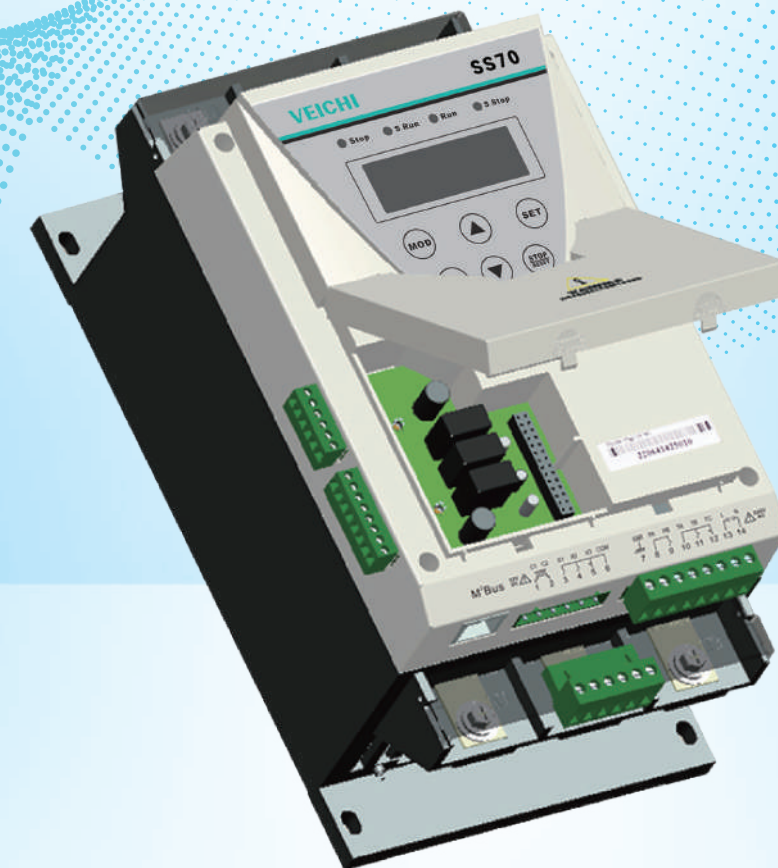


# VEICHI

## SS70 Series

### Intelligent Soft Starter with Built-in Bypass



# VEICHI

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Stock Code: 688698

## About us

Since its inception, VEICHI Electric (Stock Code: 688698) has been a pioneer in electrical transmission and industrial control, specializing in the research, development, production, and distribution of advanced industrial automation products. It serves a global clientele, delivering competitive, secure, and reliable solutions across multiple regions with R&D centers and production facilities in Suzhou, Shenzhen, and Xi'an, along with a wholly-owned subsidiary in India.

The comprehensive product portfolio, including AC drives, servo systems, and control systems, is widely applied in various industries, providing tailored solutions that drive the digital and intelligent transformation of modern manufacturing. Additionally, we are expanding into emerging fields such as robotics, new energy, and medical technologies, offering innovative products like coreless motors, frameless motors, photovoltaic storage inverters, and surgical power systems.

Along the way, VEICHI has developed a robust suite of proprietary technologies with relentless efforts on motors such as vector control, HF injection control, parameter

auto-tuning, motor protection, start-up fly track, high-speed weak magnet control, scalar V/F control, high-density water-cooled layout, and IGBT protections. As of September 30, 2024, we hold 222 authorized patents, including 54 invention patents.

And in consequence, it has reaped prestigious accolades, including the third batch of "Specialized, Elaborative, Characteristic, and Emerging 'Little Giant' Enterprise", "High-Tech Enterprise", "High and New Technology Enterprise", "Jiangsu Provincial Engineering Technology Research Center", "Jiangsu Provincial Enterprise Technology Center", and "Jiangsu Province Industrial Internet Development Demonstration".

Looking ahead, VEICHI remains unwavering in its commitment to a market-driven and cutting-edge technological innovation. By prioritizing breakthroughs in core technologies, it aims to expand into high-performance, high-quality, and high-reliability applications and drives transformative progress that shapes the future of the electrical transmission and industrial control.

