

Photovoltaic DC Cable & Connector



VEICHI

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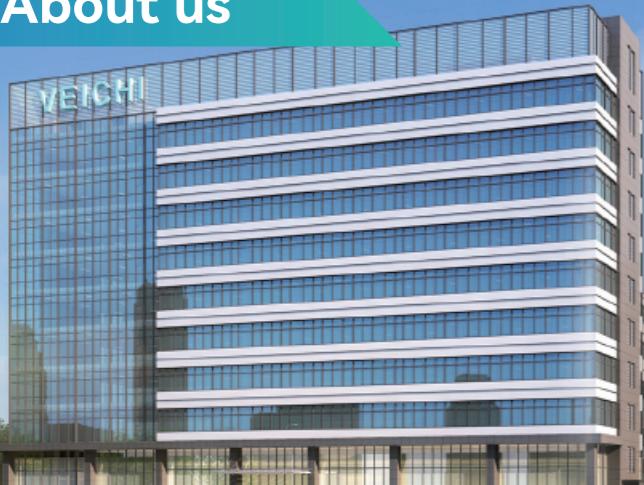
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About us



VEICHI Electric (stock code: 688698) has always been dedicated to the field of electrical drive and industrial control since its establishment, and now it is a high-tech enterprise engaged in R&D, production, and sales of industrial automation products in one. With R&D and production bases in Suzhou, Shenzhen and Xi'an, and a wholly-owned subsidiary in India, VEICHI now is capable of conducting its business to many countries and regions with competitive, safe and reliable products and services to customers all over the world.

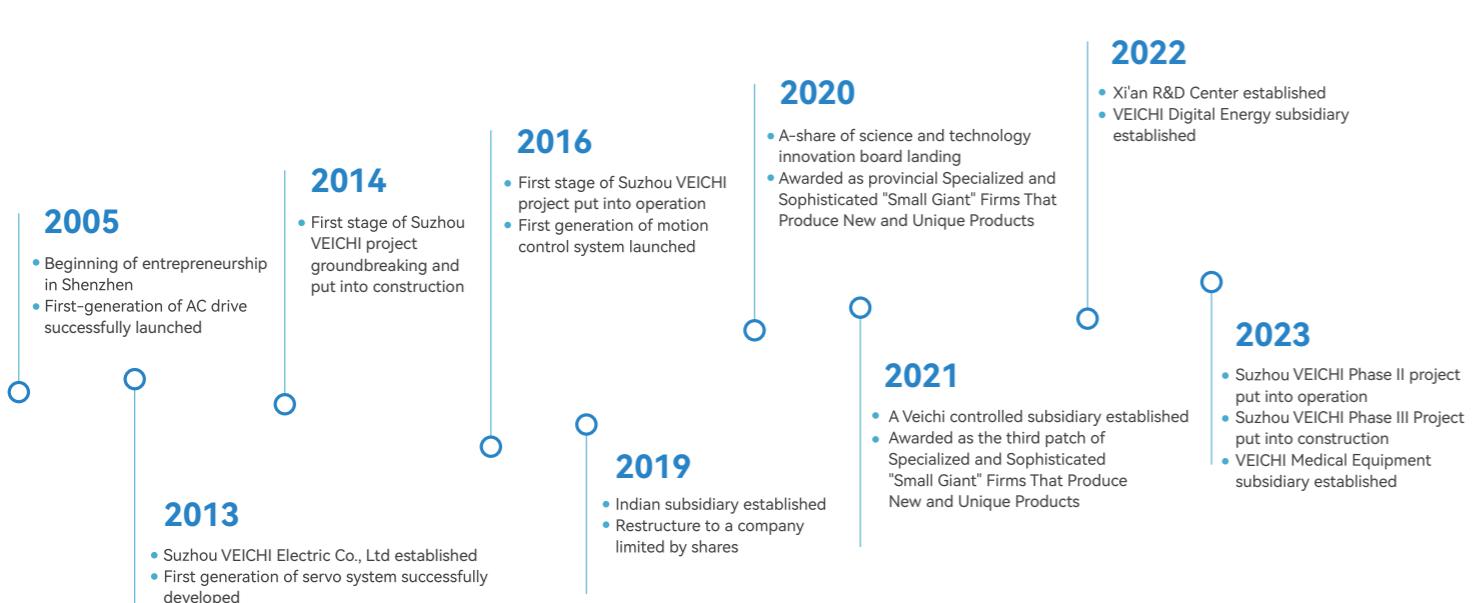
Plentiful products cover AC drives, servo systems and control systems, which are widely used in heavy industry, light industry, high-end equipment and more to facilitate the intellectualized transformation of the manufacturing industry with solutions customized to different scenarios. In the meanwhile, along the development trend of the times, VEICHI is extending its place to the emerging fields such as robotics, new energy, and medical care, and has developed products such as coreless motors, frameless motors, photovoltaic AC drives, and surgical power systems, which have deeply empowered the impressively promising industries.

