



NJR5-ZX Series Soft Starter

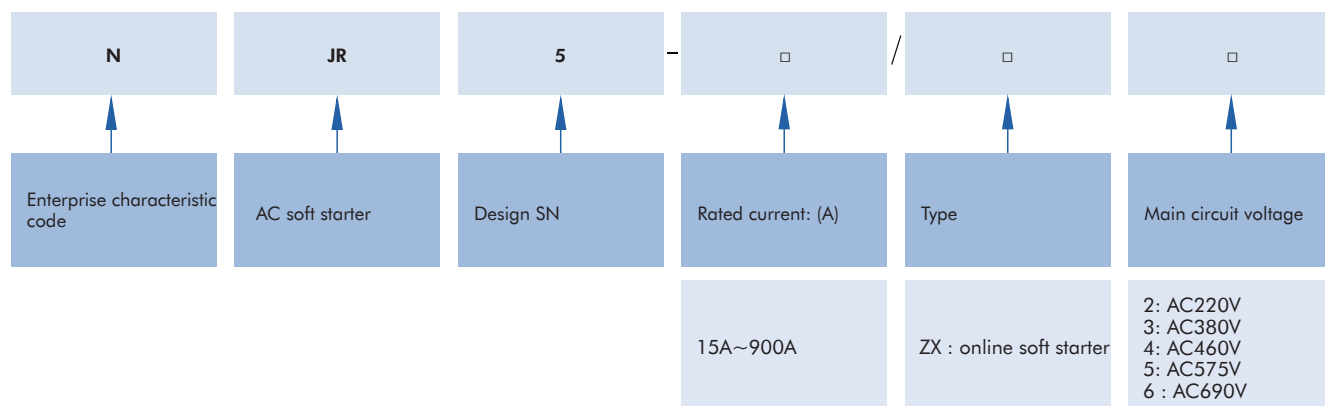
1. Product overview

NJR5-ZX series soft starter is an online soft starter, its input power voltage (main circuit voltage) is AC220V, AC380V, AC460V, AC575V and AC690V, and the rated current specification is from 15A to 1000A. With the characteristics of strong load adaptability, stable and reliable operation, etc., it is widely used in motor transmission equipment in metallurgy, petroleum, fire protection, mining, water supply, municipal, food, cement, petrochemical and other fields. It is the most ideal replacement product for a traditional star-delta starter, auto-coupling starting.

NJR5-ZX series soft starter is an AC asynchronous motor soft starter integrating power electronics technology, microprocessor technology and modern control theory technology. By controlling the three-phase parallel thyristor connected in series between the power supply and the controlled motor, the functions of soft start and soft stop of the three-phase AC asynchronous motor can be realized. This product can effectively control the starting current and the starting torque can be widely used in loads such as fans, water pumps, compressors, ball mills, and crushers.

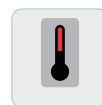
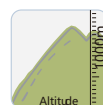
Standards: IEC60947-4-2

2. Type designation



3. Environmental conditions

- 4.1 Operation temperature: -10°C~+40°C, +40°C~+50°C should be derated for use, and the current will be derated by 2% for every 1°C increase.
- 4.2 Storage temperature: -25°C~+70°C.
- 4.3 Relative humidity: no more than 95% (20°C~65°C).
- 4.4 Altitude:
If it exceeds 1000m, it should be used with corresponding derating.
If it is above 1000m and less than 3000m, the current should be derated by 0.5% for each 100m increase. If it is above 3000m, it needs to be customized.
- 4.5 Water and dust proof:
No condensation, no flammable, explosive gas, no conductive dust.
- 4.6 Shock and vibration:
Do not drop the soft starter to the ground or suffer sudden impact, and do not install the soft starter where it may vibrate frequently.
- 4.7 Ventilation requirements:
When the soft starter is installed in the cabinet, it is required to install an exhaust fan on the cabinet to make the cabinet ventilated smoothly.
- 4.8 Long-term storage:
When the soft starter is stored for a long time, it should be energized once within two years, and then run after 1 hour.



4. Technical parameters and performance

- 4.1 Power supply voltage:
 - 1) NJR5- □ / ZX2: AC220V (range: AC198V~AC264V);
 - 2) NJR5- □ / ZX3: AC380V (range: AC323V~AC437V) ;
 - 3) NJR5- □ / ZX4: AC460V (range: AC414V~AC504V) ;
 - 4) NJR5- □ / ZX5: AC575V (range: AC517V~AC633V);
 - 5) NJR5- □ / ZX6: AC690V (range: AC621V~AC759V).
- 4.2 Main power frequency: 50HZ $\pm$ 1.5Hz, 60Hz $\pm$ 1.8Hz.
- 4.3 Applicable motor: common squirrel-cage three-phase asynchronous motor
- 4.4 Pollution level: Level 3
- 4.5 Rated insulation voltage:
 - 1) NJR5- □ /ZX2 and NJR5- □ /ZX3: AC660V;
 - 2) NJR5- □ /ZX4, NR5-D/ZX5, NJR5- □ /ZX6: AC1000V.
- 4.6 Rated impulse withstand voltage: 8kV.
- 4.7 Cooling method: forced air cooling.
- 4.8 Starting frequency: The starting frequency can be set in per hour, and it should be not to exceed 10 times per hour. For the heavier load, starting frequency should be set less.
- 4.9 Soft start time: (2~60) S.
- 4.10 Soft stop time: (2~60) S.
- 4.11 Starting modes: normal current mode, enhanced current mode, normal voltage mode, enhanced voltage mode, linear torque mode, square torque mode and frequency division mode, a total of 6 types.
- 4.12 Stop mode: free stop, brake stop and voltage ramp soft stop, a total of 3 types.
- 4.13 Initial voltage: (30~70)% U_e , where U_e represents the power supply voltage.
- 4.14 Jump time: (0.0~2.0) S.
- 4.15 Jump voltage: (50~100)% U_e , where U_e represents the power supply voltage.
- 4.16 Current limiting multiple: (50~500)% I_e , where I_e represents the rated current of the motor.
- 4.17 Torque limit level: (50.0~300.0)% T_e , where T_e represents the rated torque of the motor.

5. Main features

- 5.1 Performance aspects
 - 6 starting modes: normal current mode, enhanced current mode, normal voltage mode, enhanced voltage mode, linear torque mode, square torque mode and frequency division mode, select different starting modes and starting parameter settings according to load characteristics, It can maximize the motor to achieve the best starting effect.
 - Stable kick start: When switching from the kick process to the normal start mode, the current is seamlessly and smoothly connected without sudden changes, which prolongs the life of the transmission equipment.
 - Equipped with torque control mode: real-time control of the output electromagnetic torque of the soft starter, so that the speed of the

motor rises more smoothly during the soft start process.

