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*Saving Energy Diligently & Acting Efficiently*



OULU VFD CATALOG

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# ABOUT US

Nanjing Oulu Electric Co., Ltd. was established in September 2007 with a registered capital of 71.12 million yuan. It is a national high-tech enterprise focusing on the research and development, production, sales and service of industrial automation and new energy power. The company established a wholly-owned subsidiary "Chnchi Electric" in Liuhe Development Zone in 2014. Oulu Electric landed on the New OTC Market on May 19, 2017. The stock code is 871415.

Oulu Electric has an experienced and innovative technology R&D team, based on industrial automation control technology that has owned intellectual property rights for many years. We provide customers with high-quality products and solutions, and form a series of supporting services such as installation, commissioning, operation and maintenance, technology upgrades, and remote data mining analysis.

We are not only based on the marketing of mid-to-high-end brands in the domestic market, but will also gradually form product sales in foreign markets. "Saving Energy Diligently & Acting Efficiently", we will focus on electric transmission energy saving and new energy business, create value for customers and employees. Create opportunities, take responsibility for society, develop together with society, customers and employees, and create a better life together.



## Our Production Line

We have strict control over production management, process technology, equipment maintenance and quality control. We also have advanced manufacturing equipment, testing instruments, professional technical talents, integrated production and processing processes. We strictly follow standard operating standards to ensure the stability and accuracy of product quality.



## Our Products

Industrial automation products: Based on independently developed VFD, servo motor and drive system, permanent magnet synchronous motor and drive system and other products, to provide customers with complete automation drive control, electrical transmission control solutions.

New energy Business products: Based on small and medium-sized wind turbine, off-grid energy storage inverter, energy storage reverse control integrated machine, energy storage lithium battery, photovoltaic controller, wind and solar complementary control inverter integrated control system, base station integrated control system, to provide grid-connected power generation and off-grid power generation two modes of operation of small power generation system .



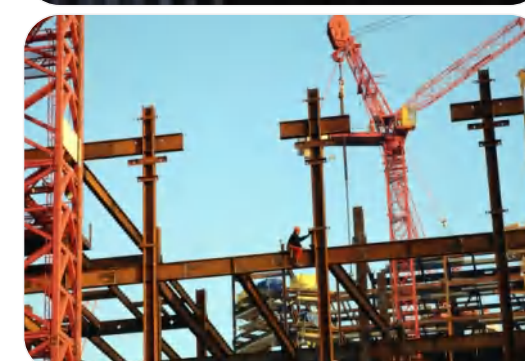
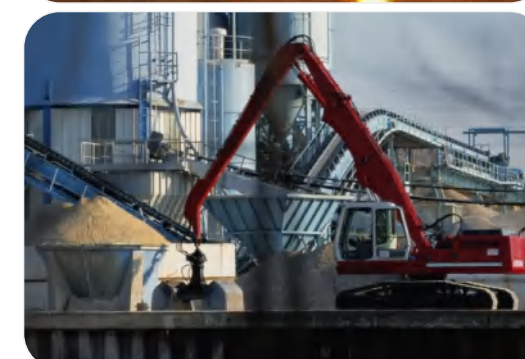


# Our Certificate



## VFD Application

- Air conditioning load
- Crusher load
- Large furnace calcined load
- Air-compressor load
- Rolling mill load
- Windlass load
- Steel converter load
- Roller load
- Pump load
- Wire machine load
- Convey machine load
- Elevator for cargo transfer load
- Machine for transfer material load
- Stacked-reclaimed machine load
- Fans load
- Mix material machine load
- Textile machine load
- Special power supply load
- Glass, ceramics, pharmaceutical, beverage, food, packaging and other production line loads
- Paper machine load
- Laundry equipment load
- Musical fountain load
- Grinding machine load
- Cigarette machine load
- Load shedding and noise reduction loads
- Dyeing machine load
- Plastic injection machine load
- Sewage treatment and environment equipment load
- Offshore oil platform machine load
- Oil submersible pump load
- Polyester chip machine load



# EV510A series high performance VFD



## About the product

The EV510A series high performance VFD is the upgraded version of the EV510 series. It is smaller in size, more compact in structure, better in carrying capacity, and more stable in performance than the EV510 series. At the same time, it supports the display of the external panel of the network cable.

## Naming rules

EV510A - 0037G/0055P - T4		
Product series	Power code	Voltage level
	0037G:3.7kW	S2:Single phase 220V
	0055G:5.5kW	T2:Three phase 220V
	G:General type	T4:Three phase 380V
	P: Pump or fans type	T5:Three phase 480V
		T6:Three phase 690V

## Rated specification

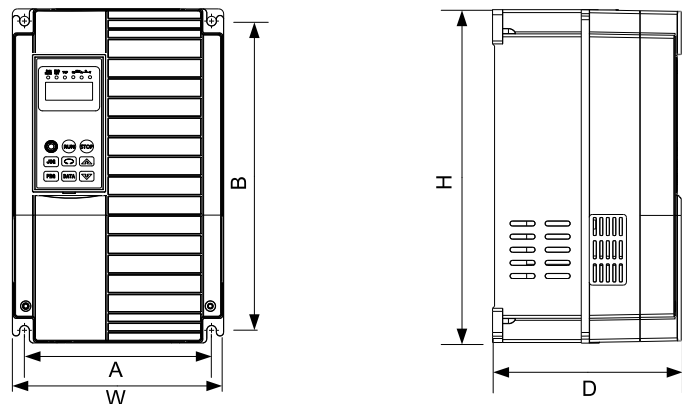
Model	Power capacity (kVA)	Input current (A)	Output current (A)	Match motor (kW)
Single phase:220V,50/60Hz				
EV510A-0004G-S2	1.0	5.4	2.3	0.4
EV510A-0007G-S2	1.5	8.2	4.0	0.75
EV510A-0015G-S2	3.0	14.0	7.0	1.5
EV510A-0022G-S2	4.0	23.0	9.6	2.2
Three phase:220V,50/60Hz				
EV510A-0037G-T2	8.9	14.6	17.0	3.7
EV510A-0055G-T2	17.0	26.0	25.0	5.5
EV510A-0075G-T2	21.0	35.0	32.0	7.5
Three phase:380V,50/60Hz				
EV510A-0007G-T4	1.5	3.4	2.1	0.75
EV510A-0015G-T4	3.0	5.0	3.8	1.5
EV510A-0022G-T4	4.0	5.8	5.1	2.2
EV510A-0037G/0055P-T4	5.9	10.5	9.0	3.7
EV510A-0055G/0075P-T4	8.9	14.6	13.0	5.5
EV510A-0075G/0110P-T4	11.0	20.5	17.0	7.5
EV510A-0110G/0150P-T4	17.0	26.0	25.0	11
EV510A-0150G/0185P-T4	21.0	35.0	32.0	15
EV510A-0185G/0220P-T4	24.0	38.5	37.0	18.5
EV510A-0220G/0300P-T4	30.0	46.5	45.0	22
EV510A-0300G/0370P-T4	40.0	62.0	60.0	30
EV510A-0370G/0450P-T4	57.0	76.0	75.0	37
EV510A-0450G/0550P-T4	69.0	92.0	91.0	45
EV510A-0550G/0750P-T4	85.0	113.0	112.0	55
EV510A-0750G/0900P-T4	114.0	157.0	150.0	75
EV510A-0900G/1100P-T4	134.0	180.0	176.0	90
EV510A-1100G/1320P-T4	160.0	214.0	210.0	110
EV510A-1320G/1600P-T4	192.0	256.0	253.0	132
EV510A-1600G/1850P-T4	231.0	307.0	304.0	160
EV510A-1850G/2000P-T4	240.0	330.0	340.0	185
EV510A-2000G/2200P-T4	250.0	385.0	377.0	200
EV510A-2200G/2500P-T4	280.0	430.0	426.0	220
EV510A-2500G/2800P-T4	355.0	468.0	465.0	250
EV510A-2800G/3150P-T4	396.0	525.0	520.0	280
EV510A-3150G/3500P-T4	445.0	590.0	585.0	315
EV510A-3500G-T4	500.0	665.0	650.0	350
EV510A-4000G-T4	565.0	785.0	725.0	400
EV510A-4500G-T4	630.0	800.0	820.0	450
EV510A-5000G-T4	700.0	890.0	870.0	500
EV510A-5600G-T4	783.0	980.0	950.0	560
EV510A-6300G-T4	882.0	1180.0	1100.0	630
EV510A-7100G-T4	-	-	1250.0	-
EV510A-8000G-T4	-	-	1400.0	-
EV510A-9000G-T4	-	-	1580.0	-
EV510A-10000G-T4	-	-	1750.0	-
EV510A-12000G-T4	-	-	2100.0	-
EV510A-14000G-T4	-	-	2320.0	-



