

## SSR Integrated Soft starter

### Selection Guide

1. Bypass built-in
2. Multiple protections
3. Space saving
4. Three-phase control
5. Optional communication
6. Easy to control



**By Industry**  
Fan  
Blender  
Pump  
Crusher  
Compressor  
Conveyor belt  
Pulping machine  
Etc.

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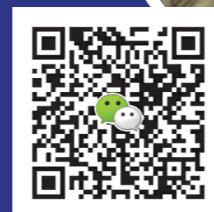
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WEBSITE



WECHAT



# SSR Integrated Soft starter

Based on our rich experience in industry application and deep understanding of customers' needs, SSR series soft starter, an overall digital intelligent motor controller and motor protector has been developed. It can control the motor to start and stop at a smoothly changing speed, it also offers the best protection to motor and itself. It is a better control method to replace the traditional  $\Delta$ -Y motor start and auto transformer start controls.

It adopts RS485 communication interface, supporting Modbus protocol. It is suited for industrial bus monitoring and control, and widely used on textile, metallurgy, petroleum, chemical industry, water treatment, shipping, transportation, medicine, food processing, mining and mechanical equipment.

New functions are added to improve the reliability and convenience for customer applications.



## Functions:

- ◆ 3 potentiometers to set start/stop time and voltage
  - ◆ With built-in bypass relay, no need for extra contactor
  - ◆ Voltage slope start-up mode
  - ◆ The output torque can be maintained during the stop process (Continuous torque control) to prevent fluid pound effect
  - ◆ External $\Delta$ , Y or Internal $\Delta$  Wiring mode
  - ◆ Real-time data communication(current of phase A,B or C, average current) \*
  - ◆ History of fault records read by communication ( 10 history log) \*
  - ◆ Read the statistical data by means of communication(e.g.cumulative starting times, cumulative running time, cumulative tripping times, etc.) \*
  - ◆ Protection function:
    - 1) 8.5xIn overcurrent protection.
    - 2) 5~8.5xIn overcurrent delay protection.
    - 3) Over load protection with classes 10A, 10, 20 and 30.
    - 4) Three phase current imbalance protection.
    - 5) Undercurrent protection.
    - 6) Phase missing protection.
    - 7) Phase sequence protection.
    - 8) SCR overheating protection.
  - ◆ 1 start/stop digital Input.
  - ◆ RS485 Communication Interface. \*
  - ◆ Optional build-in start/stop switch. \*\*
  - ◆ 2 output relay(running relay, trip relay)
- ※Note: \* Option, only function with RS-485 communication interface chosen.  
 \*\* Option, only function with built-in start/stop control switch chosen.

