SIMO
Simotech Drives Technology

Drive Automation Control
PRODUCT BROCHURE

PT.Simotech Global Indonesia

SIMO
Simotech Drives Technology

CONTENTS

ENTERPRISE INTRODUCTION

PT.Simotech Global Indonesia is a Product & System Provide-Integrator company. Established in 2007, we are focusing on motion & control technology. The company is becoming reliable product & system provider specializing in industrial electrical, mechanical, instrumentation and control equipment.

We provide excellent price and quality of many industrial products for our customers. We provide an integrated solution for automation and drives system in various local industries. The industries are in water, pulp and paper, plastics, printing, steel, chemical, food and beverage.

Our sales & marketing engineers commit to provide expert technical assistance, continuous improvement customer response and on-time delivery of quality products. We glad to serve you with our best effort to fulfill your need of quality product and system.

Core values

Customer centricity · Striver-oriented · Contributor-oriented

Beliefs and visions

Committed to building a world-class intelligent driving brand

WE INSIST ON "DEVELOPMENT BY QUALITY" ALL THE WAY

ONLY TO BRING HIGH-END INDUSTRIAL CONTROL EQUIPMENT

FREQUENCY CONVERTER

CA600series
Universal high-performance vector co ntrol drives

High drive performance and ease of use

CA600 series inverter is a general-purpose vector inverter with excellent performance, relia ble and stable structure, compact structure and strong ease of use.

Naming conventions

CA600 S - A 4T 4R0 G B 5R5 P B

Product Famyli
Empty: None
S：Dedicated to synchronous motors

empty：Design version A
B：Design version B
C：Design version C

voltage classes
2S：Single phase 110V
3S：Single phase220V
3T：Single phase220V
4T：Single phase380V
7T：Single phase690V

Applicable models
G：Universal type
P：Fan pump type

Built-in brake unit
B：Built-in brake unit
empty：None

Suitable motor power marking:
R75 1R5
.....011 015 .....
Motor power（kW）：
0.75 1.5
..... 11 15 .....

Input voltage	Adapts to motor（kW）	Brake unit		DC reactors	
Single 220V range：-15%～20%	0.4-15	0.4kW-15kW	Standard built-in	No configuration	
triphasic 380V range：-15%～20%	0.75-1000	0.75kW-30kW	Standard built-in	0.75kW-75kW	No configuration
		30kW-93kW	Optional built-in	75kW-160kW	Optional built-in
		93kW-1000kW	Optional built-in	160kW-1000kW	Standard built-in
triphasic 660-690V range：-15%～20%	30-1000	30kW-55kW	Standard built-in	30kW-315kW	Optional built-in
		75kW-1000kW	Optional built-in	355kW-1000kW	Standard built-in

High drive

It can drive three-phase AC asynchronous motor and three-phase AC permanent magnet motor; The drive performance is improved, so that synchronous motors and asynchronous motors can achieve 150% torque at zero speed without encoders, making drive and control simpler.

Multi-scenario applications

The technical and performance problems encountered so far in cables, machine tools, metal products, petr ochemicals, natural gas, lifting equipment, pulp and paper, textile, printing and dyeing, ceramics and other industrial equipment can be easily solved.

High ease of use

The VVC algorithm of the synchronizer is included, which makes the synchronous machine control more si mple and stable, especially in high-speed applications.

Extensible

Options include PG cards, communication cards, IO expansion cards, optional brackets, and more.