## Outline size

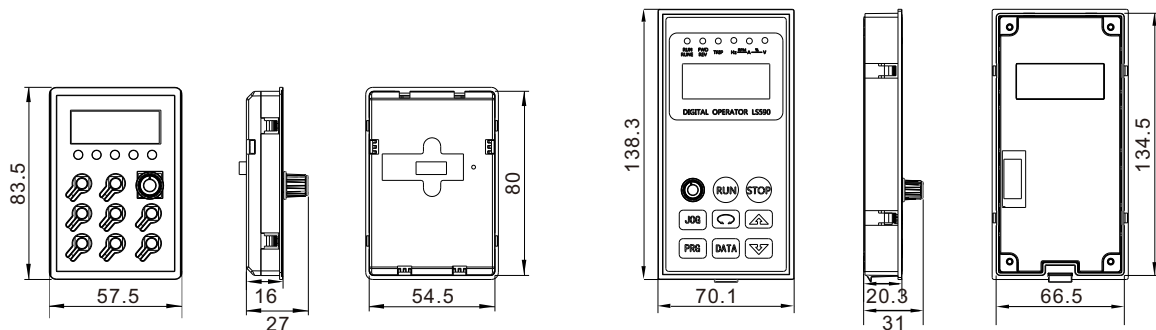
Model	Installation Size (mm)		Outline Size (mm)			Installation hole	Weight (kg)≈
	A	B	W	H	D		
EV510A-0004G-S2	101	171	112	180	118	Φ4. 6	1. 3
EV510A-0007G-S2							
EV510A-0015G-S2							
EV510A-0022G-S2							
EV510A-0037G-T2	135	245	150	260	153	Φ6	3. 9
EV510A-0055G-T2							
EV510A-0075G-T2	186	306	210	330. 5	188	Φ9. 5	7. 5
EV510A-0110G-T2							
EV510A-0150G-T2	238	396	260	420	196	Φ8. 5	12. 5
EV510A-0007G-T4	101	171	112	180	118	Φ4. 6	1. 3
EV510A-0015G-T4							
EV510A-0022G-T4							
EV510A-0037G/0055P-T4	101	171	112	180	138	Φ4. 6	2. 1
EV510A-0055G/0075P-T4							
EV510A-0075G/0110P-T4	135	245	150	260	153	Φ6	3. 9
EV510A-0110G/0150P-T4							
EV510A-0150G/0185P-T4							
EV510A-0185G/0220P-T4	186	306	210	330. 5	188	Φ9. 5	7. 5
EV510A-0220G/0300P-T4							
EV510A-0300G/0370P-T4							
EV510A-0370G/0450P-T4	238	396	260	420	196	Φ8. 5	12. 5
EV510A-0450G/0550P-T4							
EV510A-0550G/0750P-T4	272	455	304	470	240	Φ9	22. 9
EV510A-0750G/0900P-T4	200	614	278	630	310	Φ9	39
EV510A-0900G/1100P-T4							
EV510A-1100G/1320P-T4							
EV510A-1320G/1600P-T4	300	650	454	670	310	Φ9	67
EV510A-1600G/1850P-T4							
EV510A-1850G/2000P-T4 Hanging	400	810	520	835	382	Φ13	107
EV510A-2000G/2200P-T4 Hanging							
EV510A-2200G/2500P-T4 Hanging							
EV510A-2500G/2800P-T4 Hanging							
EV510A-1850G/2000P-T4 Cabinet	—	—	520	1183	382	—	—
EV510A-2000G/2200P-T4 Cabinet							
EV510A-2200G/2500P-T4 Cabinet							
EV510A-2500G/2800P-T4 Cabinet							

Outline size



	Model	Installation Size (mm)		Outline Size (mm)			Installation hole	Weight (kg)≈
		A	B	W	H	D		
Hanging	EV510A-2800G/3150P-T4	460 (230+230 3 holes in total)	895	720	920	382	φ 13	155
	EV510A-3150G/3500P-T4							
	EV510A-3500G-T4							
	EV510A-4000G-T4							
	EV510A-4500G-T4							
Cabinet	EV510A-2800G/3150P-T4	-	-	720	1320	382	-	225
	EV510A-3150G/3500P-T4							
	EV510A-3500G-T4							
	EV510A-4000G-T4							
	EV510A-4500G-T4							
	EV510A-5000G-T4	600 (300+300 3 holes in total)	1048	980	1500	502	φ 13	-
	EV510A-5600G-T4							
	EV510A-6300G-T4							
	EV510A-7100G-T4	-	-	1200	1953	502	-	460
	EV510A-8000G-T4	-	-	1335	1903	552	-	-
	EV510A-9000G-T4							
	EV510A-10000G-T4							
	EV510A-12000G-T4							
	EV510A-14000G-T4							

Keypad outline



Small operation panel

Large operation panel

About the product

EV210 series high-performance current vector inverter is mainly used to control and adjust the speed and torque of three-phase AC asynchronous motor, support a variety of PG cards, etc., powerful. It can be used in textile, paper making, wire drawing, machine tools, packaging, food, wind turbine, water pump and various automatic production equipments.

