



NJR2-ZX

On-line Soft-Starter

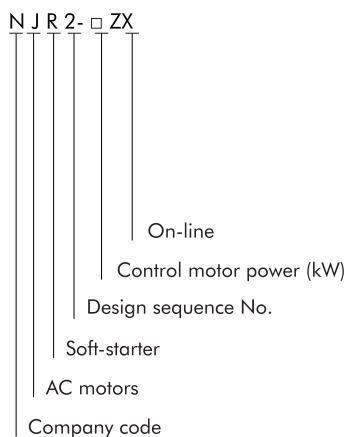
1. General

NJR2-ZX Series on-line soft-starter is cored on advanced dualCPU control technology. It controls SCR module, realizes soft starting & stopping of three-phase AC induction motor (squirrel cage type), and has wide range of protection functions e.g. overload, input phase failure, output phase failure, load shortcircuit, starting limiting overtime, over-voltage, and undervoltage.

After starting motor, the product does not require bypass contactor, with power specifications covering 7.5KW ~75KW; widely used in electrical drive equipment in the fields of metallurgy, fire, mining, water supply, municipal administration, food, cement and petrochemical.

It is an ideal updated product of traditional star - delta starter, and self-coupling voltage starting.
Standard: GB 14048.6, IEC 60947-4-2.

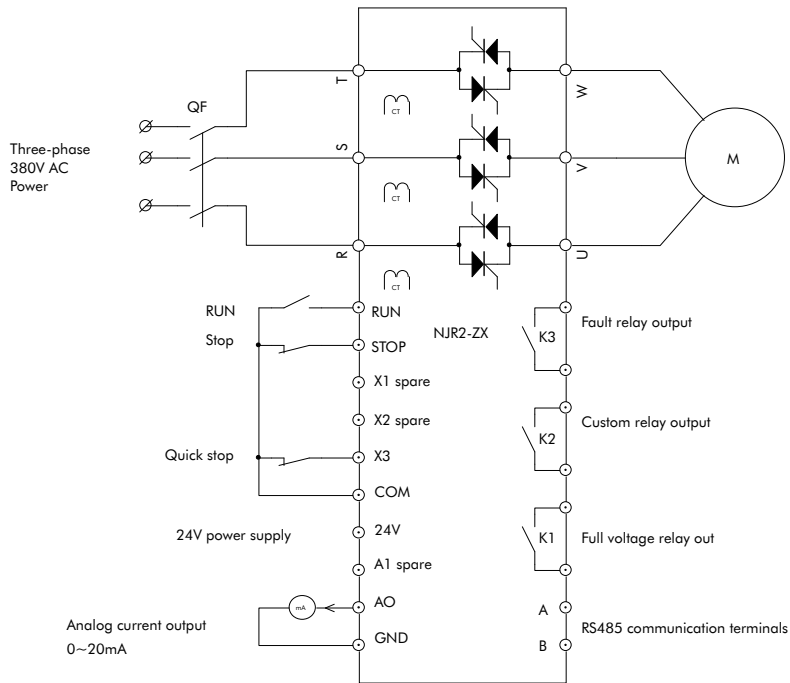
2. Type designation



3. Technical data

- 3.1 Power supply voltage: Three-phase AC380V ($\pm 15\%$)
50Hz/60Hz ($\pm 2\%$)
- 3.2 Starting current: 0.5 to 5 times the starting current limit
- 3.3 Ramp-down time: 0s ~ 60s
- 3.4 Base value voltage for soft starting: 30%Ue ~ 70% Ue
- 3.5 Kickstart Time: 0.1s
- 3.6 Environment requirements
 - Where the altitude is over 1000m, the capacity utilization should be reduced, current reduced by 0.5% for each additional 100m to 1000m;
 - Ambient temperature of -10°C ~40°C (current is reduced by 3% for each 1°C above 40°C);
 - Relative humidity less than 95%
 - Indoor environments featuring non-condensing, free of flammable and explosive gas, free of conductive dust, well-ventilated.

4. Wiring diagram



External terminal wiring instructions

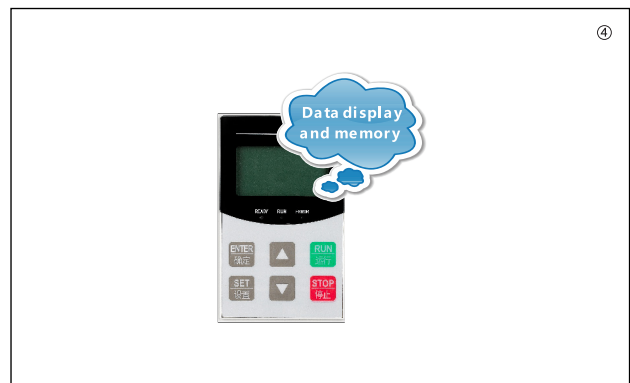
B	RS485 communication terminals	When RS485 communication is required, please contact the manufacturer.
A	RS485 communication terminals	
GND	Analog ground	As the reference ground for AO output
AO	(0 ~ 20) mA current output	GND as reference ground
A1	Spare terminals	
24V	+24 V output	Reference ground of COM, maximum output of 100mA
COM	Common terminal	Reference ground of +24 V
X3	Quick stop terminal	Connecting with COM when factory default, once disconnect, output will be stopped with an "open circuit" fault
X2	Spare terminals	
X1	Spare terminals	
STOP	Stopping terminal	Can realize "two wire" and "three wire" control with COM
RUN	Running terminal	Can realize "two wire" and "three wire" control with COM
K3	Fault relay output, normally open Contact capacity (5A/250VAC)	When there is a fault, the relay picks up (0.2s pick-up time during power-up instant).
K2	Programmable relay outputs, normally open Contact capacity (5A/250VAC)	The relay function can be defined programmatically, when effective, the relay picks up.
K1	Bypass relay output, normally open; Contact capacity (5A/250VAC)	Control bypass contactor.