2005

- Business started in Shenzhen
- First generation of drive on the market

2014

- Suzhou Veichi first-stage project put into construction

2019

- Veichi restructured to a company limited by shares
- Indian subsidiary established

2021

- Veichi subsidiary corporation established
- Veichi honored with national -level Specialized and Sophisticated Enterprise That Produces New and Unique Products

2023

- Suzhou Veichi second-stage project put into operation
- Suzhou Veichi third-stage project put into construction
- Veichi medical facility subsidiary established

2024

- Intelligent manufacturing factory and digital transformation project successfully closed down

2022

- Xi'an R&D center established
- Veichi digital energy subsidiary corporation established

2020

- A-share science and technology innovation board landing successfully
- Veichi honored with Jiangsu Province Specialized and Sophisticated Enterprise That Produces New and Unique Products

2016

- Suzhou Veichi first-stage project put into operation
- First generation of motion control system on the market

2013

- Suzhou Veichi Electric Co., Ltd established
- First generation of servo system on the market

■ SS70 Series Intelligent Soft Starter with Built-in Bypass

## Product Profile



### SS70 Series Intelligent Soft Starter with Built-in Bypass

Harnessing the latest advancements in power electronics and microprocessor technology, SS70 is powered by a high-performance DSP core, which ensures real-time performance, superior control, and enhanced safety for your motor control systems.

They are widely used and adaptable, not only for all kinds of general-purpose machineries, such as fans and pumps, but also for conveyor belts, compressors, crushers, and other occasions with heavy loads that require fast response. It also reduces energy consumption through intelligent control to lower long-term operating costs.

## Product Feature

### Built-in components

No additional bypass contactor required

### Compact structure

Advanced integration technology to greatly optimize the spatial layout

### Various starting methods

Three starting methods of current limit, current ramp, and voltage ramp available for different applications

### Perfect motor protection

Phase loss, over-voltage, under-voltage, overload, over-heat, over-current, current imbalance, start-up timeout, etc. to ensure all-round motor protection

### Multi-language interaction

User-friendly interface with multiple language options, and more for customization

### Eacy installation

Three-in-three-out main circuit wiring to save installation time and cost to a great extent

### IOT communication

Communication function to the upper computer control system with the optional IOT cloud box to realize the icould equipment management

### Special soft stopping

Dramatic improvement of motor operating performance, maintenance costs, and motor life extension, and "water hammer" and mechanical shock in water treatment



Naming Rules



Typical Application

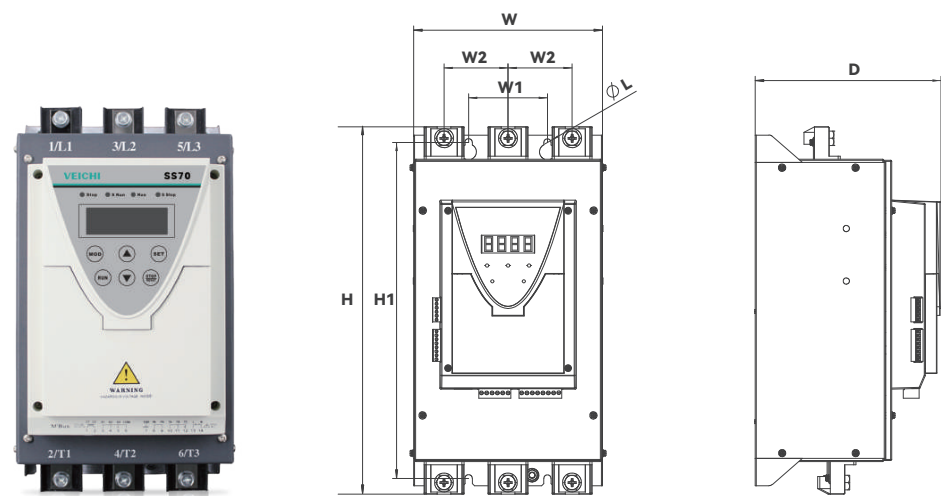
It is widely used in three-phase asynchronous motors in the fields of municipal engineering, mining, metallurgy, petroleum, chemical industry, electric power, construction, papermaking, water conservancy and so on.