Naming rules

EV210 - 0007G - T4

Product series      Power code      Voltage level

0007G:0.75kW      S2:single phase 220V

G:General type      T4:Three phase 380V



Technique Feature

Item		Specificationtem				
Input voltage		Three-phase AC380V ±10%; Single-phase AC220V ±10%				
Input frequency		50/60Hz				
Output voltage		0 ~ Input voltage				
Output frequency		Vector control: 0 ~ 500Hz		V/F control: 0 ~ 500Hz		
Overload capability		150% rated current 60s; 180% rated current 3s				
Control mode		V/F control, speed sensorless vector control (SVC)				
Control characteristics	Frequency setting resolution		Analog end input	Maximum frequency x 0.025%		
			Digital setting	0.01Hz		
	V/F control		V/F curve	Three Methods: Straight Line; Multipoint type; N power type V/F curve (1.2 power, 1.4 power, 1.6 power, 1.8 power, 2 power)		
			V/F separation	2 Methods: Full SeparationHalf Separation		
			Torque Lift	Manual setting: 0.0 to 30.0% of rated output Automatic lifting: According to the output current and combined with the motor parameters automatically determine the lifting torque		
			Automatic current limiting and voltage limiting	Whether in the process of acceleration, deceleration or stable operation, can automatically detect the stator current and voltage of the motor, according to the unique algorithm to suppress it within the allowed range, to minimize the possibility of system failure trip		
	Noninductive vector control		Voltage-frequency characteristics	Automatically adjust the output voltage-frequency ratio according to the motor parameters and unique algorithm		
			Torque characteristics		Starting torque: 150% rated torque at 3.0Hz (V/F control) 150% rated torque at 0.25Hz (vector control without speed sensor) Steady state accuracy of running speed: ≤± 0.2% rated synchronous speed Speed fluctuation: ≤± 0.5% rated synchronous speed Torque response: ≤20ms (vector control without speed sensor)	
					Motor parameters self-determination	Without any limitation, the parameters can be automatically detected under the static and dynamic conditions of the motor to obtain the best control effect
					Current and voltage suppression	The whole current closed-loop control, completely avoid current shock, with perfect overcurrent and overcurrent suppression function
			Undervoltage suppression in operation		Especially for users with low grid voltage and frequent fluctuations of grid voltage, the system can maintain the longest possible operating time according to the unique algorithm and residual energy distribution strategy, even in the voltage range below the allowable voltage	
			Multi-stage speed with swing frequency operation		16 sections programmable multi-speed control, a variety of operating modes optional. Swing frequency operation: preset frequency, adjustable center frequency, state memory and recovery after power failure	
	PID control RS485 communication		Built-in PID controller (preset frequency), standard configuration RS485 communication function			
	Frequency setting		Analog input	Dc voltage 0 ~ 10V, DC current 0 ~ 20mA (upper and lower limit optional)		
			Digital input	Operation panel setting, RS485 interface setting, UP/DOWN terminal control, can also be set with analog input in a variety of combinations		
	Output signal		Digital output	1 way programmable relay output (TA, TC) with up to 58 meaning choices		
Analog output			1 analog signal output, the output range is between 0 ~ 20mA or 0 ~ 10V flexible setting, can achieve the set frequency, output frequency and other physical quantity output			
Automatic voltage control operation		According to the need can choose dynamic voltage, static voltage, unstable voltage three ways to obtain the most stable operation effect				
Add, decelerate time setting		0.0s ~ 6500.0s can be set continuously, S type, linear mode is optional				
Braking	Energy efficient braking	Energy consumption braking starting voltage, back difference voltage and energy consumption braking rate can be adjusted continuously				
	Dc braking	Stop DC braking starting frequency: 0.00 ~ 【P0-10】 Maximum frequency Braking time: 0.0 ~ 100.0s; Braking current: 0% ~ 100% rated current				
Low noise operation		Carrier frequency 0.5KHz ~ 16.0KHz continuous adjustable, minimize motor noise				
Speed tracking speed restart function		It can realize the smooth restart and instantaneous stop restart function of the motor in operation				
Counter		An internal counter for easy system integration				
Running function		Upper and lower frequency setting, frequency jump operation, reverse operation limit, slip frequency compensation, RS485 communication, frequency increase and decrease control, fault self-recovery operation, etc				

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Technique Feature

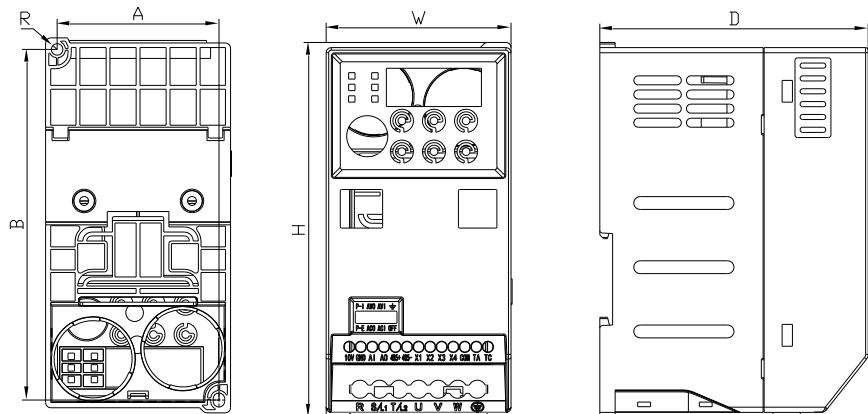
Item		Specificationtem
Operation panel display	Operating status	Output frequency, output current, output voltage, motor speed, set frequency, module temperature, PID setting, feedback amount, analog input/output, etc
	Alarm content	There are three times of fault tripping output frequency, set frequency, output current, output voltage, DC voltage, module temperature, power-on time, running time and other 8 operating parameters record
Environment	Ambient temperature	-10℃ ~ +40℃ (ambient temperature is 40℃ ~ 50℃, please use the reduced rate)
	Ambient humidity	5% to 95% RH, free of condensation
	Surroundings	Indoor (no direct sunlight, no corrosion, flammable gas, no oil mist, dust, etc.)
Structure	Altitude	Derating above 1000 m is used, 10% derating for every 1000 m rise
	Class of protection	IP20
Cooling method		Air cooled with fan control
Protective features		Over current, over voltage, under voltage, module failure, electronic thermal relay, overheating, short circuit, input and output phase deficiency, motor parameter tuning abnormal, internal memory failure, etc
Installation method		Wall-mounted, cabinet type

Rated specification

Model	Power capacity (kVA)	Input current(A)	Output current(A)	Match motor (kW)
EV210-0004G-S2	1.0	5.4	2.3	0.4
EV210-0007G-S2	1.5	8.2	4.0	0.75
EV210-0015G-S2	3.0	14.0	7.0	1.5
EV210-0022G-S2	4.0	23.0	9.6	2.2
EV210-0007G-T4	1.5	3.4	2.1	0.75
EV210-0015G-T4	3.0	5.0	3.8	1.5
EV210-0022G-T4	4.0	5.8	5.1	2.2
EV210-0040G-T4	5.9	10.5	9.0	4.0
EV210-0055G-T4	8.9	14.6	13.0	5.5
EV210-0075G-T4	11.0	20.5	16.0	7.5
EV210-0110G-T4	17.0	26.0	24.0	11
EV210-0150G-T4	21.0	35.0	32.0	15

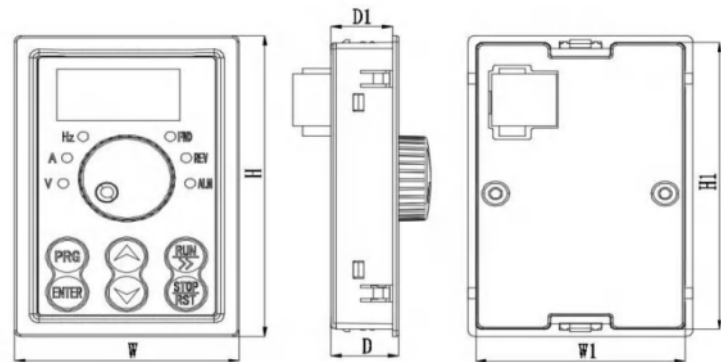
Outline size

Chassis size:



Voltage	Model	Power (kW)	Installation Size (mm)		Outline Size (mm)			R(mm)
			A	B	W	H	D	
Single phase 220V	EV210-0004G-S2	0.4	63.0	136.5	72	146	105	2.3
	EV210-0007G-S2	0.75						
	EV210-0015G-S2	1.5						
	EV210-0022G-S2	2.2						
Three phase 380V	EV210-0007G-T4	0.75	78.0	172.5	87	183	127	2.3
	EV210-0015G-T4	1.5						
	EV210-0022G-T4	2.2						
	EV210-0040G-T4	4.0	106.0	229.0	118	241	154	2.8
	EV210-0055G-T4	5.5						
	EV210-0075G-T4	7.5						
	EV210-0110G-T4	11						
	EV210-0150G-T4	15						

External keyboard mounting dimensions



Dimensions of keyboard base holes(mm)				Keyboard thickness(mm)	
W	W1	H	H1	D	D1
53	49.4	79	75.4	15.9	14.5

# EV510E series synchronous motor driver



## About the product

EV510E series synchronous motor driver is a general-purpose high-performance VFD, which is mainly used to control and adjust the speed and torque of three-phase AC synchronous motor. It uses high-performance current vector control technology to realize the control of permanent magnet synchronous motor, supports a variety of PG cards, and has powerful functions. It can be used for driving textile, paper, wire drawing, machine tool, packaging, food and various automatic equipment.

