
Energy Power Save CO.,LTD.
442/2 Chan Road, Tungwatdon Sathron Bangkok Thailand 10120

www.siamenergysaving.com

CHZIRI®

ZIRI ELECTRICAL

# OEM/ODM

Controller Technology

# Products Catalog

Inverter

Soft Starter

SINO-FRENCH JOINT VENTURE

WENZHOU ZIRI ELECTRICAL TECHNOLOGY CO.,LTD.

# ABOUT US

ZIRI Electrical Technology Co.,Ltd. is a Sino-French joint venture engaged in R&D, manufacture, sale, distribution and service of electric drive and control products. Professional and experience supplier of automation solution for multiple field. It is a Hi-Tech enterprise conveniently located the golden area of Liushi, Wenzhou, which is the capital city of electrical appliance in China.

The main products include general–purpose inverters, special–purpose inverters for pump and fan, soft starter, braking unit and other inverter accessories which have characteristic of advanced technology, complete function, stable running, simple operation, fine energy saving and excellent performance and so on. The products are widely applied to the various industries, metallurgy, plastic, textile, food, papermaking. drugs manufacture, printing, construction material, cement, oil, chemical industry mining. transmission device etc.

At present, ZIRI Electrical has become the top professional manufacturer that devotes to researching, developing, producing and marketing frequency inverters and soft starters in China. Thanks to the good quality, we respectively obtained ISO9001, CE, CCC and other certificates. ZIRI Electrical set up branch offices in more than 30 cities and established a perfect, professional and efficient sale-and-service system. At the same time, ZIRI Electrical also working up international sales net. Our products have been exported in large quantity to Europe, South America, Southeast Asia, Middle East, Africa and so on. Which earn good reputation and high praise in the market.

We adhere to the eximious tradition of technical innovation, continue to introduce new generation products to meet market demands. make great strides forward gradually to high-end application domain, and strive to shoulder heavy responsibilities to create a full of hope for the future.

# Catalog

CHZIRI®

WENZHOU ZIRI ELECTRICAL TECHNOLOGY CO.,LTD.

Excellent Quality Top Manufacturer

# ZVF9V Series

## High Performance Vector Control Frequency Inverter

ZVF9V Series frequency inverter has good effect energy saving, fine speed adjustment, stable running, soft start, protection function and self diagnostics fault and other advantages.


## ZVF9V Series

### Main Features :

ZVF9V Series frequency inverter has good effect energy saving, fine speed adjustment, stable running, soft start, protection function and self diagnostics fault and other advantages.

- Advanced vector control algorithm, combine with accurate speed calculation and self learning of the motor parameter. It can realize the accuracy control of motor speed and torque under no-speed sensor mode. V/F and SVC can be selected.
- Optimized space voltage vector PWM modulation technique, over modulation, high Voltage-utilization, low output harmonic, and it greatly improves the stability of the motor and switching losses.
- Good operation characteristic of low frequency running, can be realized 0.5Hz/150% torque output under no-speed sensor mode.
- LED display and removable keypad. display frequency, current, parameters, error and etc. the user can operate easily.
- Control terminals can be analog voltage output. current output and digital pulse output. Voltage, current, pulse. COM and other multiple frequency setting mode. It can achieve the overlay function of different sources. The frequency control mode is very flexible.
- Abundant functions: automatic voltage regulation control, automatic slip Compensation, restart when power off ect. Can meet the demand of different clients.
- Customization function design: program running, wobble frequency running, PID control operation, timing function, counter functions ect. can be convenient to form and meet the different industrial application.
- Built-in RS485 Port, Compat with MODBUS communication protocol, It can realize network control.
- Super strong protection function: Over voltage, over current, over load, under voltage, over heat, short circuit and so on, can offer more than 20 kinds fault protection function for clients.

### Demonstration of The Model

ZVF 9 V — G 0075 T 4 M DR

- "DR"indicates there is a braking unit inside. No"DR", Without braking unit inside.
- M:Integration module S:Schism module
- Voltage Class:220V、380V、 Code:2、4
- Single phase Code:S Three phase Code:T
- Motor Power:7.5KW Code:0075
- General type:G Fan type:P
- Serial Type:Vector type Code:V
- Design Number
- Inverter Model

CHZIRI®

## ZVF9V-G High Performance General Frequency Inverter

| Input Voltage(V) | Output Voltage(V) | Power Range(KW) |
|---|---|---|
| Three phase 380V ± 20% | Three phase 0~Input Voltage | 0.75KW~375KW |
| Overload Capacity:150% 1 minute; 180% 1 second; 200% transient protection. | | |

### Application Range:

ZVF9V-G is suitable for all kind of mechanical devices such as metallurgy, plastic, textile. food. petrification, paper making, drug manufacture. printing. construction materials and hoisting for driving and speeding control of AC asynchronous motor.

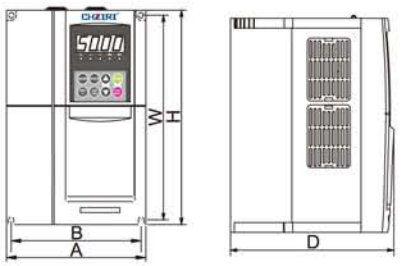



Fig.1

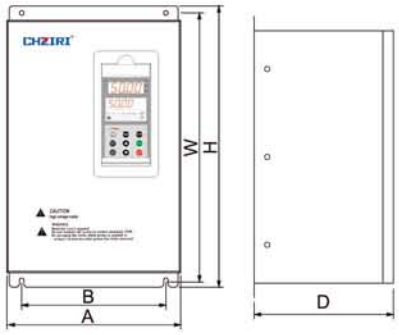



Fig.2

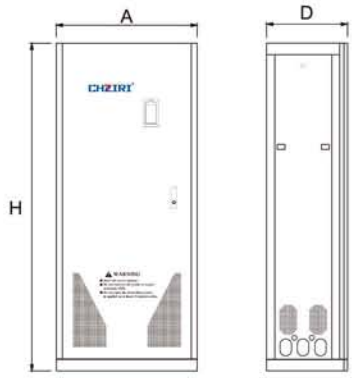



Fig.3

### Inverter Outline & Mounting Dimension(Unit:mm)

| Inverter Model | Power (KW) | Current (A) | Dimension(mm) | | | | | | Figure |
|---|---|---|---|---|---|---|---|---|---|
| | | | H | W | A | B | D | d | |
| ZVF9V-G0007T4MDR | 0.75 | 2.3 | 185 | 175 | 118 | 108 | 175 | Φ4 | Fig-1 |
| ZVF9V-G0015T4MDR | 1.5 | 3.7 | | | | | | | |
| ZVF9V-G0022T4MDR | 2.2 | 5.0 | | | | | | | |
| ZVF9V-G0037T4MDR | 3.7 | 8.5 | 215 | 205 | 145 | 135 | 178 | Φ4 | |
| ZVF9V-G0055T4MDR | 5.5 | 13 | | | | | | | |
| ZVF9V-G0075T4MDR | 7.5 | 17 | 265 | 253 | 185 | 174 | 200 | Φ5.5 | |
| ZVF9V-G0110T4MDR | 11 | 25 | | | | | | | |
| ZVF9V-G0150T4MDR | 15 | 33 | 380 | 360 | 210 | 160 | 204 | Φ10 | Fig-2 |
| ZVF9V-G0185T4M | 18.5 | 39 | 470 | 450 | 270 | 206 | 255 | Φ10 | |
| ZVF9V-G0220T4M | 22 | 45 | | | | | | | |
| ZVF9V-G0300T4M | 30 | 60 | | | | | | | |
| ZVF9V-G0370T4M | 37 | 75 | 630 | 605 | 360 | 270 | 300 | Φ10 | |
| ZVF9V-G0450T4M | 45 | 90 | | | | | | | |
| ZVF9V-G0550T4M | 55 | 110 | | | | | | | |
| ZVF9V-G0750T4M | 75 | 150 | 750 | 726 | 470 | 376 | 346 | Φ12 | |
| ZVF9V-G0900T4M | 90 | 176 | | | | | | | |
| ZVF9V-G1100T4M | 110 | 210 | | | | | | | |
| ZVF9V-G1320T4M | 132 | 250 | 1270 | | 574 | | 380 | | Fig-3 |
| ZVF9V-G1600T4M | 160 | 310 | | | | | | | |
| ZVF9V-G1850T4M | 185 | 360 | | | | | | | |
| ZVF9V-G2000T4M | 200 | 380 | 1700 | | 710 | | 410 | | |
| ZVF9V-G2200T4M | 220 | 415 | | | | | | | |
| ZVF9V-G2500T4M | 250 | 470 | | | | | | | |
| ZVF9V-G2800T4M | 280 | 510 | | | | | | | |
| ZVF9V-G3150T4M | 315 | 585 | 2020 | | 750 | | 550 | | |
| ZVF9V-G3500T4M | 350 | 645 | | | | | | | |
| ZVF9V-G3750T4M | 375 | 675 | | | | | | | |

Note: 0.75KW-11KW Plastic Case
15KW-110KW Steel Shell
132KW-375KW Cabinet

## ZVF9V-G T2 General Type Frequency Inverter

| Input Voltage(V) | Output Voltage(V) | Power Range(KW) |
|---|---|---|
| Three phase 220V ± 20% | Three phase 0~Input Voltage | 0.75KW~132KW |
| Overload Capacity:150% 1 minute; 180% 1 second; 200% transient protection. | | |

## Application Range:

ZVF9V-G T2 is suitable for all kind of mechanical devices such as metallurgy, plastic, textile. food. petrification, paper making, drug manufacture. printing. construction materials and hoisting for driving and speeding control of AC asynchronous motor.