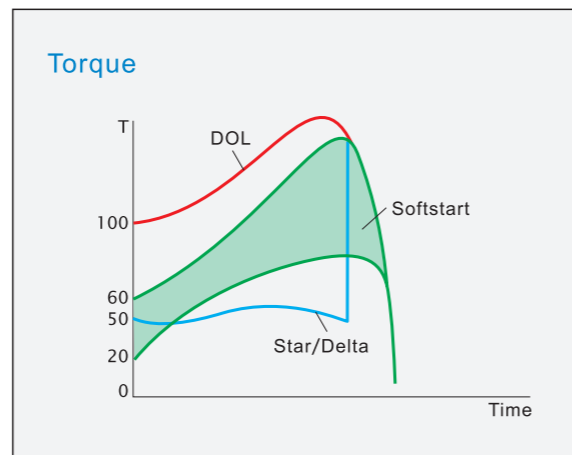
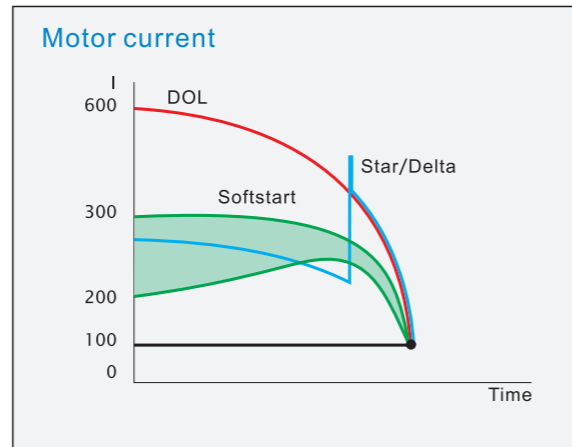
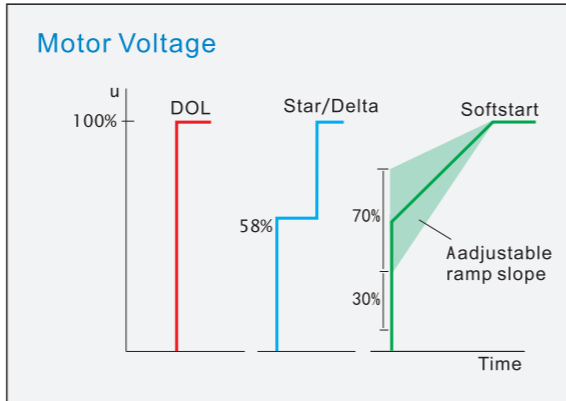
## Features:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>◆ Three-Phase control</li> <li>◆ Wide Range Voltage 200 - 500 V AC</li> <li>◆ Wide Range Control Voltage 100 - 240VAC, 50/60 Hz</li> <li>◆ Optional Control voltage 24VDC</li> <li>◆ Rated current 1.5-75A ( Inner Connection Max 125A )</li> <li>◆ Optional Internal Wiring Or External Wiring</li> <li>◆ Reinforced protective coating of the control board</li> </ul> <p>It can effectively resist dust, humidity and corrosive gases and prolong service life.</p> | <ul style="list-style-type: none"> <li>◆ Integrate construction, protection grade IP42</li> <li>◆ Direct potentiometer setting, easier to set</li> <li>◆ Full-range built-in bypass, Easy To install, Low energy consumption</li> <li>◆ Modbus RTU used for monitoring</li> <li>◆ Support common communication protocols</li> <li>◆ Built-in motor protection</li> </ul> |
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# Description & Function

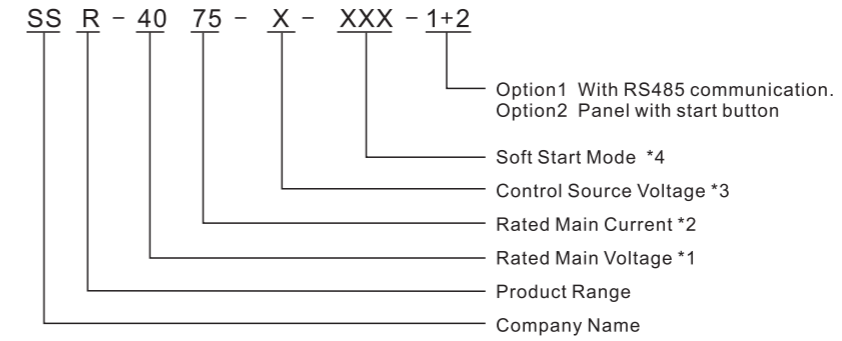
## Technical data:

Voltage Range	200~500VAC 50/60Hz
Control Voltage	100~240VAC or 24VDC
Current class	1. 5~75A (External connection) 2. 5~125A (Internal connection)
Initial Voltage	30%~70%
Start Slope time	1~30Sec
Stop Slope time	0~30Sec
Overload capability	3 x I <sub>e</sub> for 7 Sec Valid for 50 % on time and 50 % off time.
Times of start per hour	<5, 5-10 (light load or no-load)
Overload grade	10A
Environmental temperature	0 °C to + 50 °C (32 °F to 122 °F)
Store temperature	-40 °C to + 70 °C (-40 °F to 158 °F)
Maximum altitude	1000m (3280ft)
Protection rank	IP42



