

SINEE Inverter Product Selection Guide

Automated production and life









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SINEE

Since its establishment in 2003, SINEE (Shenzhen Sine Electric Co., Ltd.) has been focusing on the R&D, production and sales of motor drive and control systems in the field of industrial automation. With the mission of "automated production and life", it provides the most valuable products and services for users. In 2021, SINEE was listed on the Science and Technology Innovation Board of the Shanghai Stock Exchange (stock code: 688395). At present, it has R&D, production and service bases in Shenzhen, Wuhan and Wuxi.

Reliable drives & Solutions by technology

SINEE has established key core technology platforms such as high-performance variable frequency vector control technology, high-precision servo drive technology, embedded computer control technology, and power electronic application technology. It mainly provides inverters, integrated units, servo system products and system solutions.



VISION
Automated production and life



Business Department

Motor drive and control system solution provider



Clions

Mechanical equipment manufacturer, electronic control system integrator and distributor



Competitiveness

Industry market solution and customization

EM730 series Inverter

Single-phase/three-phase 220V-240V 0.4kW-2.2kW Three-phase AC 340V-460V 0.75kW-450kW

EThe EM730 series inverter is a high-reliability general-purpose inverter launched by SINEE. EM730 supports three-phase AC asynchronous motors and permanent magnet synchronous motors. They support a variety of drive control technologies, such as the vector VF (VVF) control and speed sensorless vector control (SVC); speed output and torque output; and Wi-Fi access and background software debugging.

Features of the EM730 series inverter:

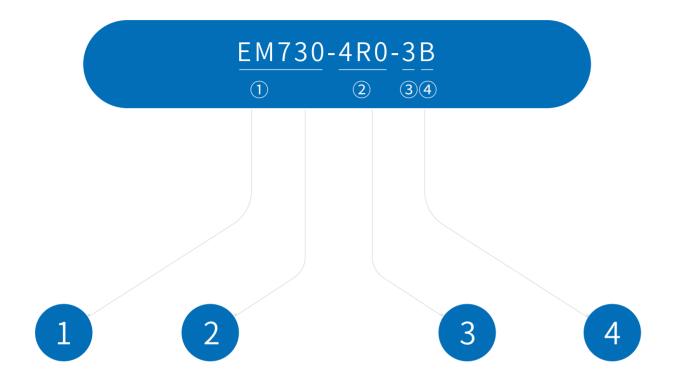
- 1. Support the mobile APP and Wi-Fi module to facilitate inverter debugging and monitoring
- 2.Reliable operation with full load at 50°C ambient temperature
- 3.Integration of special functions for rewinding and unwinding
- 4. Support the high-frequency output up to 3000Hz for driving high-speed motors
- 5. Support the 100kHz high-speed pulse input6.he metal substrate should adapt to the vibratory environment to reduce the induced voltage of the motor.
- 7.he built-in filter is close to Level C3, so the external



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EM760系列\EM730系列\EM500系列\EM600系列 GENERAL INVERTER SELECTION GUIDE

Model and Product List



EM730: EM730 INVERTER Power (kW) of the supporting motor of inverter B: BUILT-IN BRAKING UNIT Input power voltage level: For example: 4R0: 4.0kW 037:37kW

2: Single/three-phase 220V 3: Three-phase 380V



RATED VOLTAGE OF POWER SUPPLY: SINGLE-PHASE/THREE-PHASE AC 200V-240V

Model	Applicable motor power (kW)	Heavy-duty rated output current (A)	Light-duty rated output current (A)		
EM730-0R4-2B	0.4	2.8	3.2		
EM730-0R7-2B	0.75	4.8	5.0		
EM730-1R5-2B	1.5	8	8.5		
EM730-2R2-2B	2.2	10	11.5		





RATED VOLTAGE OF POWER SUPPLY: THREE-PHASE 340~460V

Model	Applicable motor power (kW)	Heavy-duty rated output current (A)	Light-duty rated output current (A)		
EM730-0R7-3B	0.75	2.5	3		
EM730-1R5-3B	1.5	4.2	4.6		
EM730-2R2-3B	2.2	5.6	6.5		
EM730-4R0-3B	4.0	9.4	10.5		
EM730-5R5-3B	5.5	13	15.7		
EM730-7R5-3B	7.5	17	20.5		
EM730-011-3B	11	25	28		
EM730-015-3B	15	32	36		
EM730-018-3B	18.5	38	41.5		
EM730-022-3B	22	45	49		
EM730-030-3/3B	30	60	70		
EM730-037-3/3B	37	75	85		
EM730-045-3	45	90	105		
EM730-055-3	55	110	134		
EM730-075-3	75	150	168		
EM730-090-3	90	176	200		
EM730-110-3	110	210	235		
EM730-132-3	132	253	290		
EM730-160-3	160	304	340		
EM730-185-3	185	340			
EM730-200-3	200	380			
EM730-220-3	220	426			
EM730-250-3	250	465			
EM730-280-3	280	520			
EM730-315-3	315	585			
EM730-355-3	355	650			
EM730-400-3	400	725	_		
EM730-450-3	450	820	_		



