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Technical innovation benefits the world
RENLE Science & technology

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RENLE

Professional manufacturer of
Smart Grid · New Energy · Electric Drive

RNB2000 SERIES

FREQUENCY INVERTER



Technical innovation benefits the world

Stock code: 833586



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RENLE

Shanghai RENLE Science & Technology Co., Ltd is a designer and product provider of energy saving system for intelligent electric industry, as well as an integrator of solutions for control system. Renle's products include LV motor soft starter, LV frequency inverter (VFD or AC drive), intelligent electric equipment, new energy electric equipment and complete sets of LV/HV power transmission and distribution equipment etc. The products are widely used in different kinds of industries and fields, such as electric power industry, metallurgical industry, petroleum and petrochemical industries, mines, chemical industry, construction industry, construction material industry, municipal engineering, military industry, light industry, textile, printing and dyeing, paper-making and pharmaceutical industries etc. Renle's products are well exported to many countries and areas in the world.

Renle's products have been used as parts of complete national key projects, such as Expo 2010 Shanghai China, 2008 Beijing Olympic Games, Yangshan Deepwater Port Project of Shanghai International Shipping Center, Shanghai Pudong Airport, Shanghai Hongqiao Airport, the Three Gorges Project, Gansu Satellite Launching Center, South-to-North Water Diversion Project, West-to-East Natural Gas Transmission Project, China National Petroleum Corp., SINOPEC, Double Coin Type Group Ltd., and Shandong Linglong Tire Co., Ltd. etc. The products receive unanimous appraisal from the customers for excellent quality and perfect after-sales service.

In China, RENLE is a pioneer who has firstly passed the certification of ISO9001 Quality Management System, ISO 14001 Environment System, OHSAS 18001 Occupational Health and Safety

Management System, CE, TUV, GOST and national CCC etc. RENLE has been continuously introducing internationally advanced production and test equipment, and has established laboratories and provided R&D experiment base to domestic universities and colleges. Approved by National Human Resources and Social Security Bureau, RENLE has established a post-doctoral workstation. This shows that RENLE cooperates with universities for setting up platforms for teaching and study. This raises the independent innovation ability and R&D ability of the enterprise.

For many years Renle has been striving for and devoted to production modernization, administration collectivization, production specialization and technical leading. Renle has achieved many honors: Key High-tech Enterprise of National Torch Program, High and New Tech Enterprise, National Enterprise of Credit, State-level Key New product, Shanghai Innovative Enterprises, Shanghai Enterprise Certifying Technology Center, Shanghai Renowned Brand, Shanghai Famous Brand Product, Shanghai Key New Product, Shanghai Renowned and High Quality Product, Post-doctoral workstation and Smart Grid R&D centers.

Renle will continually develop energy saving, high efficient, precise and humanized products, as well as help customers realize economic transformation and industrial upgrading with unique industrial control technology, advanced and applicable innovation products and profoundly integrated solution. In addition, Renle will speed up its pace of internationalization, satisfy the customers with quality and try to become a world renowned professional supplier of smart electric equipment!

RENLE

Outline of company



RENLE



RNB2000 SERIES

FREQUENCY INVERTER

RNB2000 series frequency inverters are a kind of high-performance vector frequency inverter with abundant and powerful functions and excellent and stable features. They can drive 3-phase AC asynchronous motor or 3-phase AC permanent magnet synchronous motor. This series of inverters demonstrates excellent dynamic features and strong overload capacity in the fields of control and adjustment of torque, speed and low-speed high-torque output of 3-phase asynchronous or synchronous motors. Supporting different kinds of I/O extended cards, PG cards and communication extended cards, they are widely used in automatic production equipment and automatic production lines.

- Textile
- Paper making
- Hoisting equipment
- Oil industry
- Machine tool
- Packing
- Mine
- Fan and pump

Technical innovation benefits the world
Stock code: 833586

Model description

R N B 2 XXX - X



Character	Description
RN	Shanghai Renle Science & Technology Co., Ltd
B	Low voltage frequency inverter
2	2000 series
XXX	Such as, 000:0.75 kW; 001:1.5 kW; 037:37 kW; 110:110 kW
-X	Code of special machine: Default value stands for universal machine Such as: <ul style="list-style-type: none"> - U stands for special frequency inverter for beam pumping unit of the oil field; - J stands for special frequency inverter for main line drive of metallurgical industry; - Q stands for special frequency inverter for hoisting; - Z stands for special frequency inverter for main line drive of paper making industry; - K stands for special frequency inverter (synchronous/asynchronous) for air compressor industry; - G stands for four-quadrant frequency inverter for harbor machine.

Product Characteristics

RNB2000 series frequency inverters meet requirements of high standards for production technology in different high-end applications, depending on their high-end control platform, rich interface resources, multiple communication modes, advanced control algorithm and flexible extension interfaces.

- The frequency inverters adopt new generation of digital signal processor (DSP) of TI, USA for motor control. The main frequency can reach 150MHz.
- The frequency inverters adopt 4th generation of IGBT of Infineon, Germany. The frequency inverters further lower switching loss, depending on the feature of 175 °C highest junction temperature and new PWM mode. So the driver can operate without derating in the environment of 50 °C.

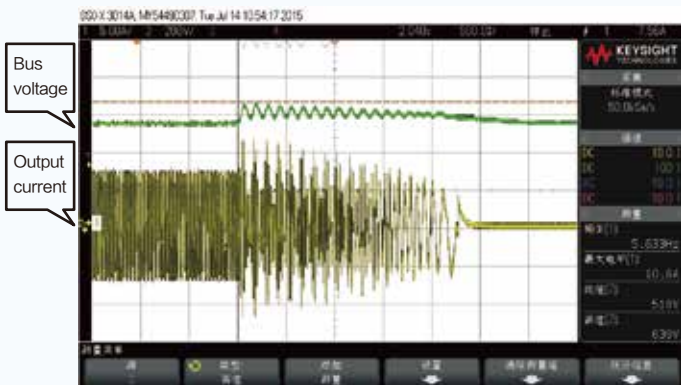
- The frequency inverters support drive of asynchronous motor and permanent magnet synchronous motor. They can accurately discriminate the parameters of asynchronous motor and permanent magnet synchronous motor and allow presetting of two groups of motor parameters. They allow switching of control for the driver between two different motors. The switching function can be set by communication or multifunctional terminals.
- Under V/f control mode, the frequency inverters offer high-precision current limiting control. So the driver gets rid of overcurrent alarm no matter in fast acceleration/deceleration or during locked rotor. In such way the driver is protected reliably; Under vector control mode, high-precision torque limiting control allows the driver to output strong or soft torque according to the technological control of the user, and so reliably protect the mechanical equipment.

Control mode	Start torque	Range of speed control	Speed precision	Torque response
V/F control	0.5Hz 180%	1:100	± 0.5%	
Vector control without PG	0.5Hz 180%	1:100	± 0.2%	<10ms
Vector control with PG	0 Hz 200%	1:200	± 0.02%	<5ms

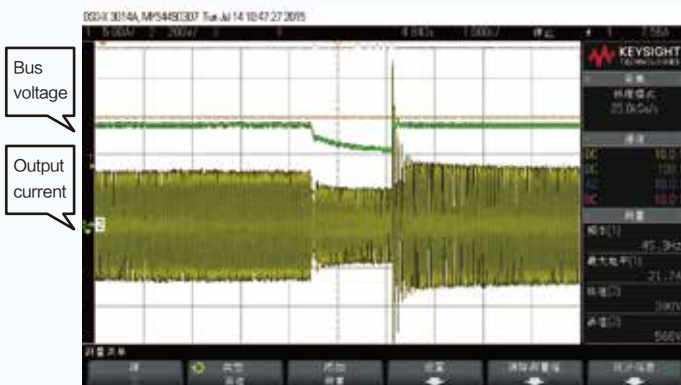




Speed search start



Overvoltage suppression



Undervoltage adjustment

- Under the V/f separation control mode, the output frequency and output voltage can be set separately. This mode is applicable to applications such as frequency conversion power supply and torque motor control etc.

- Smart extension interface allows simultaneous connection of two extension cards, so it can meet the special control requirements of industries.

- When the encoder is positioned not at the shaft end, PG vector control can still be realized if the deceleration ratio between this axis and the motor axis is kept fixed.

- Speed search, accurate and reliable, can enable no-impact smooth start of rotating motor.

