

VEICHI

Suzhou Veichi Electric Co., Ltd

No.1000 Songjia Road, Guoxiang street, Wuzhong Economic and Technological Development Zone,

Facebook: https://www.facebook.com/ veichigroup WhatsApp: +86-138 2881 8903 Https://www.veichi.org/



Official Websit

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Stock code : 688698



Veichi (stock code: 688698) has always committed to all-round company engaged in R & D, manufacturing and sales on high-tech industrial automation products, Veichi has patch of Specialized and Sophisticated Enterprises That Produce New and Unique Products, New and High-tech Enter-Jiangsu Provincial-level Enterprise Technology Center, Jiangsu Private-own Technical Enterprise, and has obtained the highest level of enterprise credit. Through years of independent research and development, Veichi now has been authorized with patents totaling 163 by the end of June, 2023, and among them 43 are for invention.

Having established R & D center and manufacturing bases in Suzhou, Shenzhen and Xi'an, added with the wholly-owned subsidiary in India, Veichi now are dealing with customers

system, and control system, which are applied in all sorts of fields like heavy industry, mining, petroleum and petrochemical, machine tools, hydraulic transmission, photovoltaic pumping, high-efficiency energy, robotics, printing and packaging, textile, new energy, medical and many other industries

20 service stations and 211 contracted distributors cover 31 provinces on China mainland and Hong Kong, Macao and Taiwan regions, which guarantees a massive and efficient

Veichi will continue to abide by the operation philosophy, that is, guided by market demand and driven by technological innovation, enlarge and enhance its core business like AC drive, servo system, control system and SIoTs. And Veichi will always be devoted to providing quality products and services for customers and further make contributions to the development of electric drive and industrial control.

SD100 Series Low Voltage Servo Drive

Based on the international leading algorithm platform, SD100 series low-voltage servo system are qualified for single-axis, two-axis and multi-axis motor algorithm control. It features compactness, versatility, flexibility, usability, stability and reliability delivering high performance so they can be widely applied to occasions with certain requirements for voltage and size like mobile robots (AMR, AGV), service robots, specialized robots, logistics, warehousing and sorting, and medical equipment, etc.

As to occasions with special requirements for, like, low temperature, communication and installation, customized low-voltage servo drive are available such as integrated products and solutions for customers to choose.



SD100 Series Low Voltage Servo System



Product Features

Delicate Structure

High power density within compact size Reduced installation area for limited space.



Compared to like products, volume here is reduced by

Unique Design 1+1>2 Dual axis output produces enhanced benefit 1+1 >2 Efficient heat dissipation: **Debugging interface: 50°C** Type-C Type-C interface Unique heat dissipation process saves cumbersome can bear operation under up to 50°C " special cables "

Ultra-High Standard



User Friendly

Easy wiring: Quick European-type plug-in terminals are used to reduce wiring time. Easy to debug: Standard Type-C interfaces are convenient for upper computer software and Bluetooth module for APP wireless debugging is optional.

Easy to install: Both front and side installation are allowed thus suitable for different scenarios.

Dual axis drive:







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Super Overload Capacity



Combined with the unique heat dissipation process, it ensures efficient overload operation.

Certification

The products have certificated with CE, UL and ROSH in accordance with international markets. STO safety protection module makes the product more reliable.

VOSE

High performance 3 times stronger overload

low noise operation, new electromagnetic design high output torque





Synchronous Drive

The principle of bus interaction as well as external circuit interaction is employed to double guarantee the synchronization of startup and shutdown.

In face of a fault, the above mechanism is used to synchronize brake and stop to protect the equipment.

Diverse buses

CANopen, EtherCAT, Profinet, Modbus-RTU and other bus communication protocols are available for users to choose.





Short frame

10% and above shorter in size than the like motors in the market

High reliability

low temperature rise for high temperature applications magnetic encoder for high vibration applications Standard direct outlet with no adapter required

Energy-saving drive

The new generation of energy-saving drive technology reduces motor heat loss and improves energy utilization by more than 10%.

"Low power consumption" mode in standby saves energy and reduce emissions to improve the battery life by more than 10%.



