

Energy efficient , beautiful environment



COMPANY INTRODUCTION

Shenzhen K-Easy Automation Co.,Limited is a professional manufacturer, specialize in R&D And production of AC drives. We have built up a comprehensive product family. Frequency inverters' power covers the range from 0.4 to 630kW, and voltage range is between 220V and 480V. More than inverters are running smoothly 300, 000 units at different industrial sites.

Why Us

- ◆ We believe "quality is life" ,so we will test all products before shipment,All Module of our VFD will be used quality is life with Infineon only, With years of persistence, the total failure ratio of Our frequency inverters has been controlled below 1%. We never lose a customer because of the quality problem;
- ◆ With Strong R&D and Engineer Team, makes our after-service very easy, For all doubts and requesting for technologies supporting, We can offer detailed Solution without delay, so for us, "Not Only Products, But also solutions" ;
- ◆ All our products will be offered with 24 months Warranty Period instead of 18 months.

Join us, enjoy the business.



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Version: A01



CL200 SERIES
four-quadrant inverter

NAME RULES

CL200 - A - 4T - 55KW

① ② ③ ④

Serial number	Description	Meaning
①	CL200 series	Series Name
②	Version	First generation vacant, upgraded to A, B, C
③	Voltage level	3S: Single-phase 220V 4T: Three-phase 380V 7T: Three-phase 690V
④	Adaptable motor power(KW)	18.5KW~315KW

QUALITY SERVICE

- Our VFD has been used in Shenzhen and Guangzhou Metrol Since Year 2014;
- Problem Rate Less Than 1%;
- Support OEM Service;
- Strong Engineer Team;
- 24 Months Warranty Time;
- Very Good After Sales-Service, Best Solutions Can be always offered within 2 hours.

CL200 Series

CL200 series four-quadrant inverter adopts IGBT as rectification bridge, and uses DSP with high speed and high computing power to generate PWM control pulse. On the one hand, the input power factor can be adjusted to eliminate harmonic pollution to the power grid. On the other hand, the energy generated by the motor can be returned to the power grid to achieve a thorough energy-saving effect. Products support three-phase asynchronous motor and permanent magnet synchronous motor control, strong performance, stable and reliable, can be used in pumping units, cranes, elevators, lifts and other industries.



CL200: Power Rate

3 phase input
3 phase output

380V (+-20%) 18.5KW~315KW

PRODUCT ADVANTAGE

01 Powerful function

Stepless speed regulation, relative power frequency start-up, small impact on the power grid and equipment, extend the service life and maintenance cycle of the equipment, reduce the maintenance cost and downtime of the equipment;

Monitor the load of the well in real time according to the load current of the pumping unit. When the condition of the well changes, the system can automatically increase or decrease the number of strokes to improve the system efficiency;

Increase the power factor on the grid side of the drive to prevent small horse-drawn carts;

Identify the up and down strokes of the pumping unit in a working cycle through the integrated cabinet, and increase the crude oil production per unit time by high frequency oil extraction in the upper stroke and low frequency slowdown in the lower stroke;

For the special use environment of the oilfield site, unattended and remote monitoring, self-actuated frequency conversion switching, to ensure the stable operation of the product, while reducing the labor intensity of well patrol parameters.

02 High reliability

Long-Life Technology

Comprehensive monitoring of key components and PCB temperature rise, rational design, and high thermal redundancy.

New generation device platform with large design margin

Adopting a new generation of IGBT and rectifier bridge hardware platform, higher configuration, and large design margin.

Severe high and low temperature environment testing

High and low temperature cycle testing, able to maintain stable operation in extreme environments, with strong environmental adaptability.

Advanced three proof paint process design

The machine can import different three proof paint processes according to the model and specifications of the single board, ensuring the uniformity of the product's three proof process and batch consistency.

