NJR2-ZX In-line Soft-Starter

1. General

NJR2-ZX Series in-line soft-starter is cored on advanced dual-CPU control technology. It controls controllable thyristor 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 short-circuit, starting limiting overtime, over-voltage, and under-voltage. After starting motor, the product does not require direct in-line use of AC 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

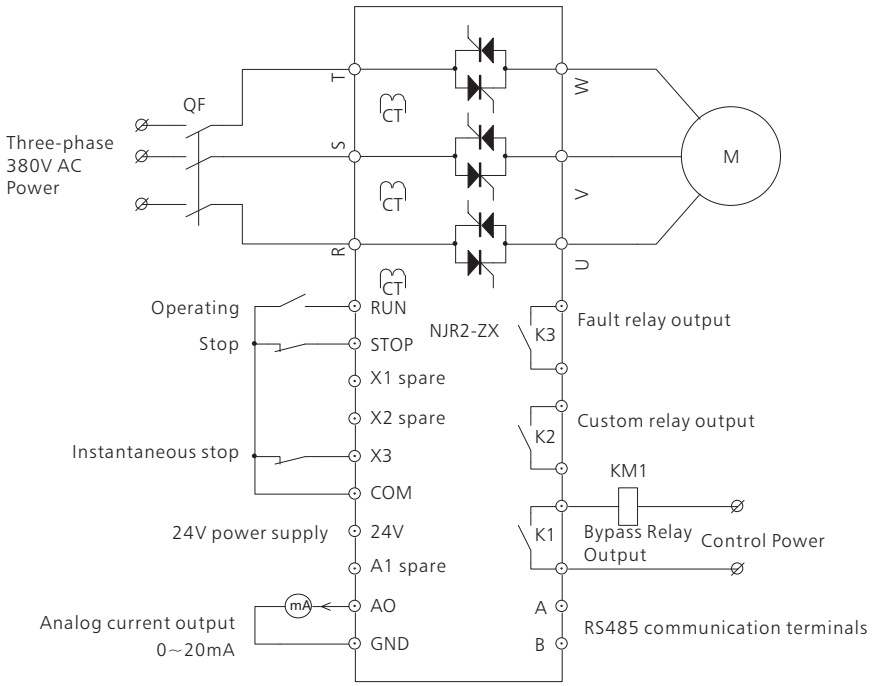
N J R 2-□ ZX

- In-line
- Control motor power (kW)
- Design sequence No.
- Soft-starter
- AC motors
- Company code

3. Technical data

3.1 Power supply voltage: Three-phase AC AC380V (± 15%) 50Hz/60Hz (± 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℃~40℃ (current is reduced by 3% for each 1℃ above 40℃);
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 A0 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	Instantaneous stop terminal	Effectively short-circuited with COM
X2	Spare terminals	
X1	Spare terminals	
STOP	Stopping terminal	Effectively short-circuited with COM
RUN	Operating terminal	Effectively short-circuited 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.

①

②

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)

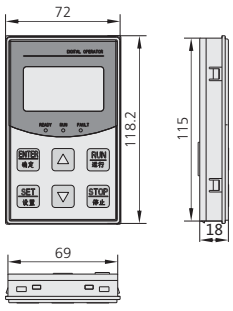
③

④

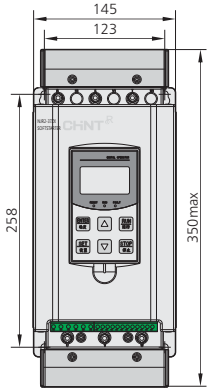
5.6 Display of operating voltage and current; fault code display and memory function (see ③)
5.7 RS485 communication function (requiring extended RS485 communication module), facilitating networking control and automation engineered; providing three relay outputs: operating, ramp-top and failure for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

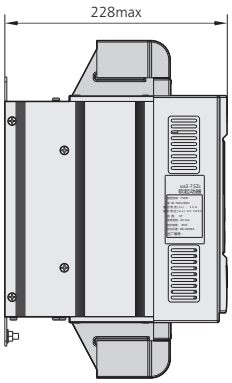
6. Overall and mounting dimensions (mm)

Display box



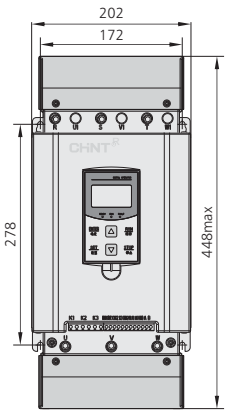
NJR2-7.5ZX~37ZX

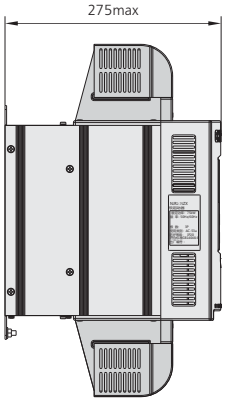




Model	Rated Current (A)	Power of controlled motor(kW)	Weight (kg)
NJR2-7.5ZX	15	7.5	7
NJR2-11ZX	22	11	
NJR2-15ZX	29	15	
NJR2-18.5ZX	36	18.5	
NJR2-22ZX	42	22	
NJR2-30ZX	57	30	
NJR2-37ZX	70	37	

NJR2-45ZX~75ZX





Model	Rated Current (A)	Power of controlled motor(kW)	Weight (kg)
NJR2-45ZX	84	45	11
NJR2-55ZX	103	55	
NJR2-75ZX	140	75	

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: NJR2-45ZX

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: NJR2-75ZX

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.

7.4 For occasions of heavy load, recommend the use of soft starter one grade larger.