## Naming rules

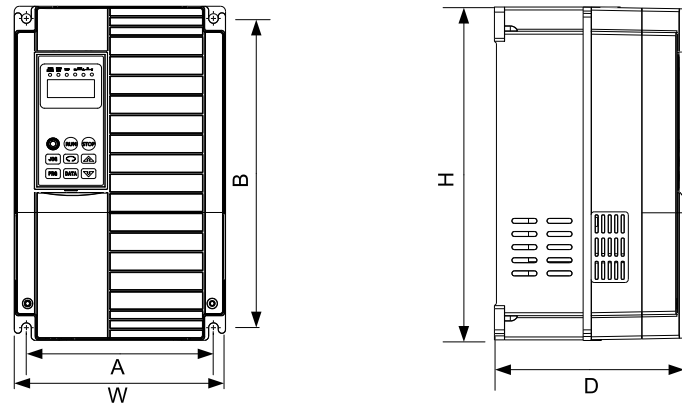
EV510E	- 0055G	- T4
Product series	Power code 0055G:5.5kW G:General type	Voltage level S2:single phase 220V T2:Three phase 220V T4:Three phase 380V T5:Three phase 480V T6:Three phase 690V



## Technique Feature

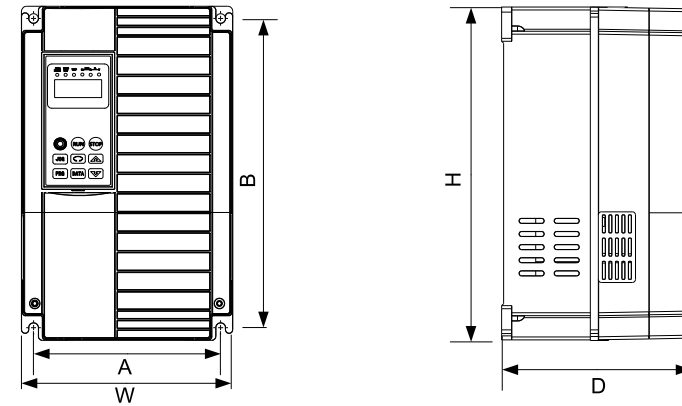
Item		Specification		
Basic function	Highest frequency	Vector control: 0~ 500Hz; V/F control: 0~ 500Hz		
	Carrier frequency	0.8kHz~12kHz    The carrier frequency can be automatically adjusted according to the temperature characteristics.		
	Input frequency resolution	Digital setting:0.01Hz                      Analog setting: maximum frequency×0.025%		
	Control mode	Open-loop vector(SVC)    Closed-loop vector(FVC)    V/F control		
	Start torque	G Type:0.5Hz/150%(SVC);0Hz/180%(FVC)    P Type:0.5Hz/100%		
	Speed range	1:100 (SVC)	1:1000 (FVC)	
	Speed control accuracy	± 0.5% (SVC)		± 0.02% (FVC)
	Torque control accuracy	± 5% (FVC)		
	Overload capacity	G Type:150% Rated current    60sec; 180% Rated current    3sec		
	Torque boost	Automatic torque increase;Manual torque increase0.1%~30.0%		
	V/F curve	Three types: linear type; multi-point type; the nth power of V/F curve (1.2 power, 1.4 power, 1.6 power, 1.8 power, 2 power)		
	V/F Separation	Linear or S curve of ACC/DEC ways. Four types of ACC/DEC Time, ACC/DEC time range is 0.0~6500.0s		
	ACC/DEC curve	Two types: full separation, half of separation		
	DC brake	DC brake frequency:0.00Hz~max frequency Brake action current: 0.0%~100.0%		Brake time: 0.0s~36.0s,
	JOG control	JOG frequency range: 0,00Hz~50.00Hz.    JOG speed-up/down time: 0.0s~6500.0s		
	Simple PLC multi-stage speed running	Via bul-in PLC or control terminal can realize max 16 stage speed running		
Built-in PID	Can realize process control close-oop system conveniently			
Auto adjust voltage(AVR)	When grid voltage changes, can keep output voltage steadily automatically			
Overcurrent and overvoltage speed control	During running,limit current and voltage automatically,protect from tripping off frequently for overvoltage and overcurrent			
Quick current-limit function	Reduce overcurrent error on max extent, protect inverter normal running			
Torque limitation and control	"Digger" feature, inverter could limit torque automatically, prevent overcurrent tripping off; close-oop vector can realize torque control			
Personalization function	Outstanding perform	Using high-perform current vector control		
	Instantaneous stop not stop	During instant power-off, by motor feedbacking energy, inverter compensates voltage-drop    to keep running for short time		
	Timing control	Timing control function: setting time range: 0.0min-6500.0min		
	Multi- motor switch	2 sets of motor parameter, can realize 2 motors switching control		
	Multi-threading bus support	Support 3 fieldbus: RS485, CAN link,CAN open		
	Multi-encoder support	Support differential, open collector, rotary transformer		
	Command source	Control panel, control terminal, communication; can be switched by several modes		
	Frequency source	10 types of frequency sources: digital setting, analog voltage setting, analog current setting, pulse setting, communication setting, can be switched by several methods		
Auxiliary frequency sources	10 types of auxiliary frequency source, can realize auxiliary frequency trimming, frequency combining flexibly			
Running display and keypad	Input terminal	Standard: 7 digital input terminal, one of them support max 100KHz HS pulse input 2 analog input terminal 2 supports 0~10V voltage input or 0~20mA current input		
	Output terminal	Standard: 1 high-speed pulse output terminal (optional open collector), support 0-100kHz pulse 1 digit output terminals 2 relay output terminal 2 analog output terminals, both support 0~20mA current output or voltage output		
	LED display	Can display parameter		
	Press-key locking and function selection	Realize press-key partial or full lacking, define part press-key function range, to avoid wrong operation		
	Protection function	Power-on motor short circuit test, output phase-loss protection, over-current protection, over-voltage protection, under-voltage protection, overheat protection, overload protection etc		
	Optional parts	Differential PG card, open collector PG card, rotary transformer PG card		
Environment	Aplication site	Indoor, without direct sunlight, no powder, corrosive gas, combustion air, oil dust, water steam, water drop or salt etc		
	Altitude level	Less than 1000m		
	Environment temperature	-10℃~-+40℃ (During 40℃-50℃, please reduce capacity to use)		
	Humidity	<95%RH, no water drop condensed		
Optional parts	Two Panel LED display	LED display; using RJ45 port to connect		

