



## VC MULTIFUNCTIONAL VECTOR VFD

# VC

## Multifunctional Vector VFD



Single-phase 220V: 0.75-2.2kW

Three-phase 380V: 0.75-37kW



Excellent control algorithm



Support flexible expansion



Wide voltage input



Compatible with synchronous / asynchronous motor



Compact structure design



Rich application macro parameters

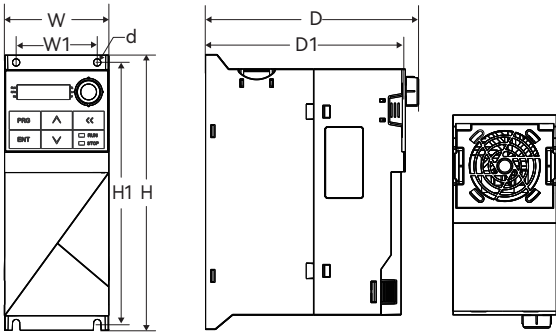
## SPECIFICATION

Item		Pecification	
Controlled Characteristic	Control Mode	V/F	SVC
	Starting Torque	1Hz/100% Rated torque	0.5Hz/150% Rated torque
	Range of Speed Regulation	1:50	1: 100
	Rotating Speed	≤1% Rated synchronous speed	≤0.5% Rated synchronous speed
	Carrier Frequency	0.6kHz~16kHz	
	Overload Capacity	150% Rated current 60s; 180% Rated current 2s	
	Torque Boost	Automatic torque increase; Manual torque increase 0.1 ~ 30.0%	
I/O	The Range of Input Voltage	Single-phase 200V-240V; Three-phase 380V-480V Allowable fluctuation range: -15% ~ 10%	
	The Range of Input Frequency	50/60Hz Allowable fluctuation range: ±5%	
	The Range of Output Voltage	0 ~ Input, Fluctuation range: < 5%	
	The Range of Output Frequency	SVC:0-500Hz V/F: 0-1000Hz Fluctuation range: ±5% of Maximum frequency	
Run Control	Run command channel	3 kinds of channels: Operation panel setting、Control terminal setting、Serial communication port given; Can change by different ways	
	frequency source	Digital setting, panel pulse potentiometer setting, linear voltage setting, curve voltage setting, analog current setting, serial communication setting, etc. Can be switched in a variety of ways	
	Auxiliary frequency source	Multiple auxiliary frequency sources. Frequency synthesis and frequency fine-tuning can be performed	
	Digital input terminal	There are four DI1-DI4, of which DI4 supports high-speed pulse input, up to 20kHz input, and supports NPN PNP switching	
	Analog input terminal	Two AI1-AI2 (You can change the terminal function to DI input by setting parameters) The AI2 can switch the current/voltage input through the jumper cap	
Basic Function	DC braking function	DC braking frequency:0.00 Hz ~ 60.00 Hz;Braking time:0.0 s ~ 60.0 s Braking action current value:0.0% ~ 150.0%	
	V/F curve	Linear, multi-point type, square type, 1.1-1.9 power curve, V/F completely separated type	
	Acceleration and deceleration curves	Linear or S-curve acceleration and deceleration mode, acceleration and deceleration time range: 0~6500s	
	Multi-speed operation	Up to 16 segment speeds are achieved through the control terminal	
	External keyboard	Standard, can upload and downtransfer inverter function code information, to achieve fast parameter replication	
	Built-in PID	It is convenient to realize the closed-loop control system of process control	
	Automatic voltage adjustment AVR	Standard, automatic current and voltage limit during operation to prevent frequent overvoltage trip	
	Over voltage over loss rate control	Automatic current and voltage limit during operation to prevent frequent overvoltage trip	
	Fast current limiting function	The standard configuration minimizes overcurrent faults and protects the normal operation of the equipment	
	Torque qualification and control	Automatic torque limit during operation to prevent frequent overcurrent tripping	
	Power on the safety self-test of peripheral devices	It can realize the safety detection of peripheral devices such as grounding and short circuit	
	Timing control function	Timing control function: set time range 0h ~ 65000h	
	Defensive function	Power-on motor short circuit detection, input and output phase loss protection, over current protection, over voltage protection, under voltage protection, overheat protection, overload protection	
Display and Keyboard Operation	LED display	5 digit LED display	
	Parameter locking function	Set parameter read-only control to prevent misoperation	
Service Environment	Place of use	Indoor, free from direct sunlight, no dust, corrosive gas, flammable gas, oil mist, water vapor, dripping or salt	
	Altitude	Less than 1000m; When the sea level is higher than 1000m, the sea level must be reduced by 1% for every 100m rise. The maximum sea level is 2000m	
	Environment temperature	-20°C ~ 45°C, Derating is required when the temperature exceeds 45°C. For every 1°C increase in the ambient temperature, the derating is about 1%. The maximum ambient temperature is 50°C	
	Humidity	≤95%RH, Avoid condensation	
	Vibration	Vibration acceleration less than 0.6g	
	Storage temperature	-25°C ~ 60°C	

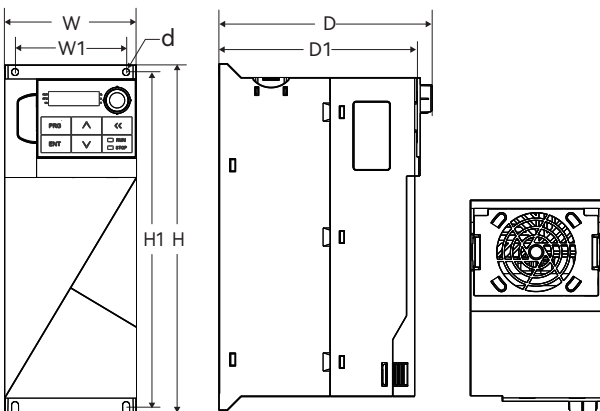
## SELECTION GUIDE

Model	Rated power	Power capacity	Input current	Output current	Adaptive motor	
	kW	kVA	A	A	kW	HP
<b>Input: Single-phase 200~240V &amp; Output Three-phase 0~Input</b>						
VC-2SR75B-E	0.75	1.5	8.2	4.5	0.75	1
VC-2S1R5B-E	1.5	3	14	7	1.5	2
VC-2S2R2B-E	2.2	4	23	9.6	2.2	3
<b>Input: Three-phase 380~480V &amp; Output Three-phase 0~Input</b>						
VC-4TR75B-E	0.75	1.5	3.4	2.5	0.75	1
VC-4T1R5B-E	1.5	3	5	3.8	1.5	2
VC-4T2R2B-E	2.2	4	5.8	5.1	2.2	3
VC-4T004B-E	4	5.9	10.5	9	4	5.5
VC-4T5R5B-E	5.5	8.9	14.6	13	5.5	7.5
VC-4T7R5B-E	7.5	11	20.5	17	7.5	10
VC-4T011B-E	11	17	26	25	11	15
VC-4T015B-E	15	21	35	32	15	20
VC-4T018R5B-E	18.5	24	38.5	37	18.5	25
VC-4T022B-E	22	30	46.5	45	22	30
VC-4T030B-E	30	40	62	60	30	40
VC-4T037B-E	37	57	76	75	37	50

## DIMENSION (UNIT: MM)



Model	External Dimension				Installation Dimension		Hole Size
	H	W	D	D1	H1	W1	d
VC-2SR75B-E	190	72	146	138	180	56	5
VC-2S1R5B-E							
VC-2S2R2B-E							
VC-4TR75B-E	190	72	146	138	180	56	5
VC-4T1R5B-E							
VC-4T2R2B-E							
VC-4T004B-E							



Model	External Dimension				Installation Dimension		Hole Size
	H	W	D	D1	H1	W1	d
VC-4T5R5B-E	250	95	153.6	145	240	80	5
VC-4T7R5B-E							
VC-4T011B-E	334	120	188.6	180	322	100	6
VC-4T015B-E							
VC-4T018R5B-E	388	145	195.1	182.7	374	116	6
VC-4T022B-E							
VC-4T030B-E	450	180	204	195	430	144	7
VC-4T037B-E							

**【Easy Maintenance】**

The cooling fan can be removed independently without complicated operations.

**【Independent Air Duct Design】**

The entire series features an independent air duct design, enhancing product protection and preventing issues such as moisture and dust accumulation on the circuit boards.

**【Convenient and Easy to Use】**

Standard with removable keyboard, can be equipped with control cabinet installation.

**【High Efficiency Heat Dissipation】**

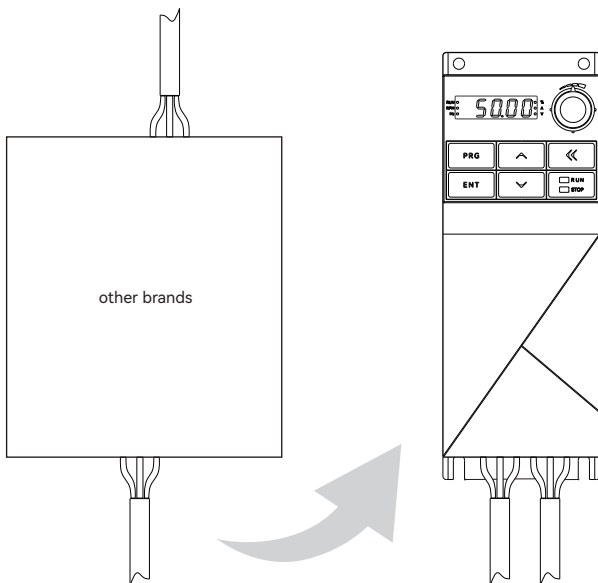
Side opening ventilation, radiator special design, can significantly improve the heat dissipation efficiency.

(additional side hole dust cover, flexible use)



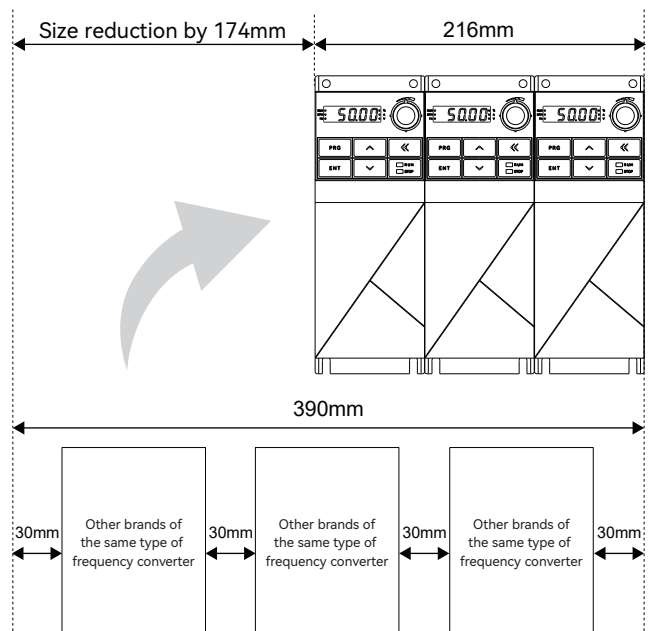
**【Single Side Wiring】**

Single-sided wiring is beneficial to the layout of internal components of the supporting control cabinet, making the installation location more flexible.



**【Narrow-body Structure Appearance】**

Realize compact product volume, support seamless side-by-side installation, reduce the volume by about 44% compared to traditional products. (4kW)





## 【Wide Input Voltage Design】

Single-phase 200-240V Three-phase 380-480V, Allowed wide input voltage and compatible with the needs of more countries, more flexible application scenarios.

220V-15% ~ 220V+15%

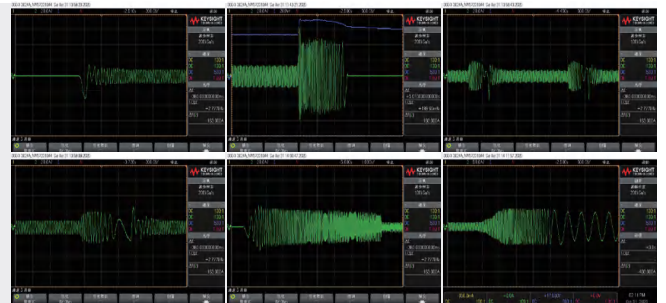
380V-15% ~ 480V+10%

## 【Braking Unit】

0.75~37kW with standard brake unit.

## 【Flexible Terminal Switching】

More flexible for specific applications, All terminal can be converted to DI terminal via parameters.

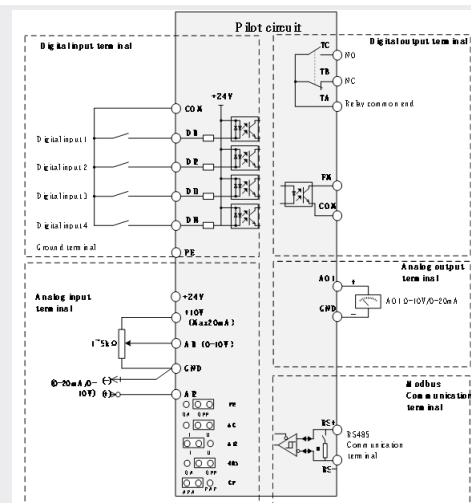


## 【Flexible Options for Expansion】

The full range of expansion interfaces are reserved, and I/O expansion modules, bus communication expansion modules, PG encoder expansion modules can be selected as needed, making the functional configuration more flexible.

## 【Flexible Terminal Switching】

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