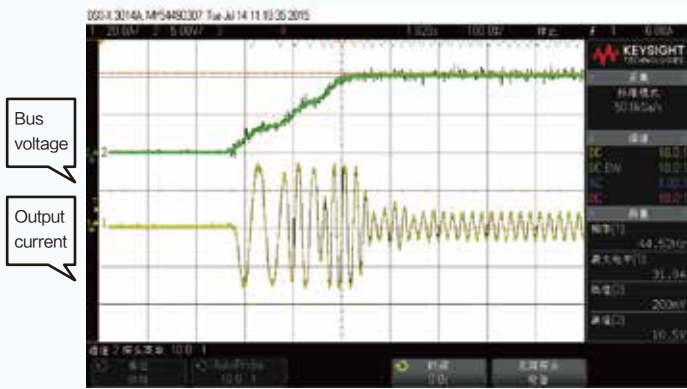
- Process PID control owns abundant giving and feedback modes. Two groups of proportion, integration and differential parameters can be switched freely. Positive and negative action feature can be selected.

This control is applicable to energy saving of fans and pumps.

- The inverter supports input of DC power and enables user to arrange application of common DC bus.

- Overvoltage stall protection: During fast deceleration of large inertia load, the regeneration energy may result in overvoltage fault. The instantaneous adjustment of output frequency can reduce the probability of overvoltage tripping, so the continuous and reliable operation of the system is ensured.

- Undervoltage adjustment: When instantaneous undervoltage or power failure occurs, the DC bus voltage remains constant depending on the automatic reduction of output frequency, so the continuous operation of the driver within short time is guaranteed. This function is applicable to application of fans and pumps.



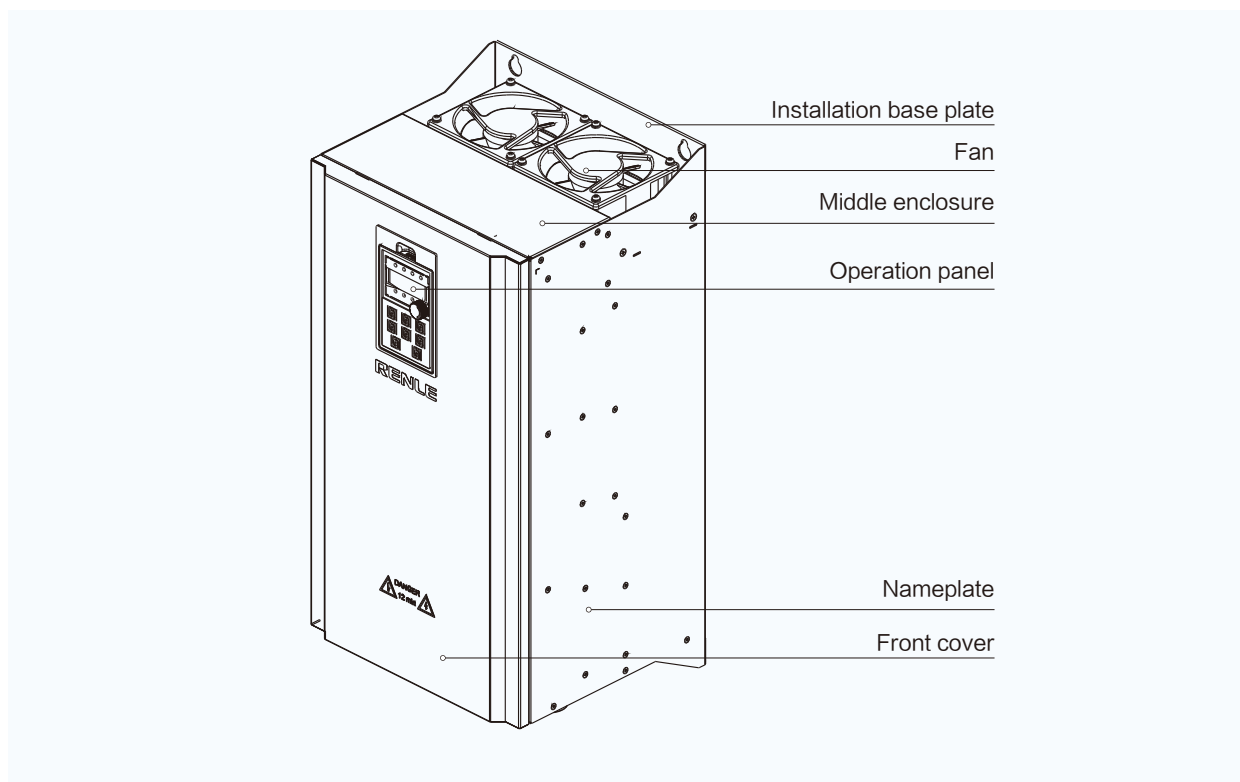
Overcurrent stall protection function

- Overcurrent stall protection function: During fast acceleration of heavy load, the instantaneous large slip may result in overcurrent fault. The instantaneous adjustment of output frequency can reduce the probability of overcurrent tripping, so the continuous and reliable operation of the system is ensured.
- Low frequency oscillation suppression function: During no-load or light load start of large power motor, the acute oscillation may occur and result in fault tripping. Enabling this function can suppress oscillation effectively and ensure reliable operation of the system.
- Wave-by-wave current limiting function: During heavy load start or abrupt increase of heavy load, this function enables automatic limitation of the output current before the overcurrent fault occurs, and avoids frequent tripping of the frequency inverter.

- Parameter backup is available. It provides convenience to the user for parameter backup, test and restoration.



Description of parts of the frequency inverter



Description of parts of the frequency inverter

	ITEM	INDEX AND SPECIFICATION
Main input power	Rated voltage	3-phase, AC 380V, 50/60Hz
	Frequency range	Voltage: 380V ± 20% Frequency: ± 5%
Main output power	Rated voltage	0 ~ rated input voltage
	Output frequency	0Hz ~ 600 Hz
Basic features	PWM mode	SVPWM, 3-phase modulation and 2-phase modulation
	Control mode	V/F control, vector control without PG (open loop vector), vector control with PG (closed loop vector), torque control
	Motor category	AC asynchronous motor, AC permanent magnet synchronous motor
	Operation command giving method	External terminals, keypad of the panel, communication
	Speed command giving method	Analog giving, keypad of the panel, communication, high-speed pulse, terminal multistage speed giving, PID control giving, simple PLC giving
	Range of speed control	For asynchronous motor – 1: 200 (V/F, vector control without PG); For synchronous motor – 1: 20 (vector control without PG)
	Speed control precision	Open loop vector control ± 0.2%
	Speed fluctuation	Open loop vector control ± 0.3%
	Torque response	<20ms (vector control without PG)
	Torque control precision	10% (vector control without PG)
	Start torque	Asynchronous motor: 0.25Hz/150% (vector control without PG); Synchronous motor: 2.5Hz/150% (vector control without PG)

> To be continued

> Continued

	ITEM	INDEX AND SPECIFICATION
	Overload capacity	150% of rated output current for 60s; 180% of rated output current for 10s; 200% of rated output current for 1s
	Automatic voltage adjustment	When the power grid's voltage changes, the inverter can automatically maintain constant output voltage
	Instantaneous frequency reduction	When undervoltage occurs in the power grid, the inverter instantaneously reduces the frequency to maintain the bus voltage
	Speed search start	Enables no-impact smooth start of rotating motor.
Control terminal input	Available inner power	1 route, +10VDC, max. current: 50mA (used for potentiometer) 1 route, +24VDC, max. current: 200mA (used for logic input port)
	Analog input	2 routes, 0~10VDC or 0/4~20mA DC, selectable 1 route, -10~+10VDC
	Switching amount input	9 routes of programmable logic inputs. NPN and PNP collector open loop signals are supported. 39 logic input functions, such as forward, reverse, fault reset are selectable.
	Pulse signal input	2 routes of high-speed pulse inputs, which can be used as switching amount input. Input frequency range: 0~50KHz. They can also be used as high-precision speed giving source or speed feedback resource with strong anti-interference capability. One of the routes can be used as signal input of photoelectric incremental encoder.
Control terminal output	Analog amount output	2 routes, 0~10VDC or 0~20mADC, selectable
	Switching amount output	1 route of programmable logic outputs, NPN collector open loop signal, 20 logic input functions, such as in-operation, forward, reverse, fault output are selectable.
	Pulse signal output	1 route of high-speed pulse output, which can also be used as switching amount output, NPN collector open loop signal, 13 output functions selectable.
	Programmable relay output	2 routes with a couple of NO contacts and a couple of NC contacts separately, contact capacity: 250VAC/3A, 30VDC/1A
Communication interface	Standard interface	RS485 interface, supporting Modbus protocol
	Extended communication interface	Profibus, CAN, Ethernet; supporting protocols, such as Profibus DP, CANopen and Ethernet TCP/IP etc, is available
Operation panel	Display	For displaying state parameters and fault codes etc, and for setting parameters. Default display is digitron panel. LED (Chinese/English language) operation panel is optional.
	Indication lamp	State indication lamp, displaying the operation state information of the inverter; Unit indication lamp, displaying the unit of the digital data shown by the LED
	Push button	For operating the inverter and setting parameters
	Parameter copy	The LED operation panel supports upload of the data by the user to the panel for storage. It also supports download of the data stored by the user in the panel to the machine.

