VEICHI

SD810 Series

General Multi-Drive Servo System

Stock code:688698

VEICHI

Suzhou Veichi Electric Co., Ltd.

No.1000, Songjia Road, Guoxiang Subdistrict, Wuzhong Economic and Technological Development Zone, Suzhou City, China

Tel:+86-512-6617 1988 Fax:+86-512-6617 3610

Facebook:https://www.facebook.com/veichigroup

WhatsApp：+86-138 2881 8903

Https://www.veichi.com/

Official Website

Version: May, 2024

About us

VEICHI Electric (stock code: 688698) specializes in electric drive and industry control, establishing itself as a leading high-tech enterprise in the R&D, production, and sales of industrial automation products. With R&D and manufacturing facilities in Suzhou, Shenzhen, and Xi'an, along with a fully-owned subsidiary in India, VEICHI serves the global market by offering competitive, safe, and reliable products and services.

A wide range of VEICHI products and solutions tailored to various scenarios, including AC drives, servo systems, and control systems, have been acclaimed with plentiful proven applications across sectors from light to heavy industries, propelling intellectualization transformation in manufacturing. Keeping pace with development trends, VEICHI is branching into burgeoning sectors like robotics, new energy, and healthcare, introducing innovative products such as coreless motors, frameless motors, photovoltaic drives, and surgical power systems for further industrial advancement.

Abundant patented technologies with independent intellectual properties have testified VEICHI's years of dedication to independent R&D and innovation in core motor control technologies including vector control for PMSM, high-frequency pulse injection, speed tracking for start-up, high-speed field-weakening, scalar V/F and vector control, as well as silicon carbide applications, auto tuning of motor parameters, and protection functions. As of March 31, 2024, VEICHI holds 204 patents, including 48 inventions.

Throughout its history, VEICHI has made significant progress patiently but surely, earning numerous prestigious awards and certifications from national and provincial authoritative entities and organizations. These accolades include titles such as "The Third Batch of Specialized and Sophisticated 'Small Giant' Enterprises with Distinctive New Products," "High-tech Enterprises," "Jiangsu Provincial Engineering Technology Research Center," "Jiangsu Provincial Enterprise Technology Center," and "Jiangsu Provincial Industrial Internet Development Demonstration Enterprise (Benchmarking Factory Category)."

Looking forward, VEICHI will, by the business philosophy of "guided by market demand and driven by technological innovation", make breakthroughs in key core technologies for more refreshing products and explore more reassuring applications based on their competitive performance and quality, energizing the electrical drive and industrial control sector one more step further.

2005
- Business started in Shenzhen
- First generation of drive on the market

2013
- Suzhou Veichi Electric Co., Ltd established
- First generation of servo system on the market

2014
- Suzhou Veichi first-stage project put into construction

2015
- Advanced integrated product development mode (IPD) initiated

2016
- Suzhou Veichi first-stage project put into operation
- First generation of motion control system on the market

2017
- Veichi honored with New High-tech Enterprise

2018
- Veichi honored with secondary enterprise of standardized production safety among Jiangsu province

2019
- Veichi restructured to a company limited by shares
- Indian subsidiary established
- Veichi honored with Jiangsu Province Enterprise Technology Center

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
- Veichi honored with Jiangsu Province Engineering Technology Research Center of Medium& high Power Drives and Servo motion Controllers

2021
- Veichi subsidiary corporation established
- Veichi honored with national -level Specialized and Sophisticated Enterprise That Produces New and Unique Products

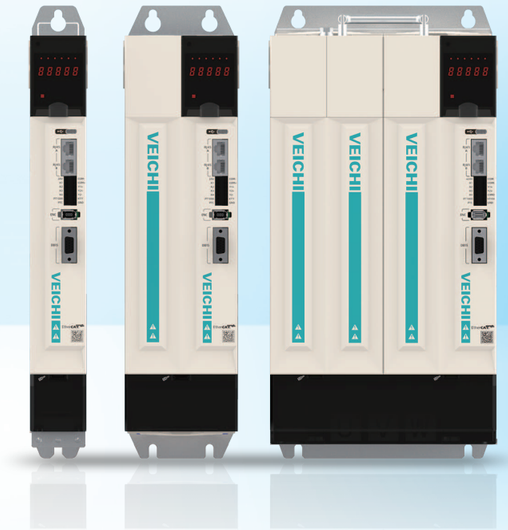
2022
- Xi'an R&D center established
- Veichi digital energy subsidiary corporation established
- Veichi honored with AAA certificate of integrating IT application with industrialization

2023
- Suzhou Veichi second-stage project put into operation
- Suzhou Veichi third-stage project put into construction
- Veichi medical facility subsidiary established

SD810 Series
General Multi-Drive Servo System

Veichi's SD810 series multifunctional servo platform offers efficient solutions for industrial machinery across injection molding, die-casting, bending, manipulator, forging tool, turret punch press, steel cutting, and handling equipment.