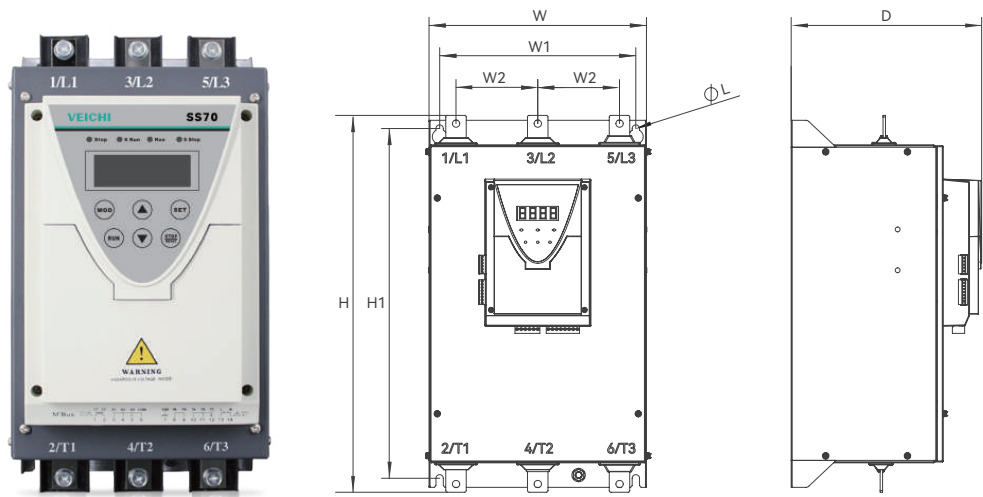
Technical Specifications

|                           |                        |  |
|---------------------------|------------------------|--|
| Standards                 |                        | GB14048.6-2016 (IEC947-4-2)  |
| Motor type                |                        | Three-phase asynchronous motor   |
| Motor power               |                        | 11A ~ 1260A(5.5kW~630kW)   |
| Input                     | Control voltage        | AC220V±15% , 50Hz/60Hz; AC110V±15%   |
|                           | Rated voltage          | AC380V±15% , 50Hz/60Hz; AC660V±15%; AC460V±15%   |
| Start time                |                        | 1s~120s  |
| Stop time                 |                        | 1s~120s  |
| Control mode              |                        | Voltage ramp, current ramp and current limit   |
| I/O                       | DI                     | 3(X1~X3)   |
|                           | AO                     | 1 (4mA~20mA/0V~10V)  |
|                           | RO                     | 2  |
|                           | Command source         | Keypad, terminals and RS485 communication  |
| Communication             | Communication protocol | 1×standard Modbus protocol   |
| Display                   | LCD display            | Display current, voltage, alarm and other motor parameters   |
| Protection and Monitoring |                        | Short-circuit, over-voltage, overload, under-voltage, phase loss, over-current, and overheat   |
| Environment               | Working environment    | Indoors without corrosive gases that destroy metals and insulating materials<br>No direct sunlight, no combustible gas, oil mist, dripping water, salt, etc. |
|                           | Altitude               | Derate 0.5% of the rated current for every 100m increase when above 1000m  |
|                           | Working temperature    | -10℃ ~ +40℃. Derate 2% of the rated current for every 1℃ increase when above 40℃   |
|                           | Humidity               | <95%RH, no condensation  |
|                           | Vibration              | <5.9m/s²(0.6g)   |
| Structure                 | Storage temperature    | -40℃ ~ 70℃   |
|                           | Protection level       | IP20   |
|                           | Cooling method         | Radiator, natural cooling  |
| Installation method       |                        | Vertical mounting in cabinet   |