Specifications

Basic functionality

Input frequency resolution	Digital settings:0.01Hz Analog settings: Maximum frequency× 0.025%
Type of motor that can be driven	Asynchronous induction motor (IM), permanent magnet synchronous motor (PMSM)
Control mode	Open-loop vector control (SVC), closed-loop vector control (FVC), V/f control
Starting torque	0.5Hz/150%（SVC），0Hz/180%（FVC）
Speed control range	1:200 （SVC） 1:1000 （FVC）
Speed stabilization accuracy	0.3%（SVC） 0.01%（FVC）
Torque control accuracy	FVC:±3% SVC:5Hz以上±5%
Torque boost	Automatic torque boost; Manual torque increase 0.1%~30.0%
V/F curve	Four ways: linear, multi-point, full V/f separation, incomplete V/f separation
Acceleration and deceleration curve	Linear or S-curve acceleration and deceleration mode is optional, which can reduce the impact of frequency sudden changes on machinery through arc smoothing. Four sets of acceleration and deceleration time can be set, and the acceleration and deceleration time range is 0.0~6500.0s
DC braking	DC braking DC braking starting frequency: 0.00Hz ~ maximum frequency braking time: 0.0s ~ 100.0s Braking action current value: 0.0%~100.0%
Jog control	Jogging frequency range: 0.00Hz~50.00Hz Jogging acceleration and deceleration time: 0.0s~6500.0s
Simple PLC,multi-stage speed operation	Up to 16 speed operation is possible via the built-in PLC or control terminal
Built-in PID	It can easily realize the process control closed-loop control system
Automatic Voltage Adjustment (AVR)	When the grid voltage changes, the output voltage can be automatically kept constant
Overvoltage over-drain velocity control	Automatic current and voltage limiting during operation to prevent frequent overcurrent and overvoltage tripping
Fast current limiting	Minimize overcurrent faults and protect the normal operation of the inverter
Torque limiting and control	"Excavator" feature, automatic torque limit during operation, prevent frequent overcurrent tripping; Vector control mode enables torque control

Personalization features

Motor overheating protection	Supports motor temperature sensor input (PT100, PT1000)	
Run the instruction	The operator panel is given, the control terminal is given, and the serial communication port is given (can be switched in various ways)	
Frequency instructions	10 frequency commands: digital given, analog voltage given, analog current given, pulse given, serial port given (can be switched in a variety of ways)	
Auxiliary frequency instructions	10 auxiliary frequency commands. It can flexibly realize auxiliary frequency trimming and frequency synthesis	
Input terminals	Standard: 5 DI terminals 2 AI terminals, AI1 supports -10V~10V voltage mode input, AI2 supports -10V~10V voltage mode input, 0~20mA current mode input, temperature mode input (switch function via DIP switch)	Scalability: 4 DI terminals
Output terminals	Standard: 1 DO terminal 1 relay output terminal 1 x FM (selectable as high-speed pulse output or normal DO function) 1 AO terminal, support 0~20mA current output or 0~10V voltage output	Scalability: 1 DO terminal 1 relay output terminal

