#### **SHCKELE**

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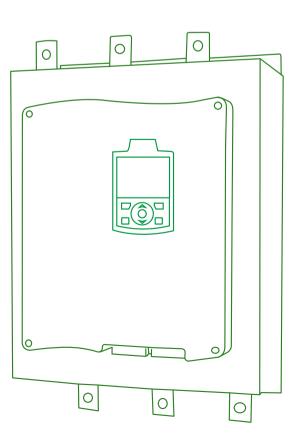


# **SHCKELE**

Be tolerant to diversity willing to innovation

---- Solutions provider in the field of motor drive control









SCKR1-6200 ► On-line intelligent motor soft starter





# On-line intelligent motor soft starter

#### Product Overview

- ➤ SCKR1-6200 soft starter has 3 starting modes, 12 protection functions and two vehicle modes .
- ➤ MCU as the core, intelligent digital control, suitable for various loads of the mouse asynchronous motor starting; Can make the motor under any conditions can smooth starting, is female of protection drag system, reduce the starting current impact on power grid, to ensure reliable motor self-starting: smooth and stop, can eliminate the drag system of the inertial impact.

#### Product Technical Features

- Main circuit operating voltage: AC220V-AC690V(+10%~-25%)
- Main circuit operating current: 11A~1260A
- Main frequency: 35HZ-70HZ
- Soft start rise time: 1~120s
- ➤ Soft parking time: 0~60s
- Current limiting multiple: 0.5-6.0 le
- ➤ Initial voltage: 30%~80%Ue;
- Cooling mode: fan cooling
- Communications: RS485 serial communication
- Starting times: <20 times/hour

#### Technical Feature

- Three starting parameters are optional, convenient for a motor soft starter to start the motor load of different power;
- Dynamic fault memory function, easy to find the fault cause;
- Overcurrent, three-phase current unbalance, overheating, phase loss, motor overload and other comprehensive motor protection functions;
- Powerful software functions, rich hardware configuration, easily meet the changing needs of various industries;
- Profibus/Modbus two communication protocols are available;
- Compact structure design, easy to install, easy to use;
- Humanized operation mode, display interface can be flexibly selected: L. ED or L CD display. Make the operation handy;
- The menu tree is grouped by function for easy operation.

#### Torque Mode

Torque starting is a starting mode to deal with unstable power supply, especially if the power supply is a generator. When the motor starts, the output voltage is accelerated to the maintenance voltage according to the early acceleration time.

The maintenance voltage is maintained in accordance with the maintenance time, and finally accelerated to full voltage in accordance with the post-acceleration time, After the starting process is over, switch to the running state.











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#### ▶ Real - time language display

SCKR1-6200 displays feedback in real language and you don't have to look up the code to see what's going on. With a real-time metering display and 10 event logs, tracking motor performance has never been easier.



#### Overdrive is more intelligent

SCKR1-6200 allows you to control motor starting. You can select the best soft start control method according to the application requirements. For applications where precise control of motor starting current is required, the SCKR1-6200 offers dual closed-loop or current ramp starting options.

#### Easier installation

If space in the motor control center is limited, using the compact SCKR1-6200 can save 70% space, eliminate bypass contractor, and reduce primary and secondary wire and labor costs by more than 30%.





### Remote display installation

The operating board is easily mounted outside the cabinet with the optional operating board installation kit. If multiple soft starters are installed in one cabinet. all relevant information can be obtained for centralized control in one place. You can also install multiple monitors side by side to quickly diagnose problems. (Protection level after installation is lp65)

#### Stop smoother

The CPU can also precisely control soft stop, which is suitable for applications that require smoother soft stop. Cpus are suitable for small inertial loads, such as pumps and conveyor belts, which can greatly reduce or even eliminate the water hammer effect.



#### Removable connectors and unique connectors

Easy to install with plug - out control bar. Simply unplug each bar, connect the wires and reinsert the bar. Can use SCKR1-6200 unique way of flexible cable go line effective arrangement of cables, cable can walk, left, or from the top to the bottom line.



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#### Faster Adjust

It's no surprise that SCKR1-6200 was designed with usability in mind that the menu is easy to use. After installation, the Quick Settings menu helps you configure the starter for common applications: it suggests a typical value that you can adjust precisely to suit your needs, all with an easy-to-use dashboard.

## Cooling Innovation

High speed fan and inlet and outlet air cooling grille, 360 degrees full range of heat dissipation, when the soft start fan high speed operation, soft start stop after five minutes automatically stop running, realize intelligent heat dissipation, so that users do not waste every degree of electricity.