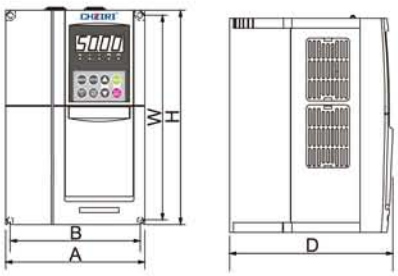



Fig.1

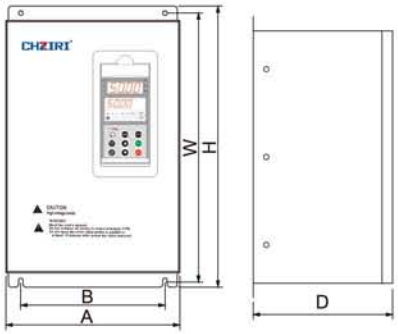



Fig.2

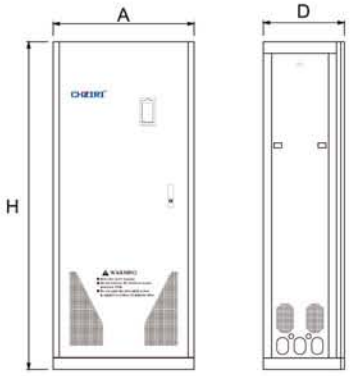



Fig.3

## Inverter Outline & Mounting Dimension(Unit:mm)

| Inverter Model | Power (KW) | Current (A) | Dimension(mm) | | | | | | Figure |
|---|---|---|---|---|---|---|---|---|---|
| | | | H | W | A | B | D | d | |
| ZVF9V-G0007T2MDR | 0.75 | 5.0 | 185 | 175 | 118 | 108 | 175 | Φ4 | Fig-1 |
| ZVF9V-G0015T2MDR | 1.5 | 7.5 | | | | | | | |
| ZVF9V-G0022T2MDR | 2.2 | 10 | 215 | 205 | 145 | 135 | 178 | Φ4 | |
| ZVF9V-G0037T2MDR | 3.7 | 16.5 | | | | | | | |
| ZVF9V-G0055T2MDR | 5.5 | 25 | 265 | 253 | 185 | 174 | 200 | Φ5.5 | |
| ZVF9V-G0075T2MDR | 7.5 | 33 | 380 | 360 | 210 | 160 | 204 | Φ10 | Fig-2 |
| ZVF9V-G0110T2M | 11 | 49 | 470 | 450 | 270 | 206 | 255 | Φ10 | |
| ZVF9V-G0150T2M | 15 | 65 | | | | | | | |
| ZVF9V-G0185T2M | 18.5 | 75 | 630 | 605 | 360 | 270 | 300 | Φ10 | |
| ZVF9V-G0220T2M | 22 | 90 | | | | | | | |
| ZVF9V-G0300T2M | 30 | 120 | | | | | | | |
| ZVF9V-G0370T2M | 37 | 150 | 750 | 726 | 470 | 376 | 346 | Φ12 | |
| ZVF9V-G0450T2M | 45 | 182 | | | | | | | |
| ZVF9V-G0550T2M | 55 | 220 | | | | | | | |
| ZVF9V-G0750T2M | 75 | 295 | 1270 | | 574 | | 380 | | Fig-3 |
| ZVF9V-G0900T2M | 90 | 350 | | | | | | | |
| ZVF9V-G1100T2M | 110 | 415 | 1700 | | 710 | | 410 | | |
| ZVF9V-G1320T2M | 132 | 500 | | | | | | | |

Note: 0.75KW-5.5KW Plastic Case
7.5KW-55KW Steel Shell
75KW-132KW Cabinet

CHZIRI®

## ZVF9V-P Blower Fan/Water Pump Special Frequency Inverter

| Input Voltage(V) | Output Voltage(V) | Power Range(KW) |
|---|---|---|
| Three phase 380V ± 20% | Three phase 0~Input Voltage | 1.5KW~400KW |
| Overload Capacity:120% 1 minute; 150% 1 second; 180% transient protection. | | |

## Application Range:

ZVF9V-P Series frequency inverter is suitable for driving and speed control of blower fan, water pump electrical machinery. Built-in PID function, which is specially suitable for flow, pressure, air, temperature and other slow physical quantity change of process control. Such as Blower fan. Water Pump and Music Spring and so on.

## Inverter Outline & Mounting Dimension(Unit:mm)

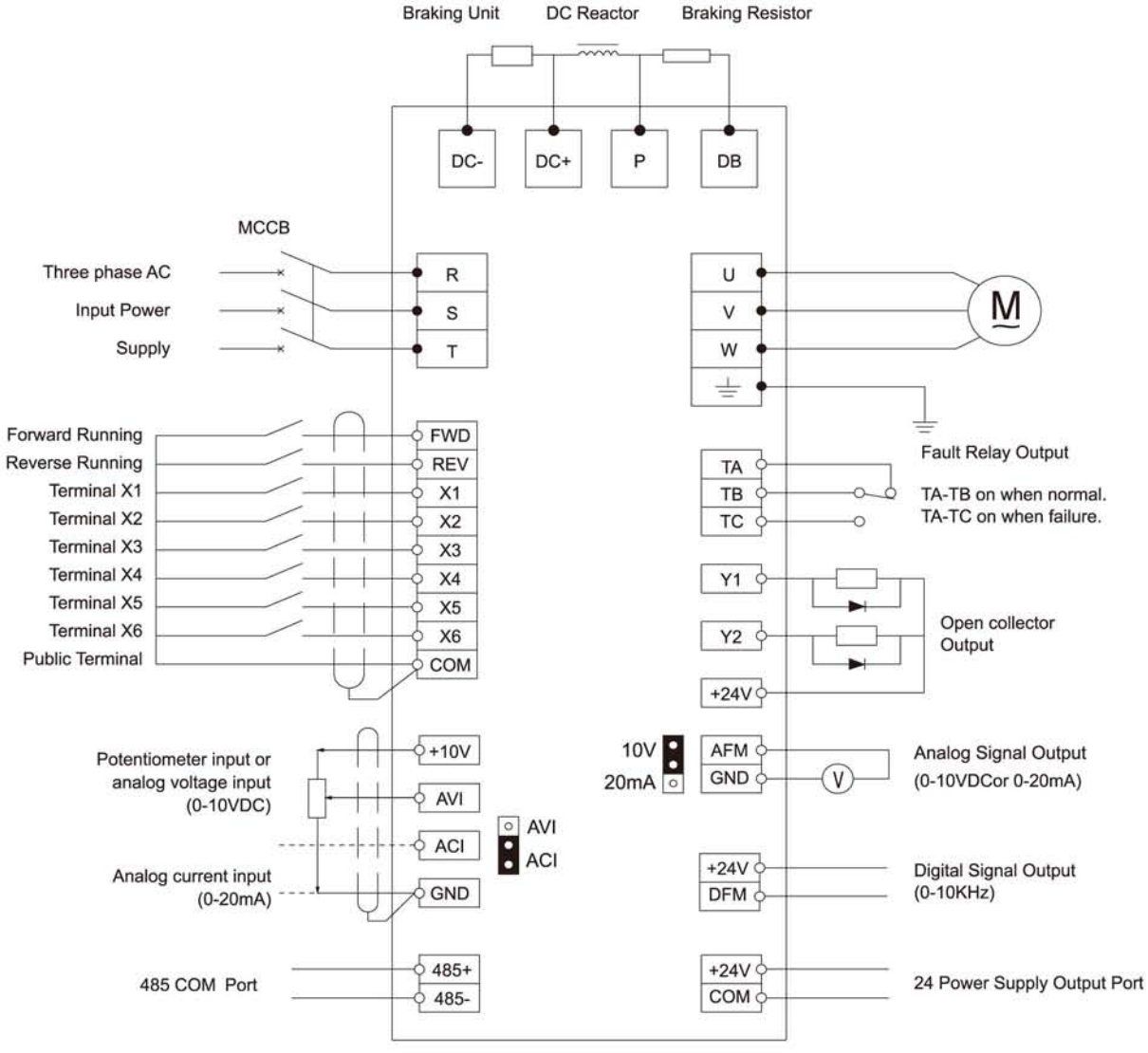
| Inverter Model | Power (KW) | Current (A) | Dimension(mm) | | | | | | Figure |
|---|---|---|---|---|---|---|---|---|---|
| | | | H | W | A | B | D | d | |
| ZVF9V-P0015T4MDR | 1.5 | 3.7 | 185 | 175 | 118 | 108 | 175 | Φ4 | Fig-1 |
| ZVF9V-P0022T4MDR | 2.2 | 5.0 | | | | | | | |
| ZVF9V-P0037T4MDR | 3.7 | 8.5 | 215 | 205 | 145 | 135 | 178 | Φ4 | |
| ZVF9V-P0055T4MDR | 5.5 | 13 | | | | | | | |
| ZVF9V-P0075T4MDR | 7.5 | 17 | | | | | | | |
| ZVF9V-P0110T4MDR | 11 | 25 | 265 | 253 | 185 | 174 | 200 | Φ5.5 | |
| ZVF9V-P0150T4MDR | 15 | 33 | | | | | | | |
| ZVF9V-P0185T4MDR | 18.5 | 39 | 380 | 360 | 210 | 160 | 204 | Φ10 | Fig-2 |
| ZVF9V-P0220T4M | 22 | 45 | 470 | 450 | 270 | 206 | 255 | Φ10 | |
| ZVF9V-P0300T4M | 30 | 60 | | | | | | | |
| ZVF9V-P0370T4M | 37 | 75 | | | | | | | |
| ZVF9V-P0450T4M | 45 | 90 | 630 | 605 | 360 | 270 | 300 | Φ10 | |
| ZVF9V-P0550T4M | 55 | 110 | | | | | | | |
| ZVF9V-P0750T4M | 75 | 150 | | | | | | | |
| ZVF9V-P0900T4M | 90 | 176 | 750 | 726 | 470 | 376 | 346 | Φ12 | |
| ZVF9V-P1100T4M | 110 | 210 | | | | | | | |
| ZVF9V-P1320T4M | 132 | 250 | | | | | | | |
| ZVF9V-P1600T4M | 160 | 310 | 1270 | | 574 | | 380 | | Fig-3 |
| ZVF9V-P1850T4M | 185 | 360 | | | | | | | |
| ZVF9V-P2000T4M | 200 | 380 | | | | | | | |
| ZVF9V-P2200T4M | 220 | 415 | 1700 | | 710 | | 410 | | |
| ZVF9V-P2500T4M | 250 | 470 | | | | | | | |
| ZVF9V-P2800T4M | 280 | 510 | | | | | | | |
| ZVF9V-P3150T4M | 315 | 585 | | | | | | | |
| ZVF9V-P3500T4M | 350 | 645 | 2020 | | 750 | | 550 | | |
| ZVF9V-P3750T4M | 375 | 675 | | | | | | | |
| ZVF9V-P4000T4M | 400 | 750 | | | | | | | |

Note: 1.5KW-15KW Plastic Case, 18.5KW-132KW Steel Shell, 160KW-400KW Cabinet.