- With light-load energy-saving function: when the energy-saving mode is selected, when the motor is detected to be in a light- load running state, the output voltage of the soft starter will be appropriately reduced, the motor magnetic flux will drop, the excitation current will drop, the iron loss will decrease, the stator current will decrease, and the stator copper loss will decrease. Decrease - the output power of the soft starter decreases, thereby realizing energy saving.
- Possess low-speed forward rotation and reverse rotation functions: By adjusting the trigger angle of the thyristor, the product has the switching function of low-speed forward rotation and low-speed reverse rotation, which meets some application functions, such as water pump cleaning.
- With brake stop function: by injecting direct current into the motor, it can realize fast stop and meet some occasions that require fast braking.
- Wide power supply frequency: In current mode, the power supply frequency ranges from 35Hz to 60Hz, which is more suitable for generator power supply occasions.

5.2 Functional aspects

- With secondary current limiting function: in some heavy load occasions, when the motor cannot start after the primary current limiting is adopted, the secondary current limiting can be selected (the secondary current limiting multiple is larger than the primary current limiting multiple) to start the motor, and finally the motor reaches run at full speed.
- With the function of the 2nd and 3rd motor parameters: when starting 2-3 motors in sequence, through the logic input control of the external control terminal signal IN1IN2, if the 2nd and 3rd motor parameters are selected, start and stop according to the 2nd and 3rd motor parameters And running overload protection, especially suitable for one-to-two, one-to-three applications and the application of two-speed motors.
- With a variety of protections: input phase loss, output phase loss, three-phase unbalance, operating overload, starting current limit overtime, main circuit overvoltage, main circuit undervoltage, load stall/ short circuit, excessive starting time, starting times Too many faults, \ etc., effectively protect the soft starter and the motor it carries.
- It has 4 kinds of analog current output: 4mA~20mA, 0mA, 20mA, 2mA~10mA and 0mA~10mA, which are better compatible with industrial automation equipment or instrumentation equipment.
- Built-in 485 communication interface: standard Modbus protocol is adopted to realize the communication between the soft starter and the upper computer.

5.3 User aspects

- Save user cost: no need to configure bypass contactor, save cabinet space, save cable, and reduce user overall cost.
- User-friendly debugging: When the load type is selected (see F2.00 or F3.00 or F4.00), the relevant starting parameters will be automatically configured, which is convenient for user debugging.
- User-friendly installation: The wiring method is three-in and three-out, which is convenient for cabinet formation and easy installation.
- Strong operability: Chinese LCD display, friendly interface, easy parameter setting and easy operation.

5.4 Stability aspects

The PCBA is comprehensively protected by thickened conformal paint, which greatly improves the stability of the product.

6. Selection table

Model	Rated Voltage	Rated Current	Rated Power
NJR5-15/ZX2	AC220V	15A	4kw
NJR5-22/ZX2	AC220V	22A	5.5kw
NJR5-30/ZX2	AC220V	29A	7.5kw
NJR5-37/ZX2	AC220V	36A	11kw
NJR5-44/ZX2	AC220V	42A	11kw
NJR5-60/ZX2	AC220V	57A	15kw
NJR5-74/ZX2	AC220V	70A	18.5kw
NJR5-90/ZX2	AC220V	84A	22kW
NJR5-110/ZX2	AC220V	103A	30kw
NJR5-150/ZX2	AC220V	140A	37kW
NJR5-180/ZX2	AC220V	167A	45kw
NJR5-220/ZX2	AC220V	207A	55kw
NJR5-264/ZX2	AC220V	248A	75kw
NJR5-320/ZX2	AC220V	300A	90kw
NJR5-370/ZX2	AC220V	349A	110kw
NJR5-440/ZX2	AC220V	404A	110kw
NJR5-500/ZX2	AC220V	459A	132kw
NJR5-560/ZX2	AC220V	514A	160kw
NJR5-630/ZX2	AC220V	579A	160kw
NJR5-710/ZX2	AC220V	634A	200kw
NJR5-800/ZX2	AC220V	720A	200kw
NJR5-900/ZX2	AC220V	810A	250kw
NJR5-1000/ZX2	AC220V	900A	250kw

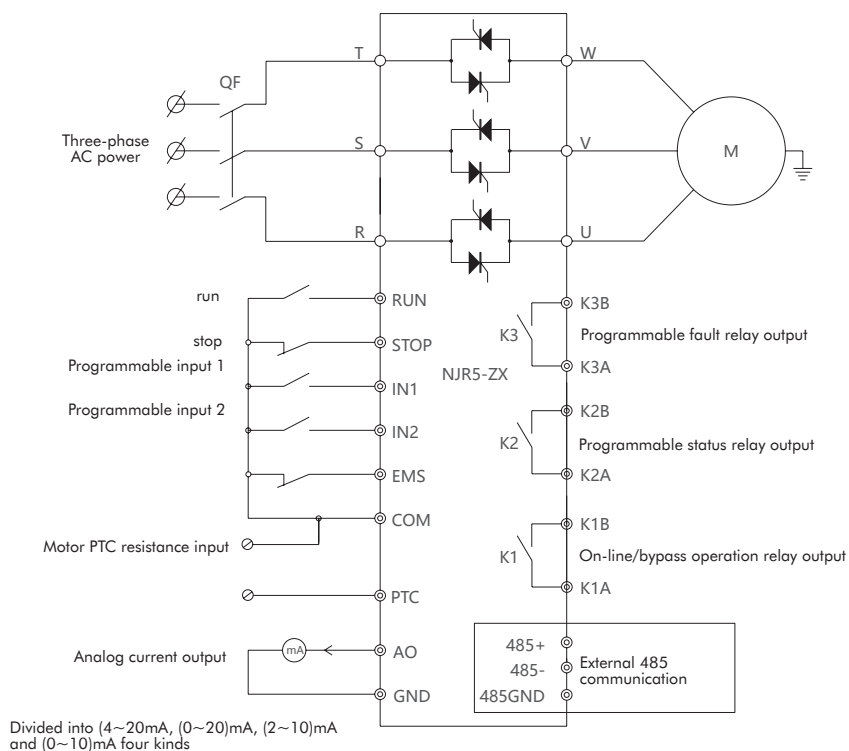
Model	Rated Voltage	Rated Current	Rated Power
NJR5-15/ZX3	AC380V	15A	7.5kw
NJR5-22/ZX3	AC380V	22A	11kw
NJR5-30/ZX3	AC380V	29A	15kw
NJR5-37/ZX3	AC380V	36A	18.5kw
NJR5-44/ZX3	AC380V	42A	22kw
NJR5-60/ZX3	AC380V	57A	30kw
NJR5-74/ZX3	AC380V	70A	37kw
NJR5-90/ZX3	AC380V	84A	45kw
NJR5-110/ZX3	AC380V	103A	55kw
NJR5-150/ZX3	AC380V	140A	75kw
NJR5-180/ZX3	AC380V	167A	90kw
NJR5-220/ZX3	AC380V	207A	110kw
NJR5-264/ZX3	AC380V	248A	132kw
NJR5-320/ZX3	AC380V	300A	160kw
NJR5-370/ZX3	AC380V	349A	185kw
NJR5-440/ZX3	AC380V	404A	220kw
NJR5-500/ZX3	AC380V	459A	250kw
NJR5-560/ZX3	AC380V	514A	280kw
NJR5-630/ZX3	AC380V	579A	315kw
NJR5-710/ZX3	AC380V	634A	355kw
NJR5-800/ZX3	AC380V	720A	400kw
NJR5-900/ZX3	AC380V	810A	450kw
NJR5-1000/ZX3	AC380V	900A	500kw

