YCB600 Series Vector

General

An inverter is an electronic device used to control the speed of a motor. It achieves precise control of motor speed by changing the voltage and frequency that the motor receives.

Variable frequency drives are widely used in industrial applications for precise control of motor speeds, such as in fans, pumps, compressors, etc.

Operating condition

1. Ambient temperature: -10°C~+45°C
2. Relative humidity: ≤20% at 40°C; ≤90% at 20°C
3. Altitude: ≤2000m
4. Environmental conditions: no harmful gases and vapors, no conductive or explosive dust, no severe mechanical vibration

Type designation

YC	B	600	-	2	S	0004G

YC B 600 2 S 0004G

- 0004G:0.4KW,0007G:0.75KW,0015G:1.5KW,0022G:2.2KW,0022G:2.2KW,0030G:3KW,0040G:4KW,0055G:5.5KW,0075G:7.5KW,0110G:11KW
- S:Single-Phase T:Three-Phase
- 2:220V 4:380V
- Design number
- Frequency converter
- CNC

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Technical data

Inverter Model (A: Economy Type)	Input Voltage(V)	Rated OutputCurrent (A)	Adaptive motorPower (kw)
YCB600-2S0004G	220-240	2.4	0.4
YCB600-2S0007G	220-240	4.5	0.75
YCB600-2S0015G	220-240	7.0	1.5
YCB600-2S0022G	220-240	10.0	2.2
YCB600-2S0030G	220-240	11.0	3.0
YCB600-4T0007G	360-440	2.1	0.75
YCB600-4T0015G	360-440	3.7	1.5
YCB600-4T0022G	360-440	5.0	2.2
YCB600-4T0030G	360-440	7.0	3.0
YCB600-4T0040G	360-440	9.0	4.0
YCB600-4T0055G	360-440	13.0	5.5
YCB600-4T0075G	360-440	17.0	7.5
YCB600-4T0110G	360-440	25.0	11.0

Technical Indications

Item		Item Description
Input	Rated voltage & Frequency	Single-phase/3 Phase 200-240VAC,3 Phase 360-440VAC,50/60Hz
	Allowable voltage working range	Voltage fluctuation range:±10% Voltage unbalance rate:<3%,Frequency fluctuation:≤5%
Ouput	Rated voltage Frequency	3 Phase 0~Input voltage VAC
		0.0~600Hz
	Overload capacity	110% long-term,150% 1 minute,180% 5seconds
Control your performance	Control mode	V/F control,Simple vector control,Advanced vector control Torque contro
	Frequency resolution	Digital setting:0.1Hz Analog setting:Maximum frequency×0.1%
	Frequency accuracy	Digital setting:0.1Hz Analog setting:within 0.2%of the maximum output frequency
	V/F Voltage frequency characteristic	Three modes:the first is a linear torque characteristic curve, the second is a square torque characteristiccurve,and the third is a user-set V/F curve.
	Automatic limit current and limit voltage	No matter in the process of acceleration,deceleration or stable operation,it will automatically detect the motor stator current and voltage,and suppress it within the allowable range according to the unique algorithm,minimizing the possibility of system fault tripping.
	Vector voltage-frequency characteristics	Automatically adjust output voltage-frequency ratio according to motor parameters and uniquealgorithm.
	Torque characteristics	Starting torque: 100% rated torque at 5.0Hz(VF control) 150% rated torque at 1.0Hz(vectorcontrol)
	Current and suppression	Full current closed-loop control,completely avoid current impact,with perfect overcurrent and overvoltage suppression function

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Technical Indications(continued)