Installation Dimensions



| Type    | Power   | H   | W   | D   | W1  | H1  | W2 | L  |
|---------|---------|-----|-----|-----|-----|-----|----|----|
| M-SG-01 | 22kW    | 278 | 150 | 143 | 127 | 259 | 45 | Φ7 |
| M-SG-02 | 30-45kW | 350 | 180 | 177 | 75  | 320 | 61 | Φ7 |
| M-SG-03 | 55-75kW | 380 | 224 | 193 | 200 | 353 | 71 | Φ7 |



| Type    | Power     | H   | W   | D   | W1  | H1  | W2  | L   |
|---------|-----------|-----|-----|-----|-----|-----|-----|-----|
| M-SG-04 | 90-110kW  | 461 | 266 | 233 | 240 | 428 | 100 | Φ9  |
| M-SG-05 | 132-250kW | 790 | 320 | 309 | 260 | 745 | 100 | Φ11 |
| M-SG-06 | 280-630kW | 939 | 330 | 379 | 270 | 850 | 82  | Φ11 |

Models and Specifications

SS70-380V

| Model       | Rated Power (kW) | Rated Current (A) | Case Model     | Outer Dimensions |      |      |
|-------------|------------------|-------------------|----------------|------------------|------|------|
|             |                  |                   |                | H                | W    | D    |
| SS70-006-40 | 5.5              | 15                | M-SS-01        | 278              | 150  | 158  |
| SS70-008-40 | 7.5              | 22                | M-SS-01        | 278              | 150  | 158  |
| SS70-011-40 | 11               | 27                | M-SS-01        | 278              | 150  | 158  |
| SS70-015-40 | 15               | 30                | M-SS-01        | 278              | 150  | 158  |
| SS70-018-40 | 18.5             | 34                | M-SS-01        | 278              | 150  | 158  |
| SS70-022-40 | 22               | 38                | M-SS-01        | 278              | 150  | 158  |
| SS70-030-40 | 30               | 65                | M-SS-02        | 350              | 180  | 177  |
| SS70-037-40 | 37               | 70                | M-SS-02        | 350              | 180  | 177  |
| SS70-045-40 | 45               | 88                | M-SS-02        | 350              | 180  | 177  |
| SS70-055-40 | 55               | 110               | M-SS-03        | 380              | 224  | 193  |
| SS70-075-40 | 75               | 140               | M-SS-03        | 380              | 224  | 193  |
| SS70-090-40 | 90               | 172               | M-SS-04        | 461              | 266  | 233  |
| SS70-110-40 | 110              | 200               | M-SS-04        | 461              | 266  | 233  |
| SS70-132-40 | 132              | 280               | M-SS-05        | 790              | 320  | 309  |
| SS70-160-40 | 160              | 320               | M-SS-05        | 790              | 320  | 309  |
| SS70-185-40 | 185              | 355               | M-SS-05        | 790              | 320  | 309  |
| SS70-200-40 | 200              | 380               | M-SS-05        | 790              | 320  | 309  |
| SS70-220-40 | 220              | 440               | M-SS-05        | 790              | 320  | 309  |
| SS70-250-40 | 220              | 480               | M-SS-05        | 790              | 320  | 309  |
| SS70-280-40 | 280              | 560               | M-SS-06        | 939              | 330  | 379  |
| SS70-315-40 | 315              | 600               | M-SS-06        | 939              | 330  | 379  |
| SS70-355-40 | 355              | 700               | M-SS-06        | 939              | 330  | 379  |
| SS70-400-40 | 400              | 780               | M-SS-06        | 939              | 330  | 379  |
| SS70-450-40 | 450              | 820               | M-SS-06        | 939              | 330  | 379  |
| SS70-500-40 | 500              | 960               | M-SS-07Cabinet | 1000             | 1200 | 2200 |
| SS70-550-40 | 550              | 1032              | M-SS-07Cabinet | 1000             | 1200 | 2200 |
| SS70-630-40 | 630              | 1100              | M-SS-07Cabinet | 1000             | 1200 | 2200 |