Model	Rated Voltage	Rated Current	Rated Power
NJR5-15/ZX4	AC460V	15A	9kw
NJR5-22/ZX4	AC460V	22A	15kw
NJR5-30/ZX4	AC460V	29A	18.5kw
NJR5-37/ZX4	AC460V	36A	22kw
NJR5-44/ZX4	AC460V	42A	30kw
NJR5-60/ZX4	AC460V	57A	37kw
NJR5-74/ZX4	AC460V	70A	45kw
NJR5-90/ZX4	AC460V	84A	55kw
NJR5-110/ZX4	AC460V	103A	75kw
NJR5-150/ZX4	AC460V	140A	90kw
NJR5-180/ZX4	AC460V	167A	110kw
NJR5-220/ZX4	AC460V	207A	132kw
NJR5-264/ZX4	AC460V	248A	150kw
NJR5-320/ZX4	AC460V	300A	185kw
NJR5-370/ZX4	AC460V	349A	220kw
NJR5-440/ZX4	AC460V	404A	250kw
NJR5-500/ZX4	AC460V	459A	280kw
NJR5-560/ZX4	AC460V	514A	315kw
NJR5-630/ZX4	AC460V	579A	355kw
NJR5-710/ZX4	AC460V	634A	400kw
NJR5-800/ZX4	AC460V	720A	450kw
NJR5-900/ZX4	AC460V	810A	560kw
NJR5-1000/ZX4	AC460V	900A	560kw

Model	Rated Voltage	Rated Current	Rated Power
NJR5-15/ZX5	AC575V	15A	11kW
NJR5-22/ZX5	AC575V	22A	18.5kw
NJR5-30/ZX5	AC575V	29A	22kw
NJR5-37/ZX5	AC575V	36A	30kw
NJR5-44/ZX5	AC575V	42A	30kw
NJR5-60/ZX5	AC575V	57A	45kw
NJR5-74/ZX5	AC575V	70A	55kw
NJR5-90/ZX5	AC575V	84A	75kw
NJR5-110/ZX5	AC575V	103A	90kw
NJR5-150/ZX5	AC575V	140A	110kw
NJR5-180/ZX5	AC575V	167A	132kw
NJR5-220/ZX5	AC575V	207A	160kw
NJR5-264/ZX5	AC575V	248A	185kw
NJR5-320/ZX5	AC575V	300A	250kw
NJR5-370/ZX5	AC575V	349A	280kw
NJR5-440/ZX5	AC575V	404A	315kw
NJR5-500/ZX5	AC575V	459A	355kw
NJR5-560/ZX5	AC575V	514A	400kw
NJR5-630/ZX5	AC575V	579A	450kw
NJR5-710/ZX5	AC575V	634A	500kw
NJR5-800/ZX5	AC575V	720A	560kw
NJR5-900/ZX5	AC575V	810A	630kw
NJR5-1000/ZX5	AC575V	900A	800kw

Model	Rated Voltage	Rated Current	Rated Power
NJR5-15/ZX6	AC690V	15A	11kw
NJR5-22/ZX6	AC690V	22A	18.5kw
NJR5-30/ZX6	AC690V	29A	22kw
NJR5-37/ZX6	AC690V	36A	30kw
NJR5-44/ZX6	AC690V	42A	37kw
NJR5-60/ZX6	AC690V	57A	55kw
NJR5-74/ZX6	AC690V	70A	75kw
NJR5-90/ZX6	AC690V	84A	90kw
NJR5-110/ZX6	AC690V	103A	110kw
NJR5-150/ZX6	AC690V	140A	132kw
NJR5-180/ZX6	AC690V	167A	160kw
NJR5-220/ZX6	AC690V	207A	200kw
NJR5-264/ZX6	AC690V	248A	250kw
NJR5-320/ZX6	AC690V	300A	315kw
NJR5-370/ZX6	AC690V	349A	355kw
NJR5-440/ZX6	AC690V	404A	400kw
NJR5-500/ZX6	AC690V	459A	400kw
NJR5-560/ZX6	AC690V	514A	500kw
NJR5-630/ZX6	AC690V	579A	560kw
NJR5-710/ZX6	AC690V	634A	630kw
NJR5-800/ZX6	AC690V	720A	710kw
NJR5-900/ZX6	AC690V	810A	800kw
NJR5-1000/ZX6	AC690V	900A	900kw

7. Basic Wiring Diagram



Note: When using the external control terminal to control start and stop, when the STOP terminal and the COM terminal are in the closed state, after the product is powered on, it must be detected that the RUN terminal and the COM terminal have changed from open to closed before it is considered to have received a valid signal. Start command, if the RUN terminal and COM terminal are always in the closed state when the power is turned on, the effective start command cannot be received.

8. Terminal definition

8.1 Definition of main circuit terminals

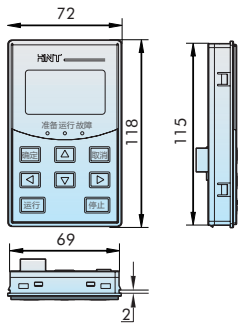
R / S / T	The input terminal of the three-phase AC power supply is also the input terminal of the soft starter
U/V/W	The output terminal of the soft starter is also the input terminal of the three-phase asynchronous motor