On long-term and persistent independent R&D and innovation, VEICHI has successfully cultivated a series of patented technologies with independent intellectual property rights, and has mastered the core technologies of motor

control such as vector control of PMSM, high-frequency pulse injection control, field-weakening control for higher speed, scalar V/F control and vector control etc., and of silicon carbide application, motor parameter tuning and identification, motor control and protection, and motor speed tracking and start-up control. As of June 30, 2024, a total of 221 patents have been granted, including 51 patents for inventions.

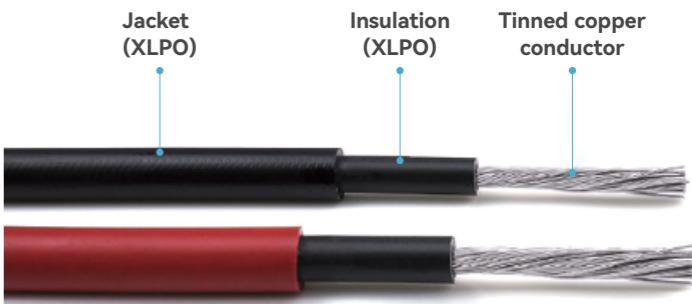
VEICHI has been developing step by step over the past 19 years with abundant honorary awards and certificates from the state and competent authorities, including "the Third Batch of Special and Sophisticated 'Small Giant' Enterprises That Produce Novel and Unique Products", "High-tech Enterprises", "Jiangsu Provincial Engineering Technology Research Center", "Jiangsu Provincial Enterprise Technology Center", "Jiangsu Provincial Industrial Internet Development Demonstration Enterprise (Benchmarking Factory Category)" and others.

In the future, VEICHI Electric will continue to uphold the business philosophy of "guided by market demand and driven by technological innovation", strengthen the key core technology research and product iteration, and constantly expand its high-performance, high-quality, high-reliability applications, contributing to the development of electrical drive and industrial control with might and main.



Photovoltaic DC Cable

Mainly used for connecting solar panels and inverters. The use of XLPO/XLPE material for the insulation and phase sheathing makes the cable resistant to sunlight and can also be used in high and low temperature environments.