## Specifications and Technical Indications

| Item | | Item Description |
|---|---|---|
| Input | Rated voltage frequency | Three-phase 220VAC, three-phase 380VAC, 50Hz/60Hz |
| | Allowable voltage range | Voltage fluctuation range:-20%~+20%; Voltage unbalance rate＜3%; frequency fluctuation≤±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.<br>Type P:120% 1 minute; 150% 1 second; 180% transient protection. |
| Control function | Modulation mode | Optimal space voltage vector PWM modulation. |
| | Control method | Speed sensorless vector control (SVC). |
| | Frequency accuracy | Digital setting: Max. frequency ×±0.01% Analog setting: Max. Frequency×±0.2%. |
| | Frequency resolution | Digital setting:0.01Hz Analog setting: Max. Frequency × 0.1%. |
| | Starting frequency | 0.00~10.00Hz |
| | Torque lifting | Automatic torque lifting: To lift the torque automatically according to the output current.<br>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/deceleration time 0.1~3600.0 S can be set. |
| | V/F curve | 1. linear curve; 2. quadratic curve(conic); 3. User defined V/F curve. |
| | Automatic energy-saving operation | Auto optimize V/F curve according to load fluctuation<br>To realize energy-saving operation. |
| | Auto voltage regulation (AVR) | When the network voltage changes, it can regulate<br>PWM output automatically to maintain constant voltage. |
| | Built-in PID | This can form a convenient closed-loop control system(CLCS),<br>and is applicable to pressure control, flow control and other process control. |
| Operating function | Operating command | Operator panel control ,external terminal control and 485 COM control |
| | DC braking | Panel potentiometer setting, operator panel ▲▼setting, external Terminal, up/down setting, analog voltage signal or external potentiometer Setting,<br>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 etc. |
| | Output signal | Programmable relay, open-collector output, failure signal output and etc. |
| | Multi-function analog and digital output terminal | This can realize the output of frequency, current and other physical quantity by output 0~10V or 0~20mA DC signal and 0~10KHz digital signal. |
| Braking function | Dynamic braking | With an external braking resistor, the maximum braking torque may reach 100%. |
| | 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 seconds, 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 485 COM. |
| Protection function | | Input open-phase protection, over-current protection, overload protection, under voltage protection, overheating protection and etc. |
| LED 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, interface panel. |
| Ambient | 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. |
| | Altitude | Below 1000M |
| | Ambient temperature | -10℃~+45℃ 「Bare Machine:-10℃~+50℃」 |
| | Humidity | 20~90%RH without dew condensation |
| | Vibration | ＜0.5G |
| | Storage temperature | -20℃~+60℃ |
| Structure | Protective class | IP20 |
| | Cooling system | Forced air cooling |
| | Installation | Wall mounted or floor-type actuator |

## Basic System Description on Inverter Wiring




## ZVF9V-M Mini Type Vector Control Frequency Inverter

| Input Voltage(V) | Output Voltage(V) | Power Range(KW) |
|---|---|---|
| Single phase 220V ± 20% | Three phase 0~Input Voltage | 0.75KW~2.2KW |
| Three phase 380V ± 20% | Three phase 0~Input Voltage | 0.75KW~2.2KW |
| Overload Capacity:150% 1 minute; 180% 1 second; 200% transient protection. | | |

### Technical Indications:

1、Control Mode: SAPWM vector control.

2、Output frequency range: 0.00~400Hz.

3、Operation command selection: Keyboard control, terminal control, Multi-stage control. External analog voltage input control. External analog current input control. RS485 Control.

4、Frequency setting mode: Digital keypad setting, Analog setting (current, voltage signal). Remote communication setting, Multi-steps speed setting. Terminal assembled setting. PID closed -loop setting.

5、Start torque control: 0~20% can be adjusted.

6、Carrier frequency range: 1.0K~10KHz.

7、DC Current Braking: Start and Stop DC current braking can be adjusted solely.

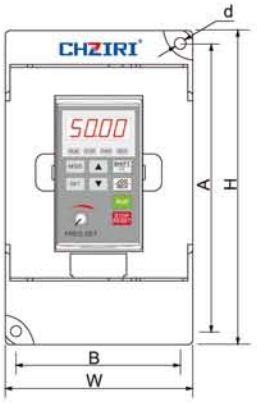
8、Automatism voltage modulate (AVR): Automatically keep the output voltage stable when input voltage fluctuating.

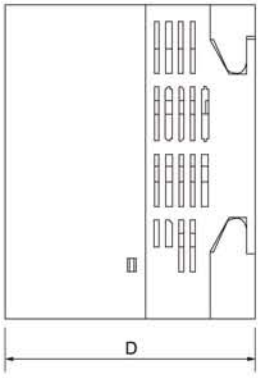
9、Automatic limiting current: Can limit the maximum current of the motor, can pro tect the inverter and motor reliably.

10、PLC programmable control: Single Cycle, continuous loop, and so on are fit-for all kinds of field's demand.

11、Input, output terminal are programmable and are convenient for user.

12、Analog signals output, voltage and current can be selected.

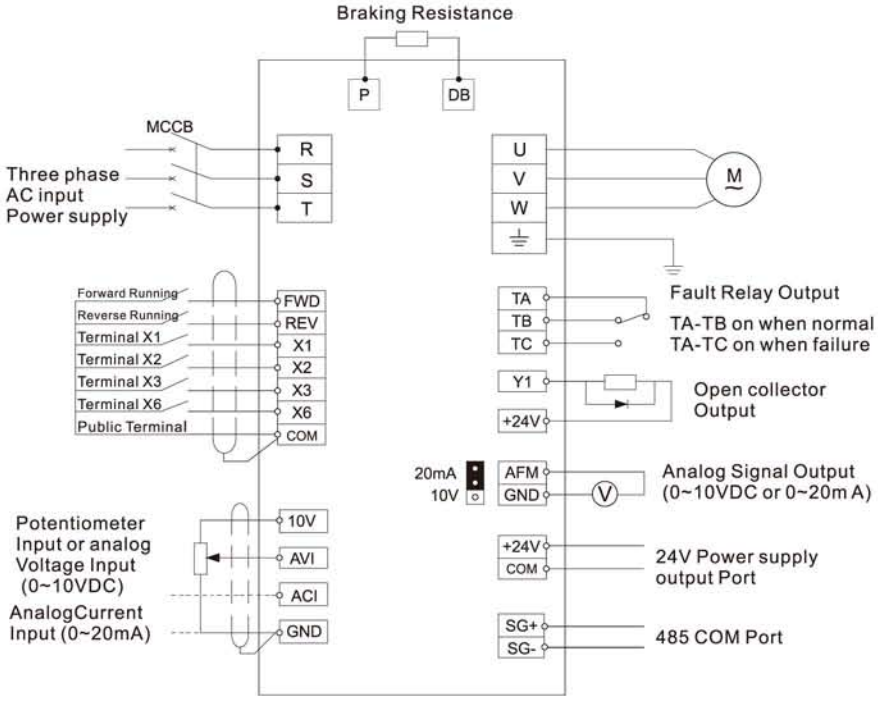



## Inverter Outline & Mounting Dimension(Unit:mm)

| Inverter Model | Voltage (V) | Power (KW) | Current (A) | Dimension(mm) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | H | W | A | B | D | d |
| ZVF9V-M0007S2 | 220V | 0.75 | 4.0 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 |
| ZVF9V-M0015S2 | | 1.5 | 7.5 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 |
| ZVF9V-M0022S2 | | 2.2 | 10 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 |
| ZVF9V-M0007T4S | 380V | 0.75 | 2.3 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 |
| ZVF9V-M0015T4S | | 1.5 | 3.7 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 |
| ZVF9V-M0022T4S | | 2.2 | 5.0 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 |

## Inverter's Standard Wiring Diragram




## ZVF200-M Variable Speed AC Motor Drive

| Input Voltage(V) | Output Voltage(V) | Power Range(KW) |
|---|---|---|
| Single phase 220V ± 20% | Three phase 0~Input Voltage | 0.4KW~2.2KW |
| Three phase 380V ± 20% | Three phase 0~Input Voltage | 0.75KW~7.5KW |
| Overload Capacity:150% 1 minute; 180% 1 second; 200% transient protection. | | |

### Main Features :

ZVF200-M Series is Sensorless Vector Micro AC Drive. The compact design is ideal for small and medium horsepower applications. The M drive is designed to provide an ultra-low-noise operation, and includes several innovative technologies that reduce interference.

- 16-bit microprocessor controlled PWM output.
- Automatic torque boost &Slip compensation.
- Output frequency : 0.1 ~ 400 Hz.
- 8-step speed control &7-step process control.
- Low-noise carrier frequency up to 15KHz.
- 2 accel./decel. Times & S-curve.
- Process follower 0-10VDC. 4-20mA.
- Communication interface RS485.
- Energy saving & Automatic voltage regulation (AVR).
- Adjustable V/F curve & Simple vector control.
- Automatic adjustment of accel./decel. times.
- PID feedback control.
- Simple position function.

### Application Range:

Packing machine. dumpling machine. treadmill. temperature/humidity control fan for agriculture and aquaculture. mixer for food processing. grinding machine. drilling machine. small size hydraulic lathe. coating equipment. small size milling machine. robot arm of injection machine (clamp). wood machine (two-side woodworking planer). edge bending machine. etc.

### Demonstration of The Model

ZVF 200 — M 0015 T 4 M DR

- DR: "DR"indicates there is a braking unit inside. No"DR", Without braking unit inside.
- M: M:Integration module S:Schism module
- 4: Voltage Class:220V、380V、 Code:2、4
- T: Single phase Code:S Three phase Code:T
- 0015: Motor Power:1.5KW Code:0015
- M: Mini type
- 200: Design Number
- ZVF: Inverter Model

## Inverter Outline & Mounting Dimension(Unit:mm)

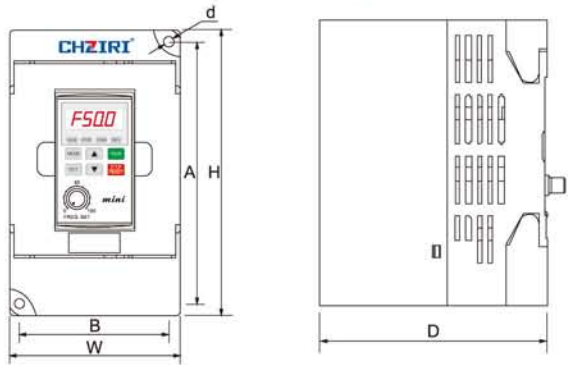



Fig.1

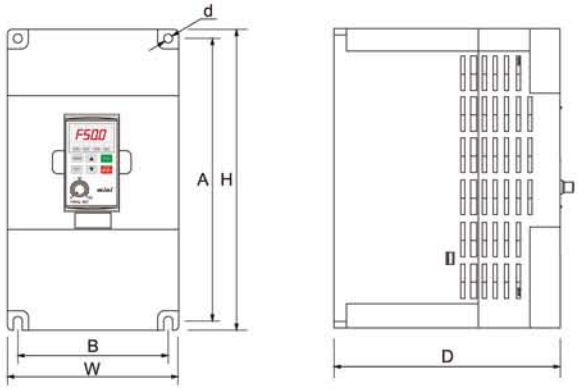
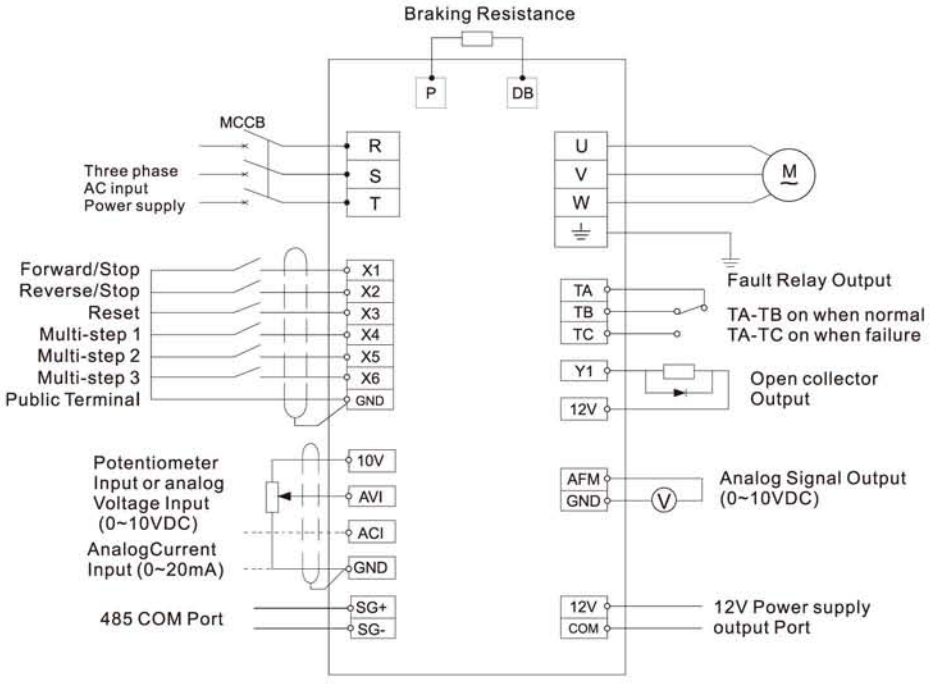



