



NJR2 Series Soft-Starter

1. General

With advanced double CPU control as its core technology, NJR2 series soft-starter is especially designed to control high-power thyristor modules and enable soft starting & stopping of (squirrel cage) three-phase AC asynchronous motors.

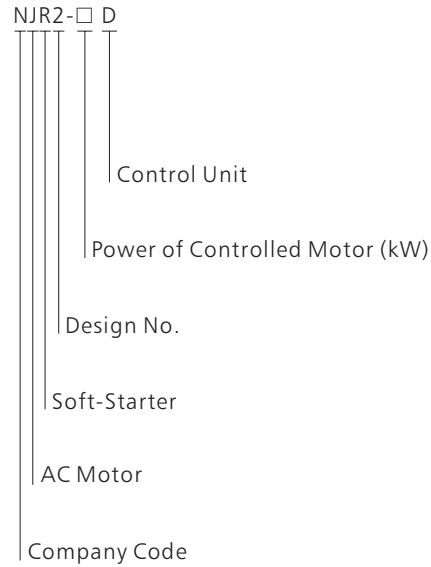
It has optional protection functions such as overload, input phase loss, output phase loss, process over-current, process under-current, over-voltage and under-voltage.

This product is mainly used with package control cabinet, where an AC contactor of corresponding specifications must be connected during the operation.

With specifications covering 7.5kW 500kW (squirrel cage) three-phase AC asynchronous motors, and being extensively applied in motor transmission equipment in metallurgy, petroleum, fire control, mining, petrochemical fields, this product is an ideal substitute for those with traditional star-delta starting mode and self-coupled reduced-voltage starting mode.

The performance indicators of this product fully comply with the standard specifications of GB14048.6-2008.

2. Type Designation



3. Technical data

3.1 Power Voltage: 3-phase AC380V(±15%), 50Hz/60Hz(±2%)

3.2 Starting Current: 0.5~ 5 times starting current limited.

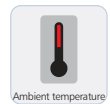
3.3 Ramp Falling Time: (0~60)s

3.4 Soft starting Reference Voltage: 30%Ue~70%Ue

3.5 Kick Start Time: 0.1s

3.6 Environmental Requirements

At an altitude above 1000m, the capacity should be reduced, and the current will decrease 0.5% for every increase of 100m; Ambient temperature is -10°C~40°C; relative humidity is ≤ 95% (20°C~65°C); Well-ventilated indoor environment, without dewing, flammable and explosive gas, conductive dust.

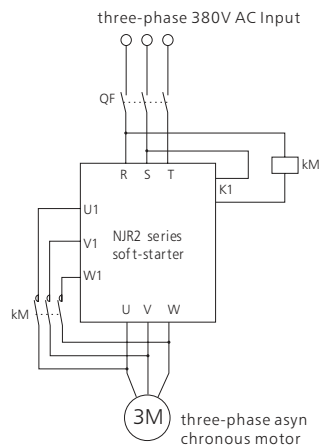


4. Elementary wiring diagram

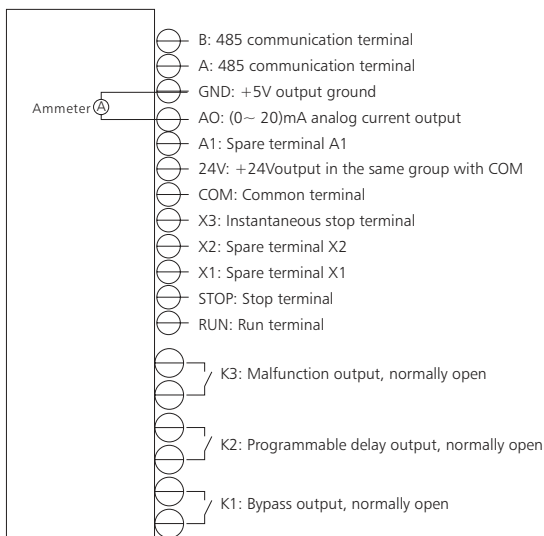
4.1 Elementary wiring diagram



Bottom of NJR2 series soft-starter



4.2 Schematic diagram of external terminals



5. Product characteristics

- 5.1 Intelligent optimized control by digital dual single-chip computer
- 5.2 Advanced varied soft starting modes
 - 5.2.1 Voltage starting mode
 - 5.2.2 Current-limiting starting mode
 - 5.2.3 Kick voltage + current-limiting starting mode
 - 5.2.4 Kick voltage + voltage starting mode
 - 5.2.5 Current ramp starting mode
 - 5.2.6 Dual-closed-loop starting mode
- 5.3 Built-in protection functions such as overload, input phase loss, output phase loss, load short circuit, current-limiting start overtime over-voltage, under-voltage and radiator overheating.

