



# KACL Series Variable Frequency AC Power Supply

- Constant voltage output ●
- Flexible work step setting: Step/Gradient Mode ●
- Editable protection parameters: Overvoltage/Overcurrent point ●
- Independent three-phase ●
- External emergency stop ●

## Summary

KACL Series is a variable frequency AC power supply of two-stage power conversion structure, featuring high-precision, wide output range, and independent three-phase. The product works in three modes: General-/Step-/Gradient Mode, satisfying the versatile demands of DC charging pile testing including overvoltage, under-voltage, over-frequency, and under-frequency tests. It is an ideal testing solution for research institutes, laboratories, inspection agencies, and authentication centers etc.

## Advantages

- Support parallel operation of multiple equipment;
- Fast voltage response;
- Low THD $\leq$ 1% (linear load);
- Complete safety protection: OVP/OCP/OTP/OPP etc.;
- High precision voltage/current output;
- Standard communication interfaces: LAN/RS485.

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## Specifications & Parameters

| Models          | Power Capacity [kVA] | Rated Current [A] | Rated Voltage [V] | Frequency [Hz] | Phase       | Voltage Range [V] |
|-----------------|----------------------|-------------------|-------------------|----------------|-------------|-------------------|
| KACL-75-345-33  | 75                   | 113               | 220               | 45-65          | 3 $\phi$ 4W | 5-345             |
| KACL-150-345-33 | 150                  | 227               | 220               | 45-65          | 3 $\phi$ 4W | 5-345             |
| KACL-300-345-33 | 300                  | 454               | 220               | 45-65          | 3 $\phi$ 4W | 5-345             |
| KACL-400-345-33 | 400                  | 606               | 220               | 45-65          | 3 $\phi$ 4W | 5-345             |

NOTE: Rated voltage, current, and frequency can be customized.

| Input Requirements |                  |
|--------------------|------------------|
| Phase              | 3 $\phi$ 3W + PE |
| Voltage            | 380V $\pm$ 15%   |
| Frequency          | 50Hz $\pm$ 5Hz   |

| Step Mode     |  |
|---------------|--|
| Step Mode     | Max. 50 sets of work steps.Voltage, frequency, and operation time are recorded for each set. |
| Gradient Mode | Max. 50 sets of work steps.Voltage, frequency, and operation time are recorded for each set. |
| Protection    | OVP/OCP/OTP/Phase loss/Emergency stop etc.   |

| Output Characteristics |                        |  |
|------------------------|------------------------|--|
| Voltage                | Waveform               | Sinusoidal wave  |
|                        | Precision              | $\pm$ 0.5% FS (linear load)                                    |
|                        | Setting Resolution     | 0.1V   |
|                        | Display Resolution     | 0.1V   |
|                        | Load Regulation        | 0.2% FS  |
|                        | THD                    | $\leq$ 1% (linear load)  |
|                        | Response Time          | $\leq$ 20ms (10%-90%) with frequency changing at the same time |
| Current                | DC Offset              | No DC offset (Built-in isolating transformer)                  |
|                        | Precision              | $\pm$ 1% FS (linear load)                                      |
|                        | Display Resolution     | 0.1A   |
| Frequency              | Precision              | $\pm$ 0.01Hz   |
|                        | Setting Resolution     | 0.01Hz   |
|                        | Display Resolution     | 0.01Hz   |
| Phase                  | Adjustment Step Length | 0.1°   |
|                        | Adjustment Range       | 360°   |

| Communication Interfaces |                                      |
|--------------------------|--------------------------------------|
| Local Interface          | LCD                                  |
| Remote Comms             | RS485/LAN                            |
| Others                   | External emergency stop/Fault signal |

| Safety & Ambient Conditions |                                    |
|-----------------------------|------------------------------------|
| Insulation Resistance       | $\geq$ 20M $\Omega$ (500Vdc)       |
| Withstand Voltage           | 2000Vac (60s, no arcing/breakdown) |
| Ground Resistance           | $\leq$ 0.1 $\Omega$                |
| Protection Level            | IP21 (indoor)                      |
| Cooling                     | Fan cooling                        |
| Ambient Temperature         | -10~40°C                           |
| Relative Humidity           | 0-90%RH (Non-condensing at 25°C)   |
| Altitude                    | $\leq$ 2000m                       |

## Software Interfaces

Amplitude and position of each phase can be set independently. Test operation can be proceeded in three modes: General/Step/Gradient Mode.



Gradient Mode



Step Mode