Fig.2

| Inverter Model | Voltage (V) | Power (KW) | Current (A) | Dimension(mm) | | | | | | Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | H | W | A | B | D | d | |
| ZVF200-M0004S2/T2 | 220V | 0.4 | 2.5 | 141.5 | 85 | 130.5 | 74 | 113 | 5 | Fig.1 |
| ZVF200-M0007S2/T2 | | 0.75 | 5.0 | 141.5 | 85 | 130.5 | 74 | 113 | 5 | |
| ZVF200-M0015S2/T2 | | 1.5 | 7.0 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 | |
| ZVF200-M0022S2/T2 | | 2.2 | 10 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 | |
| ZVF200-M0007T4 | 380V | 0.75 | 2.3 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 | |
| ZVF200-M0015T4 | | 1.5 | 3.7 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 | |
| ZVF200-M0022T4 | | 2.2 | 5.0 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 | |
| ZVF200-M0037T4/T2 | | 3.7 | 8.5 | 220.0 | 125 | 205 | 110 | 116.5 | 6.5 | Fig.2 |
| ZVF200-M0055T4/T2 | | 5.5 | 9.5 | 220.0 | 125 | 205 | 110 | 116.5 | 6.5 | |
| ZVF200-M0075T4 | | 7.5 | 13 | 220.0 | 125 | 205 | 110 | 116.5 | 6.5 | |

## Inverter's Standard Wiring Diragram



## Specifications and Technical Indications

| Item | | Item Description |
|---|---|---|
| Input | Rated voltage | Single phase/Three phase 220VAC. Three phase 380V. 50Hz/60Hz. |
| | Allowable voltage range | Voltage fluctuate range: 220V:180V~264V. 380V:342~528V.<br>Voltage unbalance rate:<3%. |
| | Frequency | 50/60Hz Frequency Fluctuate≦±5%. |
| Output | Rated voltage | 0~three phase input AC voltage. |
| | Frequency | 0.1~400Hz |
| Control function | Modulation Mode | SPWM (Sinusoidal Pulse Width modulation). |
| | Control method | V/F control & sensorless vector control. |
| | Frequency resolution | Digital setting: 0.1Hz. Analog setting: Max. Frequency x0.1%. |
| | Overload capacity | 150% of rated current for 1 minute. |
| | Torque Characteristic | Including the auto-torque. Auto-slip compensation. Start torque can be 150% at 5.0Hz. |
| | Acel/Decel Time | 0.1~600 seconds (2 independment setting for Accel/Decel time). |
| | V/F curve | Adjustable V/F Pattern. |
| | DC Braking | Operation frequency 0~60Hz. Output 0~100 % rated current. |
| | Carrier frequency | 1.0~15.0KHz |
| | Stall prevention level<br>Frequency setting | 20%~200% setting of rated current. |
| Operating function | Command | Keypad. External terminal control. COM Serial control. |
| | Frequency setting | Keypad potentiometer setting. Operation panel ▲ ▼ setting. external terminal UP/DOWN setting. Analog signal setting. 485 COM Setting. |
| | Multi-function analog output | 0-10VDC singal. Output frequency. current. output. |
| | Output signal | Programmable relay. open collector output. Fault signal output. |
| | Other functions | AVR. Over voltage. Over-current stall prevention. 3-Groups fault records. Reverse inhibition. Momentary Power loss restart. DC braking. Auto torque & slip compensation. acceleration/ deceleration. S-curve. auto tuning. adjustable carrier frequency. Frequency limits. Parameter lock /reset. Vector control. PID control. Counter. remote control. MODBUS communication. Abnormal reset, Abnormal restart. energy saving running. sleep/revival function. 1st/2nd frequency source selection. |
| | Protection function | Over Current. Over current. Under voltage. External fault. Overload. Ground fault. Overheating. |
| Ambient | Installation location | Altitude 1000m or less. Keep from corrosive gas. liquid and dust. |
| | Ambient temperature | -10℃~40℃(-10℃~50℃ without blind plate). |
| | Ambient humidity | Below 90% RH (no-condensing). |
| | Vibration | ＜0.5G |
| | Storage temperature | -20℃~+60℃ |
| Structure | Protective level | IP20 |
| | Cooling mode | Forced air cooling. |
| | Installation | Wall mounted |

CHZIRI®


## ZVF11-M AC Drive

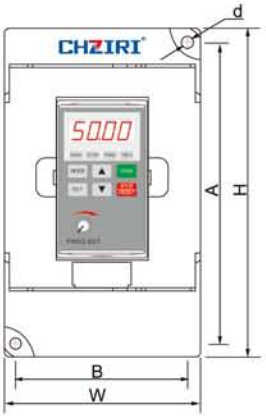
### Product Characteristic:

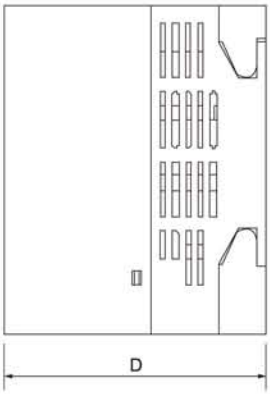
- Adopt DSP microprocessor of TI company in America and IPM intelligent module.
- Space voltage vector SAPWM control, few harmonic output, low noise.
- Effect is very good of stop of DC braking capacity from 0%-100%.
- Four kinds time of acceleration/deceleration which can set arbitrarily of time from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

### Demonstration of The Model

ZVF 11— M 0015 S 2

- 2 — Voltage Class:220V Code:2
- S — Single Phase Code:S
- 0015 — Motor Power:1. 5KW Code:0015
- M — Serial Number: Mini Type Code: M
- 11 — Design Serial Number
- ZVF — Inverter Model




## ZVF11-M Mining Type AC Drive

| Input Voltage(V) | Output Voltage(V) | Power Range(KW) |
|---|---|---|
| Single phase 220V ± 20% | Three phase 0~Input Voltage | 0.4KW~2.2KW |
| Overload Capacity:150% 1 minute; 180% 1 second; 200% transient protection. | | |

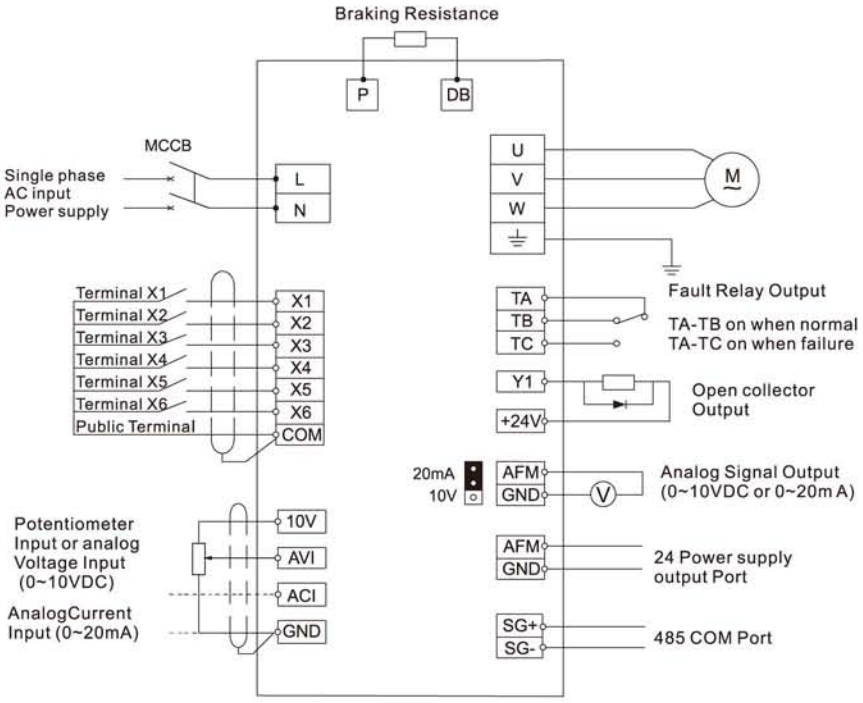
## Application Range:

ZVF11-M is suitable for all kind of mechanical devices such as metallurgy, plastic, textile. food. petrification, paper making, drug manufacture. printing. construction materials and hoisting for driving and speeding control of AC asynchronous motor.

## Inverter Outline & Mounting Dimension(Unit:mm)

| Inverter Model | Power (KW) | Current (A) | Dimension(mm) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | H | W | A | B | D | d |
| ZVF11-M0004S2 | 0.4 | 2.3 | 141.5 | 85 | 130.5 | 74.0 | 113.0 | 5 |
| ZVF11-M0007S2 | 0.75 | 4.5 | 141.5 | 85 | 130.5 | 74.0 | 113.0 | 5 |
| ZVF11-M0015S2 | 1.5 | 7.5 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 |
| ZVF11-M0022S2 | 2.2 | 10 | 151.0 | 100 | 140.0 | 89.5 | 116.5 | 5 |

## Inverter's Standard Wiring Diragram



## Specifications and Technical Indications

| Input Voltage Class | | | 220V | | | |
|---|---|---|---|---|---|---|
| ZVF11-M/S___ | | | 0004S2 | 0007S2 | 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 |
| | Maximum Output Voltage(V) | | 0~Corresponding Three-phase Input Voltage. | | | |
| | Range of Output Frequency(Hz) | | 0.01~400.00Hz | | | |
| Input | Range of Input Voltage(V) | | 160~240V | | | |
| | Range of Input Power Frequency(Hz) | | 50/60Hz ± 5% | | | |
| 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 Cure | | 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 | | Failiure, 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. | | | |
| Protection Function | | | 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 Enviroment | | Temperature: -10℃~+45℃; Humidity＜90% RH without condensing. | | | |
| | Vibration | | ＜0.5G | | | |

# ZJR2 Series

## Motor Soft Starter

ZJR2 series soft starter can work with three-phase, AC squirrel cage induction asynchronous motor, The voltage is 320V~460V, 50Hz/60Hz and the current is 1200A and below. The soft starter is a device type. It's necessary to add breakers (short-circuit protection) and AC contactor (Bypass) inside the cabinet. together with switches are made up of electric motor control circuit.

CHZIRI®


## ZJR2 Series Soft Starter

### Main Features :

ZJR2 series soft starter can work with three-phase, AC squirrel cage induction asynchronous motor,The voltage is 320V~460V, 50Hz/60Hz and the current is 1200A and below. The soft starter is a device type. It's necessary to add breakers (short-circuit protection) and AC contactor (Bypass) inside the cabinet. together with switches are made up of electric motor control circuit.