Outline size



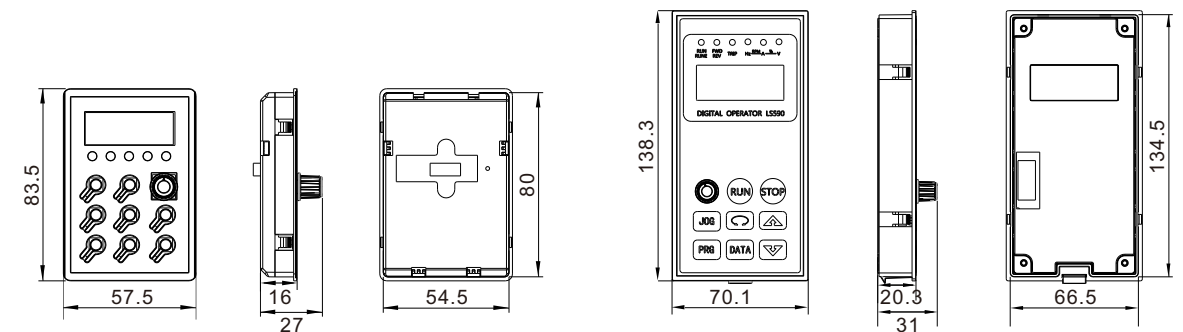
Model	Installation Size (mm)		Outline Size (mm)			Installation hole	Weight (kg)≈
	A	B	W	H	D		
EV510E-0004G-S2	101	171	112	180	118	Φ 4.6	1.3
EV510E-0007G-S2							
EV510E-0015G-S2							
EV510E-0022G-S2							
EV510E-0037G-T2	135	245	150	260	153	Φ 6	3.9
EV510E-0055G-T2							
EV510E-0075G-T2	186	306	210	330.5	188	Φ 9.5	7.5
EV510E-0110G-T2							
EV510E-0150G-T2	238	396	260	420	196	Φ 8.5	12.5
EV510E-0007G-T4							
EV510E-0015G-T4							
EV510E-0022G-T4							
EV510E-0037G-T4	101	171	112	180	138	Φ 4.6	2.1
EV510E-0055G-T4							
EV510E-0075G-T4	135	245	150	260	153	Φ 6	3.9
EV510E-0110G-T4							
EV510E-0150G-T4							
EV510E-0185G-T4							
EV510E-0220G-T4	186	306	210	330.5	188	Φ 9.5	7.5
EV510E-0300G-T4							
EV510E-0370G-T4	238	396	260	420	196	Φ 8.5	12.5
EV510E-0450G-T4							
EV510E-0550G-T4	272	455	304	470	240	Φ 9	22.9
EV510E-0750G-T4							
EV510E-0900G-T4							
EV510E-1100G-T4							
EV510E-1320G-T4	300	650	454	670	310	Φ 9	67
EV510E-1600G-T4							
EV510E-1850G-T4	400	810	520	835	382	Φ 13	107
EV510E-2000G-T4							
EV510E-2200G-T4							
EV510E-2500G-T4							
EV510E-1850G-T4	-	-	520	1183	382	-	-
EV510E-2000G-T4							
EV510E-2200G-T4							
EV510E-2500G-T4							

Outline size



	Model	Installation Size (mm)		Outline Size (mm)			Installation hole	Weight (kg)≈
		A	B	W	H	D		
Wall mounting	EV510E-2800G-T4	460 (230+230 3 holes in total)	895	720	920	382	Φ 13	155
	EV510E-3150G-T4							
	EV510E-3500G-T4							
	EV510E-4000G-T4							
	EV510E-4500G-T4							
Flange mounting	EV510E-2800G-T4	-	-	720	1320	382	-	225
	EV510E-3150G-T4							
	EV510E-3500G-T4							
	EV510E-4000G-T4							
	EV510E-4500G-T4							

Keypad outline



Small operation panel

Large operation panel



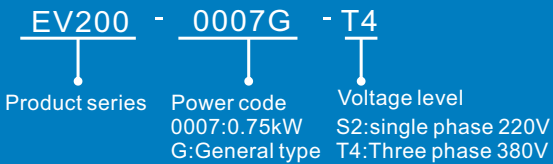
# EV200 series high performance VFD



## About the product

About the product Naming rulesEV200 series high-performance VFD is the company's new generation of high quality and high reliability small vfd. Based on the market demand of small power, small volume and simple speed regulation, the single-phase 220VAC and three-phase 380VACsmall vfd are targeted. It can be widely used in small automatic machinery represented by wood working carving, glass edging, food filling, pharmaceutical centrifuge, automatic production line, electronic equipment, logistics equipment, textile, etc.

## Naming rules



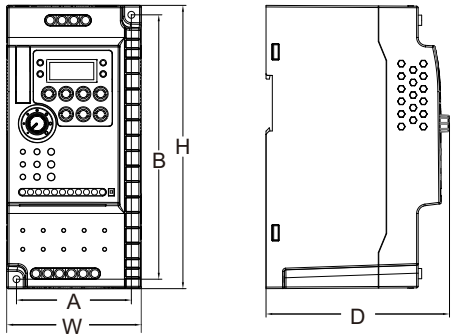
## Product features

- New narrow body design, compact structure and smart design. Compared with the old products, the installation size is reduced by 30% and the volume is reduced by 45%, which is more conducive to saving installation space and reducing power distribution costs;
- Independent air duct, straight up and down, efficient heat dissipation;
- 0.5Hz starting torque can reach 150%;
- 0.75-2.2kW without built-in brake unit, and above 3.7kW with brake unit;
- 4 digital input terminals, 1 analog input, 1 relay output;
- The keyboard can be imported from outside, and is compatible with the keyboard interface of the company's 510A and 510H frequency converters

## Rated specification

Model	Power capacity (kVA)	Input current (A)	Output current (A)	Match motor (kW)
EV200-0004G-S2	1.0	5.4	2.3	0.4
EV200-0007G-S2	1.5	8.2	4.0	0.75
EV200-0015G-S2	3.0	14.0	7.0	1.5
EV200-0022G-S2	4.0	23.0	9.6	2.2
EV200-0037G-S2	7.5	32.0	17.0	3.7
EV200-0007G-T4	1.5	3.4	2.1	0.75
EV200-0015G-T4	3.0	5.0	3.8	1.5
EV200-0022G-T4	4.0	5.8	5.1	2.2
EV200-0040G-T4	5.9	10.5	9.0	4.0
EV200-0055G-T4	8.9	14.6	13.0	5.5
EV200-0075G-T4	11.0	20.5	17.0	7.5