#### Software innovation

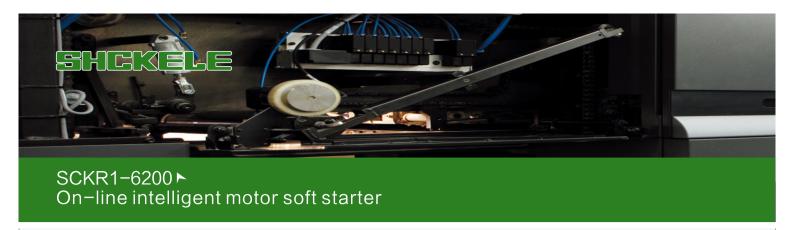
A wider range of applications built-in intelligent power motherboard, but keep remote places, low voltage or voltage instability resulting in equipment can not get up, intelligent power board can achieve the normal starting requirements of application equipment in the voltage of 150V-460V.

Add current and voltage coefficient, built-in power supply board can directly calibrate current and voltage. Starting delay parameter: When the equipment is outage, the soft starter automatically delays the starting motor equipment for 5 minutes after the call, realizing the unmanned soft starting control)

#### Communications revolution

(RJ-45,DB9 and other plug-in, built-in Rs485, RS232 interface, provide Chinese PC software, easy to remote debugging and control)





## Start mode and protection level





# On-line intelligent motor soft starter

#### Soft starter function introduction



## Starting function

- Voltage ramp starting
- Current limiting starting
- Torque starting

#### Stop function

➤ Slide, soft stop

#### Operating panel

- Remote installation option
- A screen with clear writing
- Multilingual selection

#### Protect

- > Soft phase sequence protection
- Operating overload protection
- Starting overcurrent protection
- Run overcurrent protection
- Overvoltage protection protection
- Undervoltage protection protection
- Three-phase unbalance protection
- Underload protection protection
- Overheat protection
- Thyristor breakdown protection
- Input and output phase out protection



# SCKR1-6200 ► On-line intelligent motor soft starter

### External wiring diagram

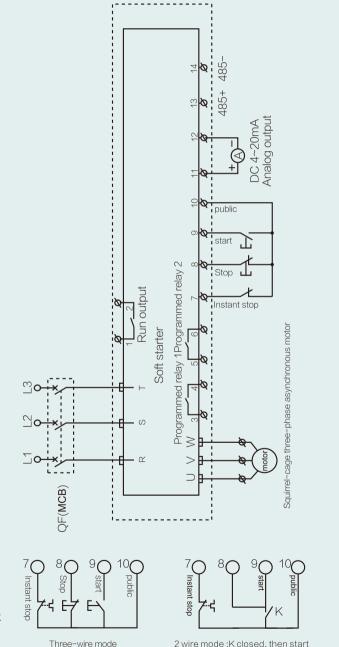
General

Current range ...... 11A- 1260A (rated)

Power supply

mains input(R,S,T)

- ➤ Terminals (1) and (2) are operation output: used to control operation indication (output). They are normally open passive contacts and close when starting successfully. Contact capacity: AC250V/5A.
- Terminals 3 and 4 are output 1 of the programmable relay: delay time is set by the programmable output 1 of A12, and action mode is set by the programmable relay 1 of A11. Is normally open passive contact, closed when the output is effective. Possible values: 0: No action 1: power-on action 2: soft start action 3: bypass action 4: soft stop action 5: Running action 6: standby action 7: fault action 8: current arrival action Contact capacity is AC250V/5A.
- ➤ Terminals ⑤ and ⑥ are output 2 of the programmable relay: the delay time is set by A14 programmable output 1 delay, and the action mode is set by A13 programmable relay 1. Is normally open passive contact, closed when the output is effective. 0: No action 1: power-on action2: soft start action 3: bypass action 4: soft stop action 5: Running action 6: standby action 7: fault action 8: current arrival actionContact capacity is AC250V/0.3A
- Terminal 7 is a transient output: This terminal must be shortcircuited with terminal 10 when the soft starter is working normally. When this terminal is open to terminal 10, the softstart cabinet stops working unconditionally and is in fault protection state. This terminal can be controlled by the . normally closed output point of the external protection device. When FA is set to 0 (primary protection), this terminal function is disabled.
- ➤ Terminals ®, 9, and 10 are input terminals for externally controlled start and stop buttons. The wiring method is shown in the figure.
- Terminals(11) and (12) for 4 ~ 20mtA DC analog output: used for real-time monitoring of motor current, full 20mA indicating motor current for soft starter nominal rated current 0.5-5 times, can be set by the parameter A17.4-20mA upper limit current. Can be connected to 4~20mA DC ammeter observation
- ➤ Terminals (13) and (14) are RS485 communication output and provide Chinése upper computer software for remote debugging and control. Do not disconnect the external terminal line; otherwise, the soft starting cabinet may be
- ➤ operating temperature ...... -10°C-40°C
- ➤ storage temperature.....-10°C +40°C
- ➤ humidity...... 5%to95% relative humidity

