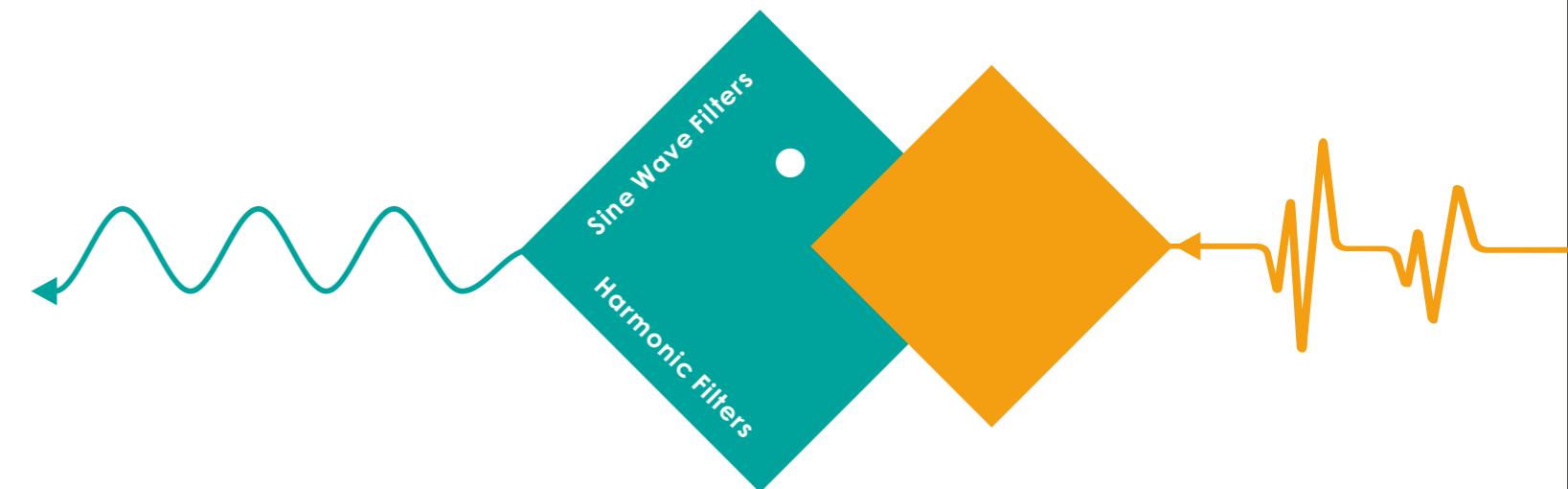


**SIKES**

# Harmonic Solutions

Expert

- Welcome to be our local distributor.
- Willkommen in unserem Händler vor Ort zu sein.



## Contact us

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CE FC



Webpage for phone



Sinusfilter

**SHENZHEN SIKES ELECTRIC CO., LTD.**

Focusing on electronic solutions and power systems

## Who we are ?

Sikes is an advanced and professional powerhouse focusing on the areas of electrification, automation and new energy. One of China's producers of electricity-solution,energy-efficient, resource-saving technologies, Sikes is a leading supplier of systems for frequency inverter,servo motor and power generation as well as power transmission. In infrastructure and industry solutions the company plays a pioneering role.

## What we do ?

We have been specialized in designing and producing:

1. Transformer
2. Choke(Reactors)
3. Braking unit
4. Load bank
5. Filters(Harmonic filter,Sine wave filter,EMC/EMI filter)
6. Power Resistor
7. Energy regenerator.



Sikes has been corporation partners of many famous enterprises, like Siemens, Mitsubishi, Yaskawa, Hitachi, Fuji, Thyssen and Emerson by technological advantages and experiences through long-term accumulation. Sikes highly expects to cooperate with other enterprises in the course of growth.

## Our Culture

### 1. Corpate philosophy

Support, profession,concentration and always keeping innovative. We listen to customers and want to be a reliable partner and supplier.

### 2. Our mission & goals

Focusing on electronic solutions and power systems. Integrity is a top priority at Sikes. We provide manufacturers and users of electrical and electronic equipment worldwide with components, solutions and services that enable efficiency and reliability by applying leading knowledge in electromagnetics and power electronics. We have developed and implemented a systematic approach designed to prevent, detect and resolve any potential integrity concerns. This is supported by tools and processes and a zero tolerance policy for any violations. Our integrity program has created an atmosphere where all of our employees can be open about identifying risks, asking questions, and raising concerns.