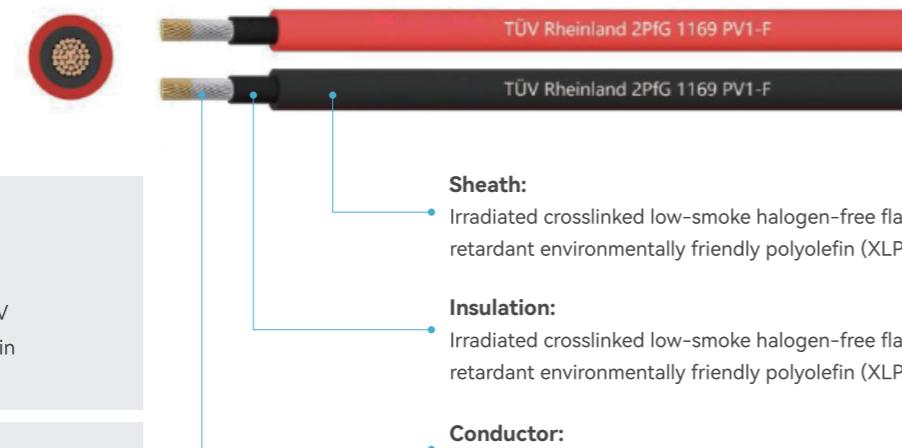
SI-PV1-F



CE RoHS

Product Certification

TÜV Rheinland 2PfG 1169



Cable Characteristics

Conductor: Stranded tinned soft copper
 Sheath/Insulation: XLPO, color available
 Rated voltage: AC Uo/U 0.6/1.0KV, DC 1.0KV
 Withstand test: AC6.5KV/5min, DC15KV/5min
 Certification standard: 2PfG 1169 / 08.07

Temperature Rating:

Rated Temperature: -40°C ~ +90°C
 Allowable short circuit temperature: 200°C for 5 seconds

Testing Standard:

Cold bending test: EN 60811-1-4
 Vertical burning test: EN 60332-1-2

Cable structure table (specific parameters are subject to the latest specification)

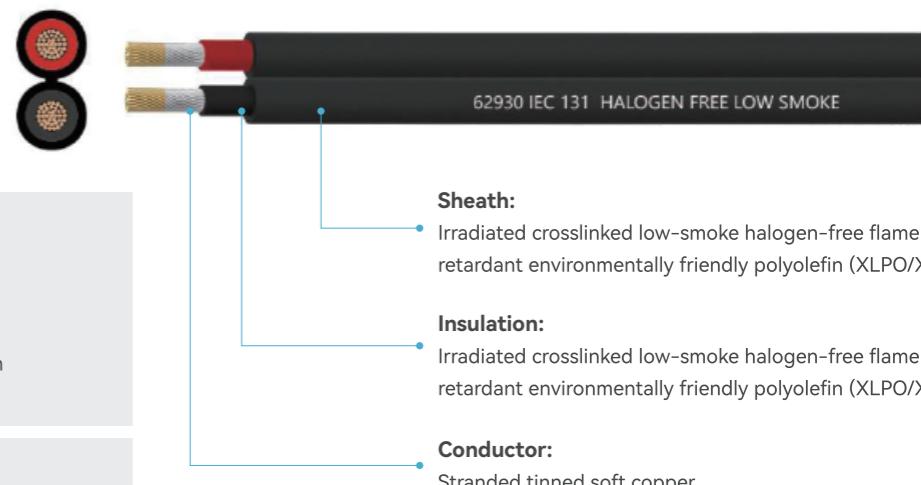
| Conductor Nominal Cross Section (mm ²) | Conductor structure (Φn/mm±0.015) | Outer diameter of stranded conductor (Φmm±0.2) | Insulation thickness (≥mm) | Sheath thickness (≥mm) | Outer diameter of finished product (Φmm±0.2) | Conductor DC Resistance (Ω/Km) | 60°C Capacitance (A) |
|--|-----------------------------------|--|----------------------------|------------------------|--|--------------------------------|----------------------|
| 1.5 | 22*0.285 | 1.5 | 0.5 | 0.5 | 4.3 | 13.7 | 24 |
| 2.5 | 36*0.285 | 2 | 0.5 | 0.5 | 4.8 | 8.21 | 33 |
| 4 | 56*0.285 | 2.4 | 0.5 | 0.5 | 5.2 | 5.09 | 44 |
| 6 | 84*0.285 | 3 | 0.5 | 0.5 | 6.1 | 3.39 | 57 |
| 10 | 80*0.39 | 4 | 0.5 | 0.5 | 7.2 | 1.95 | 79 |
| 16 | 120*0.39 | 5 | 0.5 | 0.5 | 8.4 | 1.24 | 107 |
| 25 | 196*0.39 | 6.3 | 0.5 | 0.5 | 10.2 | 0.795 | 142 |
| 35 | 276*0.39 | 7.4 | 0.5 | 0.5 | 11.2 | 0.565 | 176 |