5.4 More human-oriented large wide LCD display and operation, easier and clearer operation and parameter setting, man-machine dialogue (see ①, ②)



5.5 Display of operating voltage and current; display and memory of malfunction name and code (see ③)

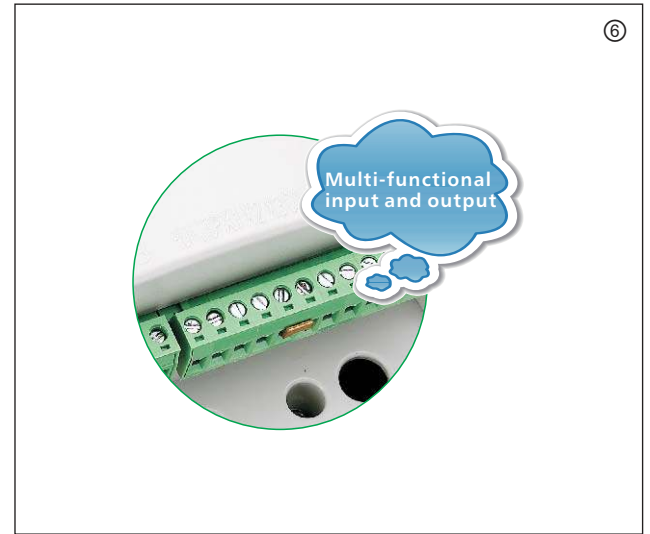
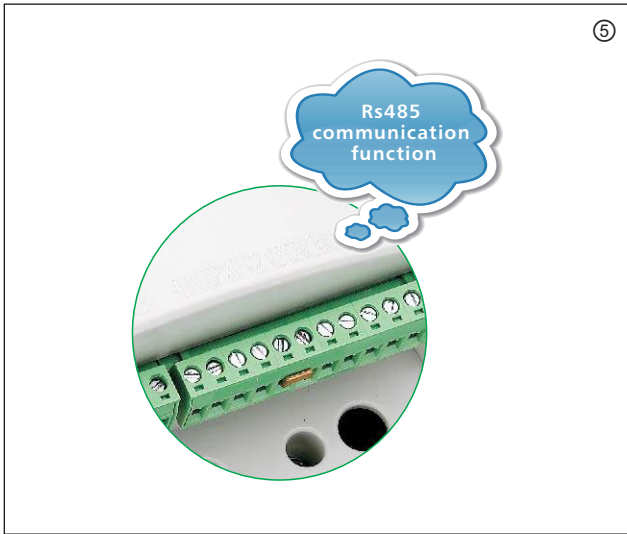


5.6 Patented design of full aluminum case (below 75kW), better radiation effect, natural air cooling, space saving (see ④)



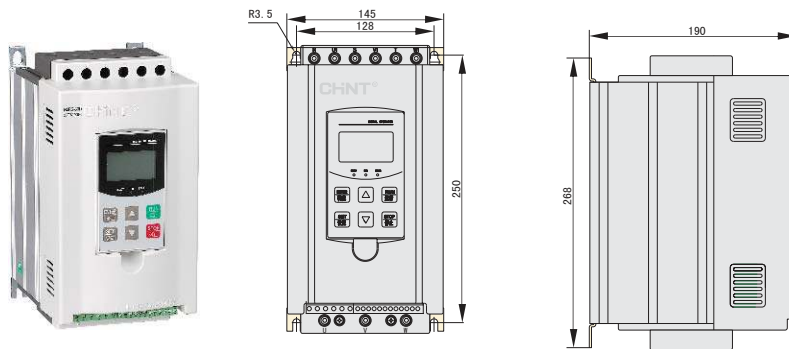
5.7 RS485 communication function, facilitating networked control and automation engineering transformation; providing three relay outputs, i.e. run, ramp to top and malfunction, for external interlocking control (see ⑤, ⑥)