03 Excellent performance

- ✦ Stable speed accuracy: $\pm 0.5\%$ (SVC), $\pm 0.02\%$ (FVC);
- ✦ Speed regulation range: 1:200 (SVC), 1:1000 (FVC);
- ✦ Torque response: $< 40\text{ms}$ (SVC), $< 10\text{ms}$ (FVC);
- ✦ In closed-loop vector mode, the torque linearity deviation is within 3%. Stable torque output, high low-frequency torque, and convenient switching between torque mode and speed mode;
- ✦ Supporting multiple PG cards, supporting various encoder interfaces such as collector signals, differential signals, and rotary signals, facilitating closed-loop vector control;
- ✦ Capable of automatically identifying asynchronous induction motors and achieving high-performance vector control; Can achieve accurate setting of motor parameters for long-distance power cables under load conditions; Can automatically distinguish the direction of encoder signals under encoder conditions, simplifying the debugging process.

SPECIFICATIONS

Control performance	
Frequency control range	0-300Hz
Output frequency accuracy	0.01Hz
Set frequency resolution	Digital setting: 0.01Hz; Simulation setting: AD conversion accuracy is one thousandth
Control mode	Three phase asynchronous motor: VF control, SVC, FVC Permanent magnet synchronous motor: SVC, FVC
Overload capacity	150% rated current for 60 seconds; 180% rated current for 1 second
Function Description	
V/F curve	Three methods: linear type; Multi point type; Square V/F curve
DC braking	DC braking frequency: 0.00 Hz to maximum frequency; Braking time: 0.0s~100.0s; Braking action current value: 0.0%~100%
Automatic Voltage Adjustment (AVR)	When the voltage of the power grid changes, it can automatically maintain a constant output voltage
Acceleration and deceleration curve	Linear or S-curve acceleration and deceleration; Four types of acceleration and deceleration times; 0.1~6500.0 seconds continuously adjustable



Function Description

Standard function	Motor parameter automatic detection function, open-loop vector, closed-loop vector, multi-point VF curve, manual torque increase, skip frequency function, carrier frequency automatic adjustment, start DC brake, stop DC brake, instantaneous power outage restart, automatic fault reset, 16 segment multi speed operation, simple PLC program operation, textile swing frequency function, closed-loop PID adjustment control
Control characteristics	Automatic torque increase, automatic slip compensation, automatic stable output voltage, speed tracking start function, overcurrent suppression during acceleration, overcurrent frequency reduction function at constant speed, overvoltage suppression during deceleration, and automatic energy-saving operation
Run Command Channel	Three control methods: keyboard control, terminal control, and serial communication control
Frequency source selection	Digital setting, analog voltage setting, analog current setting, and serial communication port setting; Multiple ways to combine and switch
Frequency source	There are a total of 10 frequency sources: digital given, analog voltage given, analog current given pulse given, and serial communication given. It can be switched in multiple ways
Auxiliary frequency source	10 types of auxiliary frequency sources. Flexible implementation of auxiliary frequency fine-tuning and frequency synthesis
Input terminals	Standard with seven digital input terminals, up to nine digital input terminals (AI1 and AI2 can be used as DI terminals), compatible with active PNP or NPN input methods Two analog input terminals, where AI1 can only be used as voltage input and AI2 can be used as voltage or current input
Output terminal	One digital output terminal (bipolar output) Two relay output terminals Two analog output terminals, optional from 0/4mA to 20mA or 0/2V to 10V, can output physical quantities such as set frequency, output frequency, and speed
Protection function	Overvoltage protection, undervoltage protection, overcurrent protection, module protection, radiator overheating protection, motor overload protection, external fault protection, current detection abnormality, input power supply abnormality, output phase loss abnormality, EEPROM abnormality, relay suction abnormality