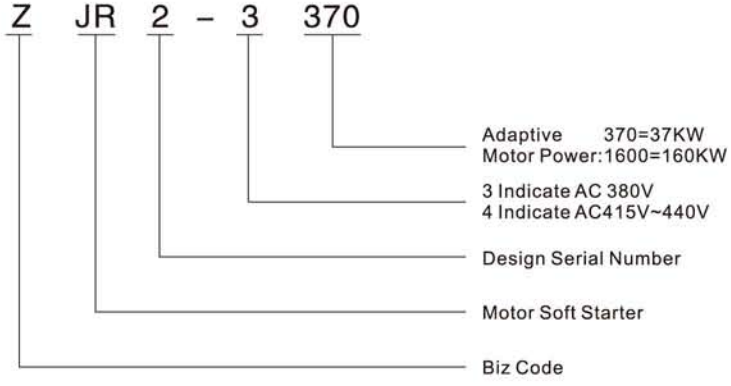
ZJR2 device type can work without three-phase AC motor in the process of starting too big acceleration torque, and power supply system plays a protection from excessive current harvest dynamic impact role, and has the following characteristics:

1. 16 SCM control, intelligent all-digital display.
2. can be put into practice a soft starter control multiple motors.
3. Starting modes: Current limiting starter, Voltage ramp start, Kick start +current-limiting start, kick start+voltage ramp start. Current ramp start. Voltage current-limiting double closed-loop start.
4. free stop and soft stop, The stop time from 0 to 60 seconds can be arbitrary choosed.
5. Over current, Overload, Open phase, instantaneous stop and other fault protection. with the flow, lack phase, instantaneous stop, and other malfunction protection.
6. Easy installation, simple operation, strong function and reasonable price.

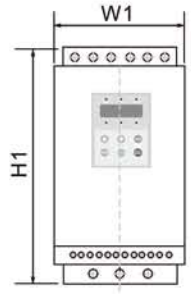
Scope of application:

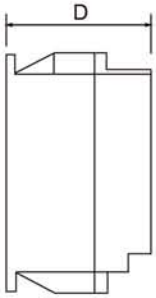
ZJR2 series motor soft starter applies to centrifuges, blower, compressor, transport planes, mixer, rolling ball mill broken machines and mechanical equipment motor starter.

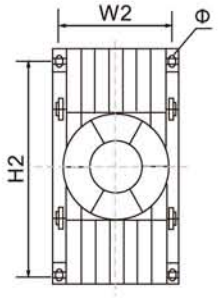
### Demonstration of the Model



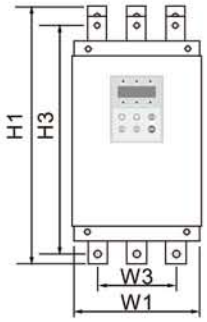
## Soft Starter Outline & Mounting Dimension(Unit:mm)

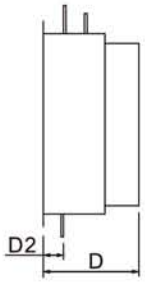


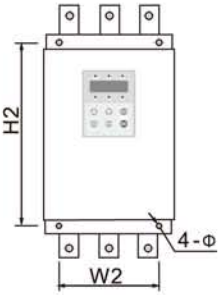




| Model | Rated Power (KW) | Rated Current (A) | Outline Size(mm) | | | Install Size(mm) | | | Net Weight (KG) |
|---|---|---|---|---|---|---|---|---|---|
| | | | H1 | W1 | D | H2 | W2 | d | |
| ZJR2-3055/4055 | 5.5 | 11 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-3075/4075 | 7.5 | 15 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-3110/4110 | 11 | 23 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-3150/4150 | 15 | 30 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-3185/4185 | 18.5 | 37 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-3220/4220 | 22 | 44 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-3300/4300 | 30 | 60 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-3370/4370 | 37 | 75 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-Z3450/4450 | 45 | 90 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |
| ZJR2-Z3550/4550 | 55 | 110 | 270 | 145 | 159 | 245 | 130 | M6 | <3. 5 |



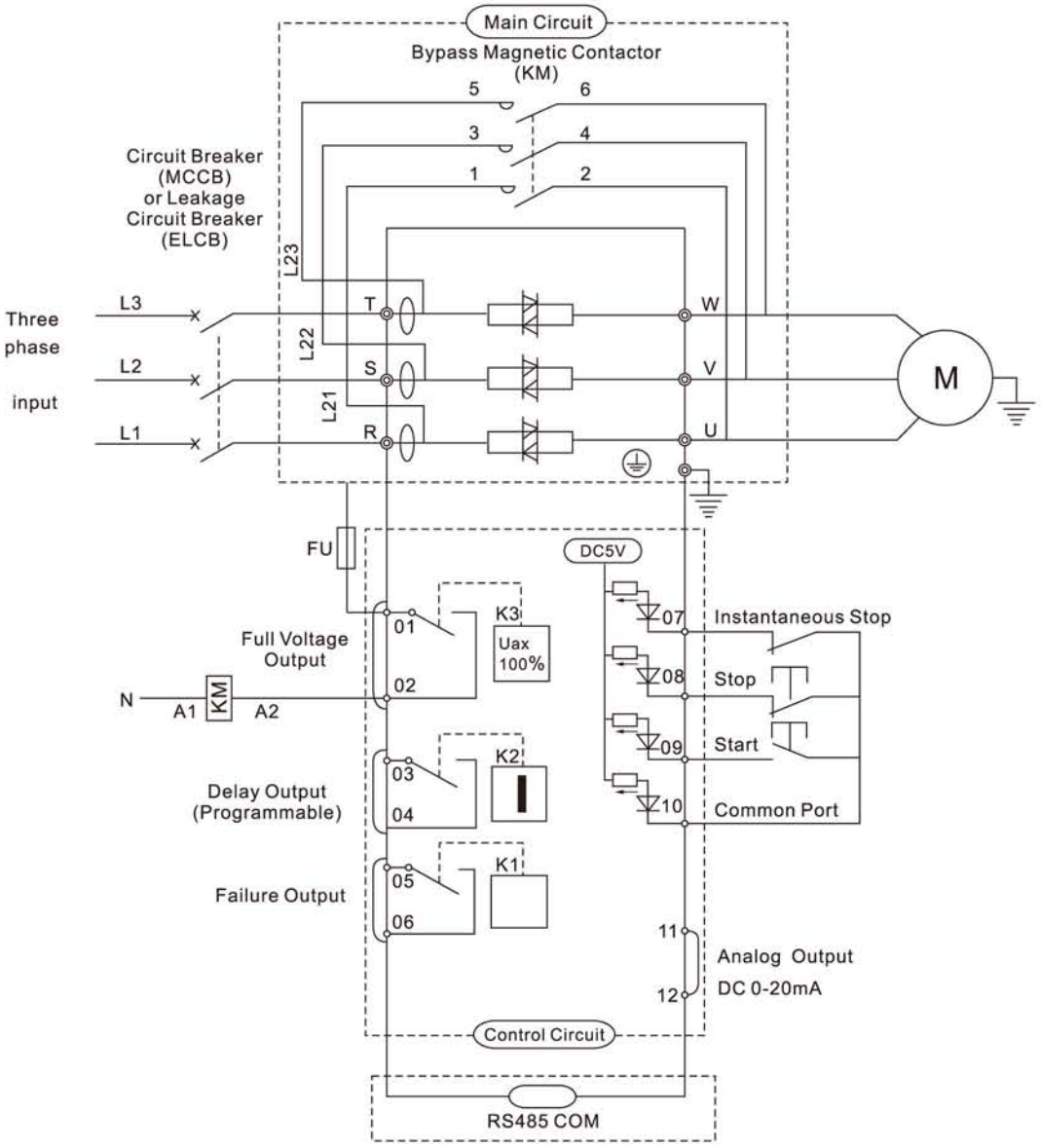

| Model | Rated Power (KW) | Rated Current (A) | Outline Size(mm) | | | Install Size(mm) | | | Net Weight (KG) |
|---|---|---|---|---|---|---|---|---|---|
| | | | H1 | W1 | D | H2 | W2 | d | |
| ZJR2-3750/4750 | 75 | 150 | 530 | 260 | 202 | 380 | 196 | M8 | <25 |
| ZJR2-3900/4900 | 90 | 180 | 530 | 260 | 202 | 380 | 196 | M8 | <25 |
| ZJR2-31150/41150 | 115 | 230 | 530 | 260 | 202 | 380 | 196 | M8 | <25 |
| ZJR2-31320/41320 | 132 | 264 | 530 | 260 | 202 | 380 | 196 | M8 | <25 |
| ZJR2-31600/41600 | 160 | 320 | 530 | 260 | 202 | 380 | 196 | M8 | <25 |
| ZJR2-32000/42000 | 200 | 400 | 530 | 260 | 202 | 380 | 196 | M8 | <25 |
| ZJR2-32500/42500 | 250 | 500 | 580 | 290 | 245 | 460 | 260 | M8 | <35 |
| ZJR2-32800/42800 | 280 | 560 | 580 | 290 | 245 | 460 | 260 | M8 | <35 |
| ZJR2-33150/43150 | 315 | 630 | 580 | 290 | 245 | 460 | 260 | M8 | <35 |
| ZJR2-34000/44000 | 400 | 800 | 630 | 330 | 245 | 500 | 265 | M8 | <40 |
| ZJR2-Z34500/44500 | 450 | 900 | 630 | 330 | 245 | 500 | 265 | M8 | <40 |
| ZJR2-Z35000/45000 | 500 | 1000 | 760 | 406 | 260 | 540 | 370 | M8 | <45 |
| ZJR2-Z36000/46000 | 600 | 1200 | 760 | 406 | 260 | 540 | 370 | M8 | <45 |

CHZIRI®

## Technical Indications

| Item | | Item Description |
|---|---|---|
| Input Power Supply | Input Voltage | Three phase 380V-15%~440V+10%. |
| | Frequency | 50/60Hz |
| Adaptive Motor | | Squirrel-cage three phase asynchronous motor. |
| Starting Times | | It is recommended not to exceed 20 times per hour. |
| Control Mode | | 1. Operation panel control.<br>2. Operation panel + external control.<br>3. External control.<br>4. External control + COM control.<br>5. Operation panel + external + COM control.<br>6. Operation panel + COM control.<br>7. COM control.<br>8. No start or stop operation. |
| Start Mode | | 1. Current-limiting start.<br>2. Voltage ramp start.<br>3. Kick start + current-limiting start.<br>4. Kick start + voltage ramp start.<br>5. Current ramp start.<br>6. Voltage current-limiting double closed-loop start. |
| Stop Mode | | 1. Soft stop. 2. Free stop. |
| Protection Function | | 1. Open loop protection for external instantaneous stop terminals.<br>2. Over-heat protection for soft starter.<br>3. Protection for too long starting time.<br>4. Input open phase protection.<br>5. Output open phase protection.<br>6. Unbalanced three-phase protection.<br>7. Starting over current protection.<br>8. Running overload protection.<br>9. Under voltage protection for power voltage.<br>10. Over voltage protection for power voltage.<br>11. Protection for fault parameter setting.<br>12. Load short circuit protection.<br>13. Auto restart or incorrect wiring protection.<br>14. Incorrect wiring protection of external control stop terminals. |
| Ambient | Place to be used | Indoor location with good ventilation free from corrosive gas and conductive dust. |
| | Altitude | Below 3000M. It have to rise the rate power when the altitude is more than 3000M. |
| | Ambient Temperature | -30℃~+55℃ |
| | Ambient Humidity | ≤90%RH without dew condensation. |
| | Vibration | <0.5G |
| Structure | Protection Class | IP20 |
| | Cooling Pattern | Natural wind cooling. |

