SINEE

GeoTech
Georgian Technology

Frequency Inverter Selection Guide

Automated production and life

High Performance

Stable&Reliable

Adaptable

Scalable

EM730 Series Inverter

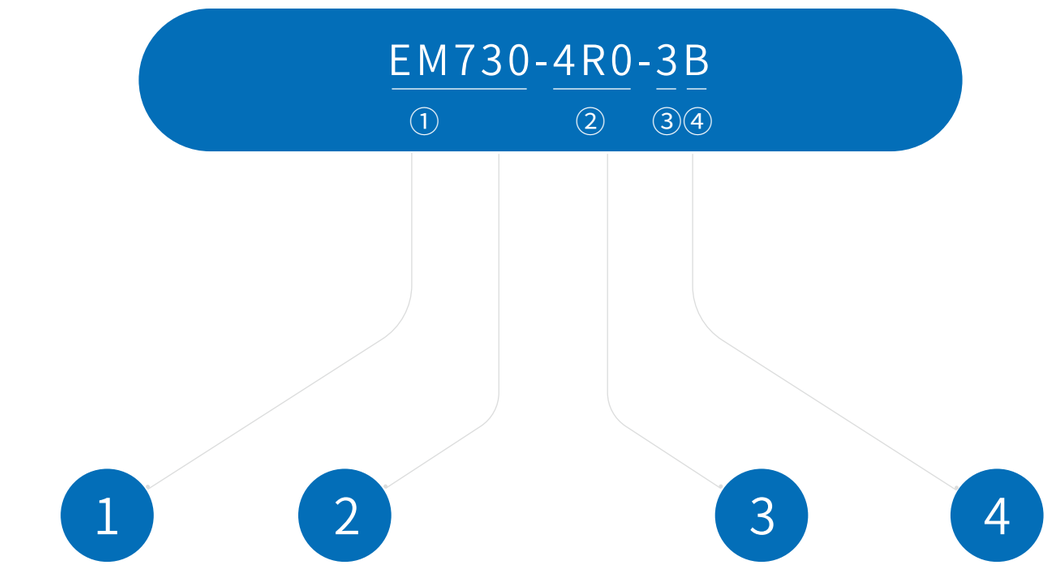
Single-phase/three-phase 220V-240V 0.4kW-2.2kW
Three-phase AC 340V-460V 0.75kW-450kW

The 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 input
6.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 interference is greatly reduced.

Model and Product List



EM730: EM730 INVERTER

Power (kW) of the supporting motor of inverter
For example: 4R0: 4.0kW
037：37kW

B: BUILT-IN BRAKING UNIT

Input power voltage level:
2: Single/three-phase 220V
3: Three-phase 380V

PRODUCT LIST

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

PRODUCT LIST

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	——

Technical Specification

POWER SUPPLY

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 ± 5%; voltage unbalance rate: <3%

OUTPUT

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

CONTROL

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 ～ 600.00Hz/0.0 ～ 3000.0HZ
Input frequency resolution	Digital input: 0.01Hz/0.1Hz Analog input: 0.1% of maximum frequency
Speed control range	1:50（VVF）、1:200（SVC）
Speed control accuracy	Rated synchronous speed ± 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（VVF） 150%/0.25Hz（SVC）
Precision torque control	±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: 0～30S Braking current: 0% to 100% of rated current
Signal input source	Communication, multi-speed, analog, etc.