Drive Model Description



Drive Appearance and Installation Dimensions

SD100-110G SD100-210G Dimension ✓ SD100-300G SD100-400G Dimension ✓





SD100-110G-2 (dual axis) SD100-210G-2 (dual axis) Dimension >



Drive Specification

Sub 0 (000) 1 2 -7 Str. 0 (000) 01 02 -01 Str. 0 (000) 000 000 000		
VECH Service Service		
out n	PRODER (2)	Networkshill KODE Mid On (1960) Network Taylor National State Network Taylor National State

	Medal	Input	Output (RMS)				
Model		DC voltage (V)	Rated current (A)	Instantaneous current (A)			
	SD100-110G	DC 24-72V	11	42			
	SD100-210G	DC 24-72V	21	63			
	SD100-300G	DC 24-72V	30	90			
	SD100-400G	DC 24-72V	40	120			
	SD100-600G	DC 24-72V	60	180			
	SD100-800G	DC 24-72V	80	240			

SD100 Series Low Voltage Servo System







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Drive Technical Specification

lte	em		Specification						
Control method			MOS PWM controlled sine wave current drive mode						
Feedback	With rotary s	ervo motor	Serial encoder: 17-bit absolute encoder						
	Ambient tem	Ambient temperature -5°C~55°C (derate during 55°C-60°C) Low-temperature model:-40°C~-5°C (no condensation)							
	Storage tem	perature	-20°C~85°C Low temperature model:-40°C~-5°C						
	Operating hu	umidity	< 95%RH (no freezing, no condensation)						
	Storage hum	idity	< 95%RH (no freezing, no condensation)						
	Oscillation		4.9m/s ²						
	Impact		19.6m/s ²						
Environmental	Protection le	vel							
condition			No corrosive ass or compustible ass						
	Onerating er	vironment							
	operating er	Wildiment	Environment with loss dust, dist, solt and metal neurons						
	Altitudo		chvioliment with tess dust, dirt, sait and metal powder						
	Othors								
	Utilets		No electrostatic interference, strong electric field, strong magnetic sound, radiation, etc.						
Applicable stand	ards		IEC61800-2/-3/-5、IEC61000-2/-3/-4						
Installation type			Side installation/base installation						
	Speed contro	ol range	1:5000 (the lower limit of the speed control range is the value under the condition of not stopping at rated torque load)						
	Speed	Load fluctuation	< ± 0.01% of rated speed (load fluctuation: 0%~100%)						
Performance	fluctuation	Voltage fluctuation	Rated speed 0% (rated voltage ± 10%)						
	rate	fluctuation	Rated speed below \pm 0.1% (temperature fluctuation: 25 \pm 25 °C)						
	Torque contr (reproducibil	ol accuracy lity)	±1%						
	Position cont	trol	Electronic gear ratio setting, pulse deviation clearing, command smoothing setting, internal PR mode, positioning proximity, positioning completion output, feed-forward compensation						
	Speed contro	ol (internal)	4-segment internal given speed switching, rotary detection signal output, soft start, zero speed clamp, speed consistency output						
Control function	Torque contr	ol (internal)	4 types of internal torque giving command switching, target torque-reached signal output						
	Advanced fe	atures	Online parameter recognition, low frequency suppression, automatic vibration suppression, disturbance observer, adjustment-free function						
	RS485		Modbus protocol						
			CiA-301 V4.02: CANopen application laver and communication protocol						
Communication	CAN		DSP-402 V2.0: drive and motion control sub-protocol						
function	USB		USB2.0 standard for upper computer (12Mbps)						
			Operating voltage range: DC24V ± 20%						
			Input mode: common collector input, common amittar input						
			• Servo ON (/S-ON)						
			• P-action (/P-CON)						
			Forward drive disable (/P-OT), Reverse drive disable (/N-OT)						
Input and			Alarm reset (/ALM-RST)						
output signals	Assignable ii	nput signal	 Forward-side external torque limiting (/P-CL), reverse-side external torque limiting (/N-CL) 						
			Motor rotation direction switching (/SPD-D) signal						
			 Internal speed selection (/SPD-A, /SPD-B) 						
			Control mode selection (/C-SEL)						
			• Zero clamp (/ZCLAMP)						
			Command pulse inhibit (/INHIBIT)						
			Magnetic pole detection input (/P-DET) signal						
			Gain selection (/G-SEL)						
			Command pulse input multiplier selection (/PSEL)						
			Assignable signals and changeable positive/negative logic						