Item		Item Description
Control your performance	Under voltage suppression during operation	Especially for users with low grid voltage and frequent grid voltage fluctuations, even if the voltage is lower than the allowable range, the system can maintain the longest possible running time according to the unique algorithm and residual energy allocation strategy
	Slip compensation	Setting range:0~100%,can automatically adjust the output frequency of the inverter according to the motor load, and reduce the rotation speed change of the motor caused by the load change
	Carrier frequency	2.0~20.0KHz
	Automatic voltage regulation operation	Dynamic voltage stabilization, static voltage stabilization, and no voltage stabilization can be selected according to the need to obtain the most stable operation effect.
	Built-in PID	It can easily constitute a closed-loop control system, suitable for process control such as pressure control and flow control
Running	Acceleration and deceleration time	0.1~999.9s Continuous can be set
	Running command	Operation panel control, external terminal control, serial communication control
	Frequency setting	Panel potentiometer setting, panel key setting, external control terminal increase/ decrease setting, analog voltage or current signal setting,terminal combination setting, serial communication setting, etc.
	Output signal	One programmable relay output, one analog output
Brake	Energy braking	Energy braking initial start voltage,return voltage andenergy braking rate are continuously adjustable
	DC braking	Start and stop can be selected separately, action frequency 0.0~upper limit frequency, action current level 0~50%, action time 0~30s, continuous can be set
Other functions		Frequency upper and lower limit, reverse running limit, jog function, counter, skip frequency operation, instantaneous power failure restart, fault automatic reset, etc.
Protection function		Overcurrent,overload, overvoltage, undervoltage, overheating,short circuit, etc.
LED Display		Can display the real-time of inverter running status, monitoring parameters,function parameters,fault codes and other information
Optional Parts		Brake components, remote operation panel and connecting cable
Structure	Cooling method	Forced air cooling
	Installation method	Wall-mounted, rail-mounted

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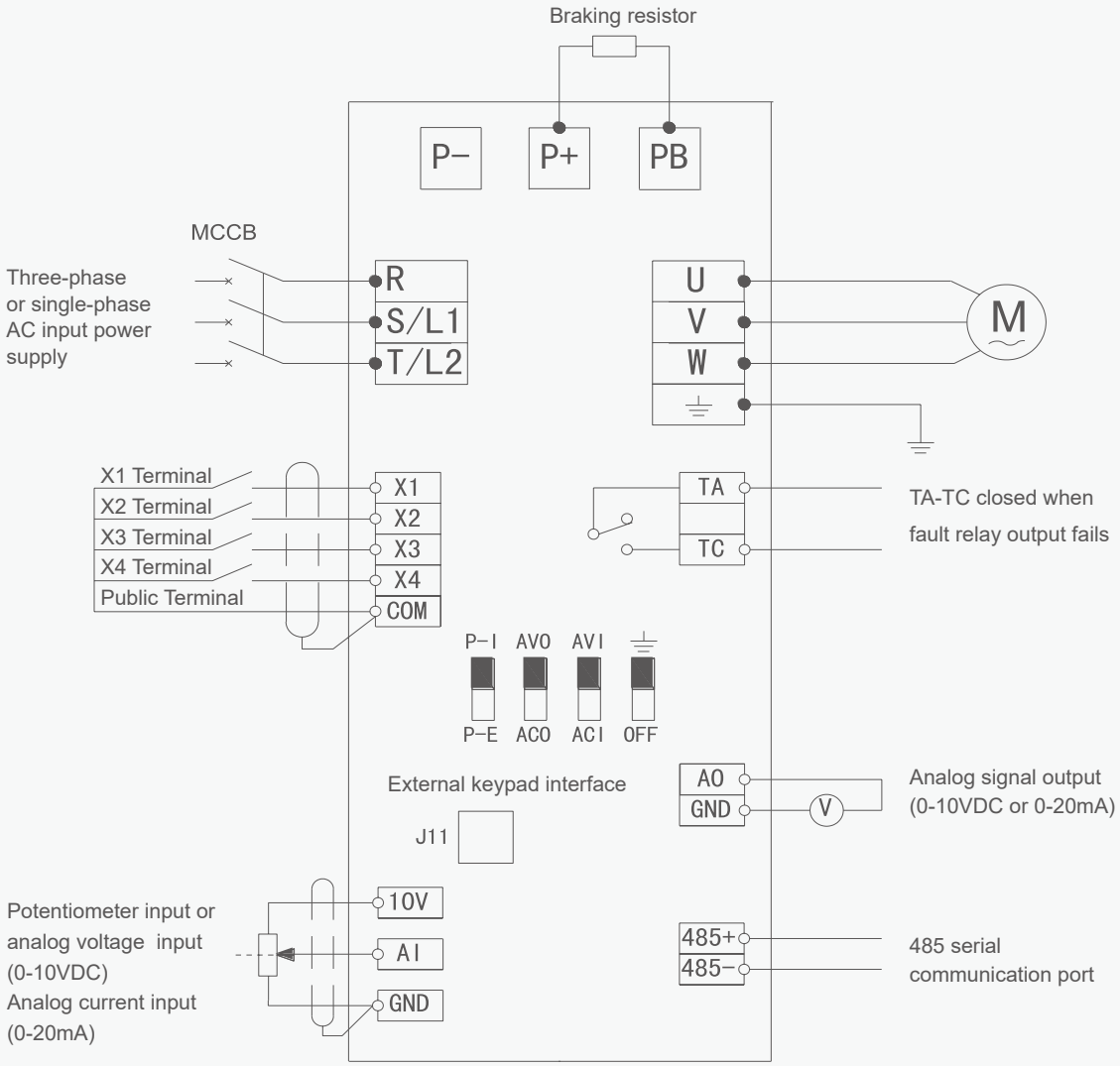
Wiring diagram