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Technical Specification





Item	Specification
Rated voltage of power supply	Three-phase 340V-10% to 460V+10%, Single-phase/three-phase 200V-10% to 240V+10%; 50-60Hz \pm 5%; voltage unbalance rate: <3%



Item	Specification
Maximum output voltage	The maximum output voltage is the same as the input power voltage.
Rated output current	Continuous output of 100% rated current
Maximum overload current	150% of heavy-duty rated current for 60s (185kW-450kW: 140% of heavy-duty rated current for 60s) 120% of light-duty rated current for 60s



Item	Specification
Driving mode	V/F control (VVF); speed sensorless vector control (SVC)
Input mode	Frequency (speed) input, torque input
Start and stop control mode	Keyboard, control terminal (two-line control and three-line control), communication
Frequency control range	$0.00 \sim 600.00$ Hz/ $0.0 \sim 3000.0$ HZ
Input frequency resolution	Digital input: 0.01Hz/0.1Hz Analog input: 0.1% of maximum frequency
Speed control range	1:50 (WVF) 、1:200 (SVC)
Speed control accuracy	Rated synchronous speed \pm 0.2%
Acceleration and deceleration time	0.01 s to 600.00 s / 0.1 s to 6,000.0 s / 1 s to 60,000 s
Voltage/frequency characteristics	Rated output voltage: 20% to 100%, adjustable Fundamental frequency 1Hz to 600Hz/3000Hz, adjustable
Torque boost	Fixed torque boost curve Any V/F curve is acceptable.
Starting torque	150%/1Hz (WF) 150%/0.25Hz (SVC)
Precision torque control	$\pm 5\%$ rated torque (SVC)
Self-adjustment of output voltage	When the input voltage changes, the output voltage will basically remain unchanged.
Automatic current limitation	Output current is automatically limited to avoid frequent overcurrent trips.
DC braking	Braking frequency: 0.01 to maximum frequency Braking time: 0 \sim 30S Braking current: 0% to 100% of rated current
Signal input source	Communication, multi-speed, analog, etc.



Item	Specification
Reference power supply	10V/20mA
Terminal control power	24V/100mA
Digital input terminal	5-channel digital multi-function input: X1 to X5 X5 can be used as the high-speed pulse input (max. 100kHZ).
Analog input terminal	2-channel analog inputs: One (AI1) voltage source: -10 to 10V input; One channel (AI2): 0 to 10V input voltage or 0 to 20mA input current optional;
Digital output terminal	Multi-function output of one open collector and one relay Maximum output current of the collector: 50mA; Relay contact capacity: 250VAC/3A or 30VDC/1A, EA-EC: normally open; EB-EC: normally closed
Analog output terminal	One multi-function analog terminal output M1: 0-10V/0-20mA multi-function analog output terminal



Item	Specification
LED display	The LED digital tube displays relevant information about the inverter.



Item	Specification
Protective Function	Short circuit, overcurrent, overvoltage, undervoltage, phase loss, overload, overheat, load loss, external fault, etc.



Item	Specification
Location	Indoor, at an altitude of less than 1 km, free of dust, corrosive gases and direct sunlight. When the altitude is higher than 1km, it is derated by 1% per 100m. The maximum allowable altitude is 3km.
Applicable environment	-10°C to +60°C, 5% to 95% RH (non-condensing). When the ambient temperature exceeds 50°C, it needs to be derated by 3% per 1°C temperature rise. The maximum allowable ambient temperature is 60°C.
Vibration	Less than 0.5g
Storage environment	-40°C∼ +70°C
Installation method	Wall-mounted or installed in the cabinet



Item	Specification
Protection level	Standard IP20/IP21 (with plastic baffle)

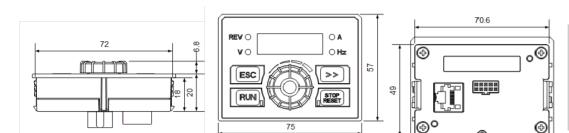


Item	Specification
Cooling method	Forced air cooling

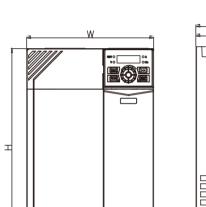
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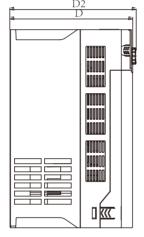
EM760系列\EM730系列\EM500系列\EM600系列