# Product Model

## Model description:

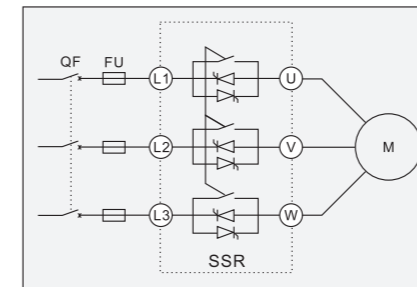


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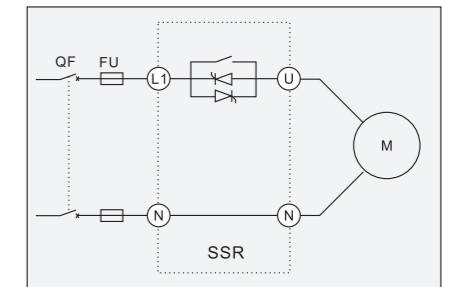
- Rated Main Voltage 22 : 220V ; 40 : 400V ; 50 : 500 ;
- Rated Main Current 1.5-75A ;
- Control Source Voltage A : 100-240VAC ; B : 24VDC
- Soft Start Mode : 3P3 : Three-phase controlling ; 1P1 : Single-phase controlling ;

## Internal Control Diagram:

1、 3P3( Only Use For Three Phase Motor )

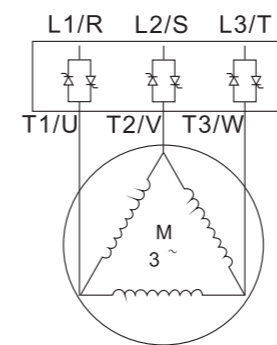


2、 1P1( Only Use For Single Phase Motor )

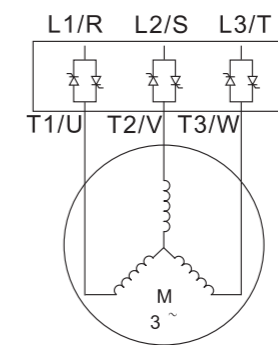


## Soft Starter Wiring Mode :

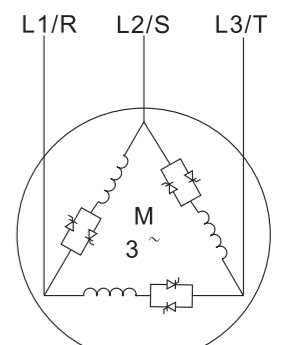
1、 Δ External Wiring



2、 Y External Wiring



3、 Δ Internal Wiring



# Product Model

## Rated current

Parameters (Type 3P3)

Model	Rated power of the motor			Rated current I <sub>e</sub> A	Structure F	Weight kg
	220V Pe/kW	400V Pe/kW	500V Pe/kW			
SSRXX 1T5-X-3P3	0.37	0.75	1.1	1.5	A	0.8
SSRXX 2T2-X-3P3	0.55	1.1	1.5	2.2	A	0.8
SSRXX 03-X-3P3	0.75	1.5	2.2	3	A	0.8
SSRXX 4T5-X-3P3	1.1	2.2	3.7	4.5	A	0.8
SSRXX 7T5-X-3P3	1.5	3.7	5.5	7.5	A	0.8
SSRXX 11-X-3P3	2.2	5.5	7.5	11	A	0.8
SSRXX 15-X-3P3	3.7	7.5	11	15	B	1
SSRXX 22-X-3P3	5.5	11	15	22	B	1
SSRXX 30-X-3P3	7.5	15	18.5	30	C	2
SSRXX 37-X-3P3	11	18.5	22	37	C	2
SSRXX 45-X-3P3	15	22	30	45	C	2
SSRXX 60-X-3P3	18.5	30	37	60	C	2
SSRXX 75-X-3P3	22	37	45	75	C	2

※Note: 1、1T5 means 1.5A, 4T5 means 4.5A, 7T5 means 7.5A in Rated current.  
2、Other voltage classes can be made to order.

