

YCB1000 Variable Frequency Drive



Product Features

- 1. Sensorless vector control with the best low frequency compensation ability
- 2. Designed with special radiator tree and switch power, all of such kinds of new technologies improvethe performance
- 3. Several protective technologies and new component have been applied to the circuit, notably improve the anti-interference ability
- 4. Realize the preset frequency, or central frequency adjustable swing frequency function
- 5. Several phases speed operation controlled by build-in PLC or controlling terminal
- 6. Modulation Mode: space vector pulse width modulation SVPWN
- 7. Automatic energy saving operation: automatically optimize V/F curve to save the energy
- 8. Switch input channel: forward and reversal rotation control, 8 channel program switch input, 35 kinds of function
- 9. Strong overload performance: 150% rated corrent for 1 minute, 180% rated current for 3 seconds
- 10. Communication function: RS485 standard communication interface, support ASCII and RTU format MODBUS communication protocol

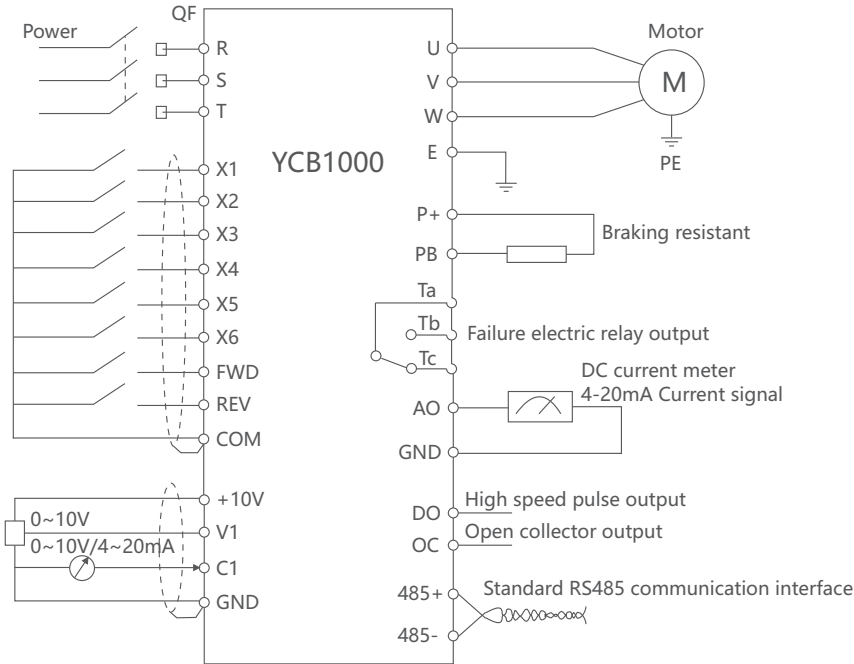
Application Fields

- 1. Applied with boiler drumm, induced draft fan, coal mine ventilator, etc
- 2. Applied in central air-condition energy saving optimization, air compressor energy saving renovation, music fountain, etc
- 3. Applied with water circulating pump, water supply pump, clear water pump, sewage pump, purification pump, constant pressure water supply, oilfield water injection pump, oil pump, etc
- 4. Applied with mine conveyer, coal feeder, mixer, pulverizer, converter, blast furnace, etc
- 5. Applied with extruder, bottle blowing machine, film blowing machine, film conveying belt, centrifugal separator, compressor, sprayer, etc

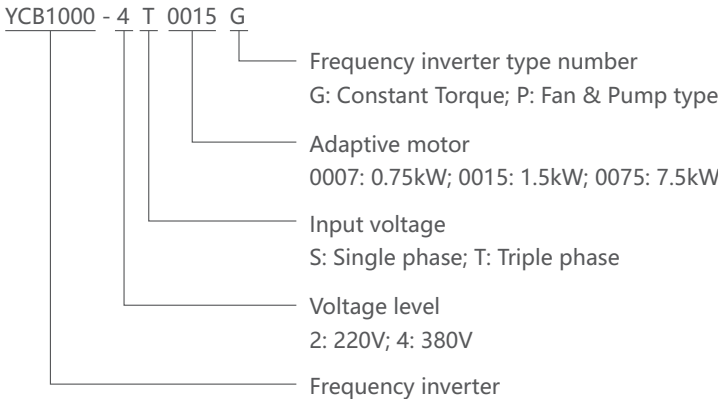
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Wiring diagram



Type Designation



Note: Special requirements of customers can be negotiated separately.