SI-62930 IEC131
Dual-core photovoltaic cable

CE RoHS

Product Certification

TÜV Rheinland IEC 62930 131



Cable Characteristics

Conductor: Stranded tinned soft copper
 Sheath/Insulation: XLPO, color available
 Rated voltage: AC Uo/U 1.0/1.0KV, DC 1.5KV
 Withstand test: AC6.5KV/5min, DC15KV/5min
 Certification standard: IEC 62930:2017

Temperature Rating:

Rated Temperature: -40°C ~ +90°C
 Allowable short circuit temperature: 200°C for 5 seconds

Testing Standard:

Cold bending test: EN 60811-1-4
 Vertical burning test: EN 60332-1-2

Cable structure table (specific parameters are subject to the latest specification)

| Conductor Nominal Cross Section (mm ²) | Conductor structure (Φn/mm±0.015) | Outer diameter of stranded conductor (Φmm±0.2) | Insulation thickness (≥mm) | Sheath thickness (≥mm) | Outer diameter of finished product (Φmm±0.2) | Conductor DC Resistance (Ω/Km) | 60°C Capacitance (A) |
|--|-----------------------------------|--|----------------------------|------------------------|--|--------------------------------|----------------------|
| 2*2.5 | 36*0.285 | 2 | 0.7 | 0.8 | 5.1*10.5 | 8.21 | 33 |
| 2*4 | 56*0.285 | 2.4 | 0.7 | 0.8 | 5.5*11.8 | 5.09 | 45 |
| 2*6 | 84*0.285 | 3 | 0.7 | 0.8 | 6.2*12.6 | 3.39 | 58 |
| 2*10 | 80*0.39 | 4 | 0.7 | 0.8 | 7.5*15.4 | 1.95 | 80 |

SI-PV004 Photovoltaic Connector

Product standard:

IEC62852:2014/TÜV certification



Rated voltage: 1000V DC

Contact material: tinned copper

Rated current: 30A

Protection class: IP67

Contact resistance: $\leq 0.5\text{m}\Omega$

Adaptable ambient temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Cable cross-sectional area: 2.5/4/6mm²

Flame retardant grade: UL94 V-0

Insulation material: PC EXL9330

Execution standard: IEC 62852:2014

SI-PV004-P Photovoltaic Board end Connector

Product standard:

CE certification



Rated voltage: 1000V DC

Contact material: tinned copper

Rated current: 30A

Protection class: IP65

Contact resistance: $\leq 0.5\text{m}\Omega$

Adaptable ambient temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Thread size: 12mm

Flame retardant grade: UL94 V-0

Insulation material: PPO

SI-PV004-D Photovoltaic Diode Connector

Product standard:

CE certification



Rated voltage: 1000V DC

Contact material: tinned copper

Rated current: 10/15/20A

Protection class: IP65

Contact resistance: $\leq 0.5\text{m}\Omega$

Adaptable ambient temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Flame retardant grade: UL94 V-0

Insulation Material: PC EXL9330/PPO

Execution standard: IEC 62852:2014/CE

SI-PV004-F Photovoltaic Fuse Connector

Product standard:

CE certification



Rated voltage: 1000V DC

Contact material: tinned copper

Rated current: 10/15/20A

Protection class: IP65

Contact resistance: $\leq 0.5\text{m}\Omega$

Adaptable ambient temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Flame retardant grade: UL94 V-0