Parameters (Type 1P1)

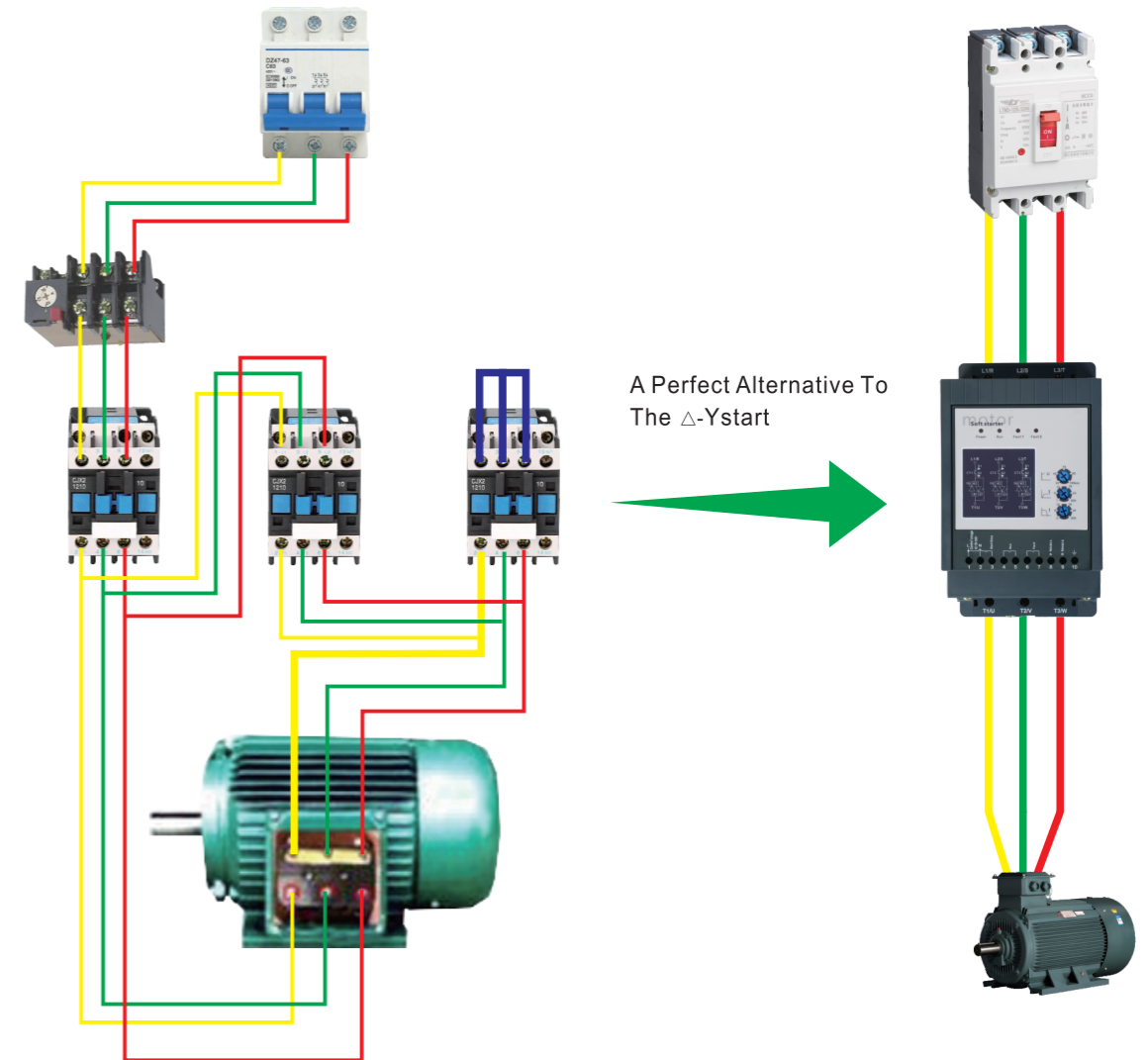
Model	Rated power of the motor		Rated current I <sub>e</sub> A	Structure F	Weight kg
	220V Pe kW	400V Pe kW			
SSRXX02-X-1P1	0.37	0.55	2	A	0.8
SSRXX03-X-1P1	0.55	0.75	3	A	0.8
SSRXX04-X-1P1	0.75	1.1	4	A	0.8
SSRXX06-X-1P1	1.1	1.5	6	A	0.8
SSRXX09-X-1P1	1.5	2.2	9	A	0.8
SSRXX12-X-1P1	2.2	3.7	12	A	0.8
SSRXX20-X-1P1	3.7	5.5	20	B	1
SSRXX30-X-1P1	5.5	7.5	30	B	1

## Selection Guide

**Light Load Application:** For example, for pump, compressor, venting equipment, conveying equipment...choose SSR series soft starter based on rated power.

