

Selection Guide

XKR1-360-Z Series  
Built In Bypass Soft Starter/Cabinet





## ➤ More control

- 360 soft starter/cabinet adopts a new generation of soft starter technology, and adaptive control realizes the control of the motor acceleration curve and deceleration curve to an unprecedented level.
- The soft starter reads the data of the motor in the process of starting and stopping, and then adjusts to achieve the best effect. Just select the curve most suitable for your load type, and the soft starter will automatically ensure that the load is accelerated in the most stable way possible.

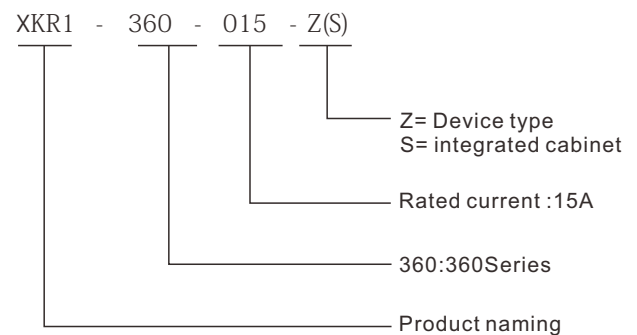
## ➤ Features

- 360 is a highly intelligent, very reliable and easy-to-use soft starter/cabinet. The newly designed functions of 360 are used for quick setting or more personalized control. It is a perfect solution. Its performance includes:
- Large LCD screen that can display feedback information in Chinese and English languages, other languages can be customized
- Remotely installable operation panel
- Intuitive programming
- Advanced start and stop control functions
- A series of motor protection functions
- Extensive performance monitoring and event logging
- Built-in bypass, small size, low heat;
- After starting, the power consumption of the internal contactor is low.
- The water output used in the pump is the same as the power frequency;
- The simulation design can test the control loop without load.

## ➤ Easy to use

- Whether in the process of installation, debugging and use, or troubleshooting, 360 is very easy to use.
- Quick setting can make the machine run quickly, the information screen can display various operating data, and the trip message can be displayed in language to explain exactly where the problem is.
- The control cable can be routed from the top, bottom or left. Very flexible and unique cable access and fixing devices make the installation faster and more tidy and beautiful. You will experience the use soon.

## ➤ Selection model definition



## ➤ Multiple starting control methods

- A variety of starting methods can meet your various load requirements, and users can choose the starting method according to their own load conditions.
- 360 simplifies the installation and operation of the motor starting system, thereby reducing installation costs and shortening installation time.



► Real-time display of real language

Chuanken hopes to make your work easy and worry-free, so 360 displays feedback information in real language, you don't have to check the code to understand what happened. With 10 sets of fault records, tracking the performance of the motor has never been easier.



► Remote display installation

With the optional operating panel installation kit, the operating panel can be easily installed outside the cabinet. If multiple soft starters are installed in a cabinet, it is convenient for centralized control in one place and all relevant information can be obtained. You can also install multiple monitors side by side,



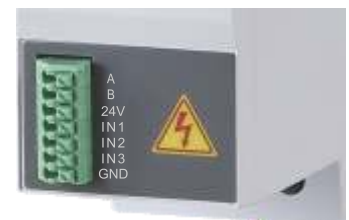
► Using MODBUS communication protocol, it is suitable for connecting with APP, host computer, etc.

► RS485/ remote control port

Quick plug terminal, easy to install, durable;



0.37-15kw



18.5-115kw

## ➤ Dimensions and specifications

Voltage Level	Rated Working Current	Rated Power	Display method	Number of parameters	Protection function type	input Output Number of terminals	Overload capacity
220V	1.6- 220A	0.37- 55kW	Chinese (English) LCD	43PCS	10 kinds	0.37-15kw 11pcs	Adjustable
380V	1.2- 230A	0.37- 115kW				18.5-115kw 14pcs	