### 3. Our value

Struggling to be best in-class.Sikes is recognized as the provider of advanced solutions for Electromagnetic Compatibility, Power Quality and Power Magnetics and consistently achieves high standards for the quality of products and business processes.

Sikes is innovation supplier in the served markets, offering advanced solutions for power conditioning and power grids, and is actively driving international standards in the fields of power electronics, power quality and power conditioning.

# Contents

## ■ For English

- 01 ■ Sine Wave Filters
- 02 Technical Characteristics
- 03 Selection Table
- 04 Mechanical data
- 05 ■ Our Product lines
- 07 ■ Our Partners

## ■ Für Deutsch

- 01 ■ Sinusfilter
- 02 Technische Eigenschaften
- 03 Auswahltafel
- 04 Mechanische Daten
- 05 ■ Unsere Produktlinien
- 07 ■ Unsere Partner

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**Sinusfilter**

# Sine Wave Filter /Sinusfilter

## Descriptions / Beschreibungen

SIKES Sine wave filters for various servo motor of VSD systems(esp. for inverters or switching power suppliers), are designed to change the PWM output voltage of the inverter and generate an almost sinusoidal voltage. The passive series is intended for use in 380V-480V network. It enables a very high motor terminal voltage, since the voltage drop at the sinus filter is significantly below the market standards. They could reduce the noise and to protect sensitive motors in industrial networks, and allow very long motor cables, up to 2,000 m.

**Typical applications:** Metallurgy, coal, petrochemical, water treatment, new energy.

SIKES Sinusfilter für verschiedene Servomotor von VSD Systeme (insb. für Umrichter oder Stromanbieterwechsel ), sind entworfen, um die PWM-Ausgangsspannung des Wechselrichters zu ändern, und erzeugen eine fast sinusförmigen Spannung. Das Passive Serie ist für den Einsatz in 380V-480V Netz vorgesehen. Es ermöglicht eine sehr hohe Motorklemmenspannung , da der Spannungsabfall an der Sinusfilter deutlich unter dem markt standards. They konnte den Lärm zu reduzieren und zu schützen empfindliche Motoren in industriellen Netzwerken und ermöglichen eine sehr lange Motorleitungen , bis zu 2.000 m.

**Typische Anwendungen:** Metallurgie, Kohle, Petrochemie, Wasser Behandlung, neue Energie.



## Technical Standards

Capacitors: CEI EN 60831-1/2, IEC 831-1/2

Equipment: CEI EN 60439-1, IEC 439-1, IEC 60939

Industrial network affected by harmonics: CEI EN 61642

Type of service: continuous for indoor operation

## Product Features

One of the most compact 5% THDv filter available

Quick installation and easy commissioning

Optimized for long motor cables and operation under full load

Efficiently control high frequency loss and dv/dt RFI

Eliminate voltage pulse, decrease overvoltage, reduce motor noise and extend motor service life.