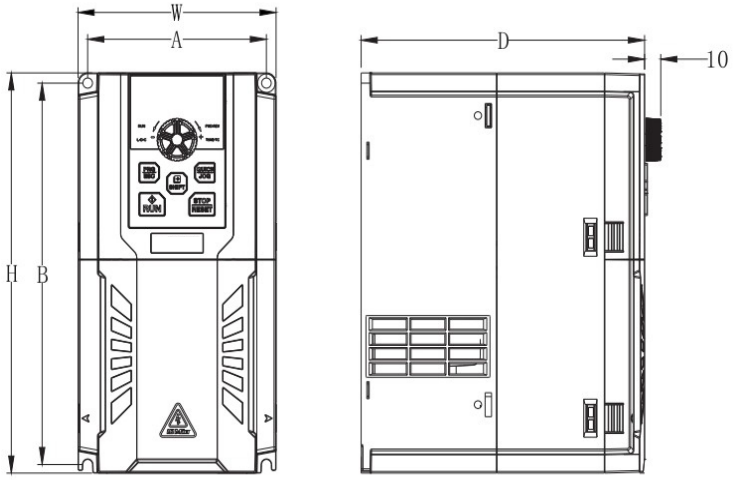
Display with keyboard operation

Phase loss protection	Input phase loss protection, output phase loss protection
Instantaneous overcurrent protection	Shutdown at more than 250% of rated output current
Overvoltage protection	Shutdown of main circuit DC voltage above 820V (for three-phase 380V models) Shutdown when main circuit DC voltage above 410V (for three-phase 220V and single-phase 220V models)
Undervoltage protection	Stop when the main circuit DC voltage is below 350V (for three-phase 380V models) Shutdown of main circuit DC voltage below 190V (for three-phase 220V and single-phase 220V models)
Overtemperature protection	Protection is triggered when the inverter bridge overheats
Overload protection	Heavy-duty applications: 150% rated current 60s shutdown; Light load application: 110% rated current 60s shutdown
Overcurrent protection	More than 2.5 times the rated current shutdown protection of the inverter
Brake protection	Brake unit overload protection, brake resistance short circuit protection
Short-circuit protection	Output phase-to-phase short-circuit protection, output short-circuit protection to ground
Motor protection	Motor stall protection, speeding protection, overload protection, overheating protection (analog input AI2 can support 4 types of motor temperature sensor input PT100, PT1000)

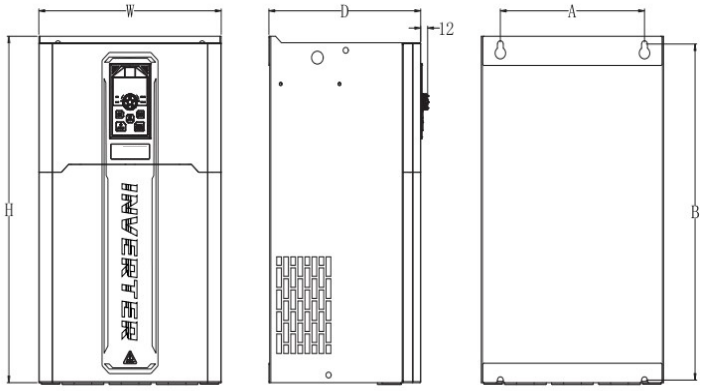
environment

Place of use	Indoors, free from direct sunlight, free of dust, corrosive gases, flammable gases, oil mist,water vapor, dripping water or salt, etc
altitude	There is no need to derate for use below 1000m, 1% derating for every 100m increase above 1000m, the maximum altitude is 3000m, please contact the manufacturer for more than 3000m.
Ambient temperature	-10°C ~ +50°C, when the ambient temperature is 40~50°C, derating is required, and the ambient temperature is derated by 1.5% for every 1°C increase
humidity	Less than 95%RH, non-condensing
vibration	Less than 5.9m/s2 (0.6g)
Storage temperature	-20℃ ~ + 60℃

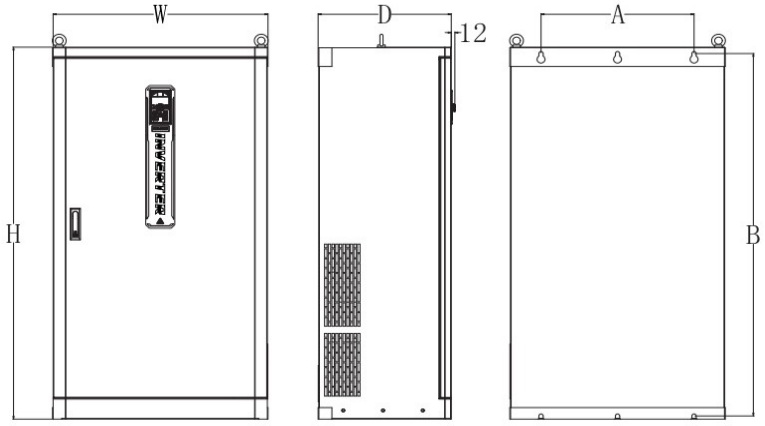
Product appearance and mounting hole size