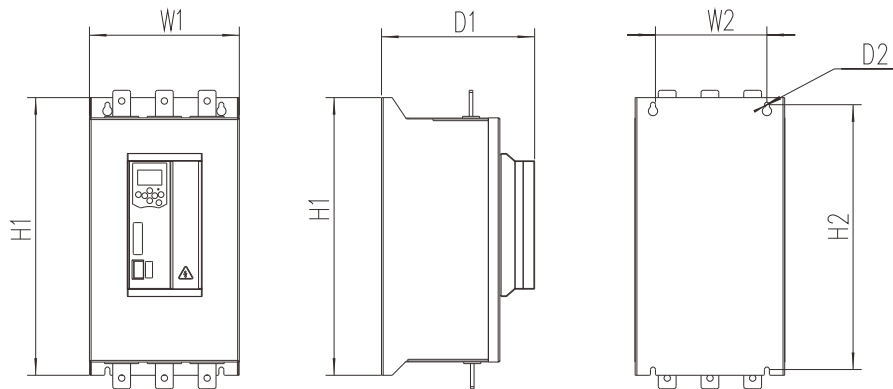
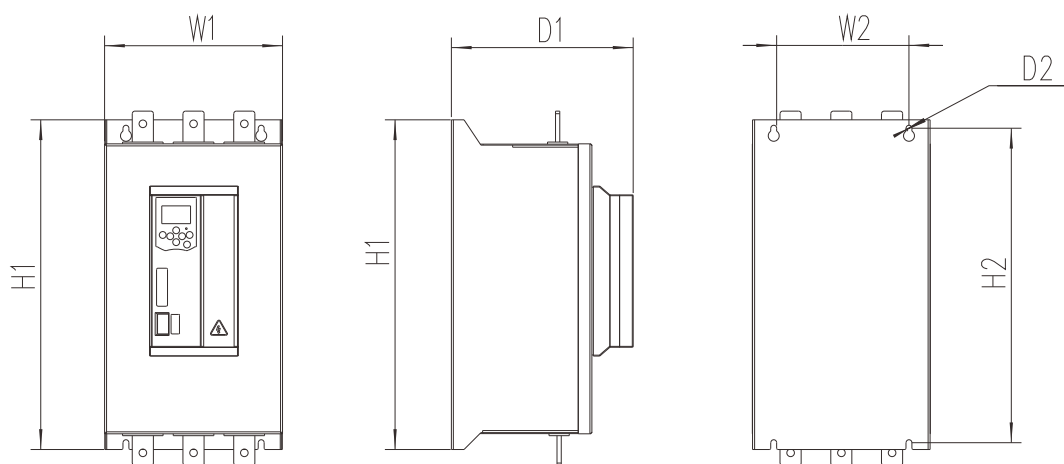
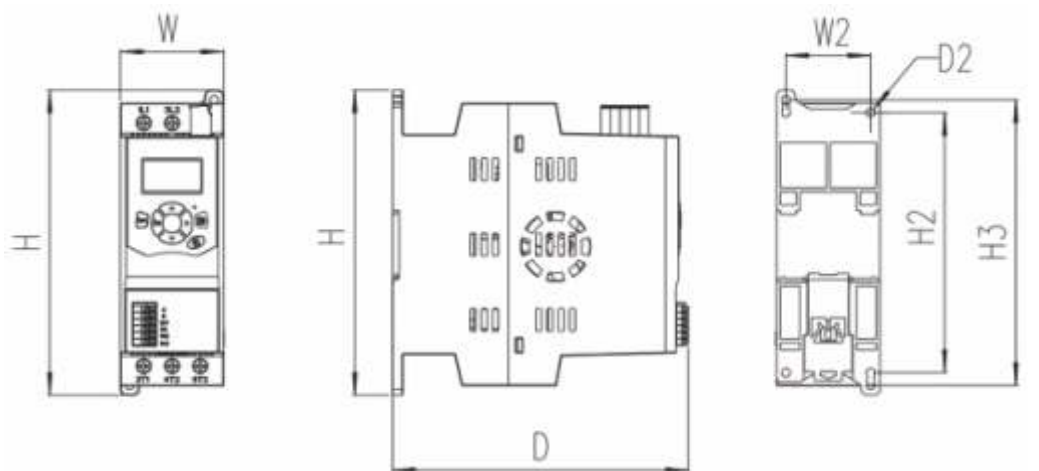