8.2 Definition of external control terminals

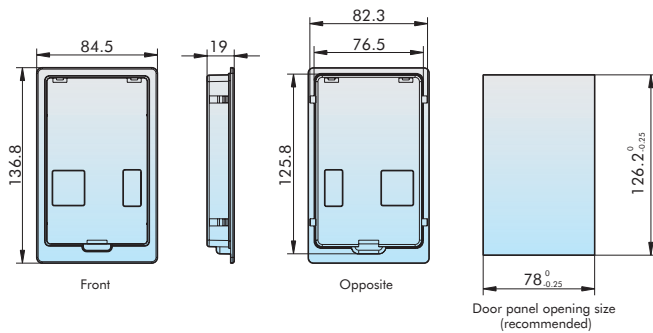
Terminal name	Terminal definition	Description
K1A, K1B	On-line/bypass relay K1 (normally open)	Contact capacity: 5A/250VAC. K1A, K1B terminals become closed when the soft starter switches to online operation or bypass operation state.
K2A.K2B	Programmable status relay K2 (normally open)	Contact capacity: 3A/250VAC. determined by function parameters F5.00 and F5.13 . When the tens digit of F5.00 is 0 , it means that the terminal K2A and K2B are in the active state when they are closed; when it is 1, it means that the terminal K2A and K2B are in the active state when they are disconnected. for example: If the tens place of F5.00 is set to 0, and F5.13 is set to 2 (online/bypass state), when the soft starter enters on-line/bypass operation state, K2A and K2B terminals are closed, while in other working states Both K2A and K2B terminals are disconnected; when the tens place of F5.00 is set to 1, F5.13 is set to 2 (online/bypass state), when the soft starter enters on-line/bypass operation state, K2A and K2B terminals Open, and in any other working state, K2A, K2B terminals are closed.
K3A.K3B	Programmable status relay K3 (normally open)	Contact capacity: 3A/250VAC This function is determined by function parameters F5.00 and F5.14. When the ones digit of F5.00 is 0, it means that the terminal K3A and K3B are in the active state; when it is 1, it means that the terminal K3A and K3B are in the active state. for example: If the unit digit of F5.00 is set to 0, and F5.14 is set to 0 (any fault or alarm), when any fault or alarm occurs to the soft starter, K3A and K3B terminals are closed, and when there is no fault or alarm, K3A , K3B terminal is disconnected; when F5.00 When the ones place is set to 1, F5.14 is set to 0 (any fault or alarm), when the soft starter has any fault or alarm, K3A and K3B terminals are disconnected, and when there is no fault or alarm, both K3A and K3B terminals are closed .
RUN	Start terminal RUN	Use COM as the reference point . When the external control start is allowed, when the RUN terminal and the STOP terminal are closed at the same time, and the closing time is greater than the setting value of F5.07 and F5.09, a start command will be issued; when the STOP terminal is disconnected, and the disconnection time is greater than F5. When the value of 10 is set, a shutdown command will be issued. Note: This terminal is a dry contact, and AC signals cannot be connected or introduced.
STOP	Stop terminal STOP	
IN1	Programmable input terminal IN1	Take COM as the reference point. The function is determined by parameter F5.01, and the factory default value is 1 (external fault) Note: This terminal is a dry contact, and AC signals cannot be connected or introduced.
IN2	Programmable input terminal IN2	Take COM as the reference point. The function is determined by parameter F5.02, and the factory default value is 4 (fault reset). Note: This terminal is a dry contact, and AC signals cannot be connected or introduced.
EMS	Momentary stop terminal EMS	Take COM as the reference point. When it is detected that the EMS terminal is disconnected from the COM terminal, it will report a "momentary power failure terminal open circuit" fault. Note: This terminal is a dry contact, and AC signals cannot be connected or introduced.
COM	External control common terminal COM	Signal input common for terminals RUN, STOP, IN1, IN2, EMS and PTC
PTC	Motor input terminal PTC	Used for thermal protection of motors. The total resistance of the motor temperature sensor circuit: 2000~750Ω at 25°C, when the total resistance is greater than 3.1kΩ, it will report "motor overheating failure", and when the total resistance is less than 1.5kΩ, the motor is overheated and the product returns to the ready state.
AO	Analog output terminal AO	Use GND as a reference point. The analog AO output type is determined by F6.00, including four output types of 4mA~20mA, 0mA~20mA , 2mA~10mA and 0mA~10mA. The factory default value is 4mA~20mA. The analog AO output function is determined by F6.01, including motor current Max=500%le, motor current Max=200%le, motor current Max=100%le, main circuit voltage V, soft starter temperature ° C , power factor and electromagnetic torque [100%], the factory default value is motor current Max=200%le.
GND	Internal chip working ground GND	The working ground of the main chip is also the ground of the analog output AO.
485+ 485- 485GND	485 communication terminal 485+ 485 communication terminal 485- 485 communication terminal 485GND	485+ is connected to the differential positive end of the host computer; 485-Connect to the differential negative terminal of the host computer; 485GND is connected to the ground of the differential power supply of the upper computer, so that the communication ground of the soft starter is directly connected with the communication ground of the upper computer, making the communication more reliable.

9. Outline and installation dimensions

9.1 Outline and installation dimensions of the operation panel



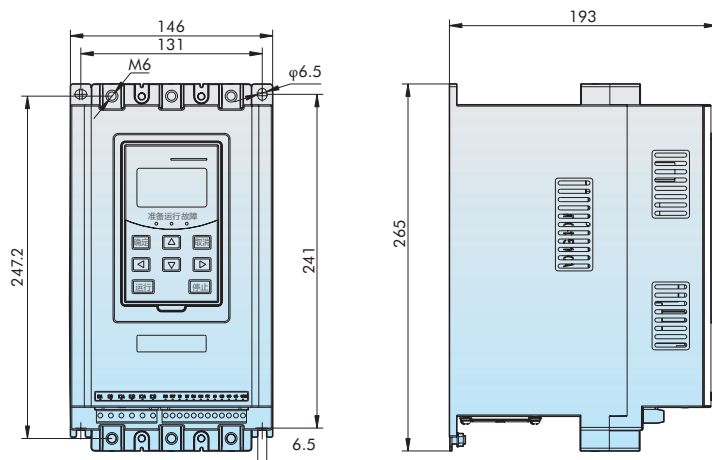
9.2 Outline and installation dimensions of the support plate of the operation panel



Note: NJR5-ZX products with a rated current greater than 90A are equipped with a support plate for the operation panel

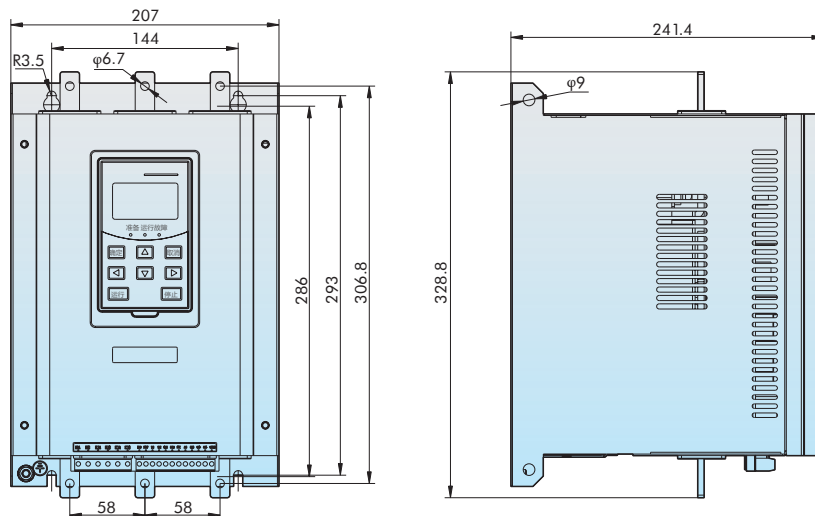
9.3 Outline and installation dimensions of the whole machine

9.3.1 NJR5-15/ZX2~NJR5-90/ZX2, NJR5-15/ZX3~NJR5-90/ZX3, NJR5-15/ZX4~NJR5-90/ZX4, NJR5-15/ZX5~NJR5-90/ZX5 And NJR5-15/ZX6~NJR5-90/ZX6 overall appearance and installation dimensions.