It boasts easy one-touch adjustment, an adaptive notch filter, torque compensation, and a reliable, compact design, simplifying installation, power/wiring distribution, and maintenance for a better user experience.



Rectifier Module Naming

AC810-D10-T3-0056

Product series	
AC810	AC810 series

Module type	
D10	Rectifier

Rated current	
Spec.	Rated current
0056	56A
0110	110A
0240	240A
0358	358A

Input voltage	
T3	AC 380V

Inverter Module Naming

SD 810-AC-S 3R8 D-E A A-FS

Product category	
SD	Servo drive

Product category	
810	810 series multi-drive

Module type	
AC	Inverter

Inverter type	
S	Single axis
M	Main axis

Rated current			
Spec.	Rated current	Spec.	Rated current
3R8	3.8A	300	30A
6R0	6.0A	400	40A
8R4	8.4A	550	55A
110	11A	700	70A
170	17A	800	80A
240	24A	121	120A
		151	150A

Safety function	
FS	Safety function
Blank	No safety function

Second encoder type	
A	Absolute
B	BISS
Blank	None

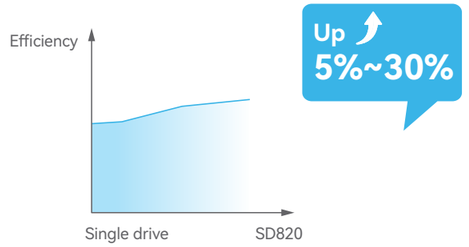
First encoder type	
A	Absolute
B	BISS
R	RT encoder

Internal bus	
E	EtherCAT
N	Profinet
L	MIII

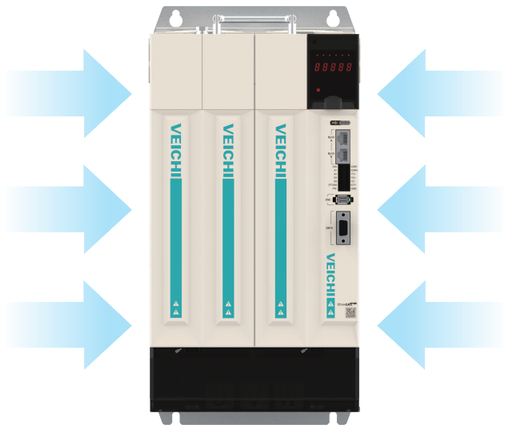
Distribution system voltage	
D	DC 540V

01 High Energy Efficiency

Parallel bus boosts efficiency, reducing energy by 5%-30% than one drive and eliminating braking resistance needs.