## Applications:

Ventilators,Conveyors,Pumps

HVAC installations,Compressors

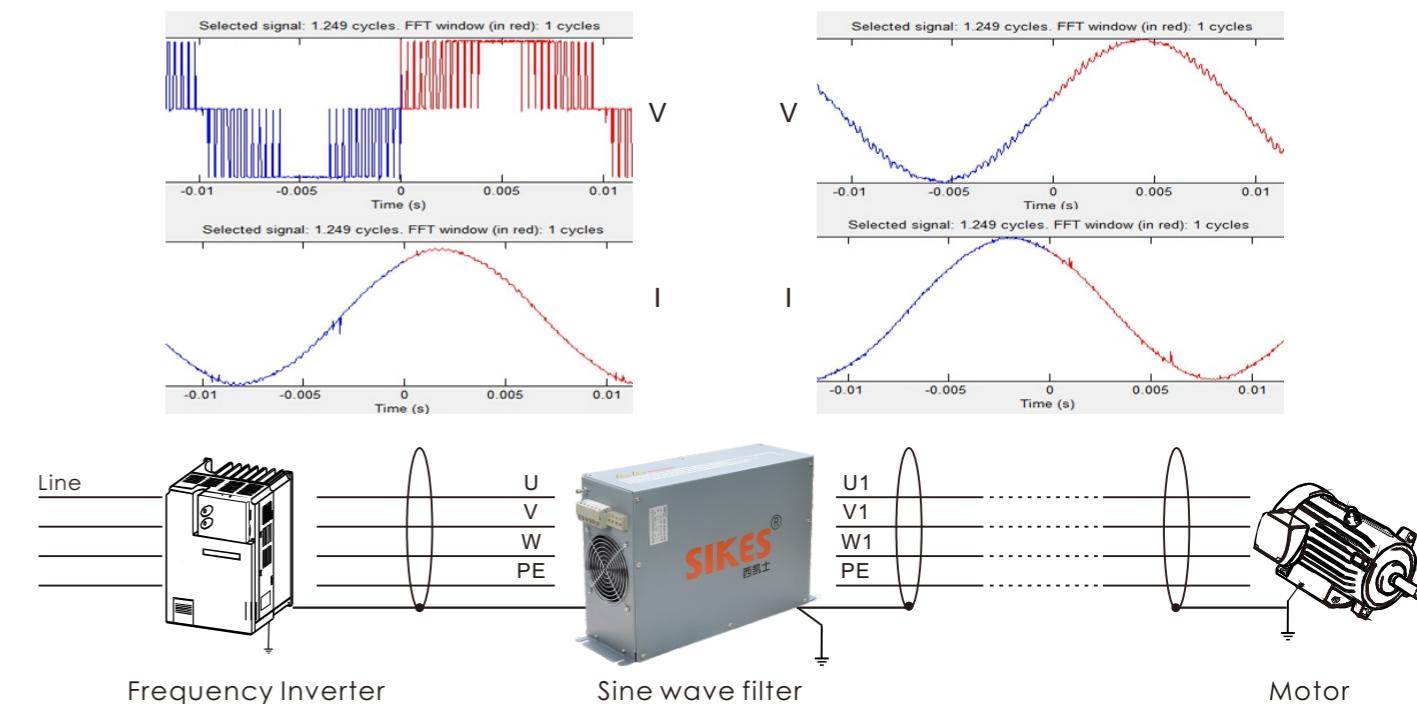
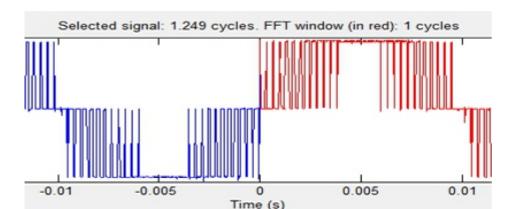
Elevators,Cranes,wind power,UPS,EPS

Motor drive with long motor cable

Motor drive with multiple motors in parallel

Medium voltage applications(deployed in front of the step-up transformer)

## Block schematic / Blockschalt



## Technische Normen

Kondensatoren: CEI EN 60831-1 / 2, IEC 831-1 / 2

Ausstattung: CEI EN 60439-1, IEC 439-1, IEC 60939

Industrielle Netzwerk von Harmonischen betroffen: CEI EN 61642

Art der Dienstleistung: kontinuierlich für Betrieb in geschlossenen Räumen

## Produkt-Eigenschaften

Einer der kompaktesten 5% THDv Filter verfügbar  
Schnelle Installation und einfache Inbetriebnahme  
Optimiert für lange Motorleitungen und Betrieb unter Vollast  
Effizientes Hochfrequenzverlust steuern und dv / dt RFI  
Beseitigen Spannungsimpuls,verringern Überspannung , reduzieren Motor Lärm und Motor Lebensdauer zu verlängern.

## Anwendungen:

Beatmungsgeräte , Fördertechnik , Pumpen Kompressoren  
HLK-Anlagen  
Aufzüge, Kräne, Windkraft , UPS, EPS  
Motorantrieb mit langen Motorkabel  
Motorantrieb mit mehreren Motoren parallel  
Mittelspannungsanwendungen (im Einsatz vor dem Step-up transformator)

## Technical Characteristics / Technische Eigenschaften

### Technical Characteristics:

Nominal operating voltage: 3x380 to 500VAC ±10%

Motor frequency: 0-120Hz

Switching frequency : 2kHz -16kHz

Resonant frequency < 50% Switching frequency

Residual ripple voltage: THDv<5%

Voltage drop at rated current: ≤10% (50Hz)

Motor cable length: Up to 2,000 m

Nominal motor drive input power rating: 3.7kW to 630kW

Efficiency: 98 to 99% @ nominal line voltage and power

Overload capability: 150% 60s, 120% 60min.