Figure 1

380V Specification model	Rated current (A)	380V power (KW)	220V Specification model	Rated current (A)	220V power (KW)	Outline
XKR1-360-0.37-Z(S)	1.2	0.37	XKR1-360-0.55-Z(S)	1.6	0.37	Figure 1
XKR1-360-0.55-Z(S)	1.6	0.55	XKR1-360-0.75-Z(S)	2	0.55	
XKR1-360-0.75-Z(S)	2	0.75	XKR1-360-1.2-Z(S)	3.6	0.75	
XKR1-360-1.1-Z(S)	2.6	1.1	XKR1-360-2.2-Z(S)	5.6	1.1	
XKR1-360-1.2-Z(S)	3.6	1.2			1.2	
XKR1-360-2.2-Z(S)	5.6	2.2	XKR1-360-4-Z(S)	9	2.2	
XKR1-360-3-Z(S)	7.2	3	XKR1-360-5.5-Z(S)	12	3	
XKR1-360-4-Z(S)	9	4	XKR1-360-7.5-Z(S)	16	4	
XKR1-360-5.5-Z(S)	12	5.5	XKR1-360-11-Z(S)	22	5.5	
XKR1-360-7.5-Z(S)	16	7.5	XKR1-360-15-Z(S)	30	7.5	
XKR1-360-11-Z(S)	22	11	XKR1-360-22-Z(S)	44	11	
XKR1-360-15-Z(S)	30	15	XKR1-360-30-Z(S)	60	15	
XKR1-360-18.5-Z(S)	37	18.5	XKR1-360-37-Z(S)	74	18.5	
XKR1-360-22-Z(S)	44	22	XKR1-360-45-Z(S)	90	22	
XKR1-360-30-Z(S)	60	30	XKR1-360-55-Z(S)	110	30	
XKR1-360-37-Z(S)	74	37	XKR1-360-75-Z(S)	150	37	
XKR1-360-45-Z(S)	90	45	XKR1-360-90-Z(S)	180	45	
XKR1-360-55-Z(S)	110	55	XKR1-360-110-Z(S)	220	55	
XKR1-360-75-Z(S)	150	75				
XKR1-360-90-Z(S)	180	90				
XKR1-360-110-Z(S)	220	110				
XKR1-360-115-Z(S)	230	115				

## ►Dimensions and specifications



Specifications	Overall dimension			Installation dimensions			
	W1	H1	D	W2	H2	H3	D2
0.37-15KW	55	162	157	45	138	151.5	M4
18-37KW	105	250	160	80	236		M6
45-75KW	136	300	180	95	281		M6
90-115KW	210.5	390	215	160	372		M6

➤ Basic wiring diagram of soft starter



## ▶ Soft starter function introduction



### ▶ Optional soft start curve

- ▶ Voltage ramp start
- ▶ Current limit start

### ▶ Expanded input and output options

- ▶ Remote control input
- ▶ Relay output
- ▶ RS485 communication output

### ▶ Customizable protection

- ▶ The input phase
- ▶ Out of phase
- ▶ Operating overload
- ▶ Starting overcurrent
- ▶ Operating overcurrent
- ▶ underload

### ▶ Optional soft stop curve

- ▶ Free parking
- ▶ Timed soft parking

### ▶ Easy-to-read display shows comprehensive feedback

- ▶ Removable operation panel
- ▶ Built-in Chinese + English display

### ▶ Models that meet all connection requirements

- ▶ 0.37-115KW (rated)
- ▶ 220VAC-380VAC
- ▶ Star connection or inner delta connection

This soft starter is an advanced digital soft starting solution for motors with power ranges from 0.37kW to 115kW. A comprehensive set of motor and system protection features guarantees reliable performance even in the harshest installation environments.



## External connection diagram

### Conventional

Current range ..... 1.2A- 230A (rated)

Motor connection..... Star external or internal delta connection

### Power Supply

Power supply voltage (L1, L2, L3)

SCKR1-360- XX.....220VAC ( $\pm 10\%$ )

SCKR1-360- XX.....380VAC ( $\pm 10\%$ )

Power frequency..... 30- 70Hz

### Enter

Input..... Active 12VDC, about 8mA(0.37-15kw)

Active 24VDC, about 8mA(18.5-115kw)

Start..... Normally open

Stop..... Normally closed

Fault input.....Normally open

### Output

Relay output...10A @ 250VAC resistive circuit

.....5A @ 250VAC

Programmable relay1 (TA, TB, TC).....