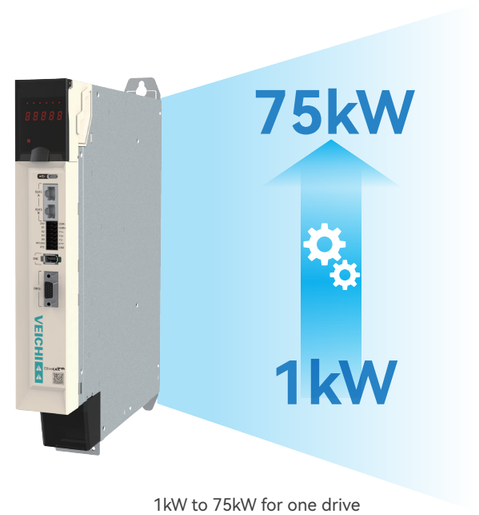


02 Space-Efficient Design



Saving cabinet space and costs

03 Wide Power Range



1kW to 75kW for one drive

04 Comprehensive Protection

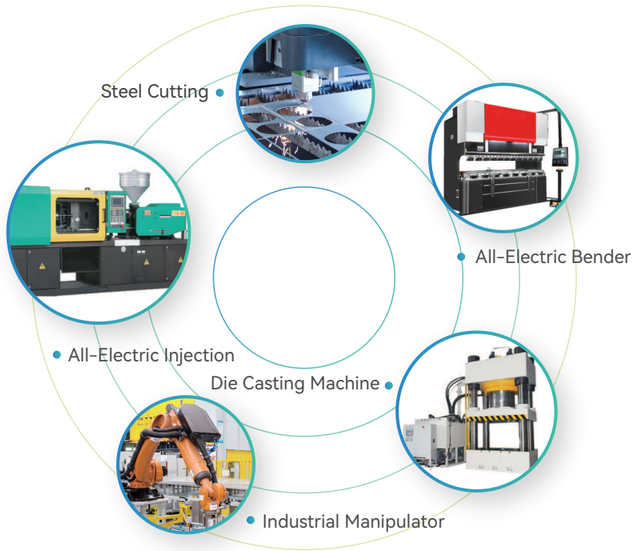
CE, STO, SIL3 compliance

CE STO SIL3

05 Flexible Expansion

For developing industry-specific products;
Supports third-party motors

06 Extensive Application

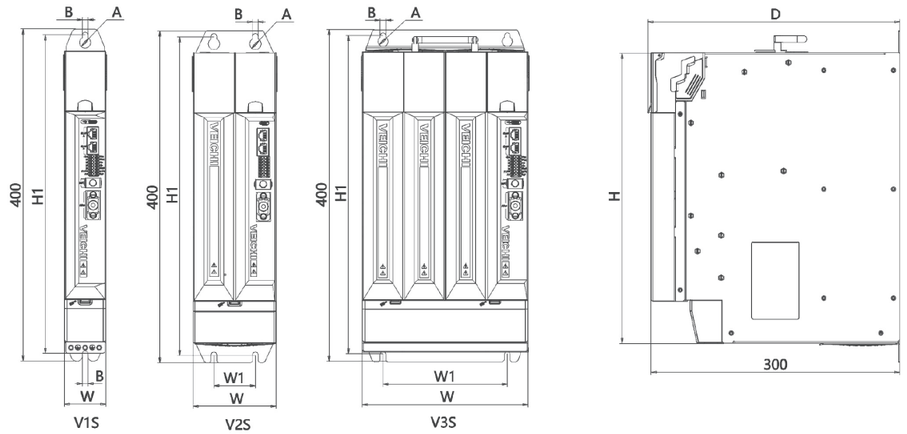


Spanning various industries such as injection molding, die-casting, bending, manipulator, forging, punch press, metal cutting, and material handling.

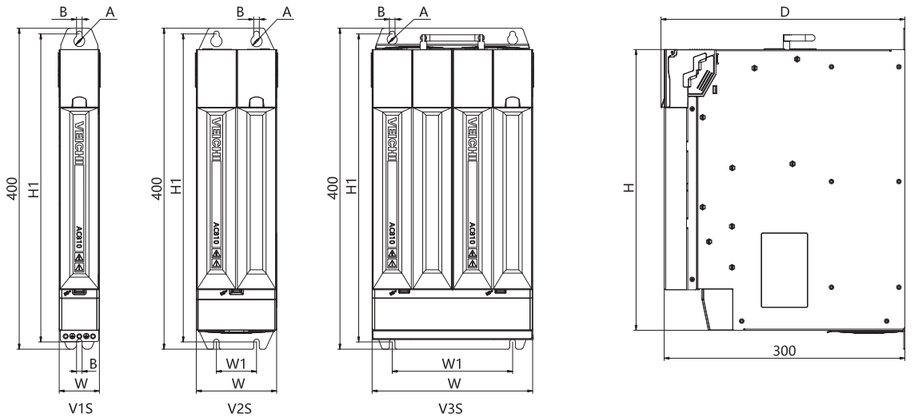
07 Precise Positioning

Standard with a **23-bit absolute encoder**, upgradeable to a higher precision encoder upon request.