Test Voltage: 2240 VDC, 2s (line/line) 2720 V DC, 2 s (lines /case)

Dielectric strength: AC4000V / 5mA / 60S

Insulation resistance: core-winding, ≥100MΩ(DC1000V)

Climatic category (IEC 60068-1): 25/100/21

Protection degree: IP30(IP40/IP54 on request), indoor:IP20

Ventilation: Internal air forced

Load type: typical motor load; standard step-up transformer; Other linear load;

## Technische Eigenschaften

Nennbetriebsspannung : 3 x 380 bis 500VAC ± 10%

Motorfrequenz : 0-120Hz

Schaltfrequenz : 2 kHz -16kHz

Resonant Frequenz <50% Schaltfrequenz

Restwelligkeitsspannung: THDv <5%

Spannungsabfall bei Nennstrom : ≤ 10% (50 Hz)

Motorkabellänge : Bis zu 2.000 m

Motornennantriebsleistung : 3.7 KW bis 630 KW

Wirkungsgrad: 98 bis 99% bei Nennspannung und -leistung

Überlastfähigkeit : 150% 60s, 120% 60min.

Testspannung : 2240 VDC, 2s (Leitung / Leitung) 2720 V DC, 2 s (Linien / case)

Durchschlagsfestigkeit : AC4000V / 5 mA / 60S

Isolationswiderstand : Kern-Wicklung, ≥ 100MOhm (DC1KV)

Klimaklasse (IEC 60068-1): 25/100/21

Schutzart: IP30 (IP40 / IP54 auf Anfrage), Innen: IP20

Belüftung: Interne Luft gezwungen

Lasttyp:Standard Aufwärtstransformator ; typische Motorlast ; Andere lineare Belastung

## Selection Table / Auswahltafel

Filter Model	System Voltage	Motor drive rating @50Hz (kw)	Rated Current (A)	Switching frequency (kHz)	Temp. Rise (K)	Noise(dB)	Connections	Insulation Class (H on request)	Weight(kg)
SKS-SWF-0011-CL/4	3x380 to 500VAC	5.5	11	≥5	<80K	<70	✓	F/H	16.5
SKS-SWF-0015-CL/4	3x380 to 500VAC	7.5	15	≥5	<80K	<70	✓	F/H	18.5
SKS-SWF-0022-CL/4	3x380 to 500VAC	11	22	≥4	<80K	<70	✓	F/H	20
SKS-SWF-0029-CL/4	3x380 to 500VAC	15	29	≥4	<80K	<70	✓	F/H	30
SKS-SWF-0034-CL/4	3x380 to 500VAC	18.5	34	≥4	<80K	<70	✓	F/H	35
SKS-SWF-0040-CL/4	3x380 to 500VAC	22	40	≥4	<80K	<70	✓	F/H	42
SKS-SWF-0054-CL/4	3x380 to 500VAC	30	54	≥3	<80K	<70	✓	F/H	58.5
SKS-SWF-0067-CL/4	3x380 to 500VAC	37	67	≥3	<80K	<70	✓	F/H	62
SKS-SWF-0080-CL/4	3x380 to 500VAC	45	80	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0097-CL/4	3x380 to 500VAC	55	97	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0132-CL/4	3x380 to 500VAC	75	132	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0155-CB/4	3x380 to 500VAC	90	155	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0191-CB/4	3x380 to 500VAC	110	191	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0227-CB/4	3x380 to 500VAC	132	227	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0273CB/4	3x380 to 500VAC	160	273	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0320-CB/4	3x380 to 500VAC	185	320	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0340-CB/4	3x380 to 500VAC	200	340	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0381-CB/4	3x380 to 500VAC	220	381	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0434-CB/4	3x380 to 500VAC	250	434	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0483-CB/4	3x380 to 500VAC	280	483	≥3	<80K	<70	✓	F/H	/
SKS-SWF-0530-CB/4	3x380 to 500VAC	315	530	≥2	<80K	<70	✓	F/H	/
SKS-SWF-0600-CB/4	3x380 to 500VAC	355	600	≥2	<80K	<70	✓	F/H	/
SKS-SWF-0675-CB/4	3x380 to 500VAC	400	675	≥2	<80K	<70	✓	F/H	/
SKS-SWF-0761-CB/4	3x380 to 500VAC	450	761	≥2	<80K	<70	✓	F/H	/
SKS-SWF-0841-CB/4	3x380 to 500VAC	500	841	≥2	<80K	<70	✓	F/H	/
SKS-SWF-0945-CB/4	3x380 to 500VAC	560	945	≥2	<80K	<70	✓	F/H	/
SKS-SWF-1061-CB/4	3x380 to 500VAC	630	1061	≥2	<80K	<70	✓	F/H	/