INPUT/OUTPUT

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

OPERATION PANEL

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

PROTECTION

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

USE CONDITIONS

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

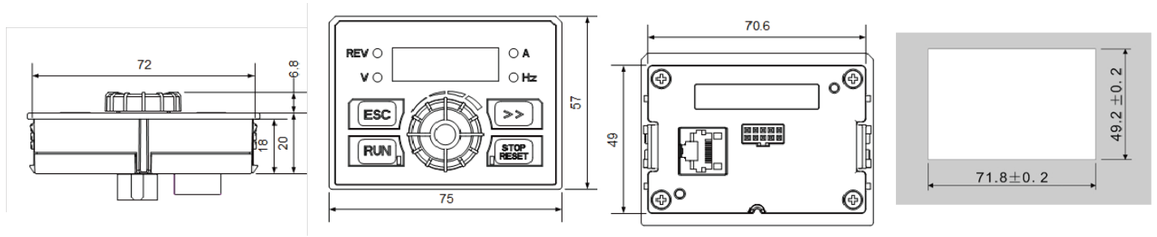
PROTECTION LEVEL

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

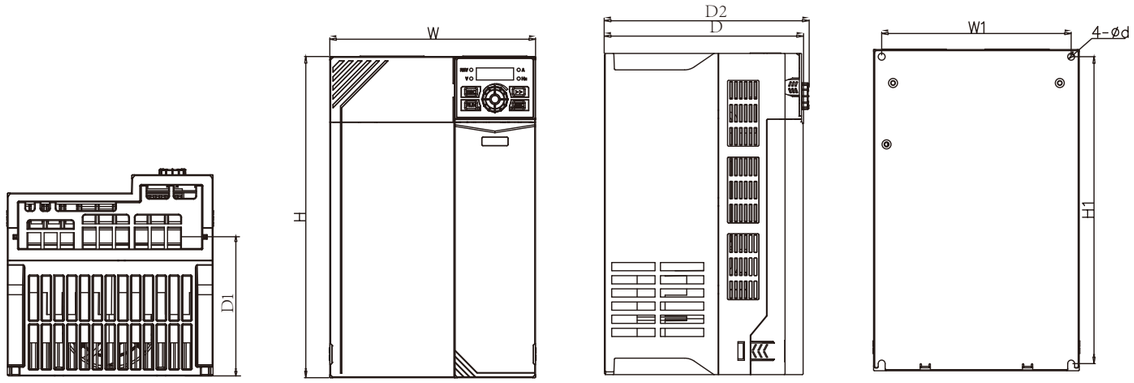
COOLING METHOD

Item	Specification
Cooling method	Forced air cooling

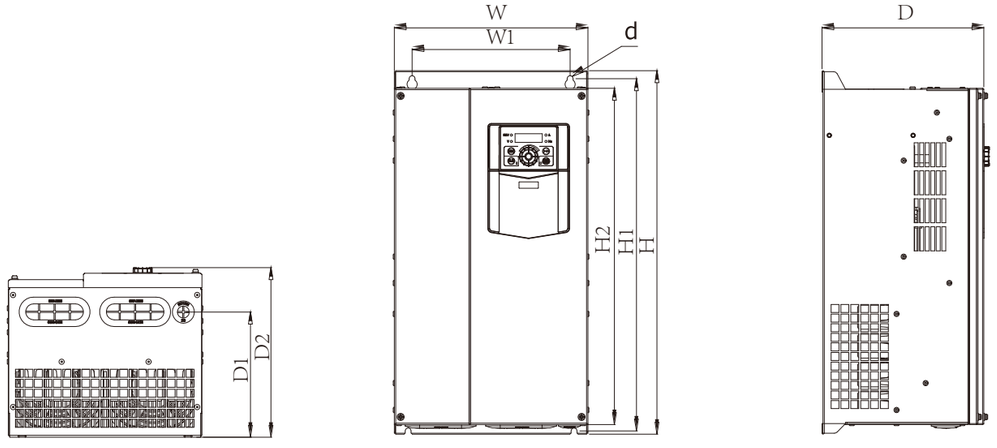
Dimension



Outline Dimensions of EM730 Series Inverter and Keyboard



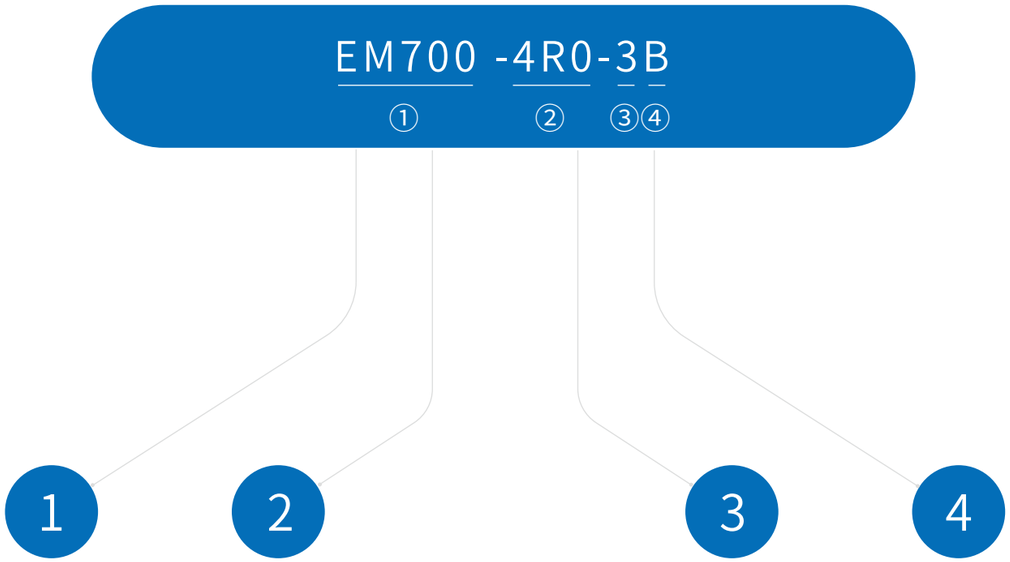
(a) Appearance of EM730-0R7-3B to EM730-022-3B inverters