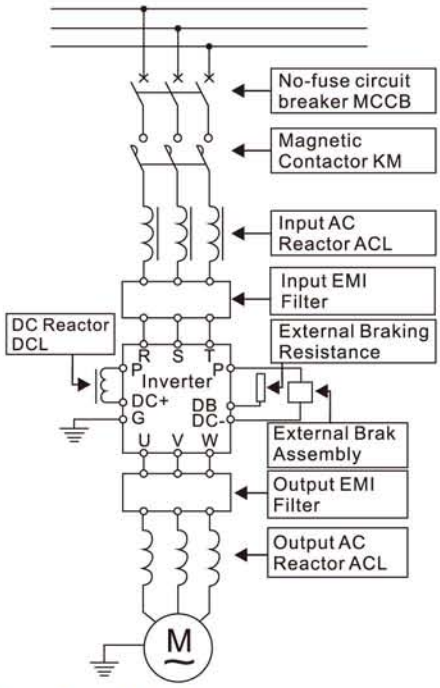
## Basic System Description On Soft Starter Wiring



CHZIRI®

## Inverter Accessories

### Wiring Diagram for Inverter System




### Recommended Brake Assembly Matching Specification

| Inverter | | Braking Unit | | Braking resistor | | |
|---|---|---|---|---|---|---|
| Voltage(V) | Motor(KW) | Model | Quantity(PCS) | Recommend resistor value | Resistor specification | Quantity(PCS) |
| 220V | 0.75KW | Built-in | | 80W200Ω | 80W200Ω | 1 |
| | 1.5KW | Built-in | | 200W100Ω | 200W100Ω | 1 |
| | 2.2KW | Built-in | | 300W70Ω | 300W70Ω | 1 |
| | 3.7KW | Built-in | | 400W40Ω | 400W40Ω | 1 |
| 380V | 0.75KW | Built-in | | 80W750Ω | 80W750Ω | 1 |
| | 1.5KW | Built-in | | 200W400Ω | 200W400Ω | 1 |
| | 2.2KW | Built-in | | 300W250Ω | 300W250Ω | 1 |
| | 3.7KW | Built-in | | 400W150Ω | 400W150Ω | 1 |
| | 5.5KW | Built-in | | 600W100Ω | 600W100Ω | 1 |
| | 7.5KW | Built-in | | 800W75Ω | 800W75Ω | 1 |
| | 11KW | Built-in | | 1000W50Ω | 1000W50Ω | 1 |
| | 15KW | Built-in | | 1500W40Ω | 1500W40Ω | 1 |
| | 18.5KW | 4030 | 1 | 2500W35Ω | 2500W35Ω | 1 |
| | 22KW | 4030 | 1 | 3000W27.2Ω | 3000W27.2Ω | 1 |
| | 30KW | 4030 | 1 | 5000W19.2Ω | 2500W38.4Ω | 2 |
| | 37KW | 4045 | 1 | 6000W16Ω | 2000W48Ω | 3 |
| | 45KW | 4045 | 2 | 9600W13.6Ω | 2500W54.4Ω | 4 |
| | 55KW | 4030 | 2 | 12000W10Ω | 2000W60Ω | 6 |
| | 75KW | 4045 | 2 | 19200W6.8Ω | 2500W54.4Ω | 8 |
| | | | | Braking Resistor Box | | Quantity(PCS) |
| | 90KW | 4030 | 3 | 9600W20Ω | | 3 |
| | 110KW | 4220 | 1 | 9600W20Ω | | 3 |
| | 132~160KW | 4220 | 1 | 40KW3.4Ω | | 1 |
| | 185~220KW | 4220 | 1 | 60KW3.2Ω | | 1 |
| | 250~315KW | 4220 | 2 | 40KW4.5Ω | | 2 |
| | 315~600KW | 4220 | 3 | 60KW3Ω | | 3 |


## Braking Unit

### Product Introduction

The function of the braking unit is to divert into a braking resistor the regenerative energy produced in the process of decelerating the motor, converting that energy into heat. Regenerative energy flows from the motor into the inverter DC Bus, manifested as increased bus voltage. The advantage gained using the braking unit is improved braking performance and shorter deceleration time of the load.

### Technical Specification

| Model | | AC200V-AC300V | | | AC380V~AC460V | | | |
|---|---|---|---|---|---|---|---|---|
| | | 2015 | 2022 | 2030 | 4030 | 4045 | 4220 | 4300 |
| Input And Output | Peak current (A) | 50 | 75 | 90 | 50 | 75 | 300 | 400 |
| | Rated Current(A) | 15 | 25 | 30 | 15 | 25 | 85 | 120 |
| | Breaking initial voltage | 380±5V | | | 630/660/690/730/760V±10V | | | |
| | Maximum Hysteresis Error | About 8V | | | About 16V | | | |
| | Multiple units | Maximum: breaking unit are parallel connected | | | | | | |
| Power | DC Bus Voltage Range | DC 243~400V | | | DC460~800V | | | |
| Indication Function | Power ON | The red "power" LED will be on when the inverter DC Bus voltage is above ~35VDC | | | | | | |
| | Braking ON | The green "braking" LED will be on during braking unit work | | | | | | |
| Ambient | Temperature | -10℃~+40℃ (-10℃~+50℃ for store) | | | | | | |
| Humidity | | 90% RH (no dew) | | | | | | |
| Vibration | | 1G(10~20Hz), 0.2G (20~50Hz) | | | | | | |
| Protection | | IP20 | | | | | | |
| Structure | | Wall mounted | | | | | | |

### Outline & Mounting Dimension(Unit:mm)

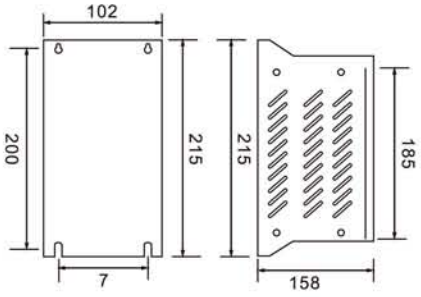



Fig.1

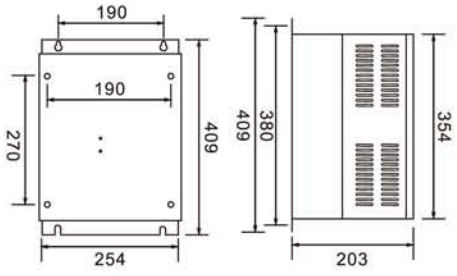



Fig.2

| Type | Mounting Hole Size (mm) | Terminal Screw Size | Wire Size ($mm^2$) | Figure |
|---|---|---|---|---|
| 2015/2030/4015/ 4030/4045 | 6 | M4 | 4-6 | Fig.1 |
| 4220 | 8 | M8 | 16-36 | Fig.2 |

CHZIRI®

# Braking Resistor

## Product Introduction

Two terminal extensions are fixed on both ends of a ceramic tube on whose surface winds wave-shaped alloy resistance wire and a high temperature-resistant and fireproof coating are applied. The ceramic tube can function as resistance wire skeleton and heat radiator as well. This product can be customized to special needs of custo mers and applicable to simulation load test, equiped discharge, automated control and inverter's energy loss brake.

## Technical Indication :

**Rated Power Range:** 50W-2500W

**Voltage Range:** 0.5KV-10KV

**Resistance Range:** 1R-1KR

**Dielectric Voltage:** AC2.5KV-20KV/1min 50Hz

**IP Class:** IP00

**Vibration:** 1G

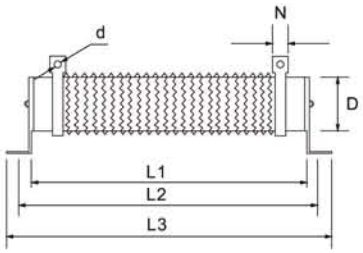
**Rated Temperature Rise:** 375℃

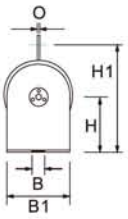
**Temperature Coefficient:** 80-400ppm/℃

**Carrier Material:** 0Cr25AL5/Ni80Cr20 Optional

**Advantage:** Work in high voltage

## Outline & Mounting Dimension(Unit:mm)




| Rated power (w) | Dimension(mm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | L1(±2) | D(±2) | L3(±3) | D(±2) | B | B1 | H | H1(±3) | N | ¢d | O |
| 50 | 102 | 124 | 146 | 28 | 6.5 | 28 | 28 | 61 | 10 | 4.5 | 1.2 |
| 60 | 102 | 124 | 146 | 28 | 6.5 | 28 | 28 | 61 | 10 | 4.5 | 1.2 |
| 80 | 152 | 174 | 196 | 28 | 6.5 | 28 | 28 | 61 | 10 | 4.5 | 1.2 |
| 100 | 182 | 204 | 226 | 28 | 6.5 | 28 | 28 | 61 | 10 | 4.5 | 1.2 |
| 120 | 182 | 204 | 226 | 28 | 6.5 | 28 | 28 | 61 | 10 | 4.5 | 1.2 |
| 150 | 195 | 217 | 239 | 40 | 8 | 40 | 41 | 81 | 12 | 5.5 | 2.0 |
| 200 | 195 | 217 | 239 | 40 | 8 | 40 | 41 | 81 | 12 | 5.5 | 2.0 |
| 300 | 282 | 304 | 326 | 40 | 8 | 40 | 41 | 81 | 12 | 5.5 | 2.0 |
| 400 | 282 | 304 | 326 | 40 | 8 | 40 | 41 | 81 | 12 | 5.5 | 2.0 |
| 500 | 316 | 338 | 360 | 50 | 8 | 50 | 45 | 101 | 16 | 6 | 2.0 |
| 600 | 345 | 367 | 389 | 40 | 8 | 40 | 41 | 81 | 16 | 5.5 | 2.0 |
| 750 | 316 | 338 | 360 | 50 | 8 | 50 | 45 | 101 | 16 | 6 | 2.0 |
| 1000 | 300 | 325 | 360 | 60 | 8.5 | 60 | 60 | 119 | 16 | 6 | 2.0 |
| 1200 | 415 | 440 | 465 | 60 | 8.5 | 60 | 60 | 119 | 16 | 6 | 2.0 |
| 1500 | 415 | 440 | 465 | 60 | 8.5 | 60 | 60 | 119 | 16 | 6 | 2.0 |
| 2000 | 510 | 535 | 560 | 60 | 8.5 | 60 | 60 | 119 | 16 | 6 | 2.0 |
| 2500 | 600 | 625 | 650 | 60 | 8.5 | 60 | 60 | 119 | 16 | 6 | 2.0 |

Note: For big power inverter, we suggest you use braking resistor box.