**Selection Recommendation:** It's compulsory to collect all network conditions:

- Rated values and service type of the load to the filter
- Rated values of other non-linear loads
- Indication of the point where the filter has to be installed
- Presence and type of the power factor equipment in the network
- Motor frequency, switching frequency and fundamental operating frequency

**Auswahl Empfehlung:** Es ist obligatorisch, alle Netzwerkbedingungen zu sammeln:

- Nennwerte und Diensttyp der Last auf den Filter
- Motorfrequenz, Schaltfrequenz und der Grundbetriebsfrequenz
- Bemessungsdaten von anderen nicht-linearen Lasten
- Anzeige der Punkt, an dem der Filter installiert werden muss
- Vorhandensein und die Art des Leistungsfaktors Geräte in dem Netzwerk

## Power supply and Over temperature protection / Stromversorgung und Übertemperaturschutz

**Power Supply:** Cabinet cooling fan requires 230VAC independent power supply.

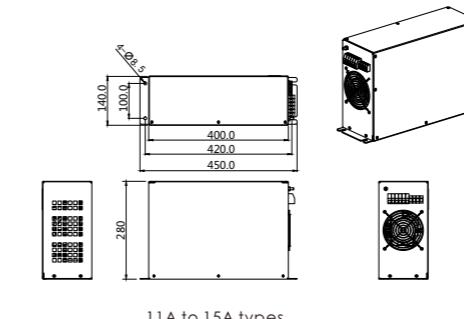
**Over temperature protection:** it is achieved by means of two temperature sensor. The first one has a lower activation threshold and controls the cooling fans located on the roof of the cabinet. The second one probe disconnects the filters when the temperature exceeds the maximum limit allowed. Restart from zero is automatic as the temperature decreases.

**Stromversorgung :** Kabinett Lüfter erfordert 230VAC unabhängige Stromversorgung .

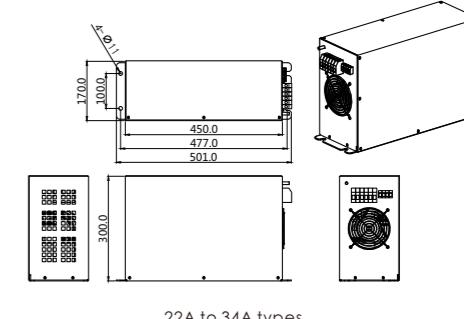
**Übertemperaturschutz:** ist es mit Hilfe von zwei Temperatursensor erreicht. Der erste Teil hat eine geringere Aktivierungsschwelle und steuert die Kühllüfter auf dem Dach des Gehäuses. Die zweite Sonde trennt die Filter, wenn die Temperatur überschreitet die Höchstgrenze zulässig. Neustart von Null erfolgt automatisch, wenn die Temperatur abnimmt.