Insulation Material: PC EXL9330/PPO

Execution standard: IEC 62852:2014/CE

SI-PV004-T2 2 to 1 T Branch Connector

Product standard: CE certification



SI-PV004-T4 4 to 1 T Branch Connector

Product standard: CE certification



SI-PV004-T6 6 to 1 T Branch Connector

Product standard: CE certification



SI-PV004-T3 3 to 1 T Branch Connector

Product standard: CE certification



SI-PV004-T5 5 to 1 T Branch Connector

Product standard: CE certification



Rated voltage: 1000V DC

Contact material: tinned copper

Rated current: 30A

Protection class: IP65

Contact resistance: $\leq 0.5\text{m}\Omega$

Ambient Temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Adaptable Connector: SI-PV004/SI-PV005

Flame retardant grade: UL94 V-0

Insulation material: PPO

SI-PV004-2T1 2 to 1 Y Branch Connector

Product standard: CE certification



SI-PV004-4T1 4 to 1 Y Branch Connector

Product standard: CE certification



SI-PV004-3T1 3 to 1 Y Branch Connector

Product standard: CE certification



Rated voltage: 1000V DC

Contact material: tinned copper

Rated current: 30A

Protection class: IP67

Contact resistance: $\leq 0.5\text{m}\Omega$

Adaptable ambient temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Flame retardant grade: UL94 V-0

Insulation Material: PC EXL9330/XLPO

Input cable specification: PV Cable 1*4mm²

(SI-PV004-XT1 PV Cable 1*4mm² / 6mm²)

Output cable specification: PV Cable 1*4mm²

(SI-PV004-XT1 PV Cable 1*4mm² / 6mm²)

SI-PV004-XT1 Multiple to 1 Y Branch Connector

Product standard: CE certification



SI-PV005 Photovoltaic Connector

Product standard:

IEC62852:2014/TÜV certification



Rated voltage: 1500V DC

Contact material: tinned copper

Rated current: 30A

Protection class: IP68

Contact resistance: $\leq 0.5\text{m}\Omega$

Adaptable ambient temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$

Cable cross-sectional area: 2.5/4/6mm²

Flame retardant grade: UL94 V-0

Insulation material: PV40Z

Execution standard: IEC 62852:2014

SI-PV005-D Photovoltaic Diode Connector

Product standard:

CE certification



Rated voltage: 1500V DC

Contact material: tinned copper

Rated current: 10/15/20A

Protection class: IP65

Contact resistance: $\leq 0.5\text{m}\Omega$

Adaptable ambient temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$

Flame retardant grade: UL94 V-0

Insulation material: PPO

Execution standard: IEC 62852:2014/CE

SI-PV005-P Photovoltaic Panel Connector

Product standard:

CE certification



Rated voltage: 1500V DC

Contact material: tinned copper

Rated current: 30A

Protection class: IP65/IP68

Contact resistance: $\leq 0.5\text{m}\Omega$

Ambient Temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$

Thread size: 12mm

Flame retardant grade: UL94 V-0

Insulation material: PPO

Execution standard: IEC 62852:2014/CE

Photovoltaic Fuse Connector

Product standard:

CE certification

SI-PV005-FA



Rated voltage: 1500V DC

Contact material: tinned copper

Rated current: 15/20/25/30A

Protection class: IP65

Contact resistance: $\leq 0.5\text{m}\Omega$

Ambient Temperature: $-40^\circ\text{C} \sim +85^\circ\text{C}$

Flame retardant grade: UL94 V-0

Insulation material: PPO

SI-PV005-FB



SI-PV005-FC



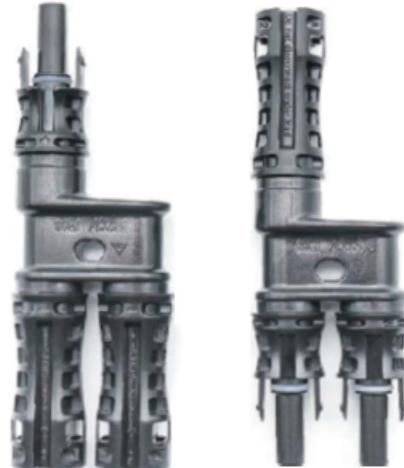
SI-PV005-FD



SI-PV005-T 2 to 1 T Branch Connector

Product standard:

CE certification



| |
|---|
| Rated voltage: 1500V DC |
| Contact material: tinned copper |
| Rated current: 30A |
| Protection class: IP68 |
| Contact resistance: $\leq 0.5\text{m}\Omega$ |
| Ambient Temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ |
| Adaptable Connector: SI-PV004/SI-PV005 |
| Flame retardant grade: UL94 V-0 |
| Insulation material: PPO |

SI-PV005-X Y Branch Connector

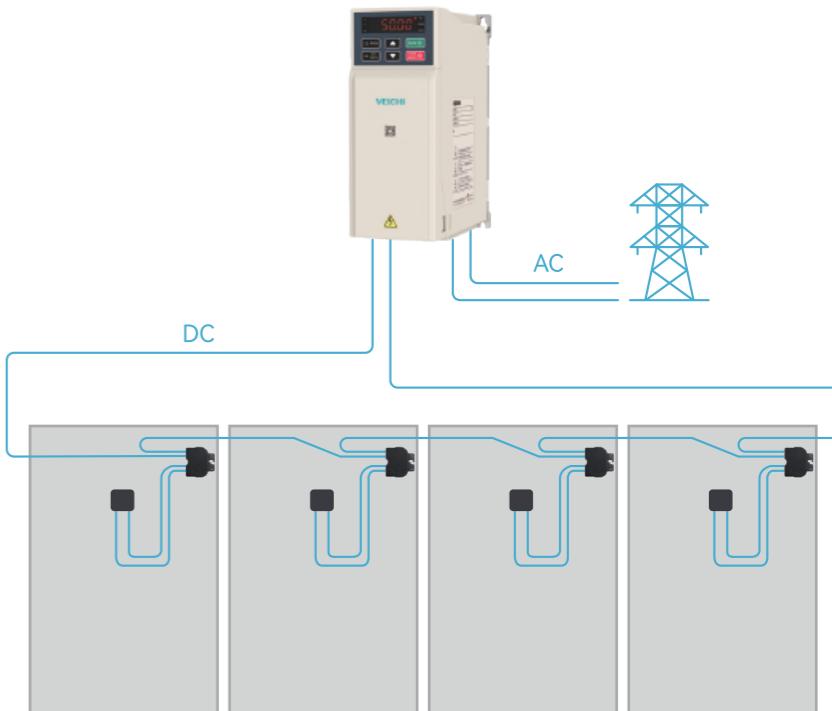
Product standard:

CE certification

| | |
|--|---|
| SI-PV005-2T1 2 to 1 Y Branch Connector |  |
| SI-PV005-3T1 3 to 1 Y Branch Connector |  |
| SI-PV005-4T1 4 to 1 Y Branch Connector |  |

| |
|---|
| Rated voltage: 1500V DC |
| Contact material: tinned copper |
| Rated current: 30A |
| Protection class: IP68 |
| Contact resistance: $\leq 0.5\text{m}\Omega$ |
| Adaptable ambient temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ |
| Flame retardant grade: UL94 V-0 |
| Insulation material: PV40Z/XLPO |
| Input cable specification: PV Cable 1*4mm ² |
| Output cable specification: PV Cable 1*4mm ² |
| (SI-PV005-4T1 PV Cable 1*6mm ²) |

SI-YH005-600W Intelligent Component Optimizer



Since the operating currents of the modules connected in the same string need to be consistent, the operating point of the modules affected by the mismatch will be shifted as the current decreases, leading to a reduction in the output power of the entire string, i.e., there is an obvious barrel effect in the power generation of PV modules. By using the optimizer solution, the maximum power point of each module can be tracked independently, which can increase the power generation by 5%-30% and achieve the optimal power generation for the whole string, ensuring that each module operates under the optimal working condition and tracking the maximum current of the string.