5. Features

- 5.1 Long-time online operation without requiring bypass contactor, saving installation space.
- 5.2 Intelligent Digital Dual SCM optimized control
- 5.3 Diversified advanced soft starting
 - 5.3.1 voltage starting mode
 - 5.3.2 Current limiting starting mode
 - 5.3.3 Kick voltage + current limiting start mode
 - 5.3.4 Kick voltage + voltage starting mode
 - 5.3.5 Current ramp starting mode
 - 5.3.6 Dual closed-loop starting mode
- 5.4 Built-in overload, input phase failure, output phase failure, load short-circuit, start current limiting timeout, over-voltage, under-voltage overheating and other protection functions.



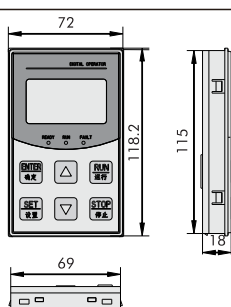
- 5.5 Wide-body large LCD displays are in both Chinese English, the operation is more humane and the operation and parameter settings are more simple and man-machine dialogue is achieved (see ① ②)



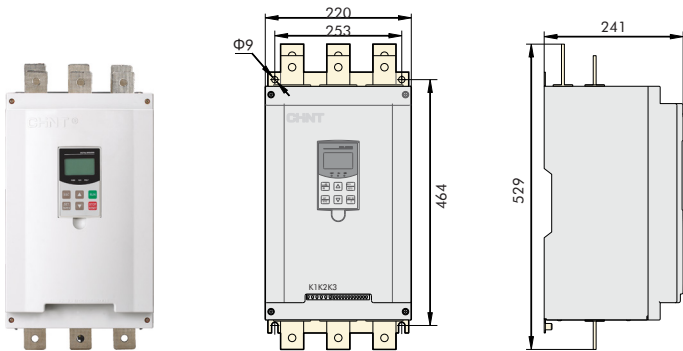
- 5.6 Display of operating voltage and current; fault code display and memory function (see ③)
- 5.7 RS485 communication function (requiring extended RS485 communication module), facilitating networking control and automation engineered; providing three relay outputs: operating, ramp-top and failure for external linkage control. (see ④)
- 5.8 Unique master-slave linkage soft starting function, facilitating production process control of equipment.

6. Overall and mounting dimensions (mm)

Display box

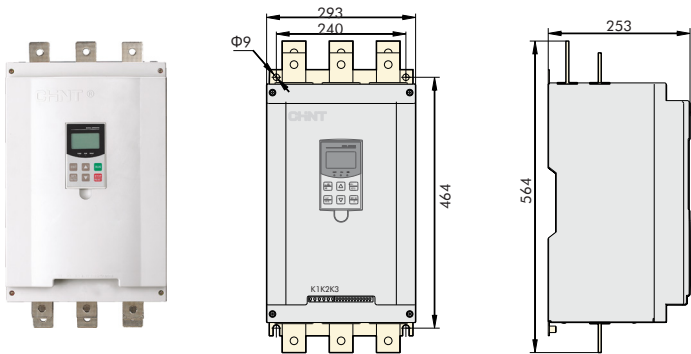


NJR2-45T~90T



Model	Rated Current (A)	Power of controlled motor(kW)	Weight (kg)
NJR2-45T	180	45	20
NJR2-55T	220	55	
NJR2-75T	300	75	
NJR2-90T	360	90	

NJR2-110T~160T



Model	Rated Current (A)	Power of controlled motor(kW)	Weight (kg)
NJR2-110T	440	110	25
NJR2-132T	528	132	
NJR2-160T	640	160	

7. Ordering information

- 7.1 Please select the required model and specification according to the instructions on model and meaning when ordering.
Example: The controlled motor power of 45kW is installed and used with soft starting cabinet or matching distribution cabinet. Ordering model: NJR2-45T
- 7.2 When motor with more than 4 poles is used with soft starter, recommend to select one size larger.
Example: the controlled motor power 55kW is installed and used with soft starting cabinet or matching distribution cabinet.
Ordering model: NJR2-110T
- 7.3 When bipolar motor is used with soft starter, as the starting current is large, please set the parameters correct as per the instruction manual before use.