## AC Input Reactor (Voltage drop 2%)

### Main Features :

- Obvious interference to other devices from power supply (such as interference, over voltage).
- Interphase voltage is unbalanced >1.8% of rated voltage.
- Low impedance line (Power transformer is about 10 times of rated data of inverter).
- Large quantity of inverter mounted on the same power line but have to minimize line current.
- power factor calibrating capacitor or power factor correcting unit applied.

### Technical Indication :

Rated Voltage: φ3/380V/50Hz or 660V/50Hz.

Rated operating current: 3A to 2000A@40℃.

Reactive Strength: Core-Winding 3000VAC/50Hz/10mA/10S Free of arcing.
breakage (tested in factory).

Insulation Resistance: 1000VDC, insulation resistance≥100MΩ.

Reactor's noise is less than 65dB (to be measured at the point 1 meter away from the reactor horizontally).

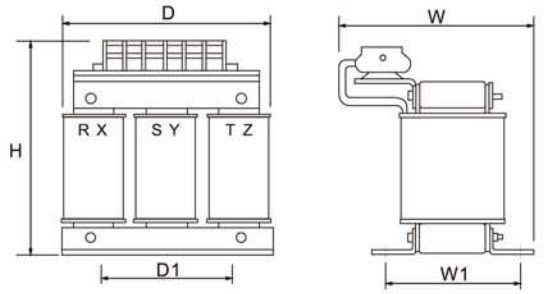
Protection class: IP00.

Insulation class: Above F.

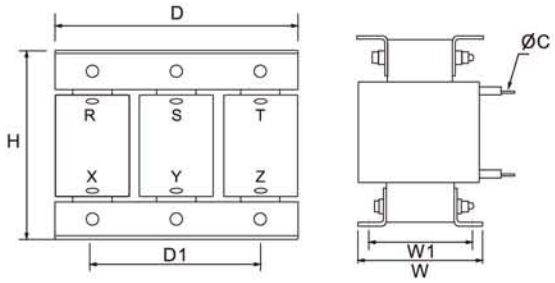
Standard: IEC289: 1987 Reactor.
GB10229-88 Reactor (equivalent to IEC289:1987).
JB9644-1999 Reactor for semi-conductor transmission.

CHZIRI®

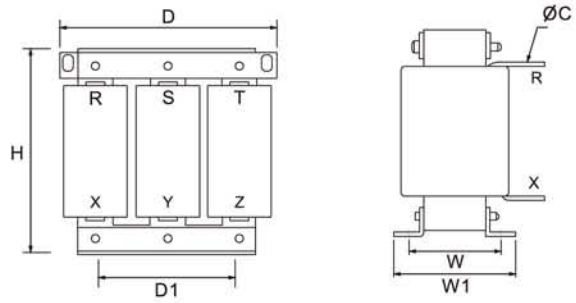
## Outline & Mounting Dimension(Unit:mm)



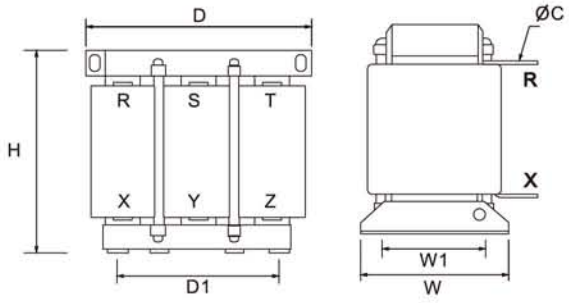

Picture A




Picture B




Picture C




Picture D

| Reactor Type | No. | Power (kW) | Rated Current | Inductance (mH) | Voltage Drop | Insulation Class | Weight (Kg) | Dimension(±0.5mm) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | D | D1 | W | W1 | H | A*B |
| ACL-0005-EISC-E3M8 | A | 1.5 | 5A | 3.8mH | 2% | F、H | 3.2 | 110 | 91 | 120 | 65 | 135 | 6*11 |
| ACL-0007-EISC-E2M5 | | 2.2 | 7A | 2.5mH | 2% | F、H | 3.4 | 110 | 91 | 120 | 65 | 135 | 6*11 |
| ACL-0010-EISC-E1M5 | | 3.7 | 10A | 1.5mH | 2% | F、H | 6 | 155 | 95 | 110 | 61 | 155 | 6*15 |
| ACL-0015-EISH-E1M0 | | 5.5 | 15A | 1.0mH | 2% | F、H | 5.5 | 155 | 95 | 130 | 80 | 155 | 6*15 |
| ACL-0020-EISH-EM75 | | 7.5 | 20A | 0.75mH | 2% | F、H | 5.5 | 155 | 95 | 135 | 80 | 155 | 6*15 |
| ACL-0030-EISH-EM60 | | 11 | 30A | 0.60mH | 2% | F、H | 7.2 | 190 | 120 | 115 | 85 | 150 | 8.5*20 |
| ACL-0040-EISH-EM42 | B | 15 | 40A | 0.42mH | 2% | F、H | 9 | 195 | 120 | 110 | 82 | 165 | 8.5*20 |
| ACL-0050-EISH-EM35 | | 18.5 | 50A | 0.35mH | 2% | F、H | 11 | 195 | 120 | 130 | 102 | 165 | 8.5*20 |
| ACL-0060-EISH-EM28 | | 22 | 60A | 0.28mH | 2% | F、H | 11.8 | 195 | 120 | 135 | 107 | 165 | 8.5*20 |
| ACL-0080-EISC-EM19 | | 30 | 80A | 0.19mH | 2% | F、H | 14.5 | 195 | 120 | 135 | 107 | 165 | 8.5*20 |
| ACL-0090-EISC-EM19 | | 37 | 90A | 0.19mH | 2% | F、H | 14.5 | 195 | 120 | 135 | 107 | 165 | 8.5*20 |
| ACL-0120-EISH-EM13 | C | 45 | 120A | 0.13mH | 2% | F、H | 20 | 250 | 182 | 135 | 96 | 230 | 11*18 |
| ACL-0150-EISH-EM11 | | 55 | 150A | 0.11mH | 2% | F、H | 28 | 295 | 214 | 150 | 110 | 240 | 11*18 |
| ACL-0200-EISH-EM08 | | 75 | 200A | 0.08mH | 2% | F、H | 31 | 295 | 214 | 160 | 120 | 240 | 11*18 |
| ACL-0250-EISH-E65U | | 110 | 250A | 0.065mH | 2% | F、H | 35 | 295 | 214 | 160 | 120 | 240 | 11*18 |
| ACL-0290-EISH-EM05 | | 132 | 290A | 0.05mH | 2% | F、H | 38 | 325 | 243 | 165 | 122 | 270 | 12*20 |
| ACL-0330-EISH-EM05 | | 160 | 330A | 0.05mH | 2% | F、H | 38 | 325 | 243 | 165 | 122 | 270 | 12*20 |
| ACL-0390-EISH-E44U | | 185 | 400A | 0.044mH | 2% | F、H | 45 | 325 | 243 | 180 | 137 | 270 | 12*20 |
| ACL-0490-EISH-E35U | D | 220 | 490A | 0.035mH | 2% | F、H | 60 | 385 | 260 | 200 | 175 | 350 | 12*20 |
| ACL-0530-EISH-E35U | | 240 | 530A | 0.035mH | 2% | F、H | 60 | 385 | 260 | 200 | 175 | 350 | 12*20 |
| ACL-0600-EISH-E25U | | 280 | 600A | 0.025mH | 2% | F、H | 70 | 395 | 275 | 200 | 175 | 350 | 12*20 |
| ACL-0660-EISH-E25U | | 300 | 660A | 0.025mH | 2% | F、H | 70 | 395 | 275 | 200 | 175 | 350 | 12*20 |
| ACL-0800-EISH-E25U | | 380 | 800A | 0.025mH | 2% | F、H | 113 | 430 | 295 | 215 | 190 | 400 | 12*20 |
| ACL-1000-EISH-E14U | | 450 | 1000A | 0.014mH | 2% | F、H | 115 | 430 | 295 | 215 | 190 | 450 | 12*20 |
| ACL-1200-EISH-E11U | | 550 | 1200A | 0.011mH | 2% | F、H | 150 | 490 | 345 | 225 | 195 | 575 | 14*25 |
| ACL-1600-EISH-E12U | | 630 | 1600A | 0.012mH | 2% | F、H | 160 | 540 | 395 | 225 | 195 | 575 | 14*25 |

Note: For AC input reactor at 4% voltage drop, Feel free to contact with us.

## AC Output Reactor ( Voltage Drop 1%)

### Main features :

- Decrease the noise of motor and the losses of eddy current.
- Decrease the leakage current caused by high order harmonic.
- Filter harmonic fluently and reduce transient voltage dv/dt to lengthen the lifetime of motor.
- Protect the power switch components of inverter.

### Technical Indication :

Rated Voltage: φ3/380V/50Hz or 660V/50Hz.

Rated operating current: 3A to 2000A@40℃.

Reactive Strength: Core- Winding 3000VAC/50Hz/10mA/10S Free of arcing.
breakage (tested in factory).

Insulation Resistance: 1000VDC, insulation resistance≥100MΩ.

Reactor's noise is less than 65dB (to be measured at the point 1 meter away from the reactor horizontally).

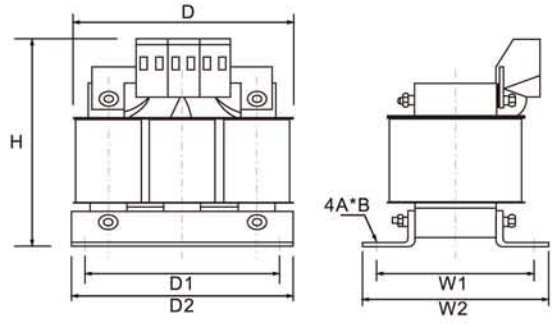
Protection class: IP00.

Insulation class: Above F.

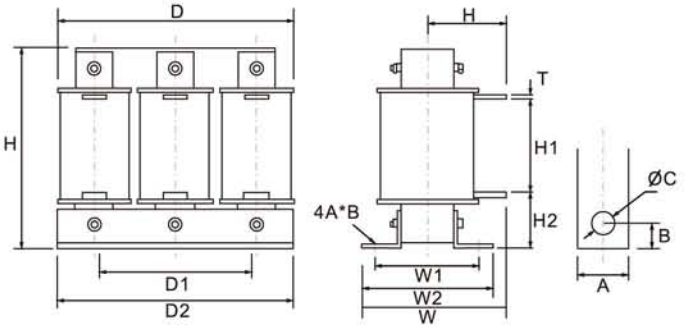
Standard: IEC289: 1987 Reactor.
GB10229-88 Reactor (equivalent to IEC289:1987).
JB9644-1999 Reactor for semi-conductor transmission.