## Outline size

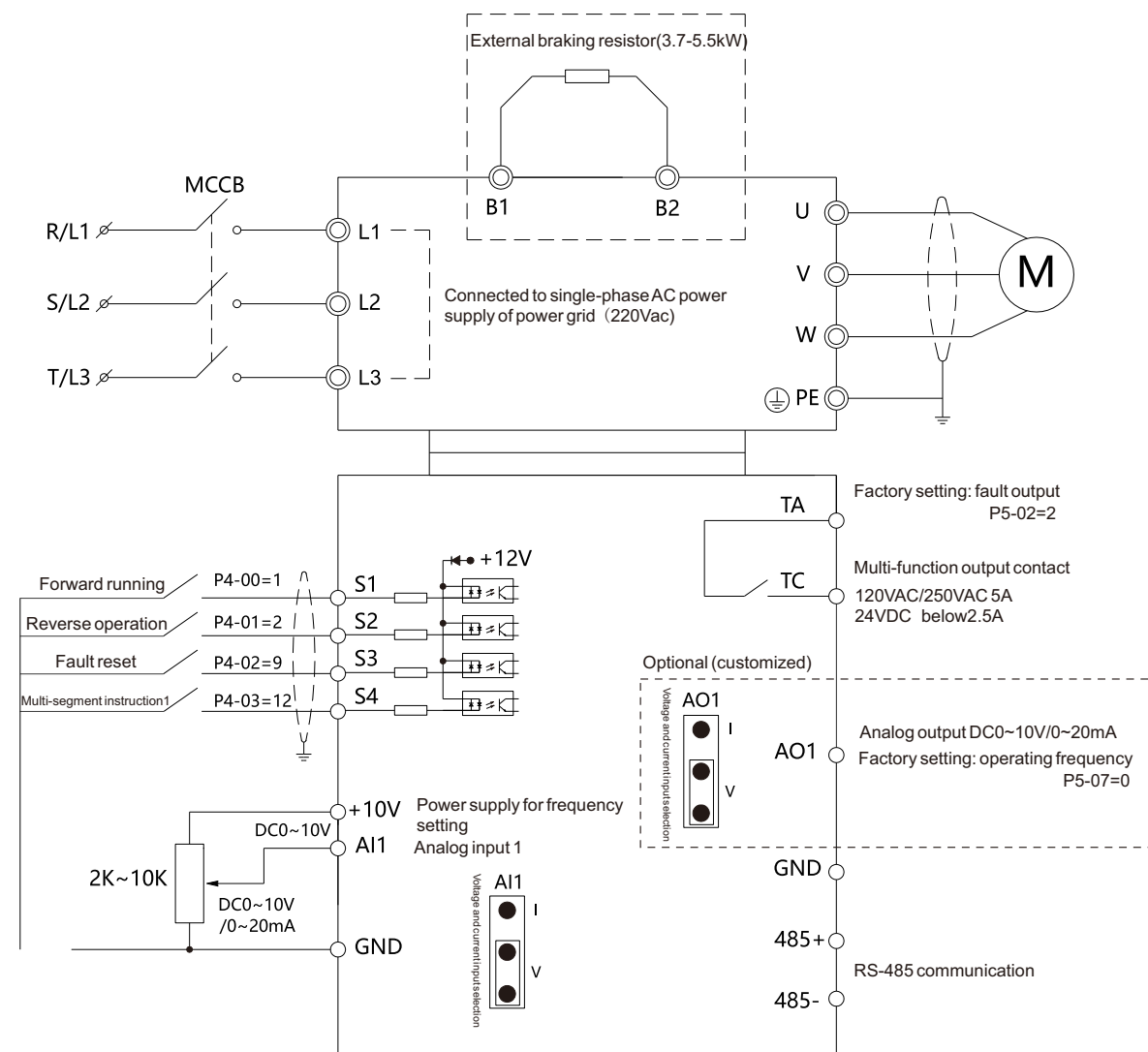


Voltage	Model	Power (kW)	Installation Size (mm)		Outline Size (mm)			Installation hole
			A	B	W	H	D	
Single phase 220V	EV200-0004G-S2	0.4	60	129	73	143	112.6	Φ4.4
	EV200-0007G-S2	0.75						
	EV200-0015G-S2	1.5						
	EV200-0022G-S2	2.2	73	168	85.5	180	116.4	Φ4.4
	EV200-0037G-S2	3.7						
Three phase 380V	EV200-0007G-T4	0.75	60	129	73	143	112.6	Φ4.4
	EV200-0015G-T4	1.5						
	EV200-0022G-T4	2.2						
	EV200-0040G-T4	4.0	73	168	85.5	180	116.4	Φ4.4
	EV200-0055G-T4	5.5						
	EV200-0075G-T4	7.5						

## Technique Feature

Item	Specificationtem
Basic function	Highest frequency
	Vector control: 0~500Hz; V/F control: 0~500Hz
	Carrier frequency
	0.8kHz~12kHz The carrier frequency can be automatically adjusted according to the temperature characteristics.
	Input frequency resolution
	Digital setting: 0.01Hz Analog setting: maximum frequency×0.025%
	Control mode
	Open-loop vector(SVC) V/F control
	Start torque
	G Type: 0.5Hz/150% (SVC); 0Hz/180% (FVC)
	Speed range
	1:100 (SVC)
	Speed control accuracy
	±0.5% (SVC)
	Torque control accuracy
	±5% (FVC)
	Overload capacity
	G Type: 150% Rated current 60sec; 180% Rated current 3sec
	Torque boost
	Automatic torque increase; Manual torque increase 0.1%~30.0%
Personalization function	V/F curve
	Three types: linear type; multi-point type; the nth power of V/F curve (1.2 power, 1.4 power, 1.6 power, 1.8 power)
	V/F Separation
	Linear or S curve of ACC/DEC ways. Four types of ACC/DEC Time, ACC/DEC time range is 0.0~6500.0s
	ACC/DEC curve
	Two types: full separation, half of separation
	DC brake
	DC brake frequency: 0.00Hz~max frequency Brake time: 0.0s~36.0s, Brake action current: 0.0%~100.0%
	JOG control
	JOG frequency range: 0.00Hz~50.00Hz JOG speed-up/down time: 0.0s~6500.0s
	Simple PLC multi-stage speed running
	Via bul-in PLC or control terminal can realize max 16 stage speed running
	Built-in PID
	Can realize process control close-oop system conveniently
	Auto adjust voltage(AVR)
	When grid voltage changes, can keep output voltage steadily automatically
	Overcurrent and overvoltage speed control
	During running, limit current and voltage automatically, protect from tripping off frequently for overvoltage and overcurrent
Running display and keypad	Quick current-limit function
	Reduce overcurrent error on max extent, protect inverter normal running
	Torque limitation and control
	"Digger" feature, inverter could limit torque automatically, prevent overcurrent tripping off; close-oop vector can realize torque control
	Outstanding perform
	Using high-perform current vector control
	Instantaneous stop not stop
	During instant power-off, by motor feedbacking energy, inverter compensates voltage-drop to keep running for short time
	Timing control
	Timing control function: setting time range: 0.0min-6500.0min
	Command source
	Control panel, control terminal, communication; can be switched by several modes
	Frequency source
	10 types of frequency sources: digital setting, analog voltage setting, analog current setting, pulse setting, communication setting, can be switched by several methods
	Auxiliary frequency sources
	10 types of auxiliary frequency source, can realize auxiliary frequency trimming, frequency combining flexibly
	Input terminal
	Standard: 4 digital input terminal 1 supports 0~10V voltage input or 0~20mA current input
Environment	Output terminal
	1 relay output terminal
	LED display
	Can display parameter
	Press-key locking and function selection
	Realize press-key partial or full lacking, define part press-key function range, to avoid wrong operation
	Protection function
	Power-on motor short circuit test, output phase-loss protection, over-current protection, over-voltage protection, under-voltage protection, overheat protection, overload protection etc
	Optional parts
	Differential PG card, open collector PG card, rotary transformer PG card
	Aplication site
	Indoor, without direct sunlight, no powder, corrosive gas, combustion air, oil dust, water steam, water drop or salt etc
	Altitude level
	Less than 1000m
	Environment temperature
	-10°C~+40°C (During 40°C-50°C, please reduce capacity to use)
	Humidity
	<95%RH, no water drop condensed
Optional parts	LED display
	LED display; The keyboard can be imported from outside, and is compatible with the keyboard interface of the company's 510A and 510H frequency converters

## Standard wiring diagram





# EV510H series high performance VFD



## About the product

EV510H series high-performance VFD, with small size, light weight, easy to carry and other characteristics, is a functional enhanced product. It can be used for driving textile, paper making, silk weaving, machine tool packaging, food, fan, water pump and various kinds of automatic production equipments.