> To be continued

> Continued

ITEM		INDEX AND SPECIFICATION
Fault protection		With 25 fault protection functions, such as output overcurrent, bus overvoltage, bus undervoltage, motor overload, inverter overload, input phase failure, output phase failure, rectification module overtemperature, inversion module overtemperature, external fault, communication fault, current detection fault, motor self-learning fault, EEPROM operation fault, PID feedback failure fault, braking unit fault and arrival of factory setting time etc.
Special functions		Parameter copy, parameter backup, common DC bus, free switching of two groups of motor parameters, speed tracking, swing frequency control, fixed length control, counting function, preexcitation, overcurrent stall, overvoltage stall, powering-off then restart, skip frequency, four stages of acceleration/deceleration, motor overtemperature protection, flexible fan control, process PID control, simple PLC control, drooping control, parameter discrimination, weak magnet control, high-precision torque control, V/f separation control
Environment	Standard	In compliance with diversity of international standards (IEC, EN), especially, IEC/EN61800-5-1(Low voltage), IEC/EN61800-3 (standard for anti-interference of conduction and radiation)
	Place of application	Indoors, altitude < 1000 m, no dust, no erosive gas and no exposure to direct sunshine
	Environmental temperature	Operation: -25 °C ~ 40 °C, reliable operation without derating; Within 40 °C ~ 50 °C, derating is necessary. The output current reduces by 1% for every rise of 1 °C. Storage: -40 °C ~ +70 °C
	Altitude	0 ~ 2000m, derating is necessary when altitude >1000m (The inverter is derated by 1% for each rise of 100m)
	Humidity	5% ~ 95%, no condensed water or dripping water
	Vibration strength	<5.9m/s ² (0.6g)
Other	Protection level	IP20
	Cooling	Forced air
	Installation method	0.75 ~ 315KW: wall-mounted; 350 ~ 500KW: floor-standing

Type and specifications

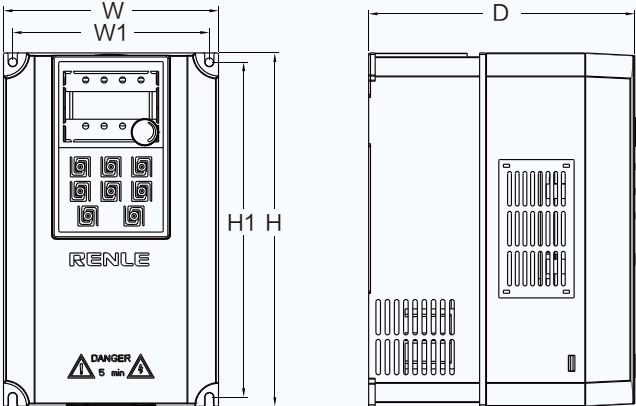
Model of inverter	Power (kW)	Input voltage (V)	Input current (A)	Output current (A)	Power of applicable motor (kW)
RNB2000	0.75	3-phase, 380V	3.4	2.5	0.75
RNB2001	1.5		5.0	3.8	1.5
RNB2002	2.2		5.8	5.3	2.2
RNB2004	4.0		12.0	9.5	4.0
RNB2005	5.5		18.5	14	5.5
RNB2007	7.5		22.5	18.5	7.5
RNB2011	11		30.0	25.0	11
RNB2015	15		39.0	32.0	15
RNB2018	18.5		45.0	38.0	18.5
RNB2022	22		54.0	45.0	22
RNB2030	30		68.0	60.0	30
RNB2037	37		84.0	75.0	37
RNB2045	45		98.0	92.0	45
RNB2055	55		123.0	115.0	55
RNB2075	75		157.0	150.0	75
RNB2090	90		188.0	180.0	90
RNB2110	110		221.0	215.0	110
RNB2132	132		267.0	260.0	132
RNB2160	160		309.0	305.0	160
RNB2185	185		344.0	340.0	185
RNB2200	200		384.0	380.0	200
RNB2220	220		429.0	425.0	220
RNB2250	250		484.0	480.0	250
RNB2280	280		539.0	530.0	280
RNB2315	315		612.0	600.0	315
RNB2350	350	665.0	650.0	350	
RNB2400	400	715	720	400	
RNB2500	500	890	860	500	

Note 1: Frequency inverters of power rating below RNB2037 (included) have built-in braking unit, whose power and resistance value should meet the requirements in the above-mentioned table. Otherwise there is risk of damage to the product. Frequency inverters of power rating between RNB2045 (included) and RNB2055 (included) can have either built-in or external braking unit. The default is external braking unit. The braking resistors of frequency inverters of power rating above RNB2075 (included) are external. They should be purchased by the customer itself.

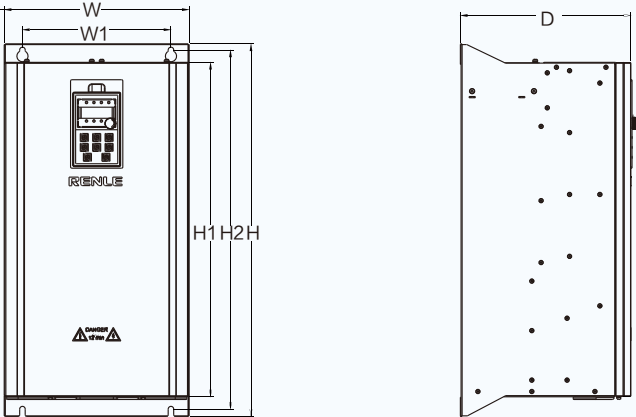
Note 2: Frequency inverters of power rating between RNB2018 (included) and RNB2037 (included) have built-in DC reactor. Frequency inverters of power rating between RNB2045 (included) and RNB2315 (included) have external DC reactor, which is purchased by the customer itself. Frequency inverters of power rating between RNB2350 (included) and RNB2500 (included) are equipped with AC input reactor.

Note 3: The above machines are for general type, not including special machine type. Customization of non-standard machine type is available.

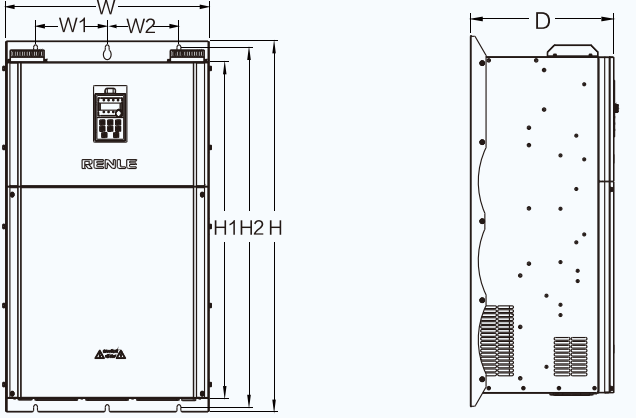
Outer dimensions, installation dimensions and weight