Models and Specifications

SS70-460V

| Model       | Rated Power<br>(kW) | Rated Current<br>(A) | Case Model     | Outer Dimensions |      |      |
|-------------|---------------------|----------------------|----------------|------------------|------|------|
|             |                     |                      |                | H                | W    | D    |
| SS70-006-46 | 5.5                 | 9                    | M-SS-02        | 350              | 180  | 177  |
| SS70-008-46 | 7.5                 | 12                   | M-SS-02        | 350              | 180  | 177  |
| SS70-011-46 | 11                  | 17                   | M-SS-02        | 350              | 180  | 177  |
| SS70-015-46 | 15                  | 23                   | M-SS-02        | 350              | 180  | 177  |
| SS70-018-46 | 18.5                | 29                   | M-SS-02        | 350              | 180  | 177  |
| SS70-022-46 | 22                  | 34                   | M-SS-02        | 350              | 180  | 177  |
| SS70-030-46 | 30                  | 46                   | M-SS-02        | 350              | 180  | 177  |
| SS70-037-46 | 37                  | 57                   | M-SS-02        | 350              | 180  | 177  |
| SS70-045-46 | 45                  | 70                   | M-SS-02        | 350              | 180  | 177  |
| SS70-055-46 | 55                  | 85                   | M-SS-02        | 350              | 180  | 177  |
| SS70-075-46 | 75                  | 116                  | M-SS-03        | 380              | 224  | 193  |
| SS70-090-46 | 90                  | 139                  | M-SS-03        | 380              | 224  | 193  |
| SS70-110-46 | 110                 | 170                  | M-SS-04        | 461              | 266  | 233  |
| SS70-132-46 | 132                 | 205                  | M-SS-04        | 461              | 266  | 233  |
| SS70-160-46 | 160                 | 248                  | M-SS-05        | 790              | 320  | 309  |
| SS70-185-46 | 185                 | 287                  | M-SS-05        | 790              | 320  | 309  |
| SS70-200-46 | 200                 | 310                  | M-SS-05        | 790              | 320  | 309  |
| SS70-220-46 | 220                 | 341                  | M-SS-05        | 790              | 320  | 309  |
| SS70-250-46 | 250                 | 387                  | M-SS-05        | 790              | 320  | 309  |
| SS70-280-46 | 280                 | 434                  | M-SS-05        | 790              | 320  | 309  |
| SS70-315-46 | 315                 | 488                  | M-SS-06        | 939              | 330  | 379  |
| SS70-355-46 | 355                 | 550                  | M-SS-06        | 939              | 330  | 379  |
| SS70-400-46 | 400                 | 620                  | M-SS-06        | 939              | 330  | 379  |
| SS70-450-46 | 450                 | 697                  | M-SS-06        | 939              | 330  | 379  |
| SS70-500-46 | 500                 | 775                  | M-SS-07Cabinet | 1000             | 1200 | 2200 |
| SS70-550-46 | 550                 | 852                  | M-SS-07Cabinet | 1000             | 1200 | 2200 |
| SS70-630-46 | 630                 | 976                  | M-SS-07Cabinet | 1000             | 1200 | 2200 |