## Naming rules

EV510H - 0037G/0055P - T4

Product series	Power code 0037G:3.7kW 0055P:5.5kW G:General type P: Pump or fans type	Voltage level S2:Single phase 220V T4:Three phase 380V
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## Rated specification

Model	Power capacity (kVA)	Input current(A)	Output current(A)	Match motor (kW)
Single phase:220V,50/60Hz				
EV510H-0004G-S2	1.0	5.4	2.3	0.4
EV510H-0007G-S2	1.5	8.2	4.0	0.75
EV510H-0015G-S2	3.0	14.0	7.0	1.5
EV510H-0022G-S2	4.0	23.0	9.6	2.2
Three phase:380V,50/60Hz				
EV510H-0007G-T4	1.5	3.4	2.1	0.75
EV510H-0015G-T4	3.0	5.0	3.8	1.5
EV510H-0022G-T4	4.0	5.8	5.1	2.2
EV510H-0037G/0055P-T4	5.9	10.5	9.0	3.7
EV510H-0055G/0075P-T4	8.9	14.6	13.0	5.5

## Technique Feature

Item		Specificationtem
Basic function	Highest frequency	Vector control: 0~ 500Hz; V/F control: 0~ 500Hz
	Carrier frequency	0.8kHz~12kHz The carrier frequency can be automatically adjusted according to the temperature characteristics.
	Input frequency resolution	Digital setting:0.01Hz Analog setting: maximum frequency×0.025%
	Control mode	Open-loop vector(SVC) V/F control
	Start torque	G Type:0.5Hz/150%(SVC); P Type:0.5Hz/100%
	Speed range	1:100 (SVC)
	Speed control accuracy	±0.5% (SVC)
	Overload capacity	G Type:150% Rated current 60sec; 180% Rated current 3sec P Type:120% Rated current 60sec; 150% Rated current 3sec
	Torque boost	Automatic torque increase;Manual torque increase0.1%~30.0%
	V/F curve	Three types: linear type; multi-point type; the nth power of V/F curve (1.2 power, 1.4 power, 1.6 power, 1.8 power, 2 power)
	ACC/DEC curve	Two types: full separation, half of separation
	DC brake	DC brake frequency:0.00Hz~max frequency Brake time: 0.0s~36.0s, Brake action current: 0.0%~ 100.0%
	JOG control	JOG frequency range: 0.00Hz~50.00Hz. JOG speed-up/down time: 0.0s~6500.0s
	Simple PLC multi-stage speed running	Via bul-in PLC or control terminal can realize max 16 stage speed running
	Built-in PID	Can realize process control close-oop system conveniently

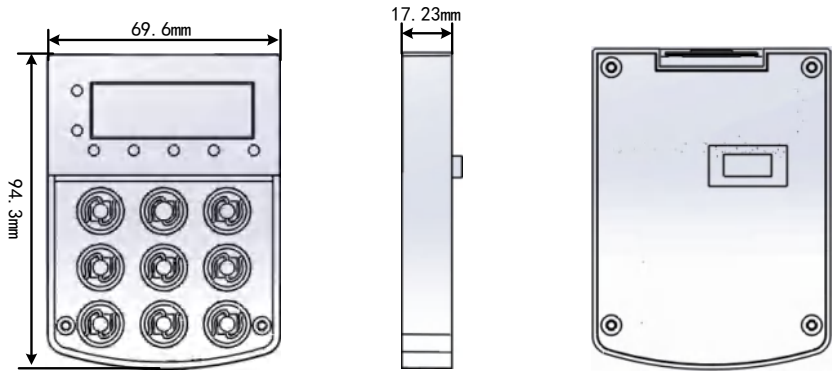
Auto adjust voltage(AVR)	When grid voltage changes, can keep output voltage steadily automatically
Overcurrent and overvoltage speed control	During running,limit current and voltage automatically,protect from tripping off frequently for overvoltage and overcurrent
Quick current-limit function	Reduce overcurrent error on max extent, protect inverter normal running
Torque limitation and control	"Digger" feature, inverter could limit torque automatically, prevent overcurrent tripping off; close-oop vector can realize torque control

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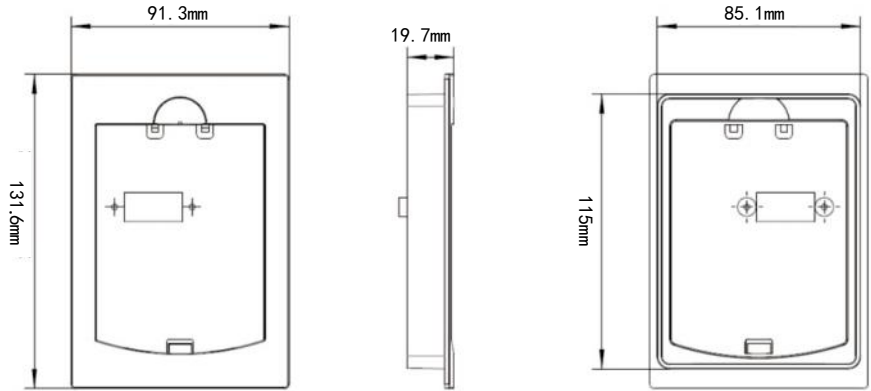
Technique Feature

Item	Specificationtem
Personalization function	Outstanding perform
	Using high-perform current vector control
	Instantaneous stop not stop
	During instant power-off, by motor feedbacking energy, inverter compensates voltage-drop to keep running for short time
	Timing control
Running display and keypad	Timing control function: setting time range: 0.0min-6500.0min
	Command source
	Control panel, control terminal, communication; can be switched by several modes
	Frequency source/ Auxiliary frequency sources
	digital setting, analog voltage setting, analog current setting, pulse setting, communication setting, can be switched by several methods
Environment	Input terminal
	5 digital input terminal, one of them support max 100KHz HS pulse input (apolegamy) , 2 analog input terminal; AI2 supports 0~10V voltage input ;AI1 support 0~10V voltage input or 0~20mA current input
	Output terminal
	1 high-speed pulse output terminal (optional open collector), support 0-100kHz pulse ( apolegamy) 1relay output terminal 1 analog output terminal, support 0~20mA current output
	LED display
Environment	Can display parameter
	Press-key locking and function selection
	Realize press-key partial or full lacking, define part press-key function range, to avoid wrong operation
	Protection function
	Power-on motor short circuit test, output phase-loss protection, over-current protection, over-voltage protection, under-voltage protection, overheat protection, overload protection etc
Environment	Aplication site
	Indoor, without direct sunlight, no powder, corrosive gas, combustion air, oil dust, water steam, water drop or salt etc
	Altitude level
	Less than 1000m,Derating above 1000m, Rated output current decreases by 1% every 100m
Environment	Environment temperature
	-10°C~+40°C (During 40°C-50°C, please reduce capacity to use)
Environment	Humidity
	<95%RH, no water drop condensed