## Mechanical data / Mechanische Daten

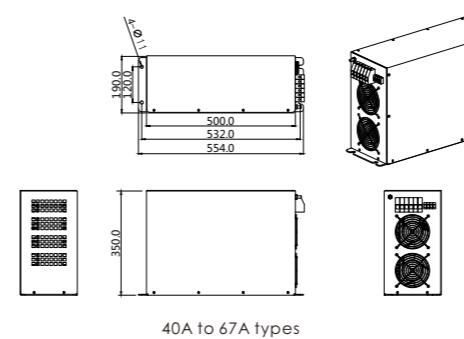
All dimensions in mm; 1 inch = 25.4 mm



11A to 15A types



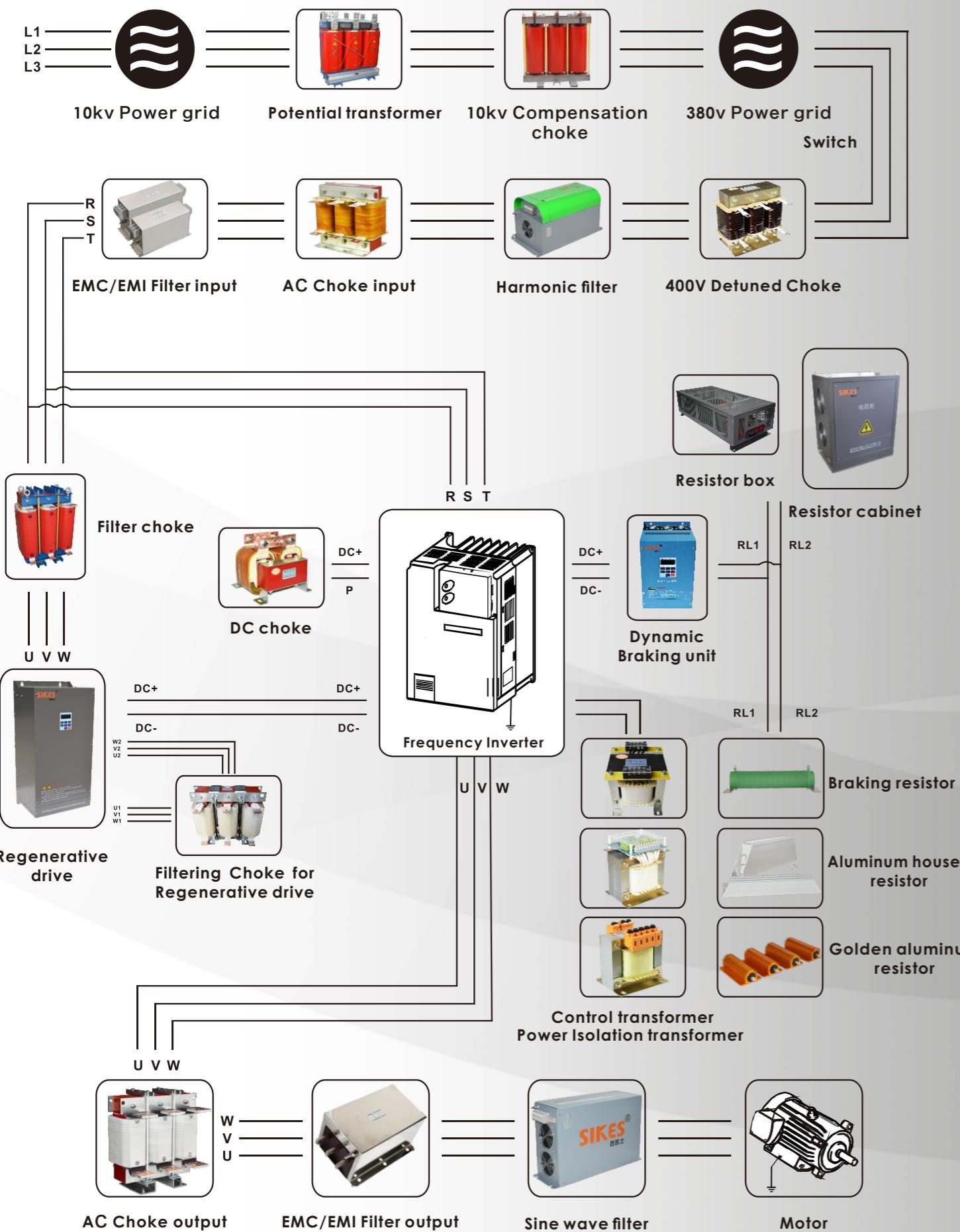
22A to 34A types



40A to 67A types

- For more technical details, please contact our sales representatives (80A to 1061A)
- Weitere technische Details finden Sie in unseren Handelsvertreter (80A bis 1061A) Kontakt

## Our Product lines / Unsere Produktlinien



## ■ Our Partners / Unsere Partner