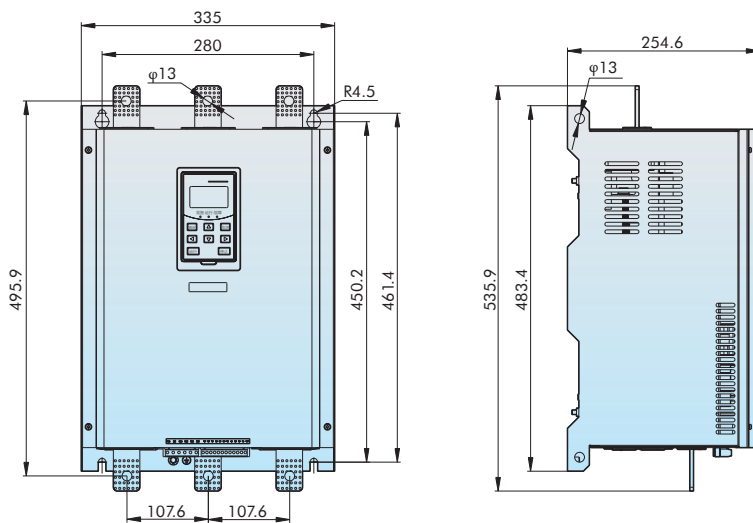
Model	Rated Voltage	Rated Current	Matched Motor Power	Net Weight(Kg)	Gross Weight(Kg)
NJR5-15/ZX2	AC220V	15A	4kw	6.2	6.7
NJR5-22/ZX2	AC220V	22A	5.5kw	6.2	6.7
NJR5-30/ZX2	AC220V	29A	7.5kw	6.2	6.7
NJR5-37/ZX2	AC220V	36A	11kw	6.2	6.7
NJR5-44/ZX2	AC220V	42A	11kw	6.2	6.7
NJR5-60/ZX2	AC220V	57A	15kw	6.2	6.7
NJR5-74/ZX2	AC220V	70A	18.5kw	6.2	6.7
NJR5-90/ZX2	AC220V	84A	22kW	6.2	6.7
NJR5-15/ZX3	AC380V	15A	7.5kw	6.2	6.7
NJR5-22/ZX3	AC380V	22A	11kw	6.2	6.7
NJR5-30/ZX3	AC380V	29A	15kw	6.2	6.7
NJR5-37/ZX3	AC380V	36A	18.5kw	6.2	6.7
NJR5-44/ZX3	AC380V	42A	22kw	6.2	6.7
NJR5-60/ZX3	AC380V	57A	30kw	6.2	6.7
NJR5-74/ZX3	AC380V	70A	37kw	6.2	6.7
NJR5-90/ZX3	AC380V	84A	45kw	6.2	6.7
NJR5-15/ZX4	AC460V	15A	9kw	6.2	6.7
NJR5-22/ZX4	AC460V	22A	15kw	6.2	6.7
NJR5-30/ZX4	AC460V	29A	18.5kw	6.2	6.7
NJR5-37/ZX4	AC460V	36A	22kW	6.2	6.7
NJR5-44/ZX4	AC460V	42A	30kw	6.2	6.7
NJR5-60/ZX4	AC460V	57A	37kw	6.2	6.7
NJR5-74/ZX4	AC460V	70A	45kw	6.2	6.7
NJR5-90/ZX4	AC460V	84A	55kw	6.2	6.7
NJR5-15/ZX5	AC575V	15A	11kW	6.2	6.7
NJR5-22/ZX5	AC575V	22A	18.5kw	6.2	6.7
NJR5-30/ZX5	AC575V	29A	22kw	6.2	6.7
NJR5-37/ZX5	AC575V	36A	30kw	6.2	6.7
NJR5-44/ZX5	AC575V	42A	30kw	6.2	6.7
NJR5-60/ZX5	AC575V	57A	45kw	6.2	6.7
NJR5-74/ZX5	AC575V	70A	55kw	6.2	6.7
NJR5-90/ZX5	AC575V	84A	75kw	6.2	6.7
NJR5-15/ZX6	AC690V	15A	11kw	6.2	6.7
NJR5-22/ZX6	AC690V	22A	18.5kw	6.2	6.7
NJR5-30/ZX6	AC690V	29A	22kw	6.2	6.7
NJR5-37/ZX6	AC690V	36A	30kw	6.2	6.7
NJR5-44/ZX6	AC690V	42A	37kw	6.2	6.7
NJR5-60/ZX6	AC690V	57A	55kw	6.2	6.7
NJR5-74/ZX6	AC690V	70A	75kw	6.2	6.7
NJR5-90/ZX6	AC690V	84A	90kw	6.2	6.7

9.3.2 NJR5-110/ZX2~NJR5-150/ZX2 , NJR5-110/ZX3~NJR5-150/ZX3 , NJR5-110/ZX4~NJR5-150/ZX4 , NJR5-110/ZX5~NJR5-150/ZX5 And NJR5-110/ZX6~NJR5-150/ZX6 overall appearance and installation dimensions.



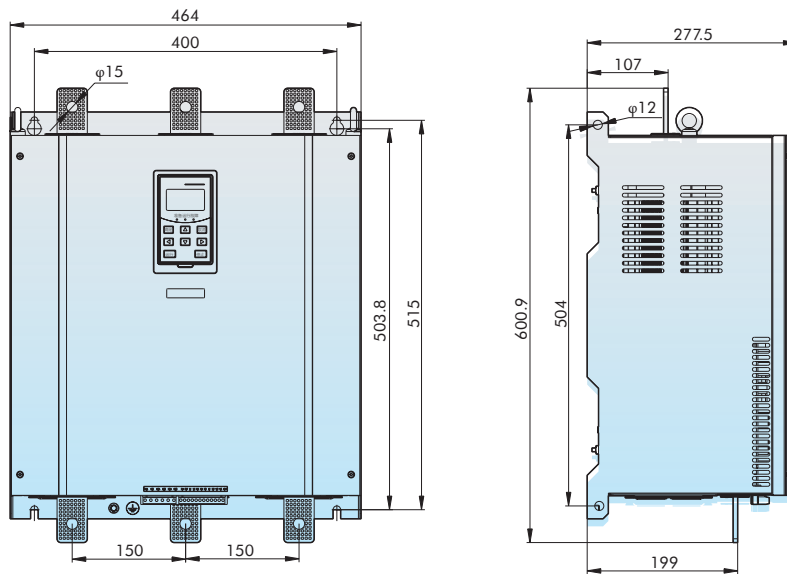
Model	Rated Voltage	Rated Current	Matched Motor Power	Net Weight(Kg)	Gross Weight(Kg)
NJR5-110/ZX2	AC220V	103A	30kw	10.2	10.7
NJR5-150/ZX2	AC220V	140A	37kW	10.2	10.7
NJR5-110/ZX3	AC380V	103A	55kw	10.2	10.7
NJR5-150/ZX3	AC380V	140A	75kw	10.2	10.7
NJR5-110/ZX4	AC460V	103A	75kw	10.2	10.7
NJR5-150/ZX4	AC460V	140A	90kw	10.2	10.7
NJR5-110/ZX5	AC575V	103A	90kw	10.2	10.7
NJR5-150/ZX5	AC575V	140A	110kw	10.2	10.7
NJR5-110/ZX6	AC690V	103A	110kw	10.2	10.7
NJR5-150/ZX6	AC690V	140A	132kw	10.2	10.7