Schematic diagram of the dimensions and structure of 22kW or less



30-132kW outline and structure diagram



CA600/CA600S external dimensions and mounting hole dimensions

CA600/CA600S external dimensions and mounting hole dimensions

Inverter model (Lower in, lower and lower out models)	Input voltage	Adapts to motors (kW)	Mounting hole position		Form factor			Mounting hole diameter (mm)
			A(mm)	B(mm)	H (mm)	W(mm)	D (mm)	
CA600-3SR40GB	Single Phase 220V Range: -15%～20%	0.4	64	138	148	74	130	Φ4.5
CA600-3SR75GB		0.75						
CA600-3S1R5GB		1.5	76	156	165	86	140	Φ5
CA600-3S2R2GB		2.2						
CA600-4TR75GB	Three-phase 380V Range: -15% ~ 20%	0.75	76	156	165	86	140	Φ5
CA600-4T1R5GB/2R2PB		1.5/2.2						
CA600-4T2R2GB/4R0PB		2.2/4.0						
CA600-4T4R0GB/5R5PB		4.0/5.5	98	182	192	110	165	Φ5
CA600-4T5R5GB/7R5PB		5.5/7.5						
CA600-4T7R5GB/9R0PB		7.5/9.0	111	223	234	123	176	Φ6
CA600-4T9R0GB/011PB		9.0/11.0						
CA600-4T011GB/015PB		11.0/15.0	147	264	275	160	186	Φ6
CA600-4T015GB/018PB		15.0/18.5						
CA600-4T018GB/022PB		18.5/22.0	174	319	330	189	186	Φ6
CA600-4T022GB/030PB		22.0/30.0						
CA600-4T030G(B)/037P(B)		30.0/37.0	200	410	425	255	206	Φ7
CA600-4T037G(B)/045P(B)		37.0/45.0						
CA600-4T045G(B)/055P(B)		45.0/55.0	245	518	534	310	258	Φ10
CA600-4T055G(B)/075P(B)		55.0/75.0						
CA600-4T075G(B)/093P(B)		75.0/93.0	290	544	560	350	268	Φ10
CA600-4T093G/110P		93.0/110.0						
CA600-4T110G/132P		110.0/132.0	320	678	695	410	295	Φ10
CA600-4T132G/160P		132.0/160.0						
CA600-4T160G/185P		160.0/185.0	380	1025	1050	480	330	Φ10
CA600-4T185G/200P		185.0/200.0						
CA600-4T200G/220P		200.0/220.0						
CA600-4T220G/250P		220.0/250.0	500	1170	1200	590	365	Φ14
CA600-4T250G/280P		250.0/280.0						
CA600-4T280G/315P		280.0/315.0						
CA600-4T315G/355P		315.0/355.0	500	1255	1290	700	400	Φ14
CA600-4T355G/400P		355.0/400.0						
CA600-4T400G/450P		400.0/450.0						
CA600-4T450G/500P		450.0/500.0						
CA600-4T500G/550P		500.0/550.0	/	/	1800	1000	500	vertical
CA600-4T550G/630P		550.0/630.0						
CA600-4T630G		630.0						
CA600-4T710G		710.0	/	/	2200	1200	600	vertical
CA600-4T800G		800.0						
CA600-7T030GB	660-690V	30	245	554	570	310	264	Φ10
CA600-7T037GB		37						
CA600-7T045GB		45						
CA600-7T055GB		55						
CA600-7T075G		75	220	705	725	350	275	Φ10
CA600-7T093G		93						
CA600-7T110G		110						
CA600-7T132G		132	320	815	835	440	295	Φ10
CA600-7T160G		160						
CA600-7T185G		185						
CA600-7T200G		200						
CA600-7T220G		220						
CA600-7T250G		250	380	1115	1140	550	330	Φ12
CA600-7T280G		280						
CA600-7T315G		315						
CA600-7T355G		355						
CA600-7T400G		400	500	1348	1380	700	400	Φ14
CA600-7T450G		450						
CA600-7T500G		500						
CA600-7T550G		550	/	/	2200	800	600	vertical
CA600-7T630G		630						
CA600-7T710G		710						
CA600-7T800G		800	/	/	2200	1050	600	vertical
CA600-7T900G		900						
CA600-7T1000G		1000						