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Technical Index

Item		Item Description
Input	Rated voltage, frequency	Single phase 220V, three phase 200V, three phase 380V, three phase 480V; 50/60Hz
	Permissible working voltage	Effective value of voltage: 220V class 180~230V, 380V class 320~460V Voltage unbalanced rate: <3%; Frequency error: ≤+5%
Output	Rated voltage	Three phases  0~input voltage
	Frequency	0~400Hz
Overloading capacity		G type: 110% long term, 150% 1min, 180% 1s, 200% instantaneous trip P type: 120% 1min, 150% 1s, 180% instantaneous trip
Control Function	Working mode	Electromagnetic vector PWM modulation
	Adjustment range	1:100
	Starting torque	100% rated torque at 3Hz
	Frequency accuracy	Digital setting: highest frequency×±0.01% Analog setting: highest frequency×±0.2%
	Freq dissolutions	Digital setting: 0.01Hz; Analog setting: highest frequency×0.1%
	Torque	Automatically rise torque up, according to output current it auto rise the torque up. Manually rise torque up, scope:1~30%
	V/F curve	1. Linear curve 2. Square curve
	Acceleration, slow-down time	0.1~6000s/min continuous adjustment.
	Compensation for rotation error	Setting scope: 0~20%, it can auto adjust the output frequency of inverter according to the motor loading, to reduce the speed change due the motor load fluctuates.
	Built-in PID	Easily form the loop control system, that it is suitable for pressure control, flux control and etc.
	Auto voltage regulation	When network voltage change, it can auto adjust the output of PWM and keep output voltage constant
	Auto energy-saving run	As load change, it auto optimize the V/F curve, to realize the energy-saved running.
Running Function	Freq setting	The setting of Potentiometer in the panel: operation panel / key setting, terminal of outer control Rise / Drop setting, ananlog voltage signal or outer potentiometer setting, analog current signal setting, ananlog combination setting, setting of 485 serial communication.
	Running command	Control of operation panel, control of outer terminals, control of serial communication
	Analog output terminal	0~10V DC voltage signal output, can realize the output of frequency, current and etc, physical parameters
	Input signal	Positive/megative rotation signal, multi-step signal, fault signal, resetting signal
	Output signal	Programmable integrated circuit opening output, fault signal output

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Item		Item Description
Braking Function	Braking by power consumption	Outer connected to braking resistance, maxi braking torque 100%
	Brake by direct current	When starting or stopping, it is optional respectively, action frequency: 0-20Hz, action voltage level: 0-20%, action time 0-30s, continuously adjustable.
Other Function		IJumpinf frequency, point function, counter, rotation speed track, restart after instan-staneous power off, upper and lower frequency limit, acceleration and slow-down modes adjustable, cymometer and voltmeter output, multi-step / program running, two lines / three lines control, double polar control, selection of multifunctional input terminal, auto reset after fault, 485 serial communication.
Protection Function		Input protection against phase failure, over-current protection, overloading protection, under-voltage protection, overheating protection, output short circuit protection and etc.
LED Display		It can display inverter real-time working status, monitoring parameters, function data, fault codes and etc.
Optional Accessories		Braking parts, remote and operation panel and connection wire, communication panel
Ambient Conditions	Working site	Indoor, without direct sunshine, no dust, corrosive gas, flammable and explosive gas, oil fog, steam, water drop, salty
	Altitude	Altitude less than 1000m
	Ambient temperature	-10-+45°C (The only machine: -10~+50°C)
	Humidity	20~90%RH, Without water condensation
	Vibration	<0.5G
	Storage temperature	-20~+60°C
	Protection grade	IP20
Structure	Cooling mode	Fan cooling
	Mounting mode	Wall hung type, standing type.

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Structure and Size

YCB1000/380V three phase				Appearance Size (mm) L×W×D	Aperture Size of Panel (mm) L×H
No.	Model	Power	Voltage		
1	YCB1000	0.75kW	380V	170×125×170	Panel: 75×55 Panel Cover: 95×61
2		1.5kW			
3		2.2kW			
4		4kW			
5		5.5kW		245×150×188	Panel: 93×70 Panel Cover: 131×91
6		7.5kW			
7		11kW		340×230×210	Panel: 131×70 Panel Cover: 156×80
8		15kW			
9		18.5kW		450×280×260	
10		22kW			
11		30kW		520×290×290	
12		37kW			
13		45kW		580×290×320	
14		55kW			
15		75kW		630×380×350	
16		93kW			
17		110kW		630×380×380	
18		132kW			
19		160kW		880×510×400	
20		185kW			
21		200kW		980×510×400	
22		220kW			
23		260kW		1050×710×420	
24		280kW			
25		315kW		1900×800×420	
26		350kW			
27		400kW			
28		500kW			

YCB1000/220V single phase				Appearance Size (mm) L×W×D	Aperture Size of Panel (mm) L×H
No.	Model	Power	Voltage		
1	YCB1000	0.75kW	220V	142×85×122	Panel: 140×73 Panel Cover: 175×87
2		1.5kW			
3		2.2kW		185×96×150	