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

Model and Product List



Product Series

EM700: EM700 Inverter

Adapted Load Power

OR7	1R5	2R2	4R0	5R5
0.75kW	1.5kW	2.2kW	4.0kW	5.5kW

Input Voltage level

2: Three-phase 220V
3: Three-phase 380V

B: Built-in braking unit
None: Without braking unit

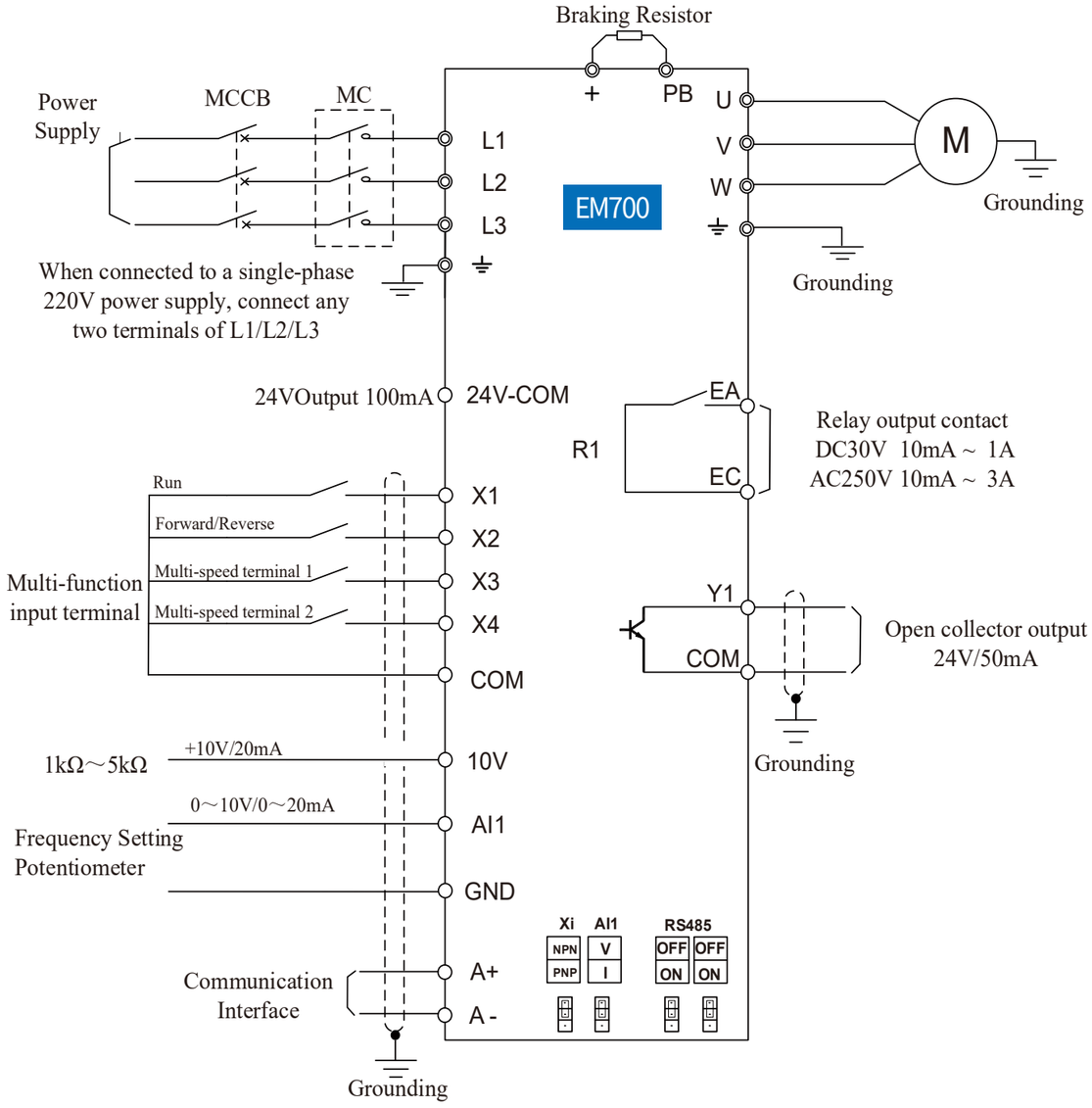
Product List

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

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

Model	Applicable motor power (kW)	Heavy load rated output current (A)	Light load rated output current (A)
EM700-0R4-2B	0.4	2.8	3.2
EM700-0R7-2B	0.75	4.8	5
EM700-1R5-2B	1.5	8	8.5
EM700-2R2-2B	2.2	10	11.5
EM700-0R7-3/3B	0.75	2.5	3
EM700-1R5-3/3B	1.5	4.2	4.6
EM700-2R2-3/3B	2.2	5.6	6.5
EM700-4R0-3/3B	4	9.4	10.5
EM700-5R5-3/3B	5.5	13	15.7

Standard Wiring Diagram of Control Circuit