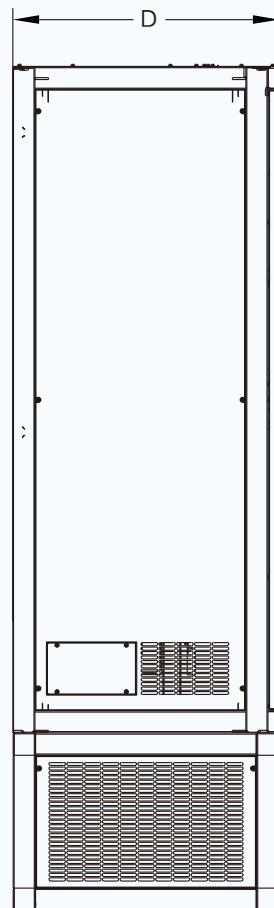
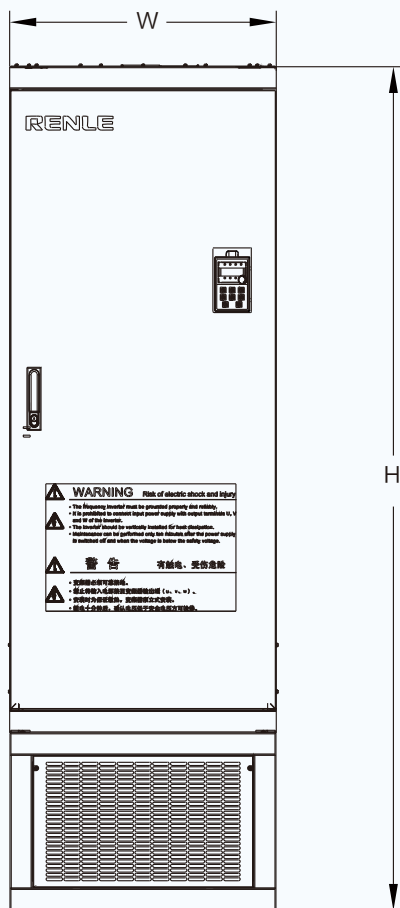
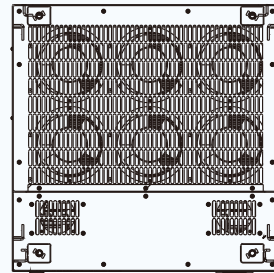
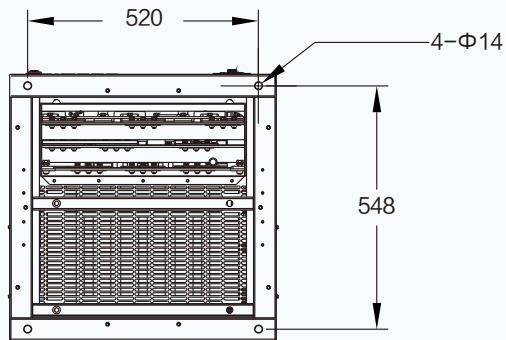
a) Applicable for RNB2000 (incl.) ~ RNB2011 (incl.)



b) Applicable for RNB2015 (incl.) ~ RNB2110 (incl.)



c) Applicable for RNB2132 (incl.) ~ RNB2315 (incl.)

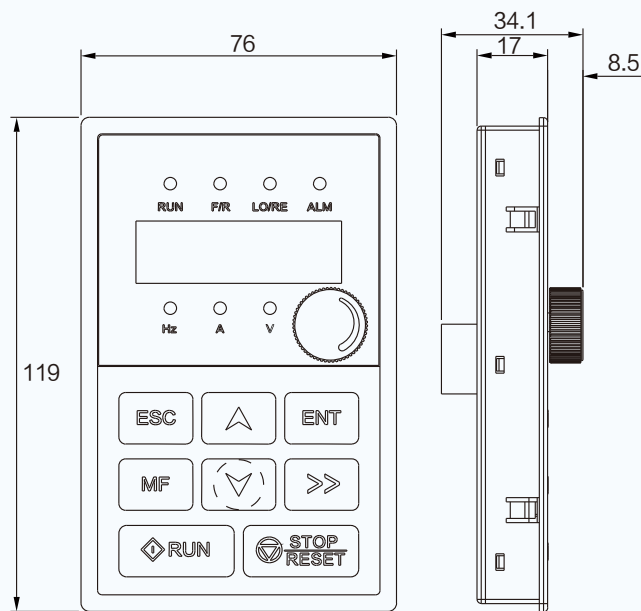


d) Applicable for RNB2350 (incl.) ~ RNB2500 (incl.)

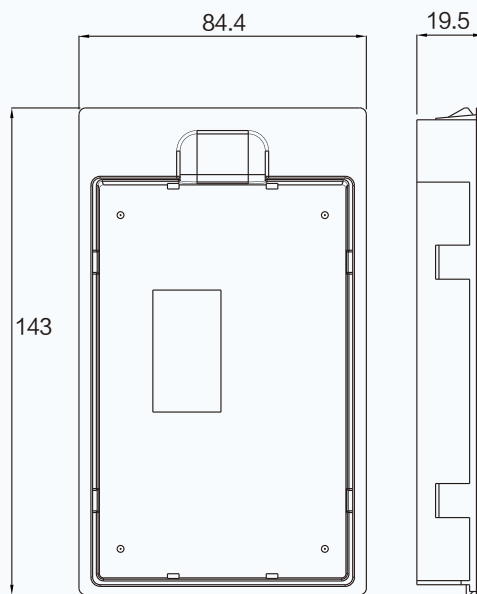
Table of Product Outer and Installation Dimensions

Model of inverter	Outer and installation dimensions (mm)						Diameter of Mounting Hole	Weight (kg)	Enclosure Type
	W	H	D	W1	H1	H2			
RNB2000	126	186	155	115	175	---	5	2.8	S0
RNB2001									
RNB2002									
RNB2004	140	230	172	128	218	---	5.5	3.5	S1
RNB2005									
RNB2007	165	285	200	153	273	---	5.5	5.2	S2
RNB2011									
RNB2015	214	410	203	184	360	385	7	11.5	S3
RNB2018									
RNB2022									
RNB2030	250	450	230	220	400	425	7	19	S4
RNB2037									
RNB2045	300	600	280	240	540	580	9	30	S5
RNB2055									
RNB2075	330	660	330	250	600	640	9	56	S6
RNB2090									
RNB2110									
RNB2132	485	850	355	180	772	826	11	110	S7
RNB2160									
RNB2185									
RNB2200									
RNB2220	683	940	355	240	860	910	13	165	S8
RNB2250									
RNB2280									
RNB2315									
RNB2350	600	1700	600	---	---	---	---	200	S9
RNB2400									
RNB2500									

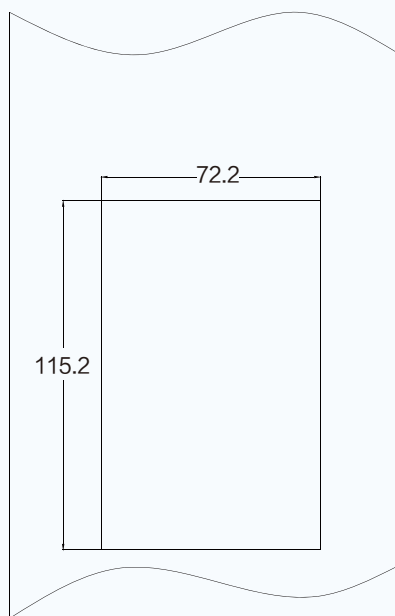
Shape and dimensions of operation panel



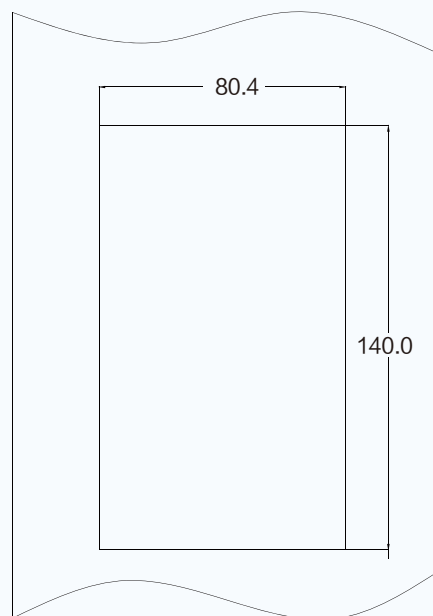
a) Outer diagram of panel body



b) Outer diagram of panel support

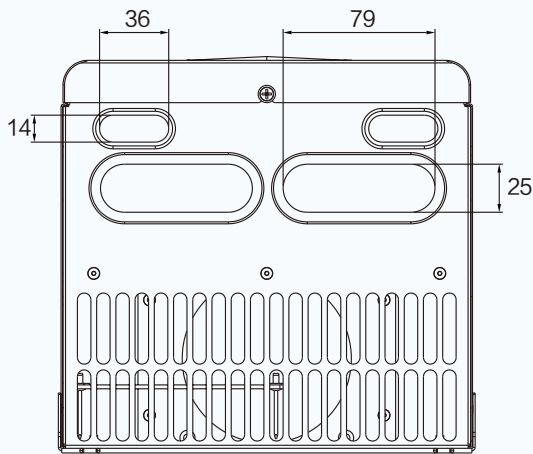
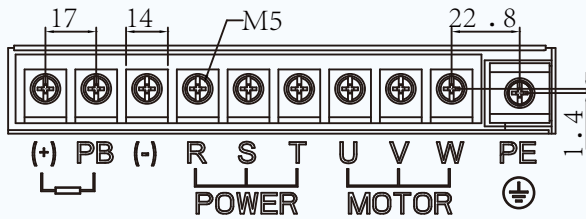