9.3.3 NJR5-180/ZX2~NJR5-370/ZX2 , NJR5-180/ZX3~NJR5-370/ZX3 , NJR5-180/ZX4~NJR5-370/ZX4 , NJR5-180/ZX5~NJR5-370/ Outline and installation dimensions of ZX5 and NJR5-180/ZX6~NJR5-370/ZX6.



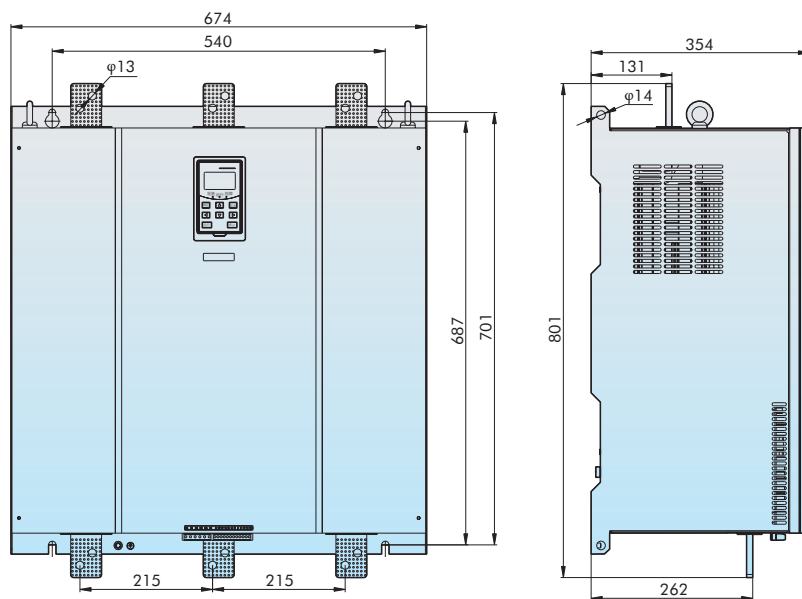
Model	Rated Voltage	Rated Current	Matched Motor Power	Net Weight(Kg)	Gross Weight(Kg)
NJR5-180/ZX2	AC220V	167A	45kw	24.5	26.5
NJR5-220/ZX2	AC220V	207A	55kw	24.5	26.5
NJR5-264/ZX2	AC220V	248A	75kw	24.5	26.5
NJR5-320/ZX2	AC220V	300A	90kw	24.5	26.5
NJR5-370/ZX2	AC220V	349A	110kw	24.5	26.5
NJR5-180/ZX3	AC380V	167A	90kw	24.5	26.5
NJR5-220/ZX3	AC380V	207A	110kw	24.5	26.5
NJR5-264/ZX3	AC380V	248A	132kw	24.5	26.5
NJR5-320/ZX3	AC380V	300A	160kw	24.5	26.5
NJR5-370/ZX3	AC380V	349A	185kw	24.5	26.5
NJR5-180/ZX4	AC460V	167A	110kw	24.5	26.5
NJR5-220/ZX4	AC460V	207A	132kw	24.5	26.5
NJR5-264/ZX4	AC460V	248A	150kw	24.5	26.5
NJR5-320/ZX4	AC460V	300A	185kw	24.5	26.5
NJR5-370/ZX4	AC460V	349A	220kw	24.5	26.5
NJR5-180/ZX5	AC575V	167A	132kw	24.5	26.5
NJR5-220/ZX5	AC575V	207A	160kw	24.5	26.5
NJR5-264/ZX5	AC575V	248A	185kw	24.5	26.5
NJR5-320/ZX5	AC575V	300A	250kw	24.5	26.5
NJR5-370/ZX5	AC575V	349A	280kw	24.5	26.5
NJR5-180/ZX6	AC690V	167A	160kw	24.5	26.5
NJR5-220/ZX6	AC690V	207A	200kw	24.5	26.5
NJR5-264/ZX6	AC690V	248A	250kw	24.5	26.5
NJR5-370/ZX6	AC690V	300A	315kw	24.5	26.5
NJR5-370/ZX6	AC690V	349A	355kw	24.5	26.5

9.3.4 NJR5-440/ZX2~NJR5-710/ZX2 , NJR5-440/ZX3~NJR5-710/ZX3 , NJR5-440/ZX4~NJR5-710/ZX4, NJR5-440/ZX5~NJR5-710 /ZX5 and NJR5-440/ZX6~NJR5-710/ZX6 overall appearance and installation dimensions.



Model	Rated Voltage	Rated Current	Matched Motor Power	Net Weight(Kg)	Gross Weight(Kg)
NJR5-440/ZX2	AC220V	404A	110kw	39.6	42.6
NJR5-500/ZX2	AC220V	459A	132kw	39.6	42.6
NJR5-560/ZX2	AC220V	514A	160kw	39.6	42.6
NJR5-630/ZX2	AC220V	579A	160kw	39.6	42.6
NJR5-710/ZX2	AC220V	634A	200kw	39.6	42.6
NJR5-440/ZX3	AC380V	404A	220kw	39.6	42.6
NJR5-500/ZX3	AC380V	459A	250kw	39.6	42.6
NJR5-560/ZX3	AC380V	514A	280kw	39.6	42.6
NJR5-630/ZX3	AC380V	579A	315kw	39.6	42.6
NJR5-710/ZX3	AC380V	634A	355kw	39.6	42.6
NJR5-440/ZX4	AC460V	404A	250kw	39.6	42.6
NJR5-500/ZX4	AC460V	459A	280kw	39.6	42.6
NJR5-560/ZX4	AC460V	514A	315kw	39.6	42.6
NJR5-630/ZX4	AC460V	579A	355kw	39.6	42.6
NJR5-710/ZX4	AC460V	634A	400kw	39.6	42.6
NJR5-440/ZX5	AC575V	404A	315kw	39.6	42.6
NJR5-500/ZX5	AC575V	459A	355kw	39.6	42.6
NJR5-560/ZX5	AC575V	514A	400kw	39.6	42.6
NJR5-630/ZX5	AC575V	579A	450kw	39.6	42.6
NJR5-710/ZX5	AC575V	634A	500kw	39.6	42.6
NJR5-440/ZX6	AC690V	404A	400kw	39.6	42.6
NJR5-500/ZX6	AC690V	459A	400kw	39.6	42.6
NJR5-560/ZX6	AC690V	514A	500kw	39.6	42.6
NJR5-630/ZX6	AC690V	579A	560kw	39.6	42.6
NJR5-710/ZX6	AC690V	634A	630kw	39.6	42.6