CHZIRI®

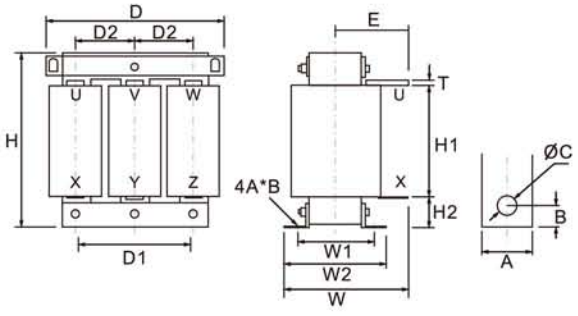
## Outline & Mounting Dimension(Unit:mm)



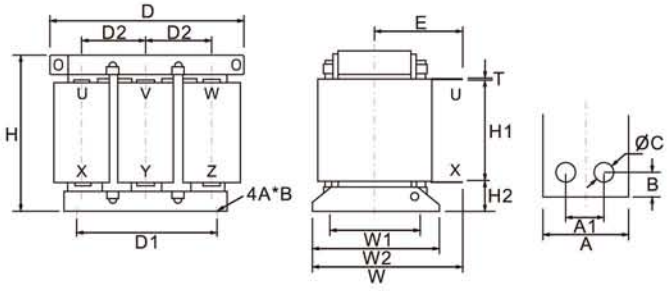

Picture A




Picture B




Picture C




Picture D

| Reactor Type | No. | Power (kW) | Rated Current | Inductance (mH) | Voltage Drop | Insulation Class | Weight (Kg) | Dimension(±0.5mm) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | D | D1 | D2 | W2 | H | A*B |
| OCL-0005-EISC-E1M4 | A | 1.5 | 5A | 1.4mH | 1% | F、H | 2.48 | 110 | 91 | 105 | 84 | 130 | 6*11 |
| OCL-0007-EISC-E1M0 | | 2.2 | 7A | 1.0mH | 1% | F、H | 2.54 | 110 | 91 | 105 | 84 | 130 | 6*11 |
| OCL-0010-EISC-EM70 | | 3.7 | 10A | 0.7mH | 1% | F、H | 2.67 | 110 | 91 | 105 | 84 | 130 | 6*11 |
| OCL-0015-EISC-EM47 | | 5.5 | 15A | 0.47mH | 1% | F、H | 3.45 | 155 | 95 | 148 | 76 | 130 | 6*15 |
| OCL-0020-EISC-EM35 | | 7.5 | 20A | 0.35mH | 1% | F、H | 3.25 | 155 | 95 | 148 | 76 | 150 | 6*15 |
| OCL-0030-EISC-EM23 | B | 11 | 30A | 0.23mH | 1% | F、H | | 155 | 95 | 148 | 96 | 150 | 6*15 |
| OCL-0040-EISC-EM18 | | 15 | 40A | 0.18mH | 1% | F、H | | 155 | 95 | 148 | 96 | 130 | 6*15 |
| OCL-0050-EISC-EM14 | | 18.5 | 50A | 0.14mH | 1% | F、H | | 155 | 95 | 148 | 96 | 165 | 6*15 |
| OCL-0060-EISC-EM12 | | 22 | 60A | 0.12mH | 1% | F、H | 6.5 | 195 | 120 | 188 | 92 | 165 | 8.5*20 |
| OCL-0080-EISC-E87U | | 30 | 80A | 0.087mH | 1% | F、H | 6.5 | 195 | 120 | 188 | 92 | 165 | 8.5*20 |
| OCL-0090-EISC-E78U | | 37 | 90A | 0.78mH | 1% | F、H | 6.5 | 195 | 120 | 188 | 92 | 165 | 8.5*20 |
| OCL-0120-EISC-E58U | | 45 | 120A | 0.58mH | 1% | F、H | 9.6 | 195 | 120 | 188 | 112 | 165 | 8.5*20 |
| OCL-0150-EISH-E47U | C | 55 | 150A | 0.047mH | 1% | F、H | 15 | 250 | 182 | 81 | 113 | 230 | 11*18 |
| OCL-0200-EISH-E35U | | 75 | 200A | 0.035mH | 1% | F、H | 17.3 | 250 | 182 | 81 | 123 | 230 | 11*18 |
| OCL-0250-EISH-E28U | | 110 | 250A | 0.028mH | 1% | F、H | 17.8 | 250 | 182 | 81 | 123 | 230 | 11*18 |
| OCL-0290-EISH-E24U | | 132 | 290A | 0.024mH | 1% | F、H | 24.7 | 290 | 214 | 95 | 127 | 250 | 11*18 |
| OCL-0330-EISH-E21U | | 160 | 330A | 0.021mH | 1% | F、H | 26 | 290 | 214 | 95 | 132 | 250 | 11*18 |
| OCL-0390-EISH-E18U | | 185 | 400A | 0.018mH | 1% | F、H | 26.5 | 290 | 214 | 95 | 132 | 250 | 11*18 |
| OCL-0490-EISH-E14U | | 220 | 490A | 0.014mH | 1% | F、H | 36.6 | 320 | 243 | 106 | 143 | 320 | 12*20 |
| OCL-0530-EISH-E25U | | 250 | 530A | 0.013mH | 1% | F、H | 36.6 | 320 | 243 | 106 | 143 | 320 | 12*20 |
| OCL-0600-EISH-E12U | | 280 | 600A | 0.012mH | 1% | F、H | 43.5 | 320 | 243 | 106 | 158 | 320 | 12*20 |
| OCL-0660-EISH-E11U | | 300 | 660A | 0.011mH | 1% | F、H | 44 | 320 | 243 | 106 | 158 | 320 | 12*20 |
| OCL-0800-EISH-E8U7 | D | 380 | 800A | 0.0087mH | 1% | F、H | 60.8 | 385 | 260 | 123 | 198 | 395 | 12*20 |
| OCL-1000-EISH-E7U0 | | 450 | 1000A | 0.007mH | 1% | F、H | 61.5 | 385 | 260 | 123 | 198 | 395 | 12*20 |
| OCL-1200-EISH-E5U8 | | 550 | 1200A | 0.0058mH | 1% | F、H | 89 | 395 | 275 | 130 | 198 | 435 | 12*20 |
| OCL-1600-EISH-E4U3 | | 650 | 1600A | 0.0043mH | 1% | F、H | 92 | 395 | 275 | 130 | 198 | 435 | 12*20 |

Note: For AC output reactor at 2% voltage drop, Feel free to contact with us.

## Filter

### Main features :

- Wire current area.
- Moderate leakage current.
- The filters are suited for power supplies for industrial installations, Particularly for the output filter used on inverter equipments. Such as inverter speed controlled systems.
- Rated voltage:275/480VAC.
- Operating frequency:50/60Hz.
- Rated current:5A-1000A.

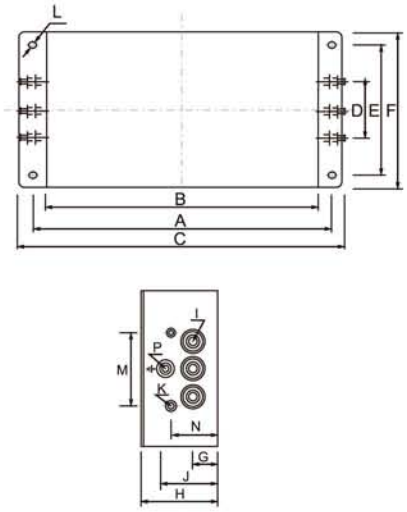




Fig.1

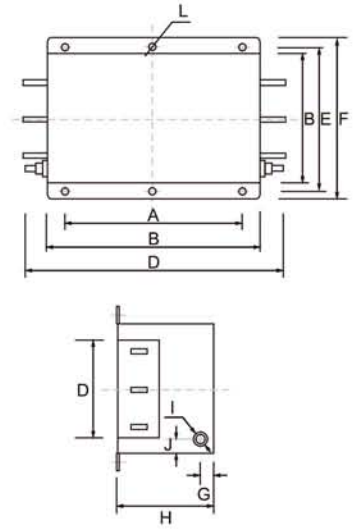



Fig.2

### Outline & Mounting Dimension(Unit:mm)

| Model | A | B | C | D | E | F | G | H | I | J | K | M | N | P | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5EBK5 | | | | | | | | | | | | | | | |
| 10EBK5 | 184 | 160 | 202 | 42 | 60 | 86 | 18 | 58 | M4 | 38 | | | | M4 | 6.4x9.4 |
| 16EBK5 | | | | | | | | | | | | | | | |
| 25EBK5 | | | | | | | | | | | | | | | |
| 35EBK5 | 243 | 224 | 265 | 58 | 70 | 102 | 25 | 92 | M6 | 58 | M4 | 74 | 49 | M6 | 6.4x9.4 |
| 50EBK5 | | | | | | | | | | | | | | | |
| 65EBK5 | | | | | | | | | | | | | | | |
| 80EBK5 | | | | | | | | | | | | | | | |
| 100EBK5 | | | | | | | | | | | | | | | |
| 130EBK5 | 354 | 323 | 388 | 66 | 155 | 188 | 90 | 92 | M8 | 62 | M4 | 86 | 56 | M8 | 6.4x9.4 |
| 160EBK5 | | | | | | | | | | | | | | | |
| 200EBK5 | | | | | | | | | | | | | | | |

| Model | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 250EBK5 | | | | | | | | | | | |
| 320EBK5 | 290 | 210 | 350 | 440 | 234 | 262 | 25 | 160 | M12 | 25 | 12 |
| 400EBK5 | | | | | | | | | | | |
| 600EBK5 | | | | | | | | | | | |
| 800EBK5 | 290 | 230 | 356 | 536 | 255 | 280 | 25 | 220 | M12 | 25 | 13 |

### Input Filter & Output Filter for inverter selection.

| Voltage | Inverter Power | Current (A) | Input filter | Output filter |
|---|---|---|---|---|
| 220V | 0.4~0.75KW | 6A | DL-6TH1 | |
| | 1.5KW | 10A | DL-10TH3 | |
| | 2.2KW | 15A | DL-15TH1 | |
| 380V | 1.5KW | 5A | DL-5EBK5 | DL-5EBL5 |
| | 2.2KW | 10A | DL-10EBK5 | DL-10EBL5 |
| | 3.7-5.5KW | 16A | DL-16EBK5 | DL-16EBL5 |
| | 7.5KW | 25A | DL-25EBK5 | DL-25EBL5 |
| | 11KW | 35A | DL-35EBK5 | DL-35EBL5 |
| | 15-22KW | 50A | DL-50EBK5 | DL-50EBL5 |
| | 30KW | 65A | DL-65EBK5 | DL-65EBL5 |
| | 37KW | 80A | DL-80EBK5 | DL-80EBL5 |
| | 45KW | 100A | DL-100EBK5 | DL-100EBL5 |
| | 55KW | 130A | DL-130EBK5 | DL-130EBL5 |
| | 75KW | 160A | DL-160EBK5 | DL-160EBL5 |
| | 95KW | 200A | DL-200EBK5 | DL-200EBL5 |
| | 110-132KW | 300A | DL-300EBK3 | DL-300EBL3 |
| | 160KW | 400A | DL-400EBK3 | DL-400EBL3 |
| | 200-250KW | 600A | DL-600EBK3 | DL-600EBL3 |
| | 315KW | 800A | DL-800EBK5 | DL-800EBL5 |