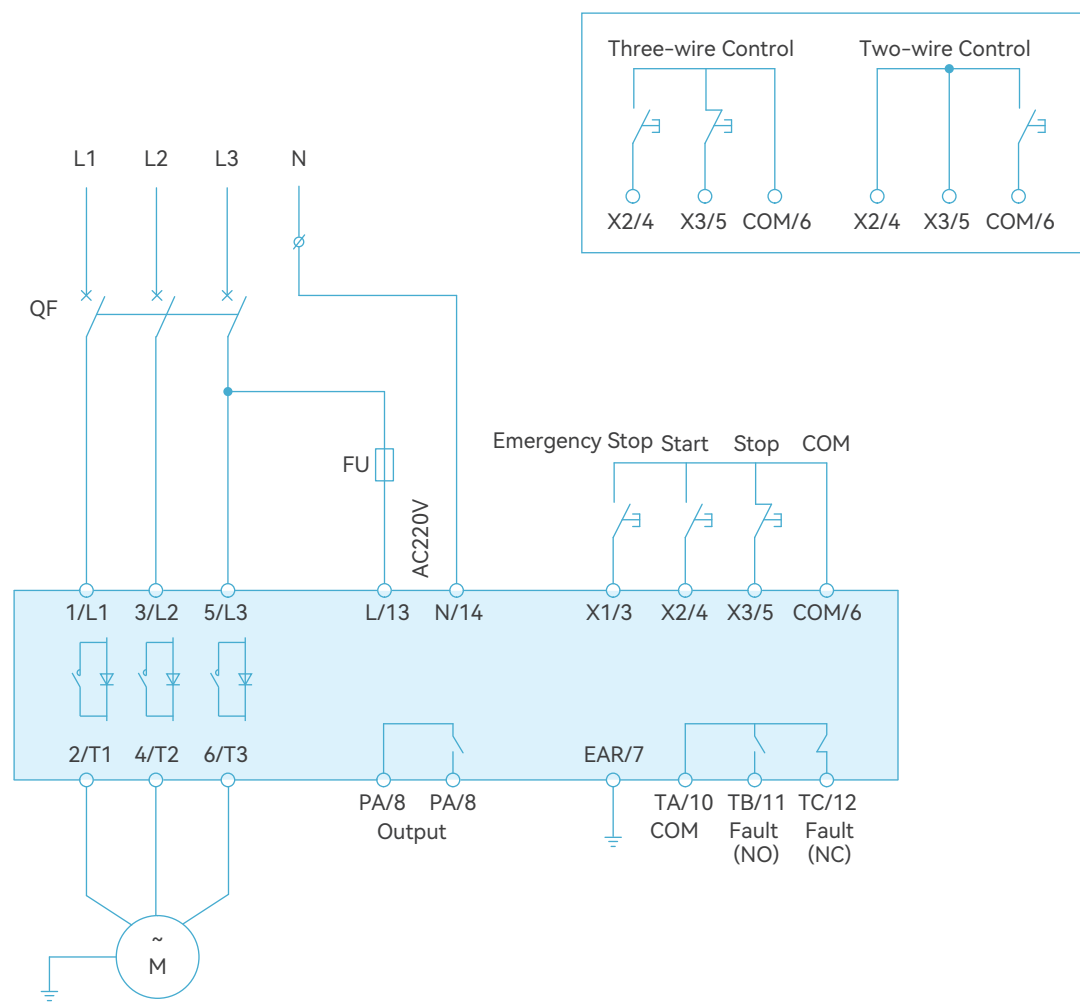
Models and Specifications

SS70-690V

| Model       | Rated Power<br>(kW) | Rated Current<br>(A) | Case Model     | Outer Dimensions |      |      |
|-------------|---------------------|----------------------|----------------|------------------|------|------|
|             |                     |                      |                | H                | W    | D    |
| SS70-006-69 | 5.5                 | 6                    | M-SS-02        | 350              | 180  | 177  |
| SS70-008-69 | 7.5                 | 8                    | M-SS-02        | 350              | 180  | 177  |
| SS70-011-69 | 11                  | 11                   | M-SS-02        | 350              | 180  | 177  |
| SS70-015-69 | 15                  | 15                   | M-SS-02        | 350              | 180  | 177  |
| SS70-018-69 | 18.5                | 19                   | M-SS-02        | 350              | 180  | 177  |
| SS70-022-69 | 22                  | 23                   | M-SS-02        | 350              | 180  | 177  |
| SS70-030-69 | 30                  | 31                   | M-SS-02        | 350              | 180  | 177  |
| SS70-037-69 | 37                  | 38                   | M-SS-02        | 350              | 180  | 177  |
| SS70-045-69 | 45                  | 46                   | M-SS-02        | 350              | 180  | 177  |
| SS70-055-69 | 55                  | 57                   | M-SS-02        | 350              | 180  | 177  |
| SS70-075-69 | 75                  | 77                   | M-SS-02        | 350              | 180  | 177  |
| SS70-090-69 | 90                  | 93                   | M-SS-03        | 380              | 224  | 193  |
| SS70-110-69 | 110                 | 114                  | M-SS-03        | 380              | 224  | 193  |
| SS70-132-69 | 132                 | 136                  | M-SS-04        | 461              | 266  | 233  |
| SS70-160-69 | 160                 | 165                  | M-SS-04        | 461              | 266  | 233  |
| SS70-185-69 | 185                 | 191                  | M-SS-04        | 461              | 266  | 233  |
| SS70-200-69 | 200                 | 207                  | M-SS-05        | 790              | 320  | 309  |
| SS70-220-69 | 220                 | 227                  | M-SS-05        | 790              | 320  | 309  |
| SS70-250-69 | 250                 | 258                  | M-SS-05        | 790              | 320  | 309  |
| SS70-280-69 | 280                 | 289                  | M-SS-05        | 790              | 320  | 309  |
| SS70-315-69 | 315                 | 325                  | M-SS-05        | 790              | 320  | 309  |
| SS70-355-69 | 355                 | 367                  | M-SS-05        | 790              | 320  | 309  |
| SS70-400-69 | 400                 | 413                  | M-SS-05        | 790              | 320  | 309  |
| SS70-450-69 | 450                 | 465                  | M-SS-05        | 790              | 320  | 309  |
| SS70-500-69 | 500                 | 517                  | M-SS-06        | 939              | 330  | 379  |
| SS70-550-69 | 550                 | 568                  | M-SS-06        | 939              | 330  | 379  |
| SS70-630-69 | 630                 | 651                  | M-SS-06        | 939              | 330  | 379  |
| SS70-710-69 | 710                 | 733                  | M-SS-07Cabinet | 1000             | 1200 | 2200 |