Display

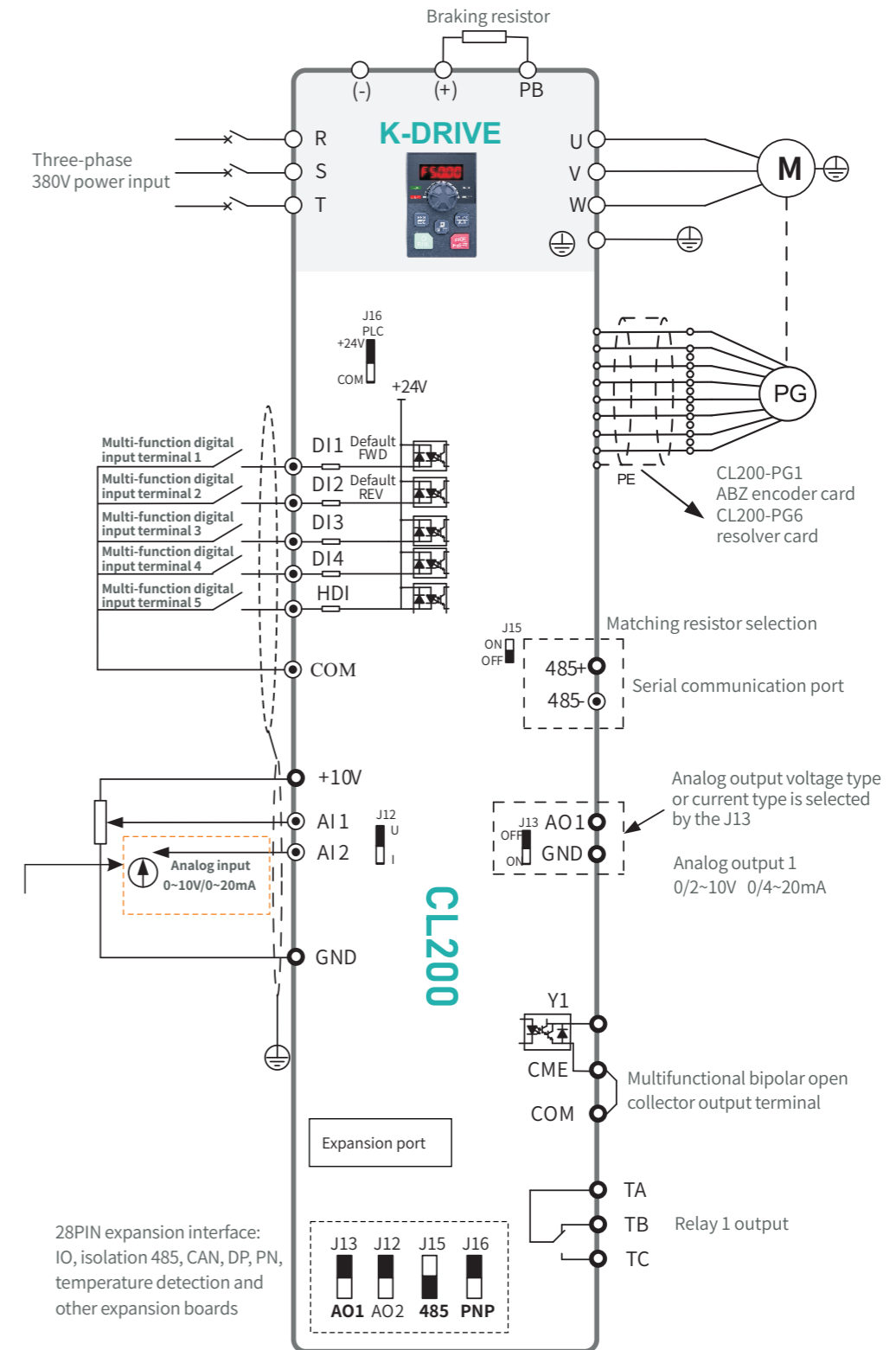
LED display	Display parameters, support parameter copying
LCD display	Optional, Chinese/English prompt operation content, supporting parameter copying
Protection level	IP20

Operating environment

Installation site	Vertically installed in a well ventilated electrical control cabinet, in an environment free of dust, corrosive gases, flammable gases, oil mist, steam, and dripping water, and not exposed to direct sunlight
Ambient temperature	-10°C to +40°C (If the ambient temperature is higher than 40 ° C, please reduce the rated output current by 1% for every 1°C increase)
Altitude	0-2000 meters, for use with a reduction of 1000 meters or more, for every 100 meters increase, the rated output current decreases by 1%
Humidity	20% to 90% RH (without condensation)
Vibration	Less than 5.8 meters per square second (0.6g)
Storage temperature	-25°C to +65°C