Drive Appearance and Dimensions

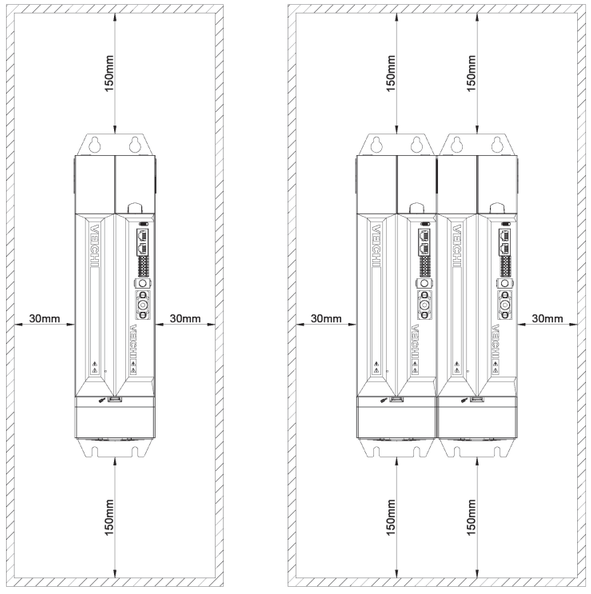


Structure	Model	Outer dimensions (mm)			Installation dimensions (mm)				Aperture
		W	H	D	W1	H1	A	B	
V1S	SD810-AC-S3R8D-EA*	50	350	305	/	384	13	7	2-M6
	SD810-AC-S6R0D-EA								
	SD810-AC-S8R4D-EA								
	SD810-AC-S110D-EA								
V2S	SD810-AC-S170D-EA	100	350	305	50	384	13	7	4-M6
	SD810-AC-S240D-EA								
	SD810-AC-S300D-EA								
	SD810-AC-S400D-EA								
	SD810-AC-S550D-EA								
V3S	SD810-AC-S700D-EA	200	350	305	150	384	13	7	4-M6
	SD810-AC-S800D-EA								
	SD810-AC-S121D-EA								
	SD810-AC-S151D-EA								



Structure	Model	Outer dimensions (mm)				Installation dimensions (mm)				Aperture
		W	H	D	W1	W2	H1	A	B	
V1S	AC810-D10-T3-0110	50	350	305	/	/	384	13	7	4-M6
V2S	AC810-D10-T3-0110	100	350	305	50	/	384	13	7	4-M6
V3S	AC810-D10-T3-0240	200	350	305	150	/	384	13	7	4-M6
V4S	AC810-D10-T3-0358	300	350	305	150	50	384	13	7	8-M6

Installation Distance



Rectifier Specifications

Item		Specifications
Basic parameters	Grid voltage	Three-phase 380VAC~480VAC (-15%~+10%)
	Power range	Rectifier unit: 45kW, 110kW, 160kW
	Grid type	TN, TT, IT star topology
	Input frequency	50Hz/60Hz（47Hz~63Hz）
	Braking	Add braking module and braking resistor
Customization	Comm./Bus	Modbus-RTU: 115200 max. baud rate, 128 nodes, 1000m max distance Profibus-DP (optional): 12M max. rate, 32 nodes, 100m max distance CANopen: 1M max. rate, 64 nodes, 40m max distance PROFINET: 100M max. rate, 100m max distance
HMI	DI, DO	1-channel multi-function input terminal, isolated drain/source programmable terminal with working voltage from 9V to 30V, invalid below 5V. 3kΩ input impedance, compatible with 100Hz inputs. 3-channel relay output with programmable normally open and closed contacts.
	Display	
Protection	Protection	Protects against temperature, phase loss, voltage imbalance, over-voltage, brake circuit over-current, resistor short-circuits, and brake tube blocking
Environment	IP	IP20
	Cooling	Forced air-cooling
	Temperature	Operating: -10℃ to 50℃, air temp change < 0.5℃/min; derate use at 40℃+, 1.5% current derate per ℃ increase, max 50℃. Storage: -25℃ to 70℃. Transport: -25℃ to 70℃.
	RH	Operating: 5%-95% humidity, not suitable for corrosive gas environments Storage: 5%-95% relative humidity Transport: <95% relative humidity at +40℃
	Altitude	Up to 1,000m with a 1% rate reduction for each additional 100m, max. at 3,000m

Inverter Specifications

Item		Specifications	
Control		IGBT PWM controlled sinusoidal current drive mode	
Feedback	Rotary servo motor	Serial encoder: 17-bit, 23-bit, 24-bit, 25-bit multi-turn absolute encoder, rotary transformer	
	Linear servo motor	Incremental scale, parallel signals	
Environment	Ambient temp.	Operating: -10℃~50℃, <0.5℃/min air temp. change, derates 1.5% per ℃ above 40℃, max 50℃	
	Storage temp.	-20℃ ~ 70℃	
	Ambient humidity	Below 95%RH (no freezing or condensation)	
	Storage humidity	Below 95%RH (no freezing or condensation)	
	Vibration resistance	4.9m/s2	
	Impact resistance	19.6m/s2	
	IP	IP20 (when properly installed)	
	Cleanliness	No corrosive or flammable gases	
		No water, oil, chemicals splash	
		Less dust, dirt, salt and metal powders	
	Altitude	1,000m, derates 1% per 100m above, max 3,000m	
	Others	No electrostatic interference, strong electric field, strong magnetic field, radiation, etc.	
Compliance		IEC61800-2/-3/-5、 IEC61000-2/-3/-4	
Installation		Base mounted	Standard
		Shelf-mounted	Add optional accessories