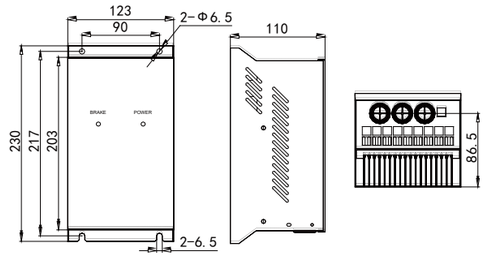
BR100 Series
Energy Consumption Braking Unit

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.

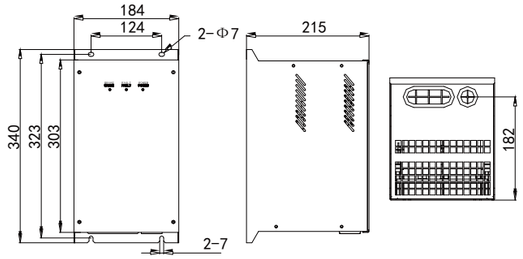
Model and specification	Application	Minimum Resistance (Ω)	Average Braking Current I_{av}(A)	Peak Current I_{max}(A)	Applicable Inverter Power (kW)
BR100-045	Energy consumption braking	10	45	75	18.5~45
BR100-160		6	75	150	55~160
BR100-200		5	100	200	160-200
BR100-315		3	120	300	220~315
BR100-400		3	200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

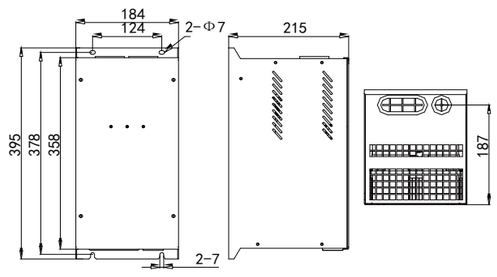
Product model and size



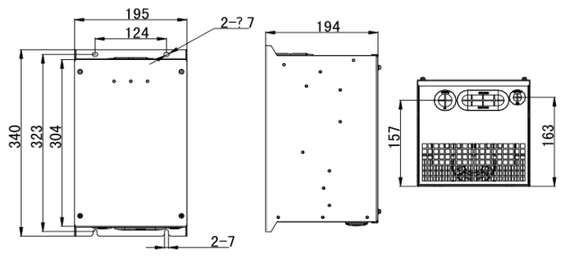
Dimensions of BR100-045 braking unit



Dimensions of BR100-160\BR100-200 braking unit



Dimensions of BR100-315\BR100-400 braking unit



Dimensions of BR100-220-6 braking unit

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