5.8 Unique soft starting main/sub linkage function, facilitating the equipment manufacturing process control.



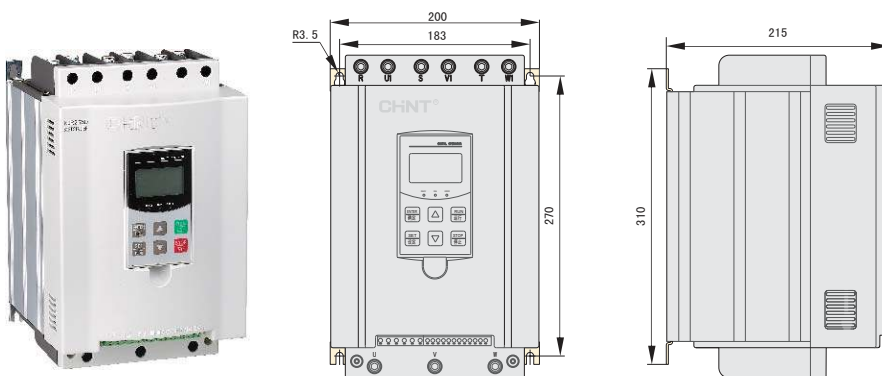
6. Overall and Installation Dimensions

NJR2-7.5D~45D

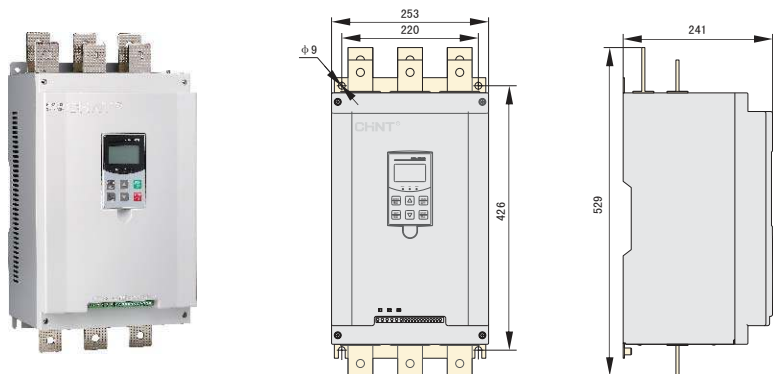


Model	Rated Current (A)	Power of Controlled Motor (kW)	Weight (kg)
NJR2-7.5D	15	7.5	5
NJR2-11D	22	11	
NJR2-15D	29	15	
NJR2-18.5D	36	18.5	5
NJR2-22D	42	22	
NJR2-30D	57	30	5
NJR2-37D	70	37	
NJR2-45D	84	45	

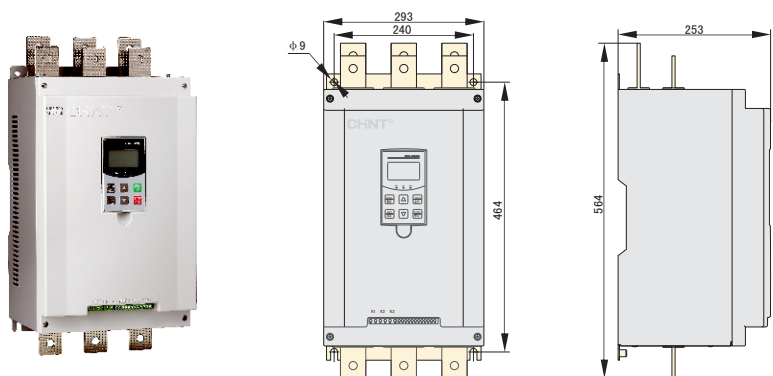
NJR2-55D~75D



Model	Rated Current (A)	Power of Controlled Motor (kW)	Weight (kg)
NJR2-55D	103	55	8
NJR2-75D	140	75	



Model	Rated Current (A)	Power of Controlled Motor (kW)	Weight (kg)
NJR2-90D	167	90	20
NJR2-110D	207	110	
NJR2-132D	248	132	
NJR2-150D	280	150	
NJR2-160D	300	160	
NJR2-185D	349	185	



Model	Rated Current (A)	Power of Controlled Motor (kW)	Weight (kg)
NJR2-200D	375	200	25
NJR2-220D	404	220	
NJR2-250D	459	250	
NJR2-280D	514	280	
NJR2-315D	579	315	

7. order information

Example 1:

the controlled motor has power of 45kW, used with soft start cabinet or power distribution cabinet.

Order Model: NJR2-45D

Example 2:

the controlled motor has power of 90kW, used with soft start cabinet or power distribution cabinet.

Order Model: NJR2-90D

Model Selection Instructions

This soft starter is especially designed for four-pole (squirrel-cage) 3-phase AC asynchronous motor.

a. For motors of other than 4 poles, it is recommended to select a soft starter of one size larger.

Example: the controlled motor has power of 90kW, used with soft start cabinet or power distribution cabinet.

Order Model: NJR2-110D

b. When used for two-pole motors, since the starting current is large, please set up the parameters correctly according to Operating Instructions before use.