c) Hole diagram of panel body

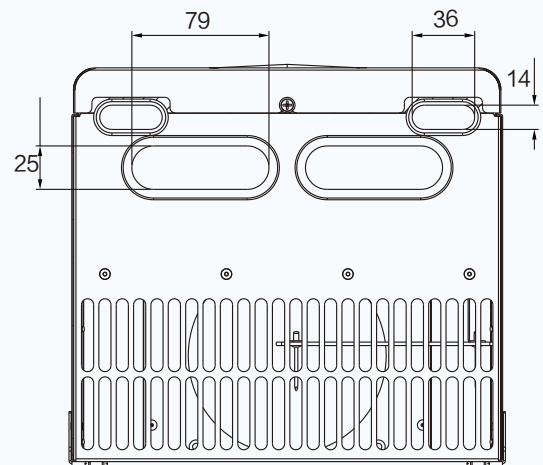
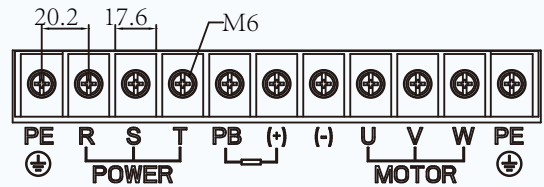


d) Hole diagram of panel support

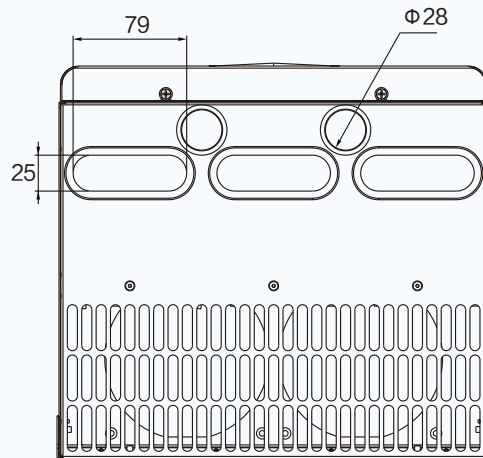
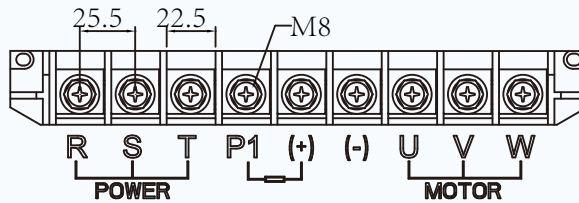
Diagram of main circuit wiring terminals and sizes of overcoils



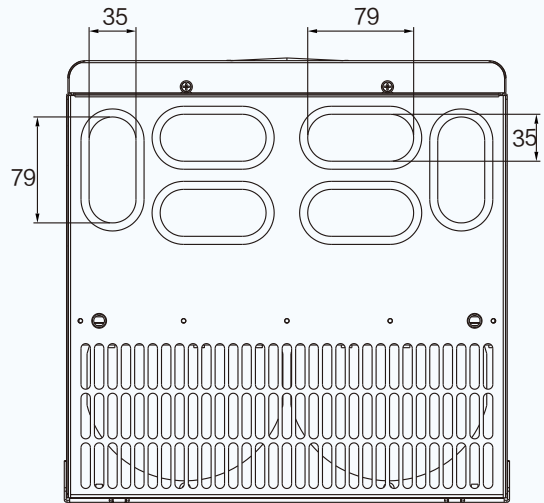
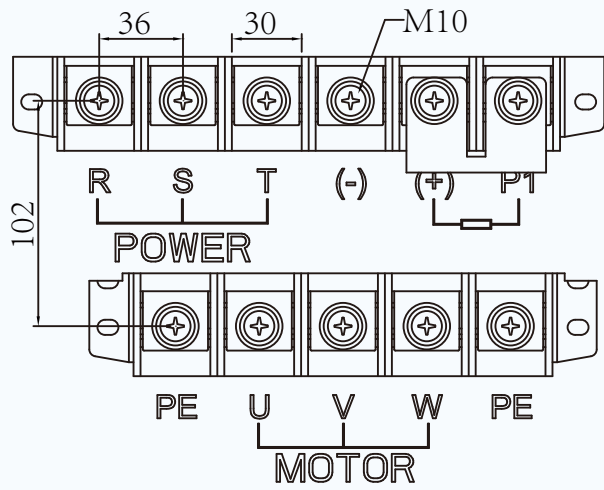
a) Applicable for RNB2015 (incl.) ~ RNB2022 (incl.)



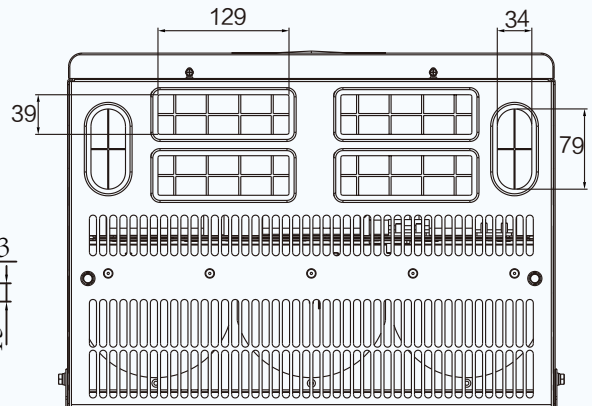
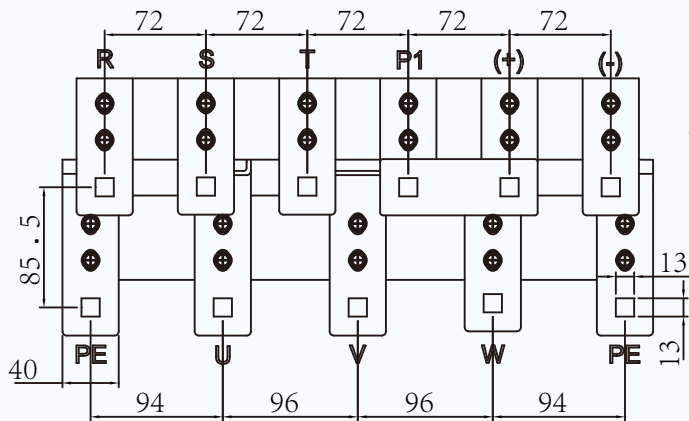
b) Applicable for RNB2030 (incl.) ~ RNB2037 (incl.)



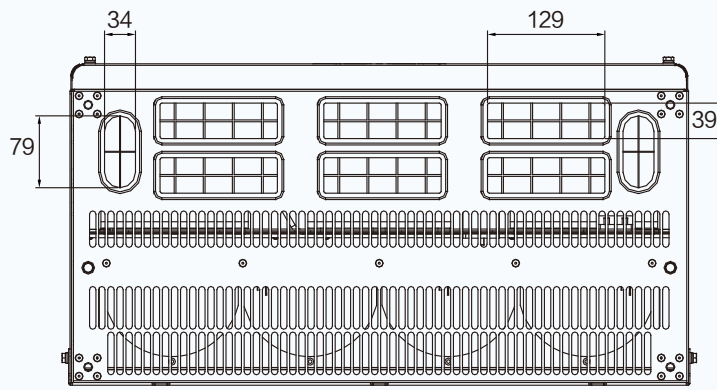
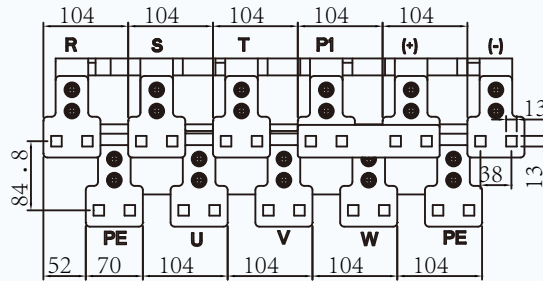
c) Applicable for RNB2045 (incl.) ~ RNB2055 (incl.)