9.3.5 NJR5-800/ZX2~NJR5-1000/ZX2 , NJR5-800/ZX3~NJR5-1000/ZX3 , NJR5-800/ZX4~NJR5-1000/ZX4, NJR5-800/ZX5~NJR5-1000/ZX5 And NJR5-800/ZX6~NJR5-1000/ZX6 overall appearance and installation dimensions.



Model	Rated Voltage	Rated Current	Matched Motor Power	Net Weight(Kg)	Gross Weight(Kg)
NJR5-800/ZX2	AC220V	720A	200kw	80	84
NJR5-900/ZX2	AC220V	810A	250kw	80	84
NJR5-1000/ZX2	AC220V	900A	250kw	80	84
NJR5-800/ZX3	AC380V	720A	400kw	80	84
NJR5-900/ZX3	AC380V	810A	450kw	80	84
NJR5-1000/ZX3	AC380V	900A	500kw	80	84
NJR5-800/ZX4	AC460V	720A	450kw	80	84
NJR5-900/ZX4	AC460V	810A	560kw	80	84
NJR5-1000/ZX4	AC460V	900A	560kw	80	84
NJR5-800/ZX5	AC575V	720A	560kw	80	84
NJR5-900/ZX5	AC575V	810A	630kw	80	84
NJR5-1000/ZX5	AC575V	900A	800kw	80	84
NJR5-800/ZX6	AC690V	720A	710kw	80	84
NJR5-900/ZX6	AC690V	810A	800kw	80	84
NJR5-1000/ZX6	AC690V	900A	900kw	80	84

10. Ordering Information

10.1 When ordering, please select the required model and specification according to the description of the model and its meaning.

Example: The power level of the grid is AC380V, the power of the controlled motor is 45kW, and the rated current is 84A. It is necessary to use the soft starter together with the soft starter cabinet or power distribution cabinet.

The order model is: NJR5-90/ZX3

Example: The power level of the grid is AC690V, the power of the controlled motor is 90kW, and the rated current is 84A. It is necessary to use the soft starter together with the soft starter cabinet or power distribution cabinet.

The order model is: NJR5-90/ZX 6

10.2 When using a soft starter for a motor with more than four poles, it is recommended to use a larger size.

10.3 When using a soft starter for a two-pole motor, due to the large starting current, please set the parameters correctly according to the instruction manual before using it.

10.4 For occasions with heavy loads, it is recommended to use a soft starter with a larger gear.

SAP No	Model	Type	Power supply	Rated power	Ordering code
G711570400000116	NJR5-15/ZX2	Online type	3 phase 220V	4	438238
G711570400000117	NJR5-22/ZX2	Online type	3 phase 220V	5.5	438239
G711570400000118	NJR5-30/ZX2	Online type	3 phase 220V	7.5	438240
G711570400000119	NJR5-37/ZX2	Online type	3 phase 220V	11	438241
G711570400000120	NJR5-44/ZX2	Online type	3 phase 220V	11	438242
G711570400000121	NJR5-60/ZX2	Online type	3 phase 220V	15	438243
G711570400000122	NJR5-74/ZX2	Online type	3 phase 220V	18.5	438244
G711570400000123	NJR5-90/ZX2	Online type	3 phase 220V	22	438245
G711570400000124	NJR5-110/ZX2	Online type	3 phase 220V	30	438246
G711570400000125	NJR5-150/ZX2	Online type	3 phase 220V	37	438247
G711570400000126	NJR5-180/ZX2	Online type	3 phase 220V	45	438248
G711570400000127	NJR5-220/ZX2	Online type	3 phase 220V	55	438249
G711570400000128	NJR5-264/ZX2	Online type	3 phase 220V	75	438250
G711570400000129	NJR5-320/ZX2	Online type	3 phase 220V	90	438251
G711570400000130	NJR5-370/ZX2	Online type	3 phase 220V	110	438252
G711570400000131	NJR5-440/ZX2	Online type	3 phase 220V	110	438253
G711570400000132	NJR5-500/ZX2	Online type	3 phase 220V	136	438254
G711570400000133	NJR5-560/ZX2	Online type	3 phase 220V	160	438255
G711570400000134	NJR5-630/ZX2	Online type	3 phase 220V	160	438256
G711570400000135	NJR5-710/ZX2	Online type	3 phase 220V	200	438257
G711570400000136	NJR5-800/ZX2	Online type	3 phase 220V	200	438258
G711570400000137	NJR5-900/ZX2	Online type	3 phase 220V	250	438259
G711570400000138	NJR5-1000/ZX2	Online type	3 phase 220V	250	438260
G711570400000139	NJR5-15/ZX3	Online type	3 phase 380V	7.5	438261
G711570400000140	NJR5-22/ZX3	Online type	3 phase 380V	11	438262
G711570400000141	NJR5-30/ZX3	Online type	3 phase 380V	15	438263
G711570400000142	NJR5-37/ZX3	Online type	3 phase 380V	18.5	438264
G711570400000143	NJR5-44/ZX3	Online type	3 phase 380V	22	438265
G711570400000144	NJR5-60/ZX3	Online type	3 phase 380V	30	438266
G711570400000145	NJR5-74/ZX3	Online type	3 phase 380V	37	438267
G711570400000146	NJR5-90/ZX3	Online type	3 phase 380V	45	438268
G711570400000147	NJR5-110/ZX3	Online type	3 phase 380V	55	438269
G711570400000148	NJR5-150/ZX3	Online type	3 phase 380V	75	438270
G711570400000149	NJR5-180/ZX3	Online type	3 phase 380V	90	438271
G711570400000150	NJR5-220/ZX3	Online type	3 phase 380V	110	438272
G711570400000151	NJR5-264/ZX3	Online type	3 phase 380V	132	438273
G711570400000152	NJR5-320/ZX3	Online type	3 phase 380V	160	438274
G711570400000153	NJR5-370/ZX3	Online type	3 phase 380V	185	438275
G711570400000154	NJR5-440/ZX3	Online type	3 phase 380V	220	438276