	I/O signal	Assignable output signals	Operating voltage range: DCSV Output channel: 2 Output mode: photo-coupler o Output signal: • Positioning completion (/COIN • Speed consistency detection (• Rotation detection (/TGON) • Servo ready (/S-RDY) • Torque limit detection (/CLT) • Speed limit detection (/VLT) • Brake (/BK) • Warning (/WARN) • Positioning Near (/NEAR) • Command pulse input multipl • Alarm codes (ALO1, ALO2, ALO Assignable signals and change			
		Command pulse pattern	Three patterns : "pulse + direct			
	Command pulse	Input pattern	Linear drive, open collector			
command pub		Max. input frequency	Differential inputs: high speed Open collector: maximum 2001			
	Shutdown contro	l	Action during servo alarm, serv			
	Regeneration trea	atment	Built-in			
	Overtravel (OT) pr	revention	P-OT, N-OT , deceleration stop of			
	Protection		Overcurrent, overvoltage, unde			
	Auxiliary function	S	Intelligent setting, alarm record			
	Display		3 LED indicators (ERR, RUN, PW			
	Regeneration trea	atment	External braking resistor			

Specification

V ~ DC30V

output (isolated)

IN) (/V-CMP)

olier output selection (/PSELA)

.03)

geable positive/negative logic

tion", "CW + CCW pulse sequence", and "A and B phase orthogonal pulse"

d maximum 4Mpps;)Kpps

rvo OFF, overtravel (OT)

or free stop

lervoltage, overload, regeneration fault, encoder disconnection, etc

rding, JOG operation, encoder reset, inertia recognition, FFT analysis, etc

NR)

Drive Wiring Diagram



Servo Motor Model Description



Specifications of Motor Mechanical Characteristics

Item	Description
Operating system	Continuous
Oscillation	$<45m/s^2$ (5G) during rotation and $<24.5m/s^2$ (2.5G) during stop
Insulation resistance	Direct current (DC) 48V, >10MΩ
Operating ambient temperature	0°C ~ 40°C
Operating ambient humidity	20% ~ 80% (no condensation)
Excitation method	Permanent magnet type
Installation method	Flange
Insulation grade	F grade
Insulation voltage	AC 500V for 1m (for 200V)
Operating temperature	-15°C~40°C
Operating humidity	20 to 90% RH(no condensation)
Protection level	IP67 (axis end excluded)

SD100 Series Low Voltage Servo System

Servo Motor Installation Dimension



Unit: mm

Motor model	A		С				н		LL	LR		w	U	z										
V7E-L06G-R2030-#1△								110.5	80.5															
V7E-L06G-R2030-#2△							60	141.5	111.5				11	1000										
V7E-L06□-R4030-#1△		70	50	14	6 5			129.5	99.5	20	5	5												
V7E-L06□-R4030-#2△	5.5	70	50	14	0.5			160.5	130.5	30	S													
V7E-L06□-R6030-#1△								148.5	118.5															
V7E-L06□-R6030-#2△								179.5	149.5															
V7E-L08□-R7530-#1△																M5		147	112					
V7E-L08□-R7530-#2△										10		179	144											
V7E-L08G-1R030-#1△								161	126															
V7E-L08G-1R030-#2△	6.6	6.6	6.6	6.6	6.6	90	70	19	8		80	193	158	35	6	6	15.5	1500						
V7E-L08G-1R230-#1△							-	179	144															
V7E-L08G-1R230-#2△								211	176															
V7E-L08G-1R530-#1△								179	144															
V7E-L08G-1R530-#2△								211	176															
V7E-M13G-1R530-#1△	0	145	110		12	M5	120	191	136	5.5	7		10	2500										
V7E-M13G-1R530-#2△	9	145	110	22	12	depth 12	130	219	165	55		0	10	2500										

Notes: ① above means the encoder lead style, the wire length can be 1m, 1.5m, 2.5m, 3.5m, 5.5m;

" \square " above means the voltage level, 24V(E) or 48V(G), and the motor sizes is the same;

"#" above means the encoder type, single-turn absolute (Q) or multi-turn absolute (R), and the motor size is the same.

 \bigtriangleup above means the motor outlet type U or Y.