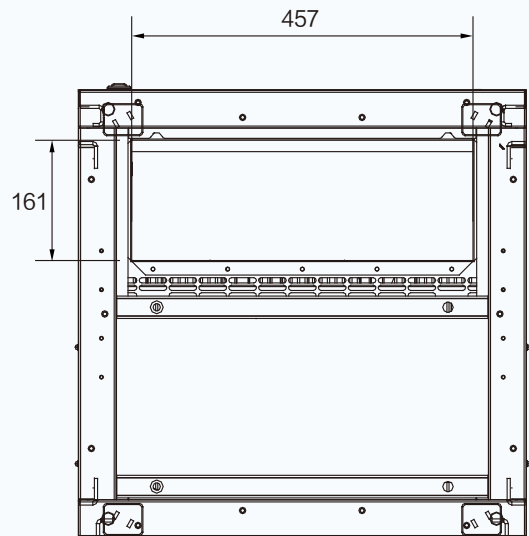
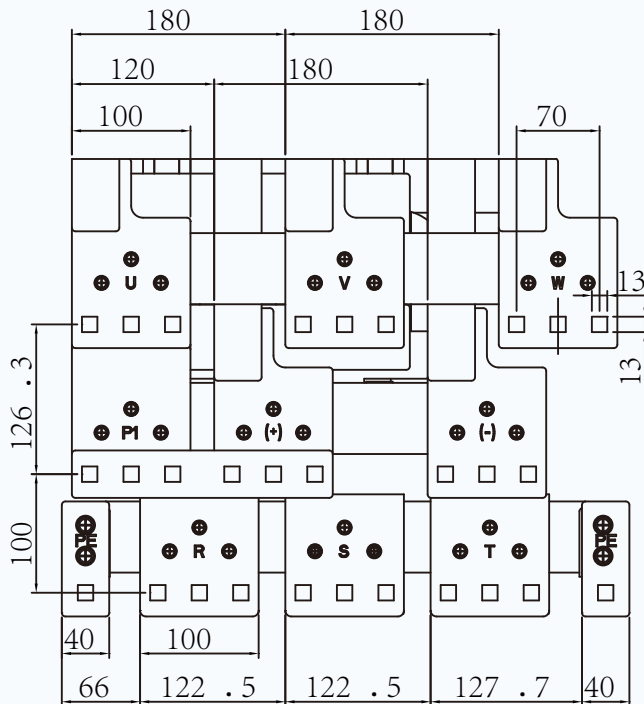
d) Applicable for RNB2075 (incl.) ~ RNB2110 (incl.)



e) Applicable for RNB2132 (incl.) ~ RNB2200 (incl.)



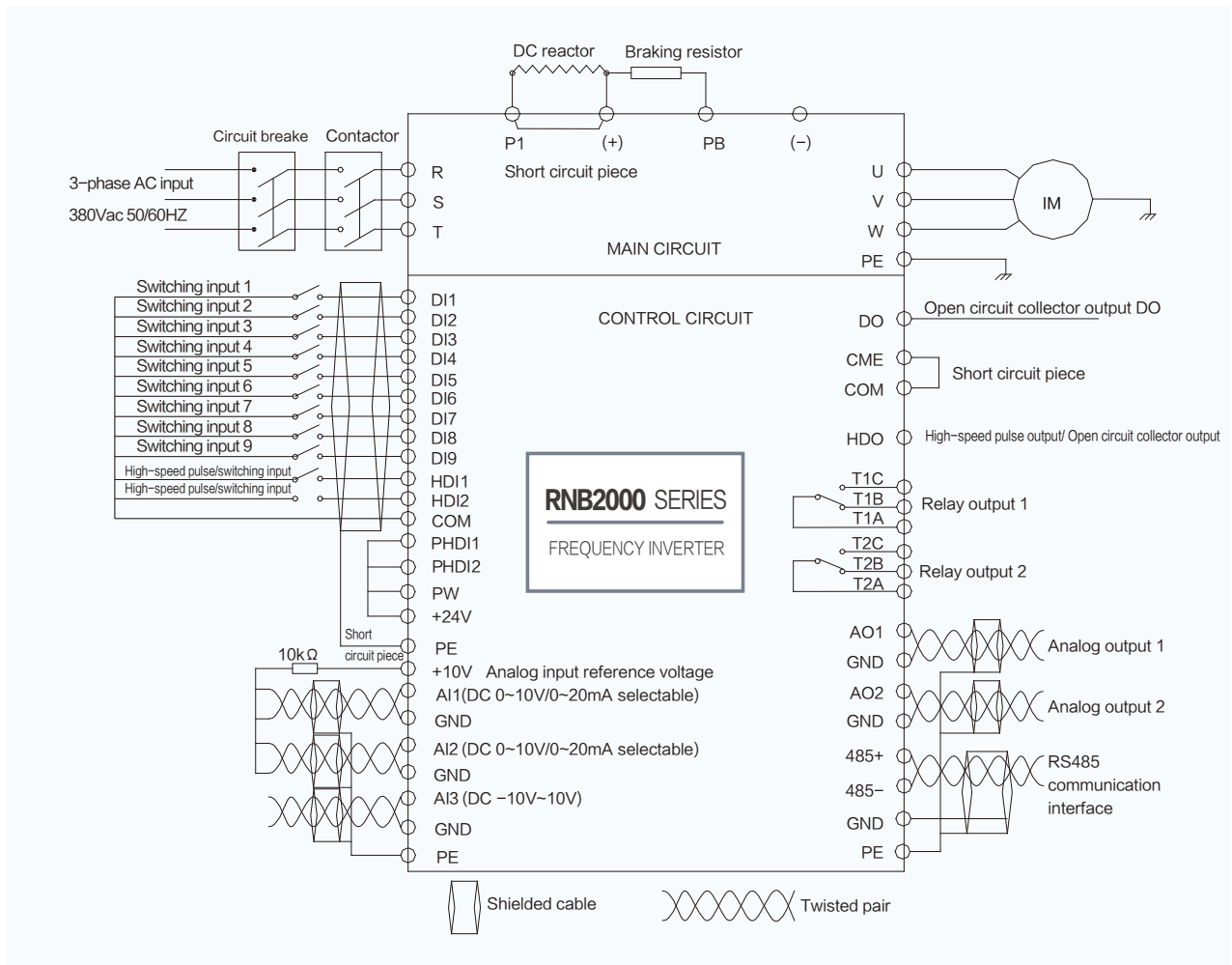
f) Applicable for RNB2220 (incl.) ~ RNB2315 (incl.)



g) Applicable for RNB2350 (incl.) ~ RNB2500 (incl.)

Standard Wiring Diagram

Please refer to the following diagram for wiring of the frequency inverter. Make only the connection of the main circuit to start the motor when operating the frequency inverter with keyboard.



1. AI1 is used to select input voltage or current signal. Pin X2 in the control panel determines the input signal type.
2. AI2 is used to select input voltage or current signal. Pin X3 in the control panel determines the input signal type.
3. AO1 is used to select output voltage or current signal. Pin X4 in the control panel determines the input signal type.
4. AO2 is used to select output voltage or current signal. Pin X5 in the control panel determines the input signal type.
5. X7 and X8 are extended card interface.
6. X9 is the main signal interface, used for signal connection between the control panel and the driving board.

7. X10 is the socket for download of the CPU of the control panel and MICRO USB interface. When the main circuit is not powered on, it offers convenience to the user for supplying power to the control panel and for parameter setting through MICRO USB connection wire with the help of external 5V power supply, such as power bank or USB interface of the notebook computer etc

8. X11 is the external keyboard interface.

9. X13, X14 and X15 are special pins for download of the CPU of the control panel (setting has been performed at factory. The user does not have to make modification).