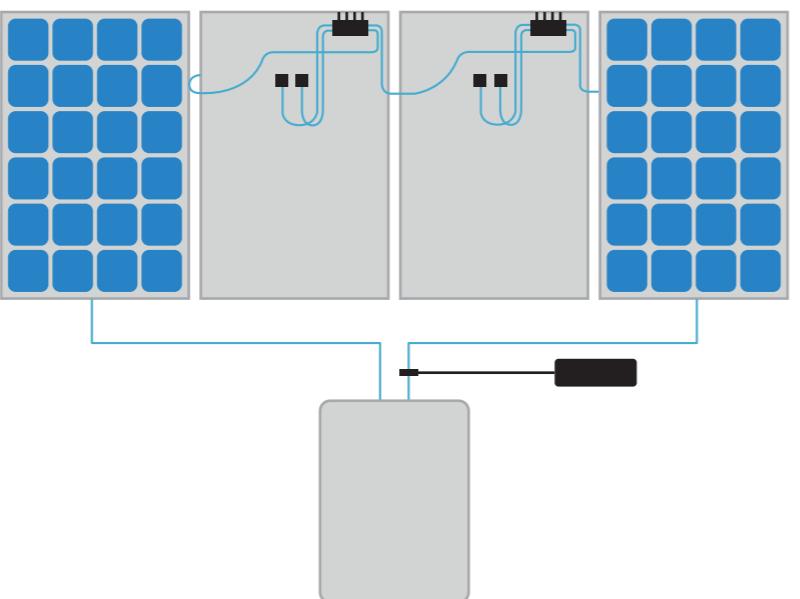
- Reduces performance mismatch over the lifetime of the PV module
- Clip-on design for reliable fastening and easy disassembly and maintenance
- Adaptable to a wide range of modules, adapting to complex and changing installation scenarios.
- Increase in power generation by 5-25%.

| | |
|--------------------------------|--------------------|
| Max. system voltage | 1500V |
| Max. input power | 600W |
| Input working voltage | 7~60V |
| Max. input current | 16A |
| Max. output current | 42A |
| Overload protection conditions | 18A or 150°C |
| Dimension | 103*105*21mm |
| Weight | 0.5kg |
| Wiring Specification | 1*4mm ² |

| | |
|---------------------------|--|
| Input Cable Length | 500mm |
| Output Cable Length | 1000mm |
| Connector type | SI-PV005 |
| Terminal compatibility | Compatible MC4 Connector |
| Protection class | IP65/IP68 |
| Ambient Temperature Range | $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ |
| Ambient Humidity Range | 0~100%RH |
| peak efficiency | 99.50% |
| service life | 25 years |

SI-GD004-20/30 Solar Fast Shutoffs

The core equipment in the fast shutdown solution can be connected with individual modules to realize group-level fast shutdown function and achieve the purpose of safe and stable operation of solar power generation system. Low loss, high efficiency, stable and reliable, can effectively ensure the safe operation of the solar system.



| | |
|----------------------------|------------------------|
| Max. system voltage | 1000V (1500V Optional) |
| Input Voltage | 12~80V |
| Max. output current | 20A |
| Max. short-circuit current | 25A |
| Shutdown Output Voltage | 1V@10mA |
| Static power dissipation | 200mW |
| efficiency | 99.90% |
| maximum power | 700W |

| | |
|-----------------------|-----------------------|
| Input Cable Length | 0.5m |
| Output cable length | 1.2m |
| Dimension | 120*77*17mm |
| Operating temperature | -40°C~+85°C |
| Protection class | IP68 |
| Operating temperature | -40°C~+85°C |
| Connector Type | MC4 or MC4 Compatible |
| Service life | 25 Years |



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 74.62%.
- 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 VEICHI 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.



Service and Support