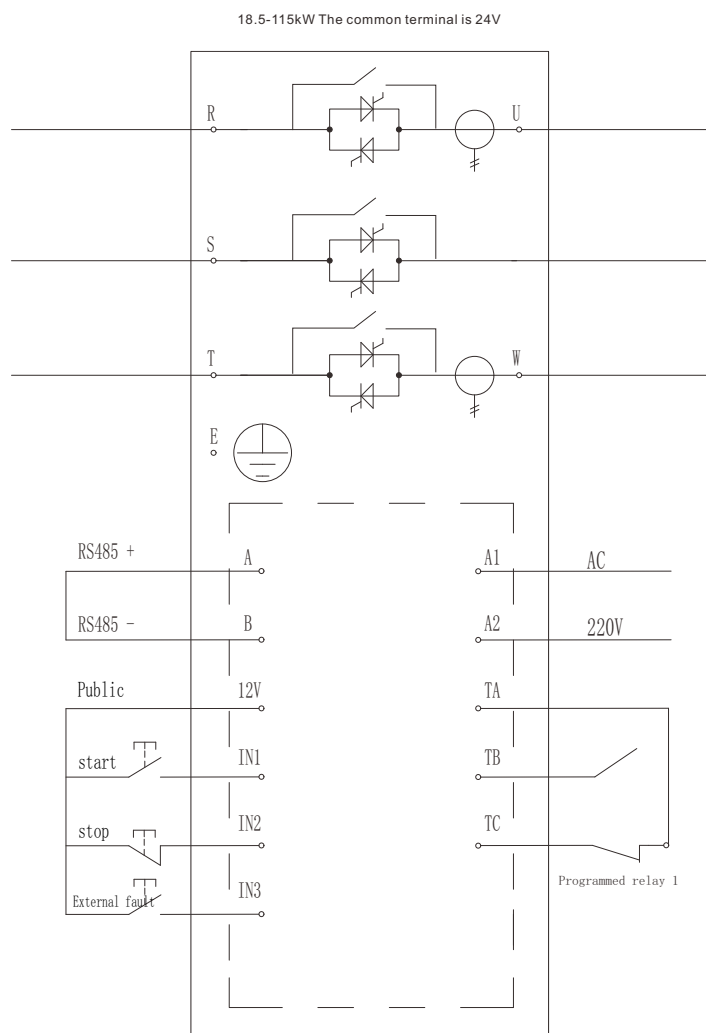
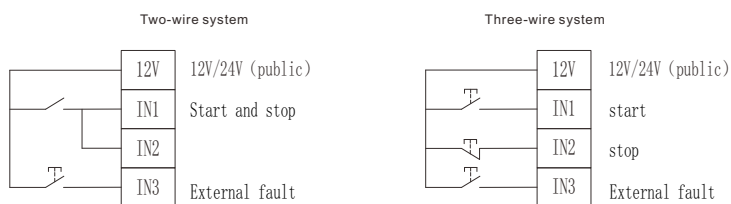
normally open or normally closed

Programmable relay2 (TA2,TC2).....

normally open (18.5-115KW)

### Programmable output

Communication output (485-,485+).....RS485 communication

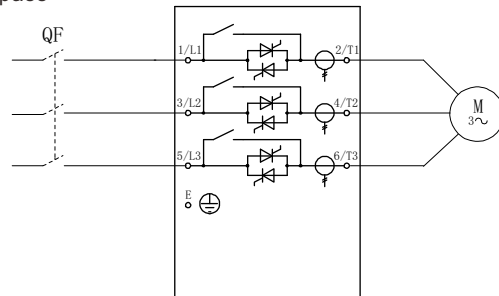


Note: 18.5-115kw(A1A2 input voltage 220-440V)

## Motor connection

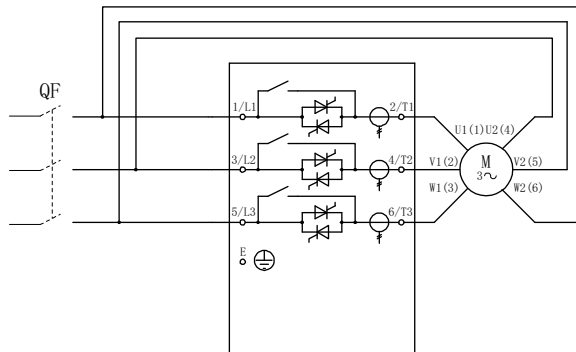
The soft starter can be connected to the motor by the star connection method or the inner triangle connection method (also known as the three-wire connection method and the six-wire connection method). If the internal triangle connection method is used, input the rated current of the motor with parameter F01.