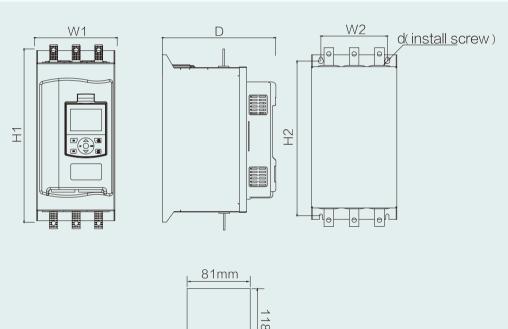




# ◆ SCKR1-6200 On-line intelligent motor soft starter

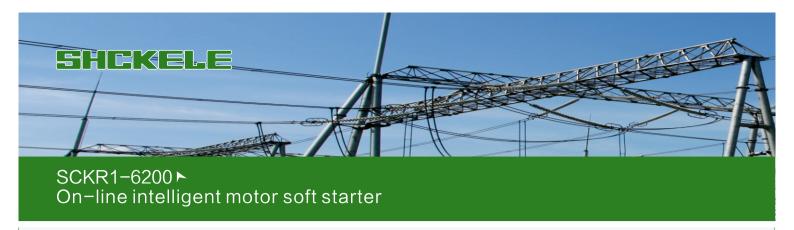
# • Soft starter appearance and mounting dimensions

Rate voltage	Rated current	Rated power	Display	Para meter	Protect	Terminal	Overload
220V	11A-1260A	3kW-350kW					
380V	11A-1260A	5.5kW-630kW	Chinese LCD display	62	12	14	Adjustable
660V	11A-1260A	5.5kW-1000kW					

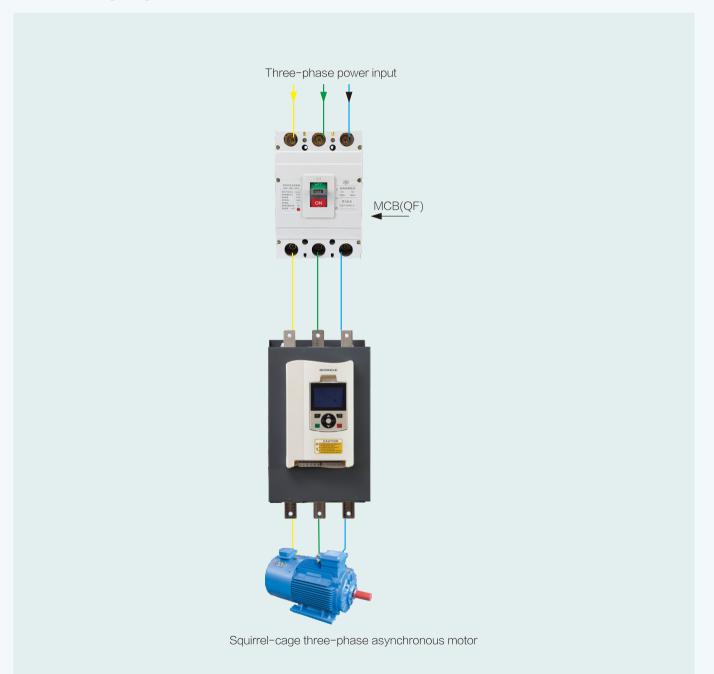


Installation dimension of external keyboard (mm) Figure 1

Specificationns	Outline dimention( mm )			Installation dimetion( mm )			Outside view
Specificationins	W1	H1	D	W2	H2	d	Outside view
5.5KW-45KW	145	340	214	85	298	M6	
55KW-75KW	172	355	222	140	300	M6	
90KW-115KW	210	394	255	150	343	M8	Figure 1
132KW-160KW	330	496	265	260	440	M8	rigure i
185KW-350KW	490	608	305	335	542	M8	
400-630KW	680	840	418	350	780	M10	

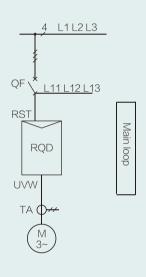


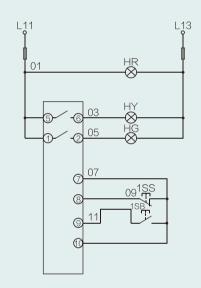
# ▶ Basic wiring diagram of soft starter





# SCKR1-6200 wiring diagram





Power	
Breaker	
Power light	
Bypass lamp	C
Fault Indicator	Control
Run indication	ol loop
Stop	
Button	
Button	
common port	

On-line intelligent motor soft starter

#### Description

- 1. This picture is the electrical schematic diagram of SCKR1-6200 series on-line one-tow standard motor control cabinet.
- 2. The R, S and T ends of the six line of the soft starter are connected to the circuit breaker, and the U, V and W of the soft starter are connected to the three-phase asynchronous motor.
- 3. The control loop diameter is 1.5BVR, and the transformer loop diameter is 2.5BVR; Overload ammeter shall be used for PA and 1PA.
- 4. There are 2 watch heads (PA, PV),2 buttons (SB, SS) and 3 indicators (HG, HR, HY) on the control cabinet.