BASIC CONNECTION

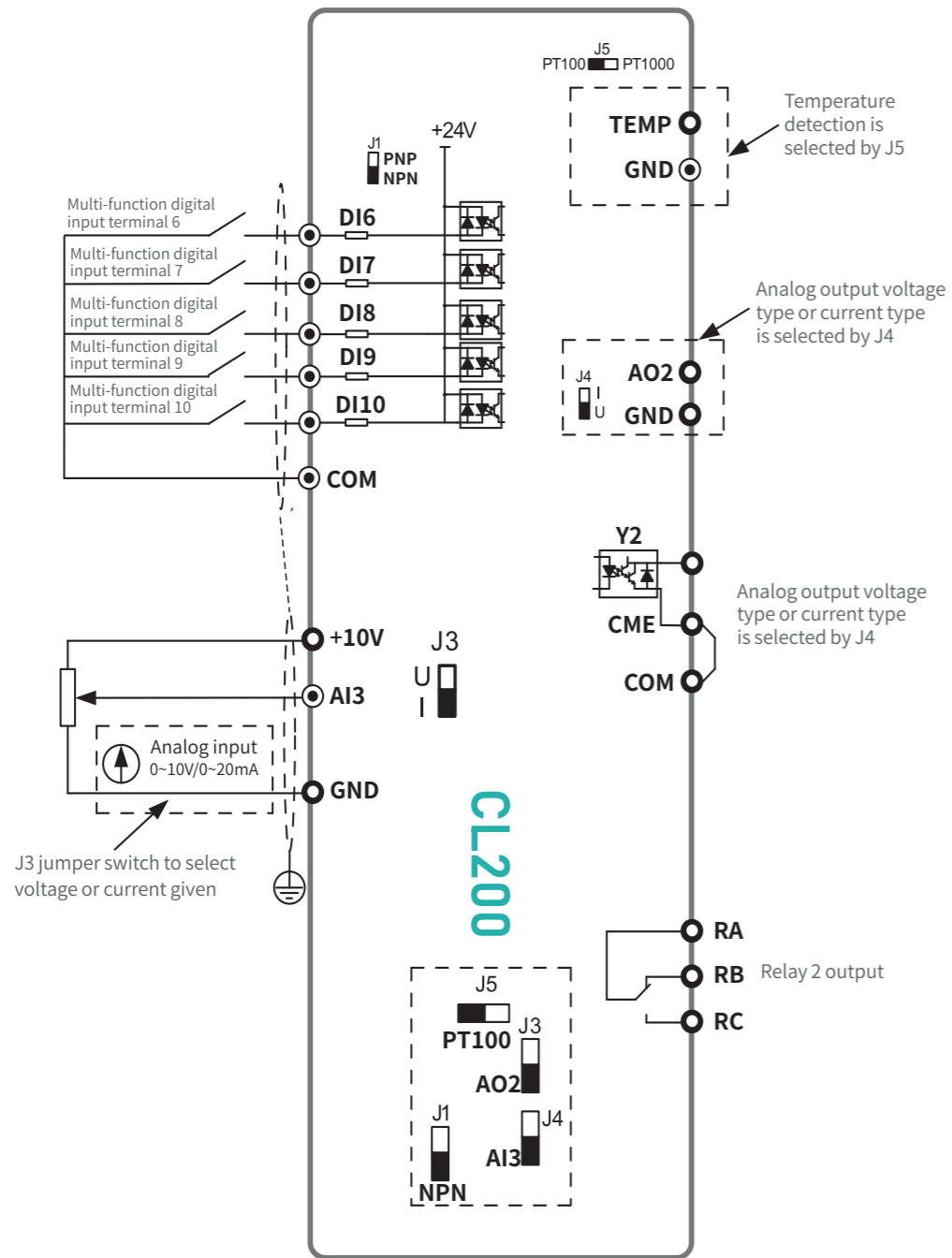
CL200-4T-18.5-315KW



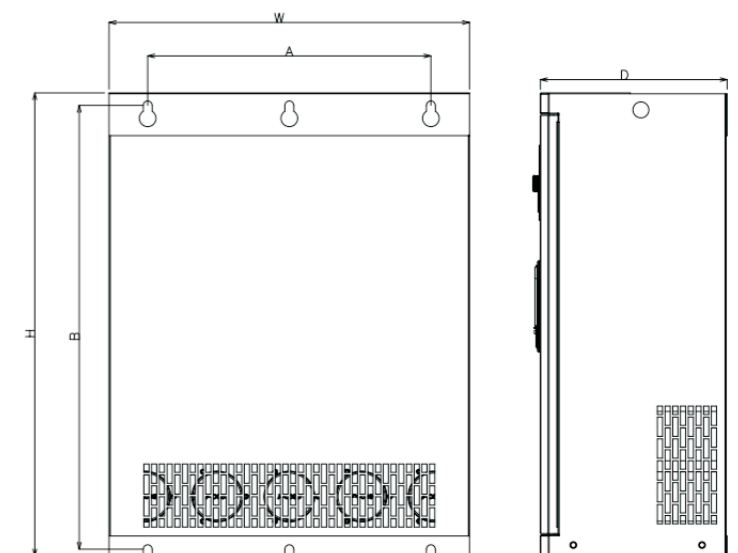
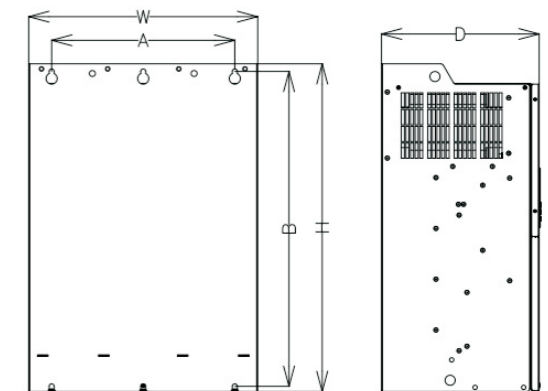
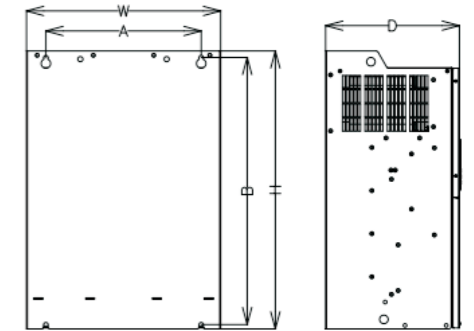


BASIC CONNECTION

CL00-IO1 expansion card



MODEL AND SIZE





4T

AC Drive Model	Adapter motor (KW)	Rated Input Current(A)	Rated Output Current(A)	Installation size(mm)		Dimensions (mm)			Aperture d	Frame NO.
				A	B	H	W	D		
CL200-4T-18.5KW	18.5	38	37	300	575	592	360	220	Φ8	A
CL200-4T-22KW	22	46	45							
CL200-4T-30KW	30	62	60							
CL200-4T-37KW	37	76	75							
CL200-4T-45KW	45	92	90	360	620	645	450	310	Φ10	B
CL200-4T-55KW	55	113	110							
CL200-4T-75KW	75	157	150	440	690	720	560	290	Φ12	C
CL200-4T-93KW	93	180	176							
CL200-4T-110KW	110	214	210	700	717.5	750	820	300	Φ12	C
CL200-4T-132KW	132	256	253							
CL200-4T-160KW	160	307	304	720	1026	900	960	330	Φ12	C
CL200-4T-185KW	185	345	340							
CL200-4T-200KW	200	385	380	900	933	965	1175	350	Φ12	C
CL200-4T-220KW	220	430	426							
CL200-4T-250KW	250	468	465							
CL200-4T-280KW	280	525	520							
CL200-4T-315KW	315	590	585							

The CL200-4T-18.5KW~55KW filtering reactor is built-in, and the CL200-4T-75KW~315KW filtering reactor is external.

APPLICATION CASES



Bridge crane



Injection machine



Ship unloader



Pumping unit



Elevator



Conveyer belt