Basic Wiring Diagram of Inverter



Basic Wiring Diagram

Dynamic voltage stabilization, static voltage stabilization, and no voltage stabilization can be selected according to the need to obtain the most stable operation effect.

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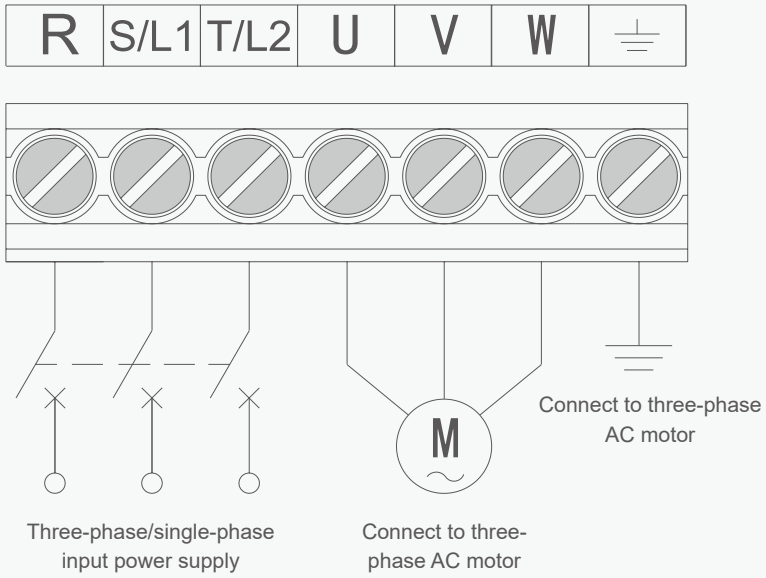
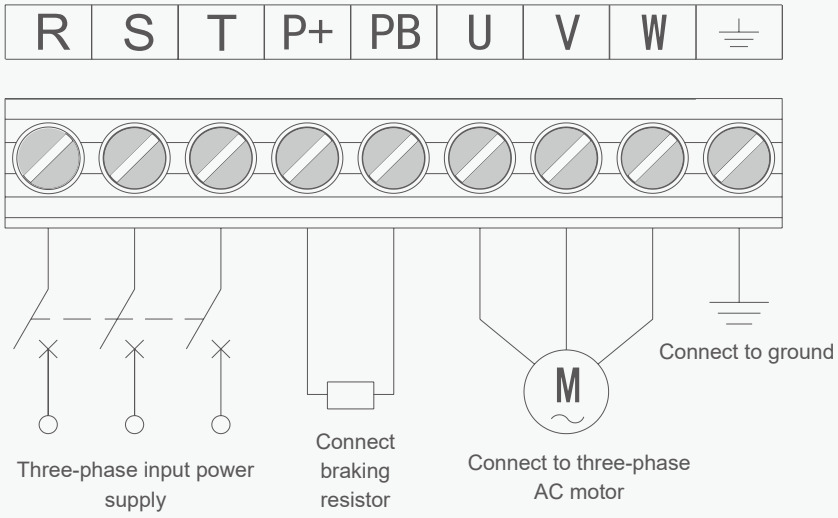
Main terminal