Star connection, internal bypass



QF	Circuit breaker (optional)
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Triangle connection method, internal bypass



QF	Circuit breaker
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## Comparison of soft starter, star delta, auto coupling

Project	Soft starter	Star triangle	Self-coupling
Overvoltage And Undervoltage Protection	have	nothing	nothing
Short Circuit Protection	have	have	Knife switch, no protection, low safety factor
Overload Protection	Yes (current value can be set)	have	have
Input Phase Loss Protection	have	nothing	nothing
Output Phase Loss Protection	have	have	have
Under Load Protection	Yes (applicable to water pump to prevent idling from burning the water pump)	nothing	nothing
Start Mode	varied	one kind	one kind
485 Communication	have	nothing	nothing
Convenient Maintenance	18 months warranty	Generally, the contactor is only guaranteed for three months	Generally, the contactor is only guaranteed for three months
Convenient Transportation	Small volume and light weight	Small volume and light weight	Especially bulky and troublesome transportation
Display	Chinese LCD display, simple operation and convenient troubleshooting	nothing	nothing
Cost Performance	Soft start is 10% cheaper than the auto coupling cabinet. It is installed on the wall with low power and has higher cost performance. Internal delta connection method can be adopted for soft starting. For example, 37KW soft starter can be selected for 55kW motor		

## Customization of mobile app functions

XKR1-360-Z series motor soft start can be customized by mobile app

- Mobile phone configuration operation screen
- Equipment site real-time monitoring screen
- Equipment real-time data
  - Cloud configuration
  - Video surveillance
  - Issue command
  - Historical data online and offline
- Alarm record
  - Equipment online and offline
  - Alarm push
- Equipment map distribution



## Matching function selection of water pump

Matching function selection of water pump			
①	0: None	None: standard soft start function.	Figure 1
②	1: Floating ball	Floating ball: IN1, closed start, disconnected stop. IN2 has no function.	Figure 2
③	2: Electric contact pressure gauge	Electric contact pressure gauge: IN1 starts when it is closed, IN2 stops when it is closed.	Figure 3
④	3: Water supply level relay	Water supply level relay: IN1 and IN2 are disconnected and started, and IN1 and IN2 are closed and stopped.	Figure 4
⑤	4: Drain level relay	Drainage level relay: in1 and IN2 are disconnected and stopped, and in1 and IN2 are closed and started.	Figure 5

Note: the water supply function starts and stops IN3 control, the standard soft start IN3 is an external fault, and the water supply type is used to control the start and stop. IN3 is the starting end. The above operation can be performed only when it is closed, and it is disconnected and stopped.

0: None

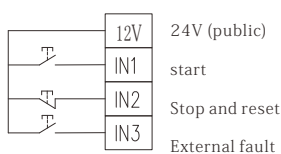


Figure 1

1: Floating ball

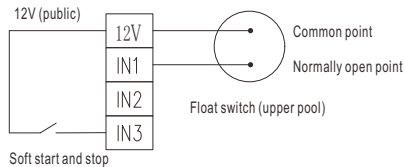


Figure 2

2: Electric contact pressure gauge

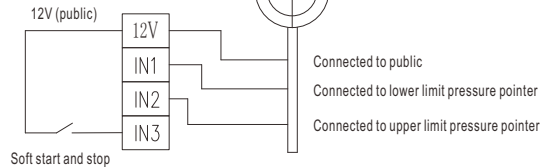


Figure 3

3: Water supply level relay

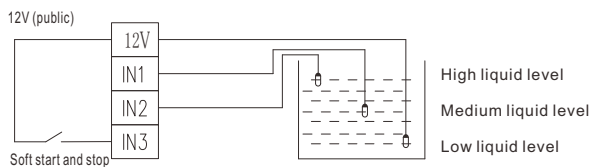


Figure 4

4: Drain level relay

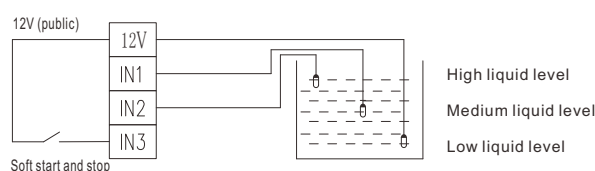


Figure 5