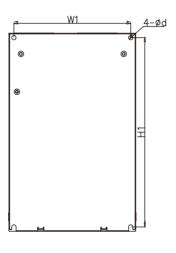
Dimension





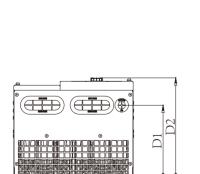


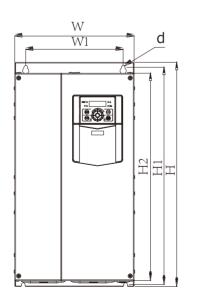


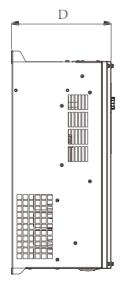


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(a) Appearance of EM730-0R7-3B to EM730-022-3B inverters







(b) Appearance of EM730-030-3B to EM730-450-3 inverters

Specifications	W(mm)	W1(mm)	H(mm)	H1(mm)	H2(mm)	D(mm)	D1(mm)	D2(mm)	d(mm)
EM730-0R4-2B	75	CE	140	122		146	67	150	4.5
EM730-0R7-2B	75	65	142	132		146	67	152	4.5
EM730-1R5-2B	02	00	172	102			0.5	141	4.7
EM730-2R2-2B	93	82		163		136	85		
EM730-0R7-3B	75	CE				1.40	C7	150	4.5
EM730-1R5-3B	15	65	142	132		146	67	152	4.5
EM730-2R2-3B	02	02	170	102		120	0E	1 / 1	4.7
EM730-4R0-3B	93	82	172	163		136	85	141	4.7
EM730-5R5-3B	100	0.0	207	100		154	100	100	
EM730-7R5-3B	109	98	207	196		154	103	160	5.5
EM730-011-3B	126	125	250	240		1.00	115	174	FF
EM730-015-3B	136	125	250	240		169	115	174	5.5
EM730-018-3B	100	175					145	189	6.5
EM730-022-3B	190	175	293	280		184			
EM730-030-3		200	454	440	420	205	156	212	7.5
EM730-030-3B									
EM730-037-3	245								
EM730-037-3B									
EM730-045-3			524	508	480	229	174	236	9
EM730-055-3	300	266							
EM730-075-3	335	286	580	563	536	228	177	235	9
EM730-090-3			630	608	570	310	247	317	11
EM730-110-3	335	286							
EM730-132-3									
EM730-160-3	430	330	770	747	710	311	248	319	13
EM730-185-3	422	320	786	758	709	335	271	256.4	11.5
EM730-200-3						357		285	11.5
EM730-220-3	441	320	1025	989	942				
EM730-250-3									
EM730-280-3		450	1024	1170 -	1100	400		333	13
EM730-315-3	560			1170.5	1100				
EM730-355-3									
EM730-400-3	660	443	1597	1567	1504	430	375.5	325.5	13
EM730-450-3									

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BR100 series energy consumption braking unit

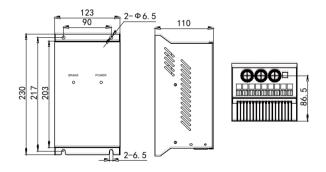
The BR100 series braking unit has the stable and reliable working performance and protection against over-temperature and braking resistor short circuit, and can be used for inverter-driven lifting equipment, centrifuges, washing machines, spin dryers, and rapid parking. It can change the electric energy generated by the motor in the power generation state into the thermal energy to be used by the braking resistor. In addition, it is easy to use and compatible with inverters of various brands.

Model and specification	Application	Minimum Resistance (Ω)	Average Braking Current I _{av} (A)	Peak Current	Applicable Inverter Power (kW)
BR100-045	Energy consumption braking	10	45	75	18.5~45
BR100-160		6	75	150	55~160
BR100-200		5	100	200	160-200
BR100-315		3	120	300	220~315
BR100-400		3	200	400	315~400
BR100-220-6		6	120	200	160~250

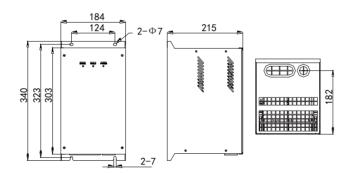
Note: With the minimum resistance, the BR100 braking unit can work continuously at the braking frequency D≤33%. In the case of D>33%, it should work intermittently; otherwise, the over-temperature protection fault may occur.



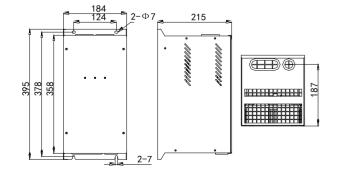
产品型号及尺寸



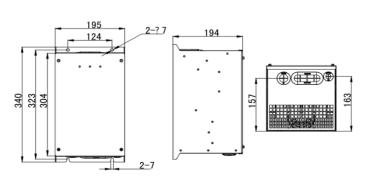
Dimensions of BR100-045 braking unit



Dimensions of BR100-160\BR100-200 braking unit



Dimensions of BR100-315\BR100-400 braking unit



Dimensions of BR100-220-6 braking unit