Motor Parameter

48V

Motor model	Rated power (W)	Rated voltage (V)	Rated speed (rpm)	Max. speed (rpm)	Rated current (A)	Peak current (A)	Rated torque (N.m)	Peak torque (N.m)	Rotor inertia (Kg.m2×10^-4)	Net weight (Kg)	Electromagnetic brake suction current(A)	Electromagnetic brake suction time (ms)	Electromagnetic brake static torque (N.m)	Feedback element		
V7E-L06G-R2030-#1	200					15.0	0.64	1.02	0.18	1.0						
V7E-L06G-R2030-#2	200				5.3	15.9	0.64	1.92	0.20	1.3	0.42	60	1.5			
V7E-L06G-R4030-#1	400				10.0	21.0	1 27	2.01	0.34	1.4						
V7E-L06G-R4030-#2	400				10.6	31.8	1.27	3.81	0.36	1.8	0.42	60	1.5			
V7E-L06G-R6030-#1	600						15.0	47.4	1.01	5 72	0.51	1.8				
V7E-L06G-R6030-#2					15.8	47.4	1.91	5./3	0.53	2.1	0.42	60	1.5			
V7E-L08G-R7530-#1△		750 40				50.7			1.02	2.6				Single-		
V7E-L08G-R7530-#2	/50	48	3000	4000	19.9	59.7	2.38	7.14	1.13	3.3	0.44	100	3.8	17bit		
V7E-L08G-1R030-#1		A 1000				21.2	(2)(210	0.54	1.34	3.2				value	
V7E-L08G-1R030-#2	1000				21.2	63.6	3.18	9.54	1.45	3.9	0.44	100	3.8			
V7E-L08G-1R230-#1	1200				20	0.4	2.02	11.40	1.63	3.8						
V7E-L08G-1R230-#2	1200				28	84	3.82	11.40	1.74	4.5	0.44	100	3.8			
V7E-L08G-1R530-#1	-				25	105	476	14.20	1.94	4.4						
V7E-L08G-1R530-#2						35	105	4.76	14.28	2.05	5.1	0.44	100	3.8		
V7E-M13G-1R530-#1△	1500								10.51	7.2						
V7E-M13G-1R530-#2△					38.7	116.1	4.8	14.4	12.65	7.2	0.46	100	16			

24V

Motor model	Rated power (W)	Rated voltage (V)	Rated speed (rpm)	Max. speed (rpm)	Rated current (A)	Peak current (A)	Rated torque (N.m)	Peak torque (N.m)	Rotor inertia (Kg.m2×10^-4)	Net weight (Kg)	Electromagnetic brake suction current(A)	Electromagnetic brake suction time (ms)	Electromagnetic brake static torque (N.m)	Feedback element											
V7E-L06E-R4030-#1	400				21.2	(2)(1.07	2.01	0.34	1.4															
V7E-L06E-R4030-#2	400	U														21.2	03.0	1.27	5.01	0.36	1.8	0.42	60	1.5	Cingle
V7E-L06E-R6030-#1	(00	24	2000	4000	21.6	04.0	1.01	E 70	0.51	1.8				turn											
V7E-L06E-R6030-#2△	600	24	3000	4000	31.0	94.8	1.91	5./3	0.53	2.1	0.42	60	1.5	17bit absolute											
V7E-L08E-R7530-#1△										1.02	2.6				value										
V7E-L08E-R7530-#2	/50				38	114	2.38 7.	7.14	1.13	3.3	0.44	100	3.8												

Note: "#" above means 17-bit single-turn absolute encoder (Q) or 17-bit multi-turn absolute encoder (R); \triangle above means the motor outlet type U or Y.

SD100 Series Low Voltage Servo System

Brake Resistor Selection

The braking resistor resistance value and power mentioned in the following table are approved according to the common inertia load and intermittent braking mode. If it is necessary to use in the occasions of large inertia or frequent braking for a long period of time, please adjust the braking resistor resistance value and resistor power according to the specifications of the selected drive and the rated parameters of the braking unit. Please consult with the customer service department of Veichi Electric Ltd. if any questions. When external regenerative resistor is connected, connect the resistor to RB+ and RB- terminals, and the wiring reference diagram is shown on the right.



Low voltage

RR-





Braking resistor

Dimension	2

Motor power (KW)	Installation dimension	Resistance value (Ω)	Resistance power (W)
200-400W	Dimension 1	10	100
600-750W	Dimension 1	5	100
1000-1500W	Dimension 2	5	200



Robots

SD100 Series Low-voltage Servo System

• Logistics sorting lines

(mobile robots/service robots/

Manufacturing and Quality Control	Service and Support
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.	
nheriting 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.	







ISO45001:2018







Roms

RoHS 2.0 for

customized

products







AAA Certification for Measurement Management System

ISC

Five-star QC080000 certification Management for after-sales System service



Home

20 service outlets, 211 contracted channels and distribution channels covering 31 provinces, cities, Hong Kong, Macao and Taiwan

Broad

43 overseas distributors developed, with offices and service outlets covering major cities in Southeast Asia, South Asia, CIS, the Middle East, Europe, Africa and the Americas.

regular return visits, regular maintenance, application instruction