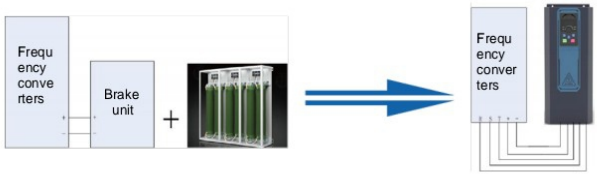
ENERGY RETURN SERIES

CL100 energy feedback unit

CL100 energy feedback unit adopts advanced control algorithm, which has the characteristics of high efficiency, high power factor and low harmonic interference. It is used in the occasions where electric energy regeneration during frequency conversion speed regulation and high requirements for harmonics and energy saving and emission reduction. The feedback unit ensures effective braking of frequency conversion speed regulation, and feeds back more than 95% of the regenerated electric energy to the power grid to achieve the purpose of energy saving and emission reduction.

Functional features

Small footprint, plug-and-play, easy to use, space-saving compared to traditional energy-consuming braking



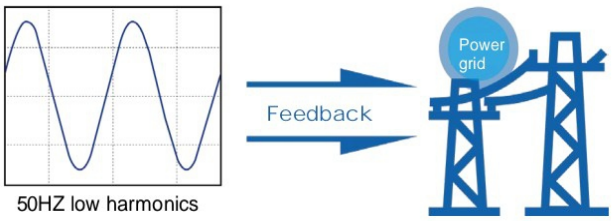
Renewable energy feeds back to the power grid, economical and energy-saving, compared with traditional energy consumption braking, the comprehensive energy saving rate is as high as 20%-60%

Compared to conventional energy consumption braking

Comprehensive energy saving rate

Up **20%-60%**

Low harmonic pollution, THD<5%



50HZ low harmonics

Built-in MODBUS communication protocol, convenient to achieve centralized monitoring, external control start and stop

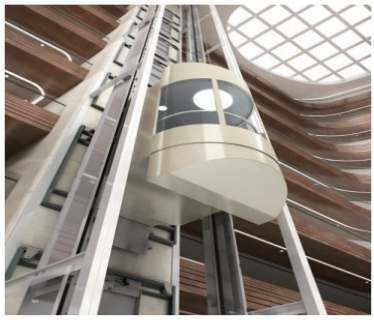
Application industry

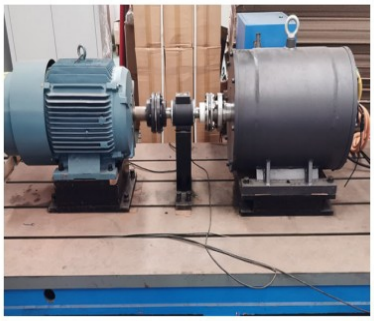

Lifting


colliery


centrifuge


oil field


lift


Dynamometer

Product naming

CL100 - A 4T - 55KW

①: Product Model:
CL100 energy feedback stand-alone series

②: Version Code:
First generation : empty
Upgrades: A, B, C

③: Adapt to motor

④: Voltage level
3S: Single phase 220V
4T: three-phase 380V
7T: three-phase 690V
.....

Technical specifications

project		specification
power supply	Grid voltage	Three-phase - 380V
	Grid frequency	45Hz~65Hz
control	Current control mode	Direct current control mode
	Working mode	Rectification/feedback
	Feedback start voltage	620V
	Fan control	Parameter selection
	Overtemperature protection	90℃
instructions	Status indication	Power indication, fault indication, feedback status indication, etc
environment	Installation site	Indoor, altitude is not more than 1000m, no direct sunlight, no conductive dust and corrosive gases
	Ambient temperature	-10~40°C, good ventilation
	Ambient humidity	90% RH or less (non-condensing)
	Vibration degree	0.5g or less