Main circuit terminal diagram 1

Applicable models: YCB600-2S0004G-YCB600-2S0022G
YCB600-4T0007G-YCB600-4T0030G



Main circuit terminal diagram 2

Applicable models: YCB600-2S0030G-YCB600-2S0055G
YCB600-4T0040G-YCB600-4T0110G

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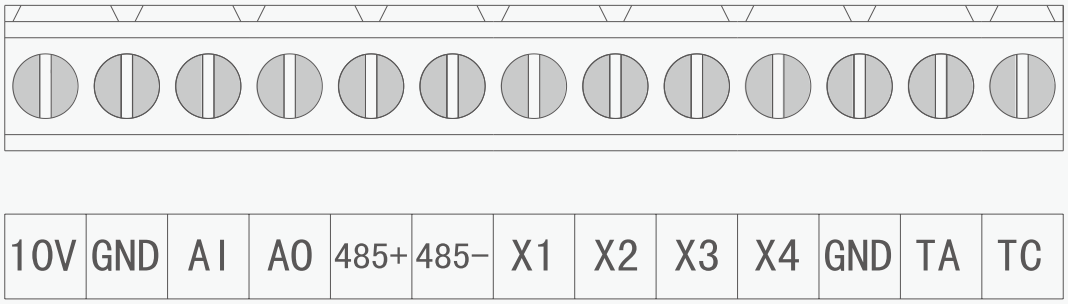
Control terminals

Control circuit terminals are shown in



Control circuit terminals

Control circuit terminal

Category	Terminal label	Function Description	Electrical Specifications
Analog power terminal	10V	External analog given power supply, and GND, AL terminals connected to potentiometers, frequency setting can be performed	OUTPUT,10V/10mA DC voltage
Public end	GND	Signal common terminal	
Analog input terminal	AI	Analog voltage signalinput, reference ground isGND	INPUT, 0~10V DCvoltage
Analog output terminal	AO	Programmable analog voltage output,the function is set by parameter F2.10,the reference ground is GND	OUTPUT,0~10V DC voltage Or 0~20mA DC current
Communi cation terminal	485+	Positive end of communication signal	
	485-	Communication signaln negative terminal	

Control circuit

Category	Terminal label	Function Description	Electrical Specifications
Multi-funct ion inputterminal	X1	It is valid when Xn(n=1,2.3.4)-GND is short-circuited,and its functions are respectively set by parameters F2.13~F2.16	INPUT, 0~5V levelsignal, Active low, 5mA
	X2		
	X3		
	X4		
Programmable outputterminals	TA	Relay contact output,Normal: TA-TC disconnected;When in action: TA-TC is closed;The function is set byparameterF2.20	Contact Rating:NO: 240VAC-3A
	TC		

J1	
⏚ G	Indicates that the main control board is grounded
OFF	Indicates that the ground of the main control board isdisconnected
J2	
AVO	Indicates analog AO output voltage signal, 0-10V
ACO	Indicates analog AO output current signal, 0-20mA
J4	
P-I	Indicates that the built-in keyboard potentiometer is selected
P-E	Indicates the selection of an external keyboard potentiometer
J5	
AVI	Indicates analog AI input voltage signal, 0-10V
ACI	Indicates the analog AI input current signal, 0-20mA

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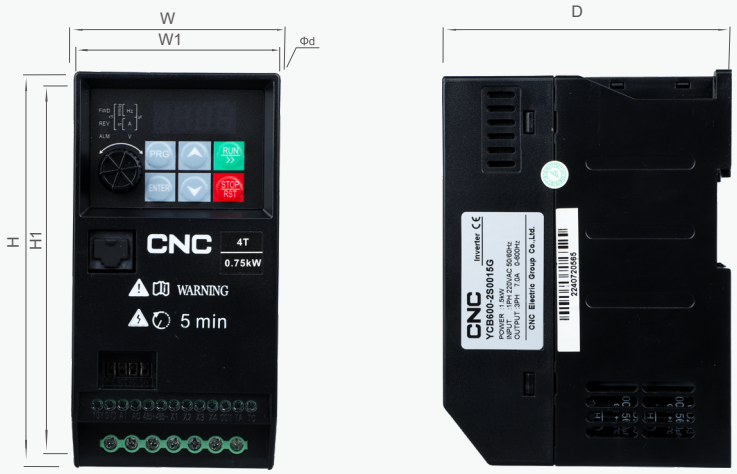
Overall and mounting dimensions(mm)