10. If external braking resistor is required, make sure the wiring is correct during connection of the braking resistor.

11. In the figure “⊙” is the terminal of the main circuit, and “○” is the control terminal.

Description of Control Circuit Terminal

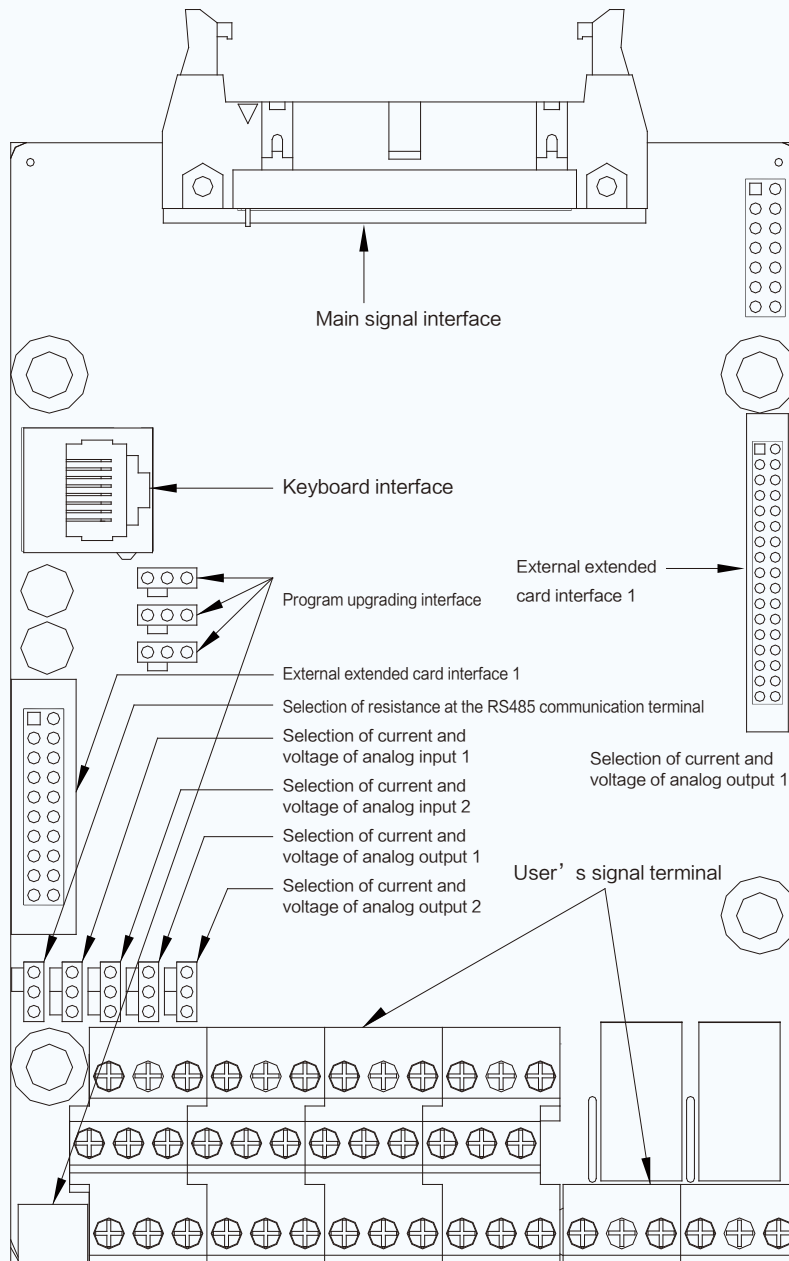


Figure: Distribution of control panel interface

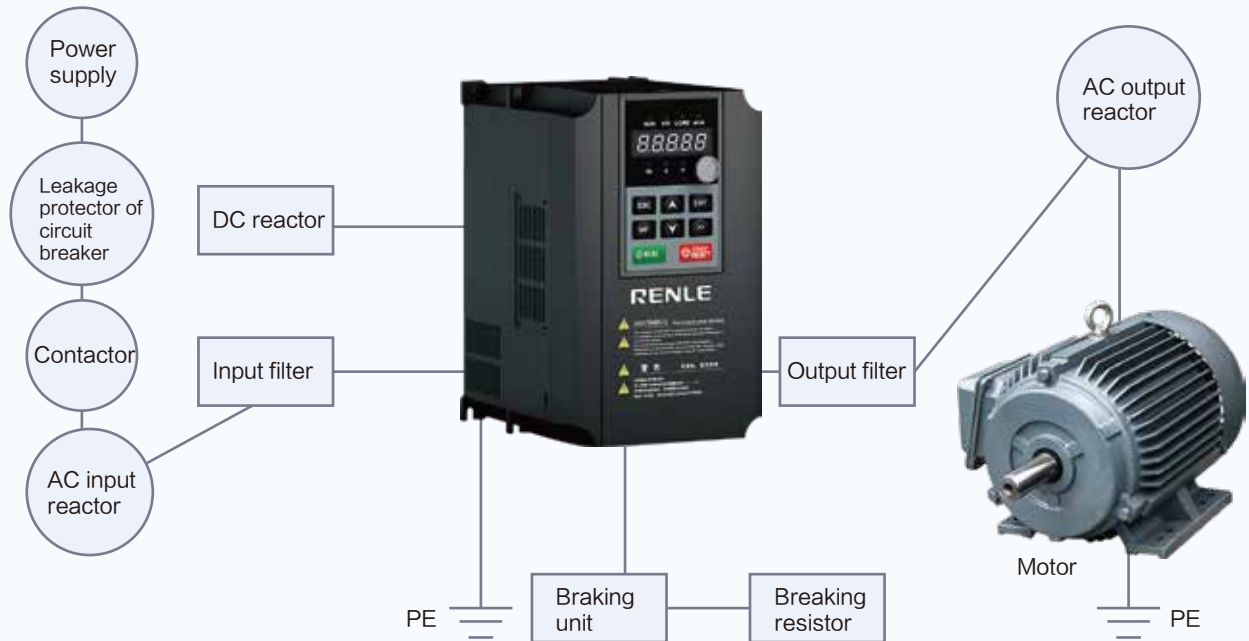
AI1	AI2	AI3	DI1	DI2	DI3	DI4	DI5	DI6	DI7	DI8/CH	DI9/CL						
+10V	GND	A01	A02	GND	COM	HD0	HD11	HD12	COM	DO	COM						
PE	485+	485-	COM	PW	+24V	+24V	P_HDI1	P_HDI2	COM	CME	COM	T1A	T1B	T1C	T2A	T2B	T2C

Figure: Diagram of user's terminals in the control panel

Table of Functions of Control Board Terminal

Type	Terminal	Terminal Function Description	Specification
Switch input	+24V	+24V power supply	24V ± 10%, internally isolated from GND. Max. load 200mA
	PW	External power supply input terminal (digital input terminal power source)	Short connected with +24V at factory
	DI1 ~ DI9	Switch input terminal 1~9	Input specification: 24V, 5mA
	HDI1, HDI2	High speed pulse input or switching input	Pulse input frequency range: 0~50KHz. High level voltage: 24V
	PHDI1, PHDI2	External power supply input terminals of DI1/HDI2	Short connected with +24V at factory
	COM	+24V power supply or external power source	Internally isolated from GND
Switching output	DO	Open collector output. The common terminal is CME	External voltage range: 0~24V
	CME	Open collector output common terminal	Short connected with COM at factory
	HDO	High speed pulse output or open collector output. The common terminal is COM	Pulse output frequency range: 0~50KHz
	COM	Common terminal of HDO	Internally isolated from GND
Analog Input	+10V	+10V power output supplied by the inverter	Output current range: 0~50mA (if the potentiometer is connected between +10V and GND, its resistance should be no less than 2KΩ)
	A 1	Analog input terminal 1	Input voltage and current can be selectable Input voltage range: 0V~10V Input current range: 0/4~20mA
	A 2	Analog input terminal 2	Input voltage and current can be selectable Input voltage range: 0V~10V Input current range: 0/4~20mA
	A 3	Analog input terminal 3	Input voltage range: -10V~10V
	GND	Analog ground	Internal isolated with COM
Analog Output	AO1~AO2	Analog output terminal	Output voltage and current should be selectable Output voltage range: 0~10V Output current range: 0~20mA
	GND	Analog ground	Internally isolated from GND
Relay Output	T1A/T1B/T1C	Relay output	T1A~T1B: normally closed T1A~T1C: normally open Contact capacity: 250VAC/3A, 30VDC/1A
	T2A/T2B/T2C	Relay output	T2A~T2B: normally close T2A~T2C: normally open Contact capacity: 250VAC/3A, 30VDC/1A
Communication interface	485+/485-	RS485communication interface	RS485 communication interface

Description of peripheral components of the product



Configuration diagram of the inverter's peripheral components

Table of Functions of Peripheral Component

Name	Description of function
Circuit breaker	Application: To cut off the power when fault occurs in the back equipment and protect the equipment.
	Selection: Select the breaking current of the circuit breaker as twice the breaking current of the frequency inverter
Leakage protector	The high frequency leakage current is unavoidable due to the PWM high frequency output chopper voltage of the frequency inverter. Therefore special leakage protector must be selected.
Contactor	Please do not switch on and off the contactor frequently. This may result in the fault of frequency inverter, and do not start/stop the frequency inverter by switching on/off the main circuit. This may affect the service life of the inverter.
Input reactor and DC reactor	To improve the power factor
	To improve the influence caused by the imbalance of input power supply to the system.
	To suppress the high order harmonics and reduce the transmission of the harmonic to the outside.
	To restrain the influence of pulse current to the rectifier bridge effectively.
Input and output filter	To reduce the interference of frequency inverter to the peripheral devices.
Braking unit, braking resistor	To consume the feedback energy of the motor and quickly realize braking during braking.
Output reactor	To reduce the frequency inverter protection caused by the leakage current.
	It is suggested to install the output reactor when the cable length is longer than 100m between the frequency inverter and the motor.