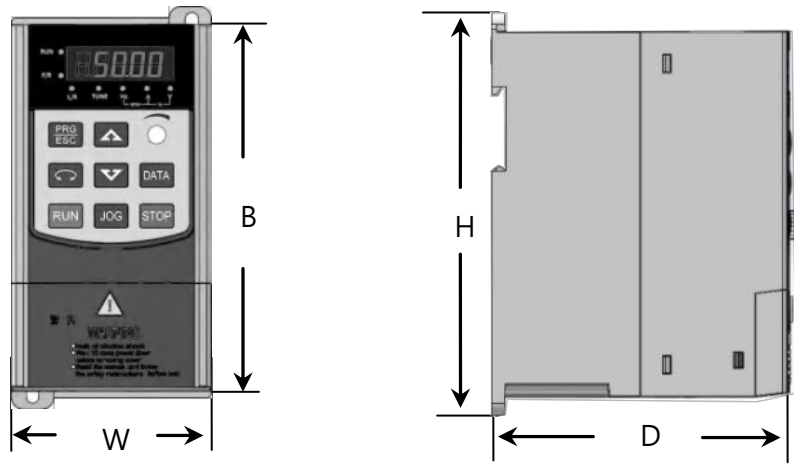
Keypad outline



Panel tray size



Outline size



Model	Outline size (mm)				Installation hole
	B	W	H	D	
EV510H-0004G-S2	155	84	170	127	Φ 5.7
EV510H-0007G-S2					
EV510H-0015G-S2					
EV510H-0022G-S2					
EV510H-0007G-T4					
EV510H-0015G-T4					
EV510H-0022G-T4					
EV510H-0037G/0055P-T4	183	91	193	142	Φ 4.7
EV510H-0055G/0075P-T4					



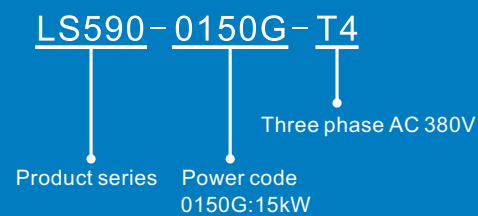
# LS590 series servo driver



## About the product

LS590 series servo driver is a servo driver specially developed for driving permanent magnet servo motor (PMSM) to realize high-performance vector control of permanent magnet synchronous motor. It is mainly used in plastic molding, pipe extrusion, shoe making, rubber, metal die casting and other industries.

## Naming rules



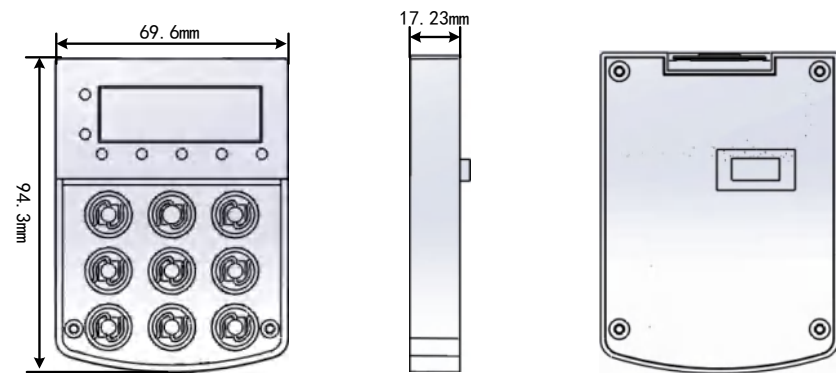
## Rated specification

Model LS590-****G-T4		0075G	0110G	0150G	0185G	0220G	0300G	0370G	0450G	0550G	0750G
Rated power(kW)		7. 5	11	15	18. 5	22	30	37	45	55	75
Output current(A)		17	25	32	37	45	60	75	91	112	150
Maximum holding current(A) Continuous 60S		25. 5	37. 5	48. 0	55. 5	67. 5	90. 0	112. 5	136. 5	168. 0	225. 0
Power input	Rated voltage and frequency	three phase 350, 380, 400, 420, 50/60Hz									
	Allowed voltage range	±15%									
	Allowed frequency range	±5%									
Braking resistance (matching)	kW	1	1. 5	1. 5	2. 5	2. 5	3	4	5	6	8
	Ω	≥65	≥43	≥32	≥22	≥22	≥16	≥16	≥16	≥16	≥12
Resolver sign cable (according to model)		ZF28-****stands for cable length,unit: cm. For example, ZF80-400 means cable length of 4 meters.									
Pressure sensor (necessary)		Can choose a variety of pressure sensors,the measurement range matches parameters A3-03,presure sensor range,recommended Danforss 060G3557.									
Breaker		50	50	60	75	100	100	150	150	200	300
Contactor		30	30	50	50	50	80	100	100	160	250

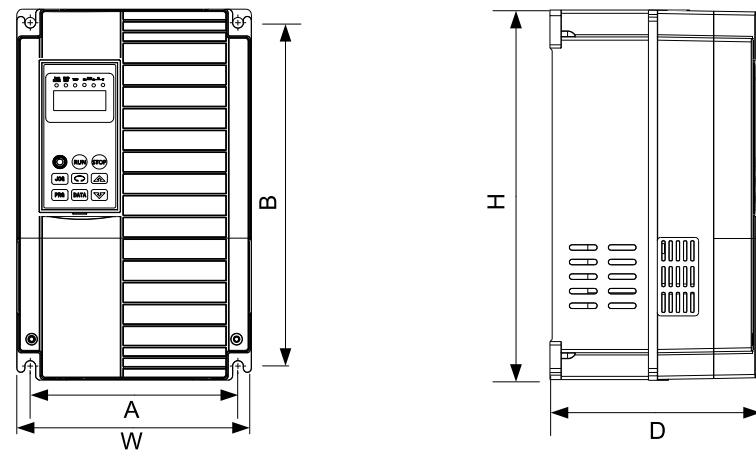
## Technique Feature

Item		Specificationtem
Basic function	Highest frequency	300Hz
	Carrier frequency	1kHz~8kHz Automatically adjust carrier frequency according to load characteristics
	Input frequency resolution	Digital setting:0.01Hz      Analog setting: maximum frequency×0.1%
	Control mode	Closed-loop vector(VC)    V/F control
	Start torque	0Hz/180%(VC)
	Speed range	1:1000(VC)
	Speed control accuracy	±0.02% (VC)
	Torque control accuracy	±5% (VC)
	Overload capacity	150% Rated current 60sec; 180% Rated current 3sec
Protection function	Auto adjust voltage(AVR)	When grid voltage changes, can keep output voltage steadily automatically
	Protection function	Power-on motor short circuit test, output phase-loss protection, over-current protection, over-voltage protection, under-voltage protection, overheat protection, overload protection etc
Environment	Aplication site	Indoor, without direct sunlight, no powder, corrosive gas, combustion air, oil dust, water steam, water drop or salt etc
	Altitude level	Less than 1000m
	Environment temperature	-10°C~+40°C (During 40°C-50°C, please reduce capacity to use)
	Humidity	<95%RH, no water drop condensed
	Vibrate	Less than 5.9m/s2(0.6g)
	Storage temperature	-20°C~+60°C
Protection grade		IP20

Keypad outline



Outline size



Model	Installation Size (mm)		Outline Size (mm)			Installation hole	Weight (kg)≈
	A	B	W	H	D		
LS590-0075G-T4	186	306	210	330.5	188	Φ9.5	7.5
LS590-0110G-T4							
LS590-0150G-T4							
LS590-0185G-T4							
LS590-0220G-T4							
LS590-0300G-T4							
LS590-0370G-T4	238	396	260	420	196	Φ8.5	12.5
LS590-0450G-T4							
LS590-0550G-T4	272	455	304	470	240	Φ9	22.9
LS590-0750G-T4	200	614	278	630	310	Φ9	39