Wiring

SS70 Series Intelligent Soft Starter with Built-in Bypass



Note:  
SS70 built-in bypass intelligent soft starter adopts two kinds of start-stop control methods from the keypad and terminals (two-wire and three-wire). 1. Two-wire control is a holding signal and three-wire control is a trigger signal.  
1. The keypad is invalid with 2-wire control.  
2. The keypad is valid with 3-wire control.  
3. X3 and COM must be kept closed when the keypad is valid.  
4. Terminal signal valid when >200ms

R&D and Manufacturing








R&D Capacity

- > Excellent professional and technical talents in the field of industrial control in China have gathered in VEICHI with R&D personnel accounting for 37.16% of the total employees, while technical personals with bachelor's degrees or above for 75.19%.
- > VEICHI is always committed to providing customers with stable and trustworthy products and technical services in accordance to the research and development concept of "strive for excellence by innovating technologies".
- > Annual R&D investment of accounts for about 10% of the whole revenue. EMC laboratory, safety laboratory, reliability laboratory, product performance testing laboratory and a number of experimental platforms for multiple industrial applications are established successively.
- > In-depth cooperation with many famous universities and research institutions in China has been established and "Jiangsu Postdoctoral Innovation Practice Base" and "Jiangsu Postgraduate Workstation" set up successively.

Intelligent Automation Production

- > Products are based on digital technologies from the beginning of product development, to production programming and then production, that is the whole production cycle, with an annual output up to 914,600 units.
- > 5 fully imported MT high-speed chip mounting lines, 5 automatic coating lines, 4 DIP testing lines, 1 automated line equipped with robotic arms, 12 production lines ensure production of all of the VEICEHI products.
- > All of the products are checked by the quality management mode of 3 (tri-inspection system)+ 1 (proportional inspection) during the whole process, and all of them are carried out automatically so as to ensure the performance.
- > Three major production management system WMS, MES and ERP together ensure that the unique code of each product is traceable in the system to manage product quality.



|   |   |   |  |   |  |   |
|---|---|---|--|---|--|---|
| <br>ISO9001:2015<br>ISO14001:2015<br>ISO45001:2018 | <br>Full series with<br>CE certification | <br>Dedicated<br>products with<br>3C certification | <br>Customized<br>products with<br>RoHS2.0<br>certification | <br>Measurement<br>Management<br>System AAA<br>certification | <br>5-star after-sales<br>service certification | <br>QC080000<br>Management<br>System |
|---|---|---|--|---|--|---|