Item			Specifications	
Performance	Speed control		1:5000, stable at rated torque	
	Speed Fluctuation rate	Load	Below ±0.01% of rated speed (Load: 0%~100%)	
		Voltage	Below ±0.01% of rated speed (Voltage: ±10%)	
		Temperature	Below ±0.1% of rated speed (Temp.: 25℃±25℃)	
	Torque control accuracy (reproducibility)		±1%	
	Soft-start time		0s~30s (for separately set accel./decel.)	
I/O Signal	Sequential control input	General	Operating voltage: DC24V ± 20%	
			Point No.: 4	
			Mode: common collector, common emitter	
		Distributable	• Positive limit (P-OT), negative limit (N-OT)	
			• Alarm reset (/ALM-RST)	
			• Manual PI-P control (/P-CON)	
			• Torque limit switch (/TLC)	
			• Zero-point clamp (/ZCLAMP)	
			• Command pulse inhibit (/INHIBIT)	
			• Gain selection (/G-SEL)	
			• Torque command direction (/T-SIGN)	
			• Command pulse multiplication switch (/PSEL)	
			• Home signal (/Home signal)	
	Sequential control output	Relay	Operating voltage: DC5V ~ DC30V	
			Point No.: 1	
			Mode: Relay output (default as holding brake), configurable as needed	
		General	Operating voltage: DC5V ~ DC30V	
			Point No.: 1	
			Mode: Optocoupler output (isolated), configurable as needed	
		Distributable	• Servo control ready (/S-RDY)	
			• Position coincidence (/COIN)	
			• Velocity comparison (/V-CMP)	
			• Rotation detection (/TGON)	
			• Torque limit detection (/CLT)	
			• Velocity limit detection (/VLT)	
			• Brake (/BK)	
			• Warning (/WARN)	
			• Near (/NEAR)	
			• Reference pulse input multiplication switch output (/PSELA)	
			• Torque arrival output (/TAO)	
			• Encoder overheat alarm (/encovheat)	
			• Trouble-free positioning completed (/NoAlmCoin)	
Communication	Bus (CN6)		EtherCAT	Standard
			Connection device	PC host, standard, TYPE-C
	USB (CN7)		Specification	USB 2.0 and 3.0 compliant
Display			CHARGE, 8-segment LED × 5bit	
Panel Operator			Button switch× 4	
Regeneration			External	
Overtravel (OT) Prevention			Dynamic brake (DB) stop, deceleration stop, or free stop when P-OT or N-OT input is activated	
Protection			Overcurrent, overvoltage, undervoltage, overload, encoder disconnection, motor overheat, etc.	
Auxiliary			Safe torque off (STO), gain adjustment, alarm recording, JOG operation, home search, etc.	

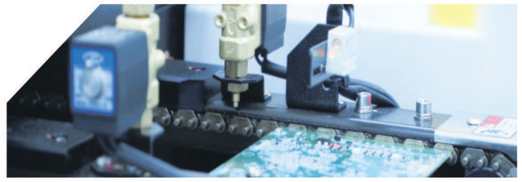
Manufacturing and Quality Control

Smart manufacturing with whole-process automation

- On intelligent manufacturing ,the smart factory yields an annual capacity of 914,600 sets;
- Fully automatic SMT production line, automatic coating line, assembly line, testing line, packaging line, high temperature aging room and advanced production equipment are established;
- Enterprise production is implemented with target management and is operated in strict accordance with the production process and management methods, which greatly improves the production efficiency.
- Complete supply chain system meets the large volume of one-time delivery.

Inheriting the spirit of craftsmanship, detail-oriented and striving for better

- Insist on the quality policy and concept of quality first.
- Procurement, design, manufacturing and other aspects all implemented in strict accordance with the requirements of the ISO9001 quality management system.
- Talents create high quality, the production line core positions are occupied by 100% college degrees and above.
- Each product has a unique product code, which can be used in the product traceability system to ensure quality can be controlled and traced.

ISO9001:2015
ISO14001:2015
ISO45001:2018

CE certification for full series

3C certification for specialized products

RoHS 2.0 for customized products

AAA Certification for Measurement Management System

Five-star certification for after-sales service

QC080000 Management System