**Heavy Load Application:** For example, for centrifugal fan, mixer, grinder, blender...we recommend choosing a higher power grade softstarter.

# Application Diagram



## Reliable Full comprehensive motor protections

With full comprehensive protections of the motor, SSR can cope with any abnormal occurrence of electric power grid or load to ensure the motor to run stably.

## Efficient Perfect pump controlling function

With many special functions to improve efficiency, e.g. its highly efficient start and stop control.

## Energy-saving Full-range built-in bypass, Save time, Lower consumption

When the running motor reaches full speed, the soft starter will trigger bypass relay, so it will reduce soft starter heating to save energy consumption. The bypass circuit is strictly screened and tested, helping customers to save wiring and installation costs as well as checking time and cabinet space.

## High-qualified Contactless start/stop control

Smooth current change, non-surge close and non-arcing break due to the contactless start/stop of SSR can greatly prolong the service life of the equipment.



## Technical data

General	
Frequency	50/60Hz±5Hz(Dual frequency), Defaulted frequency: 50±5Hz
Main power source voltage	220-500±10% VAC(to be specified by users); 400VAC±10%(default voltage)
Control power Voltage	100-240VAC±10% or 24VDC(to be specified by users); 100-240VAC±10%(default voltage)
Load	Three-phase three -wire or single-phase asynchronous squirrel cage induction motor
Maximum starting times per hour	<5 at 400% FLA(full load ampere of the motor)
Working Parameters	
Rated current of the starter	Full load current of the motor: 1.5-75A
Initial voltage	Can be set to 30%~70%Un
Start acceleration time	Adjustable within 1-30 seconds
Stop deceleration time	Adjustable within 0-30 seconds
Motor Protection	
Over-current protection	Stop-protection is triggered when the main current exceeds the set value during starting, running and stopping process
Unbalance-current protection	The unbalance degree of the three-phase current is greater than the set value, then stop-protection will occur
Overcurrent protection	Overload protection can be set at 10A, 10, 20 and 30.Delayed stop-protection can be set according to the level
Phase/Voltage loss	Starter runs stop-protection when 1 to 2 phases are missing, or when a circuit break occurs between soft start and the main current
Overheating of the heat sink	When the temperature of the heat sink is over 80 degrees, the stop-protection will occur
Phase sequence	When the phase sequence of the soft start inlet is wrong, it is forbidden to start. (if this function is not required, please specify when ordering)

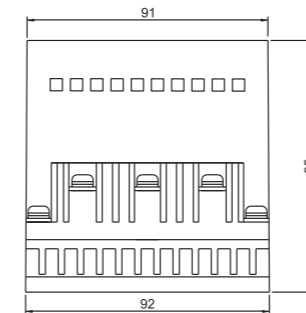
### Rapid fuse

Model	SCRI <sup>2</sup> T(A <sup>2</sup> S)	Fuse rating
SSRXX 1T5-X-3P3	70	5A
SSRXX 2T2-X-3P3	150	10A
SSRXX 03-X-3P3	270	10A
SSRXX 4T5-X-3P3	610	16A
SSRXX 7T5-X-3P3	1700	25A
SSRXX 11-X-3P3	3630	32A
SSRXX 15-X-3P3	6750	32A
SSRXX 22-X-3P3	14250	50A
SSRXX 30-X-3P3	27000	63A
SSRXX 37-X-3P3	41070	100A
SSRXX 45-X-3P3	60750	125A
SSRXX 60-X-3P3	108000	125A
SSRXX 75-X-3P3	168750	200A

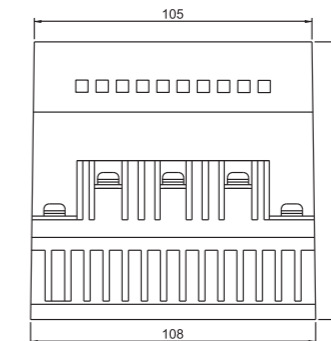
## Dimensions

### SSR softstarters:

SSR1.5~11A  
Model A



SSR15~22A  
Model B



SSR30~37A  
Model C