SAP No	Model	Type	Power supply	Rated power	Ordering code
G711570400000155	NJR5-500/ZX3	Online type	3 phase 380V	250	438277
G711570400000156	NJR5-560/ZX3	Online type	3 phase 380V	280	438278
G711570400000157	NJR5-630/ZX3	Online type	3 phase 380V	315	438279
G711570400000158	NJR5-710/ZX3	Online type	3 phase 380V	355	438280
G711570400000159	NJR5-800/ZX3	Online type	3 phase 380V	400	438281
G711570400000160	NJR5-900/ZX3	Online type	3 phase 380V	450	438282
G711570400000161	NJR5-1000/ZX3	Online type	3 phase 380V	500	438283
G711570400000162	NJR5-15/ZX4	Online type	3 phase 460V	9	438284
G711570400000163	NJR5-22/ZX4	Online type	3 phase 460V	15	438285
G711570400000164	NJR5-30/ZX4	Online type	3 phase 460V	18.5	438286
G711570400000165	NJR5-37/ZX4	Online type	3 phase 460V	22	438287
G711570400000166	NJR5-44/ZX4	Online type	3 phase 460V	30	438288
G711570400000167	NJR5-60/ZX4	Online type	3 phase 460V	37	438289
G711570400000168	NJR5-74/ZX4	Online type	3 phase 460V	45	438290
G711570400000169	NJR5-90/ZX4	Online type	3 phase 460V	55	438291
G711570400000170	NJR5-110/ZX4	Online type	3 phase 460V	75	438292
G711570400000171	NJR5-150/ZX4	Online type	3 phase 460V	90	438293
G711570400000172	NJR5-180/ZX4	Online type	3 phase 460V	110	438294
G711570400000173	NJR5-220/ZX4	Online type	3 phase 460V	132	438295
G711570400000174	NJR5-264/ZX4	Online type	3 phase 460V	150	438296
G711570400000175	NJR5-320/ZX4	Online type	3 phase 460V	185	438297
G711570400000176	NJR5-370/ZX4	Online type	3 phase 460V	220	438298
G711570400000177	NJR5-440/ZX4	Online type	3 phase 460V	250	438299
G711570400000178	NJR5-500/ZX4	Online type	3 phase 460V	280	438300
G711570400000179	NJR5-560/ZX4	Online type	3 phase 460V	315	438301
G711570400000180	NJR5-630/ZX4	Online type	3 phase 460V	355	438302
G711570400000181	NJR5-710/ZX4	Online type	3 phase 460V	400	438303
G711570400000182	NJR5-800/ZX4	Online type	3 phase 460V	450	438304
G711570400000183	NJR5-900/ZX4	Online type	3 phase 460V	560	438305
G711570400000184	NJR5-1000/ZX4	Online type	3 phase 460V	560	438306
G711570400000185	NJR5-15/ZX5	Online type	3 phase 575V	11	438307
G711570400000186	NJR5-22/ZX5	Online type	3 phase 575V	18.5	438308
G711570400000187	NJR5-30/ZX5	Online type	3 phase 575V	22	438309
G711570400000188	NJR5-37/ZX5	Online type	3 phase 575V	30	438310
G711570400000189	NJR5-44/ZX5	Online type	3 phase 575V	30	438311
G711570400000190	NJR5-60/ZX5	Online type	3 phase 575V	45	438312
G711570400000191	NJR5-74/ZX5	Online type	3 phase 575V	55	438313
G711570400000192	NJR5-90/ZX5	Online type	3 phase 575V	75	438314
G711570400000193	NJR5-110/ZX5	Online type	3 phase 575V	90	438315

SAP No	Model	Type	Power supply	Rated power	Ordering code
G711570400000194	NJR5-150/ZX5	Online type	3 phase 575V	110	438316
G711570400000195	NJR5-180/ZX5	Online type	3 phase 575V	132	438317
G711570400000196	NJR5-220/ZX5	Online type	3 phase 575V	160	438318
G711570400000197	NJR5-264/ZX5	Online type	3 phase 575V	185	438319
G711570400000198	NJR5-320/ZX5	Online type	3 phase 575V	250	438320
G711570400000199	NJR5-370/ZX5	Online type	3 phase 575V	280	438321
G711570400000200	NJR5-440/ZX5	Online type	3 phase 575V	315	438322
G711570400000201	NJR5-500/ZX5	Online type	3 phase 575V	355	438323
G711570400000202	NJR5-560/ZX5	Online type	3 phase 575V	400	438324
G711570400000203	NJR5-630/ZX5	Online type	3 phase 575V	450	438325
G711570400000204	NJR5-710/ZX5	Online type	3 phase 575V	500	438326
G711570400000205	NJR5-800/ZX5	Online type	3 phase 575V	560	438327
G711570400000206	NJR5-900/ZX5	Online type	3 phase 575V	630	438328
G711570400000207	NJR5-1000/ZX5	Online type	3 phase 575V	800	438329
G711570400000208	NJR5-15/ZX6	Online type	3 phase 690V	11	438330
G711570400000209	NJR5-22/ZX6	Online type	3 phase 690V	18.5	438331
G711570400000210	NJR5-30/ZX6	Online type	3 phase 690V	22	438332
G711570400000211	NJR5-37/ZX6	Online type	3 phase 690V	30	438333
G711570400000212	NJR5-44/ZX6	Online type	3 phase 690V	37	438334
G711570400000213	NJR5-60/ZX6	Online type	3 phase 690V	55	438335
G711570400000214	NJR5-74/ZX6	Online type	3 phase 690V	75	438336
G711570400000215	NJR5-90/ZX6	Online type	3 phase 690V	90	438337
G711570400000216	NJR5-110/ZX6	Online type	3 phase 690V	110	438338
G711570400000217	NJR5-150/ZX6	Online type	3 phase 690V	132	438339
G711570400000218	NJR5-180/ZX6	Online type	3 phase 690V	160	438340
G711570400000219	NJR5-220/ZX6	Online type	3 phase 690V	200	438341
G711570400000220	NJR5-264/ZX6	Online type	3 phase 690V	250	438342
G711570400000221	NJR5-320/ZX6	Online type	3 phase 690V	315	438343
G711570400000222	NJR5-370/ZX6	Online type	3 phase 690V	355	438344
G711570400000223	NJR5-440/ZX6	Online type	3 phase 690V	400	438345
G711570400000224	NJR5-500/ZX6	Online type	3 phase 690V	400	438346
G711570400000225	NJR5-560/ZX6	Online type	3 phase 690V	500	438347
G711570400000226	NJR5-630/ZX6	Online type	3 phase 690V	560	438348
G711570400000227	NJR5-710/ZX6	Online type	3 phase 690V	630	438349
G711570400000228	NJR5-800/ZX6	Online type	3 phase 690V	710	438350
G711570400000229	NJR5-900/ZX6	Online type	3 phase 690V	800	438351
G711570400000230	NJR5-1000/ZX6	Online type	3 phase 690V	900	438352