Application case of the product

Application in hoisting industry



Feature

High start torque and fast response.

Vector control without PG, 0.25Hz, reaching 180% of output torque, torque response time <10ms; Vector control with PG, 0Hz, 200% of output torque is available, torque response time <5ms; These can prevent accidents such as sliding of the load due to inadequate torque under low speed.

Switching of dual motors

Two groups of motor parameters can be set individually for the instance when one inverter drives two different motors for walk or translation.

Contracting brake function

Regarding to the contracting brake logic control and monitoring function of lifting industry, Renle' s RNB1000 series inverters more flexibly realize stable start and stop of hoister and effectively prevent the slide and fall of the object.

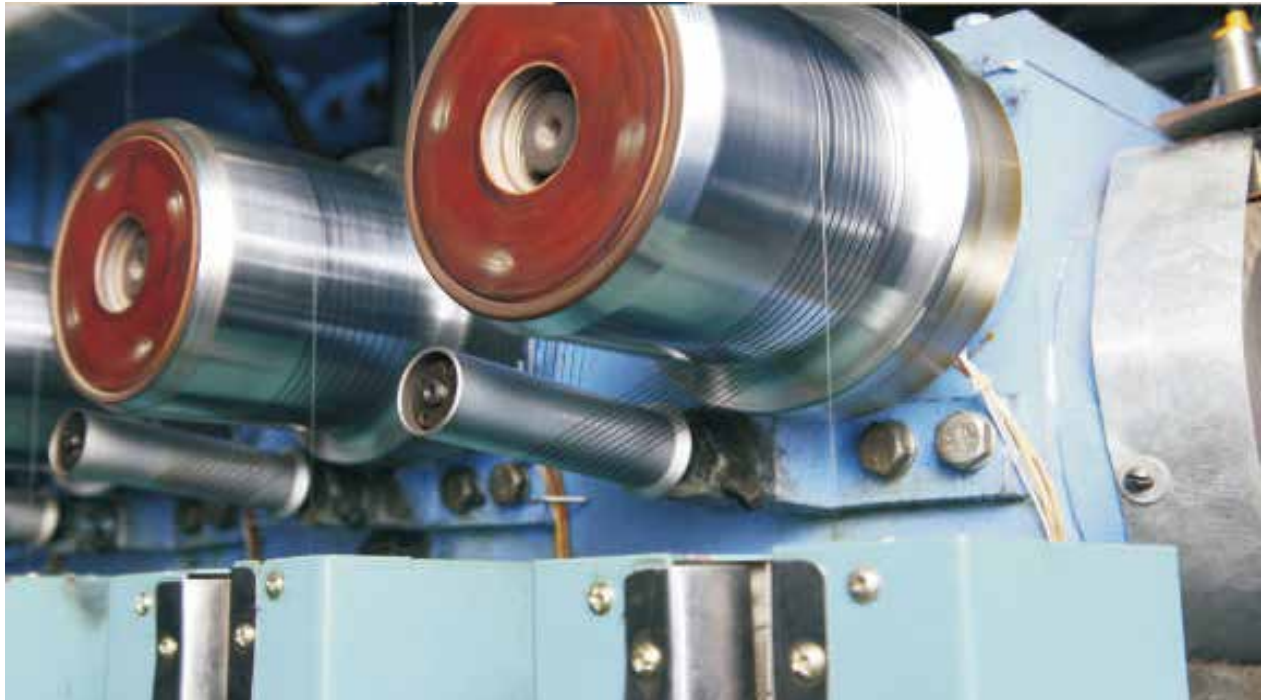
Perfect protection functions

All-around alarming and protection functions meet the safety requirements of the industries.

Application

Tower cranes, bridge cranes, port machines, electric hoists, construction lifts, hoist doors, electric winches and mine hoisters.

Application in winding industry



Feature

Flexible rewinding and unwinding methods

Multiple roll diameter calculation methods are available. Constant linear velocity and constant tension control can be realized for the central rewinding and unwinding occasions.

Function designs in compliance with the technological requirements of industries.

Friction compensation and inertia compensation function ensures consistent tension during acceleration and deceleration for compensation adjustment of different mechanical equipment.

Perfect forming control

Multiple ways to control the tension taper ensure good forming effect of unwinding and rewinding.

Perfect protection functions

All-around alarming and protection functions meet the safety requirements of the industries.

Abundant interface design and parameter copy function

The function offers convenience to design and equipment commissioning and simplifies the work of completing clients.

Application

Printing machinery, packing machinery, film blowing machine and wire drawing machine.



雷诺尔

Shanghai RENLE
Science&Technology Co., Ltd.

National Key Projects



Three Gorges Project

Beijing Olympic Rowing-Canoeing Park

Beijing Olympic Games Supporting Projects

Beijing Wukesong Gymnasium

Government Offices Administration of the State Council

CCTV, China

Beijing Capital International Airport



South-to-North Water Diversion Project

Huangshan-Quzhou-Nanping Expressway

West-to-East Electricity Transmission Project

West-to-East Natural Gas Transmission Project

Stations of Shanghai Magnetic Levitation Rail Transportation

Expo 2010 Shanghai China Supporting Projects

Shanghai Pudong Airport



Shanghai International Automobile Museum

Shanghai Hongqiao Airport Extension Project

Terminal of Inner Mongolian Hohhot Baita International Airport Extension Project

Shenyang Olympic Center

Qingdao Olympic Center

Jinan Olympic Center



Chengdu Shuangliu International Airport Extension Project

Chongqing Yuanjiagang Olympic Sports Center

Guangzhou New Baiyun International Airport

Wuhan Tianhe Airport

Shanghai Metro Line 3

Chongqing International Convention & Exhibition Center

Shanxi Wanjiashai Yellow River Diversion Project

Qinghai Xiaoyou Mountain Ecological Engineering

Tianjin Eight Large Regions Heating Engineering

Shandong Heze City Yellow River Diversion Project

Yangshan Deepwater Port Project of Shanghai International Shipping Center

Sichuan Xichang Satellite Launching Center

Guangxi Longtan Hydroelectric Project



Gansu Satellite Launching Center
Yunnan Honghe River Nansha Hydropower Station
Datang International Power Generation Co., Ltd.
Guizhou Kailin (Group) Co., Ltd
Inner Mongolian Shenhua Group Corporation Limited
Shanghai Petrochemical Company Limited
Baosteel Group Corporation in Shanghai
Taizhou Petrochemical Co., LTD
Anshan Iron and Steel Group Corporation
Jilin Petrochemical Company
Wuhan Iron and Steel (Group) Corp.
Liuzhou Chemical Industry Co., Ltd, Guangxi
Beijing Shougang Company Limited
SINOPEC Cangzhou Company
China Great Wall Aluminum Corporation
SINOPEC Luoyang Company
Guangxi PingguoAluminium Company
Yueyang Petrochemical Factory
Liuzhou Iron and Steel Co., Ltd
Sinopec Nanjing Chemical Industry Co., Ltd
Magang (Group) Holding Company Ltd
SINOPEC Beijing Yanshan Company
Shanxi Zhongyang Iron and Steel Co., Ltd.
PetroChina Urumqi Petrochemical Company
Daqing Oilfield Limited Company
PetroChinaJinxi Petrochemical Company
SINOPEC Shenli Oilfield
CNPC Dushanzi Petrochemical Company
PetroChinaLiaohe Oilfield
Beijing Financial Street
PetroChinaTarim Oilfield
Panda Museum of Chengdu Panda Ecological Park
Karamay Oilfield
Qingdao Beihai Shipyard
PetroChinaChangqing oilfield