Inverter Qutline Dimension

Inverter Model	Power(kg)	Dimension(MM)					
		H	H1	W	W1	D	d
YCB600-2S0004G	0.4	146	136.5	72	63	105	Φ4.5
YCB600-2S0007G	0.75						
YCB600-2S0015G	1.5						
YCB600-2S0022G	2.2						
YCB600-4T0007G	0.75						
YCB600-4T0015G	1.5						
YCB600-4T0022G	2.2						
YCB600-4T0030G	3.0						
YCB600-2S0030G	3.0	182	172.5	87	78	127	Φ4.5
YCB600-4T0040G	4.0						
YCB600-4T0055G	5.5						
YCB600-4T0040G	4.0	240	229	118	106	155	Φ5.5
YCB600-4T0055G	5.5						
YCB600-4T0075G	7.5						
YCB600-4T0110G	11						

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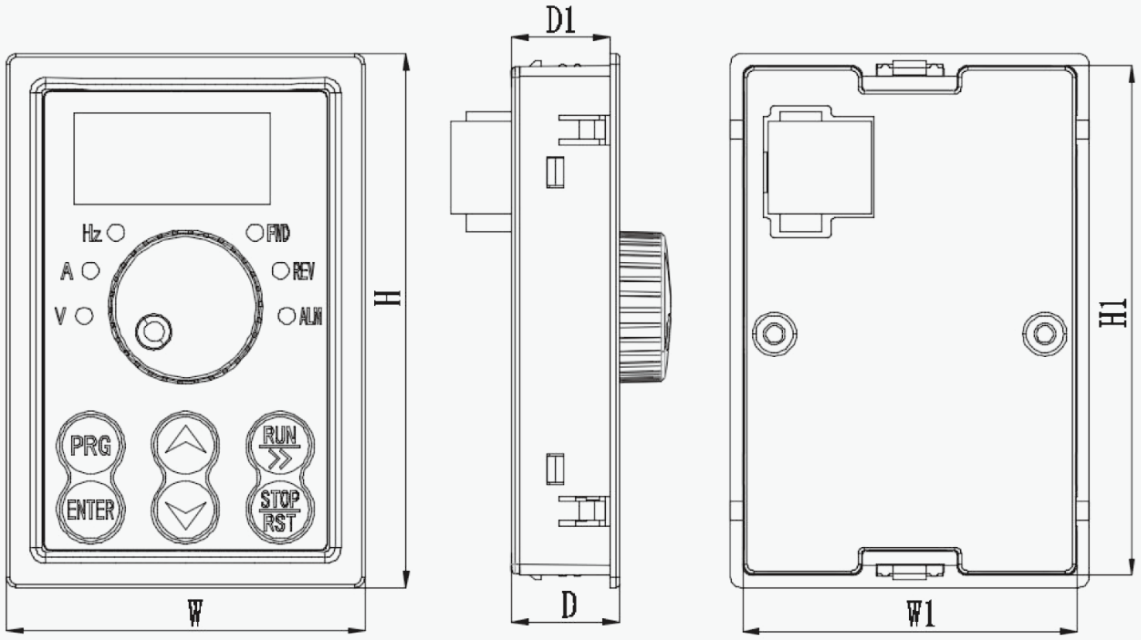
Keypad Outline Dimension& Mounting holes Dimension



Keypad Dimension

Dimensions of keypad base holes				Keypad thickness	
W	W1	H	H1	D	D1
53mm	49.4mm	79mm	75.4mm	15.9mm	14.5mm

Tips:

- It needs to be equipped with an external display panel,WVhen the YCB600 series operation panel is led out.
- The opening size of the external display panel is:width 49.4mmx height 75.4mm.