BRAKE UNIT

CBR600 series energy-consuming brake unit

CBR600 series energy consumption brake unit is mainly used in large inertia load, four-quadrant load, fast shutdown and long-term energy regenerative occasions. When the drive brakes, due to the mechanical inertia of the load, the kinetic energy will be converted into electrical energy during braking, which will be fed back to the drive, resulting in the voltage of the drive DC bus rising. The energy-consuming brake unit converts excess electrical energy into resistive heat consumption, preventing excessive bus voltages from damaging the drive.
The energy-consuming brake unit has over-current, over-voltage, over-temperature, braking resistance short-circuit protection, etc.; With parameter setting function, the user can set the brake start and stop voltage; The need for high-power drive braking can also be realized by master-slave paralleling.

- ◆ Voltage level: AC380V and AC690V
- ◆ Support LED and LCD display,Flexible parameter setting
- ◆ IP21 rating
- ◆ Power range: 37KW~800KW

Product naming

CBR600 - A 4T - 132KW

①: Product Model:
CBR600 brake unit series

②: Version code:
First generation: Empty
upgrade: A, B, C

③:Adapt to motor power standards

④:Voltage level
3S:Single phase 220V
4T:Three-phase 380V
7T:Three-phase 690V
....

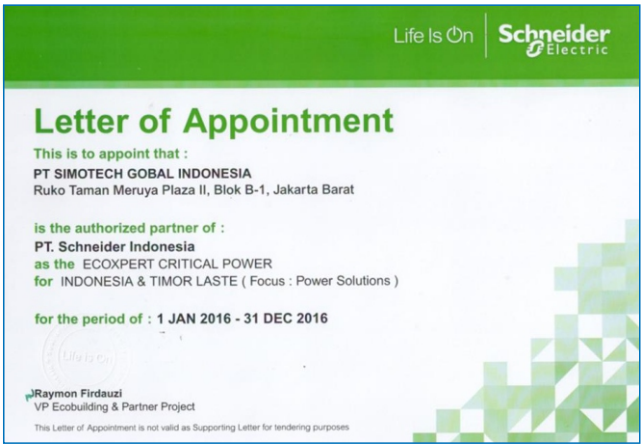
Product model and technical data

Brake unit model	Voltage Level (V)	Minimum permissible resistance(Ù)	Peak current (A)	Maximum adaptation of inverter work Rate (KW)	Cable cross-section
CBR600-4T037	380	24	32	37	6
CBR600-4T075	380	12	60	75	6
CBR600-4T132	380	6.8	110	132	10
CBR600-4T200	380	3.4	210	200	10
CBR600-4T315	380	2.3	310	315	16
CBR600-4T450	380	1.5	470	450	16
CBR600-4T630	380	1.0	700	630	25
CBR600-7T037	690	40	30	37	6
CBR600-7T075	690	20	60	75	6
CBR600-7T132	690	12	90	132	10
CBR600-7T200	690	6	190	200	10
CBR600-7T315	690	4	280	315	16
CBR600-7T450	690	2.6	430	450	16
CBR600-7T630	690	1.8	630	630	25
CBR600-7T800	690	1.7	650	800	25

Installation environment

Place of use	Indoors, not exposed to direct sunlight, no dust, corrosive gases, flammable gases, oil mist, water vapor, dripping water or salt, etc
altitude	Below 1000 meters
Ambient temperature	-10°C~+40°C (ambient temperature is 40°C~50°C, please use derating)
Humidity	Less than 95% RH, no water bead coagulation
Vibrate	Less than 5.9 m/s2 (0.6g)
Storage temperature	−20℃ ~+60℃
Pollution level	2

Certification



Cooperation And Mutual Benefits

Services

PT. Simotech Global Indonesia
Driving to the future

Address: Ruko Taman Meruya Plaza II Blok B
no. 1 Jakarta Barat 11620 Indonesia

Web: www.ptsimotechglobal.com