inches, touch screen)
- ② Control area
- ③ 19-inch standard rack handle
- ④ Heat dissipation air inlet
- ⑤ Casters wheel
- ⑥ Power input circuit breaker
- ⑦ Communication interface
- ⑧ Heat dissipation air outlet
- ⑨ AC input terminals
- ⑩ AC output terminal

## Display Interface



- ① Three-phase voltage set value
- ② Frequency display area
- ③ Phase voltage, line voltage, current display area
- ④ Frequency/voltage setting value
- ⑤ Function setting area
- ⑥ Current time
- ⑦ Accumulated running time
- ⑧ This run time



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## Contact us

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All technical data and instructions are based on the actual product

If there is any change, Hangyu Power has the final interpretation right

Authorized distributor:

