

CHZIRI®

SINO-FRENCH JOINT VENTURE

WENZHOU ZIRI ELECTRICAL TECHNOLOGY CO.,LTD

ZVF9V Series

High Performance Vector Control Frequency Inverter

ZVF11-M Series

Mining Type Frequency Inverter

CE ISO9001



Inverter , AC Driver Manufacturer

Product Catalogue



BRIEF INTRODUCTION

ZiRi Electrical is a Sino-French joint venture engaged in R&D, production and sales of Frequency Inverter and automation products (AC drivers and soft starters).

Certified with ISO9001, CCC, CE and other authentications, it is a high-tech enterprise conveniently located the golden area of Liushi Town of Wenzhou, Zhejiang, reputed as the Capital of China Electrical Equipment.

We are working hard on developing and design new frequency inverters all the time, Depth of industry experience combined with innovative design talents in divers technologies have ensured that ZIRI will be an important player in automation and driver market around the world. With competitively-priced, high-performance products and comprehensive support and service, we aim to be your most valued automation and drives technology partner.

ZVF9V Series

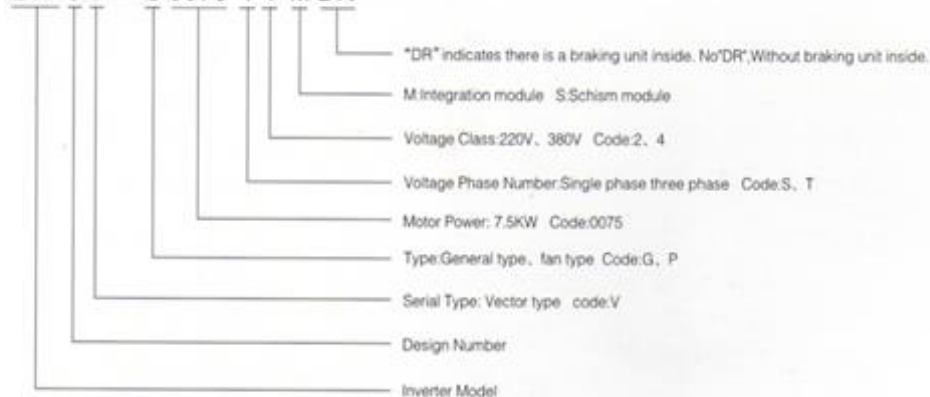
High Performance Vector Control Frequency Inverter

- Advanced vector control algorithm , combine with accurate speed calculation and self learning of the motor parameter. It realize the accuracy control of motor speed and torque under sensorless vector control mode. V/F and SVC can be selected .
- Optimized space voltage vector PWM modulation technology, has over-modulation function, high voltage-utilization rate, low output harmonic wave, and it greatly improves the stability and switching loss of the motor.
- Good operation characteristic of low frequency, can realize 0.5HZ/150% rated torque output which is under sensorless vector control mode.
- LCD and LED double display keyboard, display digit and Chinese , the user can operate easily.
- Control terminal analog voltage output, current output ,digit output, impulse output, Voltage, current , impulse , communication and other multi frequency setting modes. Also can realize the overplay function for all kinds of given source, And the frequency control mode is very flexible.
- Abundant functions : automatic voltage regulation control, automatic slip Compensation, restart when the power cuts and so on. Can meet the demand of different users.
- Customization function design :program running, wobble frequency running, PID control operation , timing function ,counter function and ect. can be convenient to form and meet the different industrial field demands;
- Built-in RS485 interface , compat with MODEBUS communication protocol, can realize networked control.
- Super strong protect function: Over voltage, over current , over load, under voltage, over heat , short circuit and so on , can offer more than 20 kinds failure protection function for user.



Demonstration of the Model

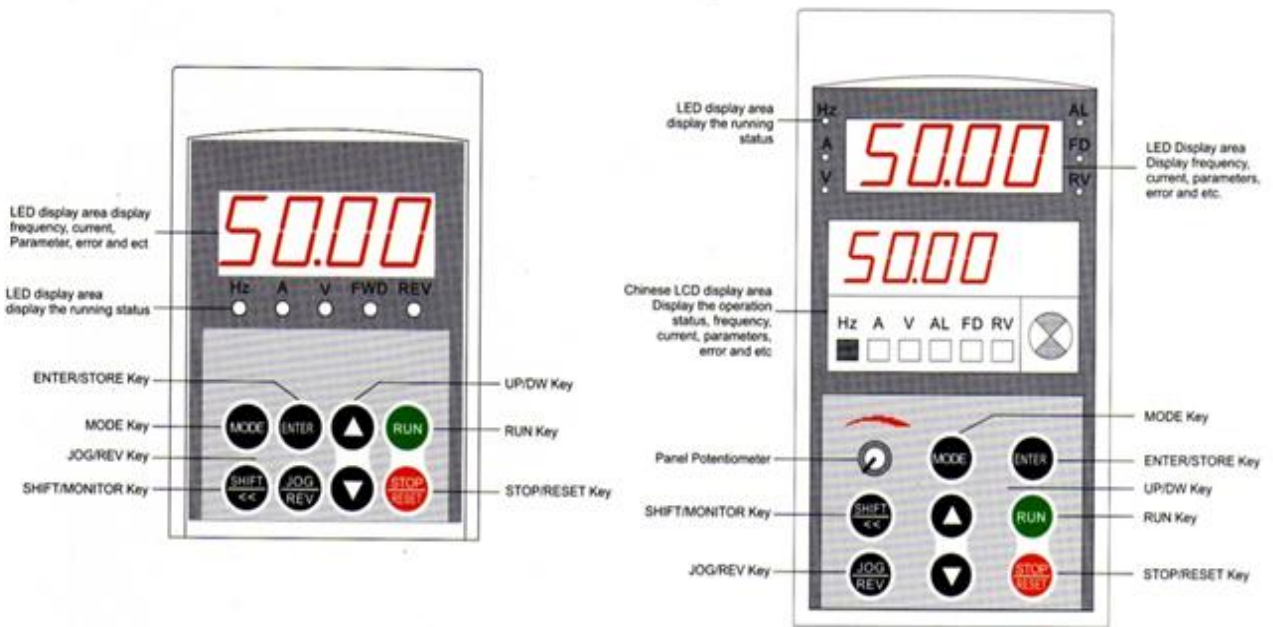
ZVF 9 V — G 0075 T 4 M DR



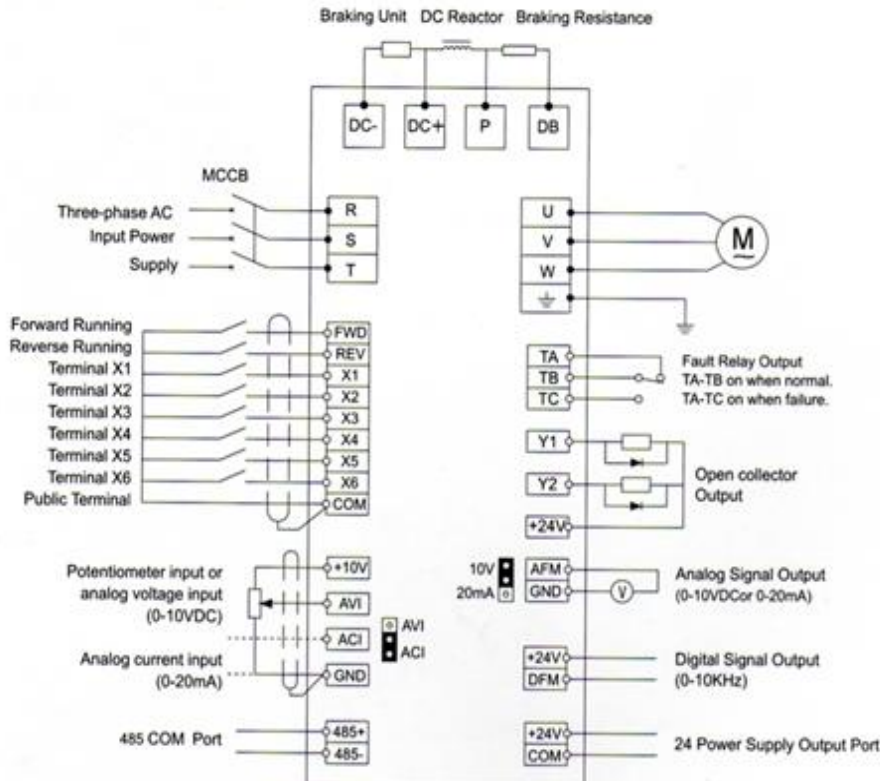
Specifications and Technical Indications

Item		Item Description
Input	Rated voltage, frequency	Single/three-phase 220VAC, three-phase 380VAC, 50Hz/60Hz
	Allowable voltage range	Voltage fluctuation range: -20%~+20% Voltage unbalance rate < 3%; frequency fluctuation $\leq \pm 5\%$
Output	Rated voltage	Three-phase 0~input voltage VAC
	Frequency	0.00~400.00Hz
Overload capacity		Type G:150% 1 minute; 180% 1 second; 200% transient protection Type P:120% 1 minute; 150% 1 second; 180% transient protection
Control function	Modulation method	Optimal space voltage vector PWM modulation
	Control method	Sensorless vector control(SVC)
	Frequency accuracy	Digital setting: Max.frequency $\times \pm 0.01\%$ Analog setting: Max.frequency $\times \pm 0.2\%$
	Frequency resolution	Digital setting:0.01Hz Analog setting:Max.Frequency $\times 0.1\%$
	Starting frequency	0.00~10.00Hz
	Torque lifting	Automatic torque lifting: To lift the torque automatically according to the output current. Hand-operated torque lifting:Range:0.1~30.0%
	Slip compensation	Setting range:0~150%,The inverter output frequency can be auto-regulated within this range according to the motor load so as to reduce the speed variation of the motor due to load fluctuation
	Acceleration/deceleration time	0.1~3600.0 sec/min, which can be set in sequence.
	Carrier frequency	1.0~15.0KHz
	Jog function	Jog frequency range:0.01~400.0Hz Jog acceleration/decelerationtime, 0.1~3600.0 can be set.
	V/F curve	1.linear curve; 2.quadratic(Conic); 3.User defined V/F curve
Control Function	Automatic energy-saving operation	Auto optimize V/F curve according to load fluctuation to realize energy-saving operation.
	Auto voltage regulation(AVR)	When the network voltage changes, it can regulate PWM output automatically to maintain constant voltage.
	Built-in PID	This can form a convenient closed-loop control system(CLCS), and is applicable to pressure control flow control and other process control.
Operating function	Operating command	operator panel control, external terminal control and COM control
	DC braking	Panel potentiometer setting, operator panel \blacktriangle \blacktriangledown setting, external terminal up/down setting, analog voltage signal or external potentiometer setting, analog current signal setting, analog assembly setting, 485 COM setting and etc.
	Input Signal	Forward/Reverse signal,multiple speed signal,failure signal, reset signal and ect.
	Output signal	Programmable relay,open-collector output, failure signal output and ect.
	Multi-function analog and digital output terminal	This can realize the output of frequency, current and other physical quantity by outputting 0~10V or 0~20mA DC signal and 0~10KHz digital signal.
	Dynamic braking	With an external braking resistor, the maximum braking torque may reach 100%.
Braking function	DC braking	This can be selected when the motor starts or stops with the action frequency of 0~20Hz, action current level of 0~100% and actuation time of 0~30 sec., which can be set in sequence.
	Other functions	Leap frequency, Jog function, counter, trace to rotating speed, instant shutdown restarting, Frequency upper/lower limitation, acceleration/deceleration mode regulating, frequency meter and voltmeter output, multiple speed/program operation, two-wire/three wire control, vibration frequency control, Multi-function input terminal selection, Failure auto reset and 485COM.
	Protection function	Input open-phase protection, over-current protection, overload protection, under voltage protection, overheating protection and etc.
LED, LCD display		Real-time display the running state, monitoring parameters, function parameters, diagnostic trouble codes(DTC)and other information of the inverter.
Matching parts		Brake assembly, remote operator panel, connecting wire,communication panel.
Place to be used		Indoor location free from direct exposure to sunlight, high humidity or dew condensation, high levels of dust, corrosive gas, explosive gas, inflammable gas, oil mist, salt and etc.
Ambient	Altitude	Below 1,000M
	Ambient Temperature	-10~+45°C[Bare Machine:-10~+50°C]
	Humidity	20~90%RH without dew condensation
	Vibration	< 0.5G
	Storage Temperature	-20~+60°C
Structure	Protective Class	Ip20
	Cooling system	Forced air cooling
	Installation	Wall mounted or floor-type actuator

Operation Panel Outlay



Basic System Description on Inverter Wiring



Appearance and Installtion Dimension (unit:mm)



Fig.1



Fig.2

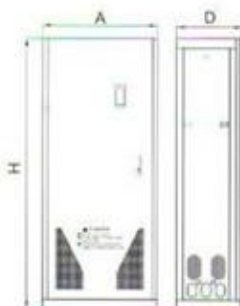


Fig.3

Inverter Model	Power (KW)	Dimension(mm)						Figure
		H	W	A	B	D	d	
ZVF9V-G0007T2/S2	0.75	185	175	118	108	175	φ4	Fig.1
ZVF9V-G0015T2/S2	1.5							
ZVF9V-G0022S2	2.2							
ZVF9V-G0007T4	0.75							
ZVF9V-G0015T4/P0015T4	1.5							
ZVF9V-G0022T4/P0022T4	2.2							
ZVF9V-G0022T2	2.2	215	205	145	135	178	φ4	Fig.1
ZVF9V-G0037T2/S2	3.7							
ZVF9V-G0037T4/P0037T4	3.7							
ZVF9V-G0040T4/P0040T4	4.0							
ZVF9V-G0055T4/P0055T4	5.5							
ZVF9V-P0075T4	7.5							
ZVF9V-G0055T2	5.5	265	253	185	174	200	φ5.5	Fig.1
ZVF9V-G0075T4	7.5							
ZVF9V-G0110T4/P0110T4	11							
ZVF9V-P0150T4	15							

ZVF9V-G0075T2	7.5	380	360	210	160	204	φ10	Fig.2
ZVF9V-G0150T4/P0150T4	15							
ZVF9V-P0185T4	18.5							
ZVF9V-G0110T2	11							
ZVF9V-G0150T2	15							
ZVF9V-G0185T4	18.5							
ZVF9V-G0220T4/P0220T4	22	470	450	270	206	255	φ10	Fig.2
ZVF9V-G0300T4/P0300T4	30							
ZVF9V-P0370T4	37							
ZVF9V-G0185T2	18.5							
ZVF9V-G0220T2	22							
ZVF9V-G0370T4	37							
ZVF9V-G0450T4/P0450T4	45	630	605	360	270	300	φ10	Fig.2
ZVF9V-G0550T4/P0550T4	55							
ZVF9V-P0750T4	75							
ZVF9V-G0750T4	75							
ZVF9V-G0900T4/P0900T4	90							
ZVF9V-G1100T4/P1100T4	110							
ZVF9V-P1320T4	132	750	726	470	376	346	φ12	Fig.2

ZVF9V-G1320T4	132	1270	574	380				Fig.3
ZVF9V-G1600T4/P1600T4	160							
ZVF9V-G1850T4/P1850T4	185							
ZVF9V-T2000T4	200							
ZVF9V-G2000T4	200							
ZVF9V-G2200T4/P2200T4	220							
ZVF9V-G2500T4/P2500T4	250	1700	710	410			Fig.3	
ZVF9V-G2800T4/P2800T4	280							
ZVF9V-P3150T4	315							
ZVF9V-G3150T4	315							
ZVF9V-G3500T4/P3500T4	350							
ZVF9V-G3750T4/P3750T4	375							
ZVF9V-T4000T4	400	2020	750	550			Fig.3	

ZVF11-M Series

Mining Type Frequency Inverter

Product Characteristic

- Adopt DSP microprocessor of TI company in America and IPM intelligent module.
- Space voltage vector SAPWM control, few harmonic output, low noise.
- Effect is very good of stop of DC braking capacity from 0%-100%.
- Four kinds time of acceleration/deceleration which can setting arbitrarily of time from 0.1 second to 999.9 seconds.
- Six multi-functional terminals which can setting arbitrarily of 24kinds of purpose.
- PLC running which can setting of 16th stage running frequency and time.
- Built-in PID and function of speed setting on pulse coder.
- RS485 communication control adopt the popular MODBUS communication protocol.
- Appearance size with subminiature + keypad design with simple.



Specifications and Technical Indications

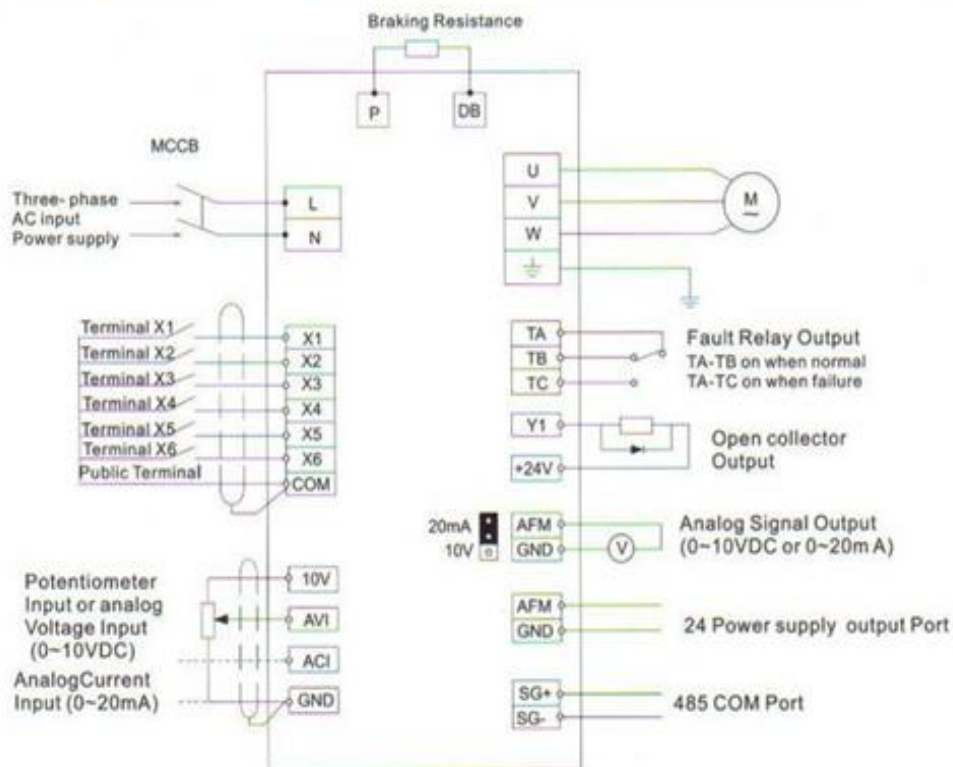
Input Voltage Class		220V			
ZVF11-M/S_ _ _		0004S2	0075S2	0015S2	0022S2
Applicable Motor Power (KW)		0.4	0.75	1.5	2.2
Output	Output Current(A)	2.3	4.5	7.5	10.0
	Maximum Output Voltage(V)	Three-phase 0-Input Voltage			
	Range of Output Frequency(Hz)	0.01-400.00Hz			
Input	Range of Input Voltage	160-240V			
	Range of Input Power Frequency	50/60±5%Hz			
Control Characteristics	Control Mode	SAPWM Space Vector Control			
	Frequency Resolution	Digital Setting: 0.01Hz; Analog Setting: Maximum Frequency*0.1%			
	Torque Characteristics	Adjustable from 0% to 20%.			
	Overload Capacity	150% of the rated output current per minute			
	Acceleration/Deceleration time	Adjustable from 0.1 to 999.9.			
	V/F Curve	Linear/ Quadratic			
Running Characteristics	Frequency Setting Signal	Panel Control	Set by the key ▲▼ or the potentiometer on the panel.		
		External Signal	Terminal 0-10V, 4-20mA, 0-10KHz, UP/DOWN, 485 COM etc.		
	Operation Setting Signal	Panel Control	Set by the key RUN or STOP.		
		External Signal	External FWD, REV and JOG operation, PLC operation and COM operation.		
	Multi-function Input Signal	Multi phase speed, counter, program run, VI/CI shifting and etc.			
	Multi-function Output Signal	Failure, running, counter arrival, frequency arrival program running			
	Analog Output Signal	Running frequency, output voltage, current, motor rotation			
Other Functions		AVR, overvoltage and current stall prevention, no reversal and etc.			
Protecting Functions		Overvoltage, overcurrent, undervoltage, overload, overheat, short circuit protection and etc.			
Cooling Mode		Forced air cooling			
Ambient	Points of Use	Altitude < 1000m, indoor places without corrosive gas, liquid and etc.)			
	External Environment	Temperature: -10~+45℃; Humidity < 90%RH without condensing			
	Vibration	< 0.5G			

ZVF 11— M 0015 S 2

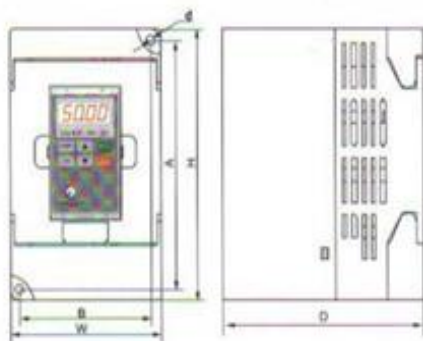
- Voltage Class: 220V, 380V Code: 2, 4
- Voltage Phase: Single Phase, Three-phase Code: S, T
- Economic Type: 1.5KW Code: 0015
- Serial Number Mini Type Economic Type Code: M, S
- Design Serial Number
- Inverter Model



Inverter's Standard Wiring Diagram



Appearance and Installation Dimension (Unit:mm)



Inverter Model	Power (KW)	Dimension(mm)					
		H	W	A	B	D	d
ZVF11-M0004S2	0.4	141.5	85.0	130.5	74.0	113.0	5
ZVF11-M0007S2	0.75	141.5	85.0	130.5	74.0	113.0	5
ZVF11-M00015S2	1.5	141.5	100.0	140.0	89.5	116.5	5
ZVF11-M00022S2	2.2	141.5	100.0	140.0	89.5	116.5	5