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High Efficient Drive in MICNO

micno

Product Catalogue

About Micno

Shenzhen Micno Electric Co., Ltd is a high-tech enterprise, which specializes in R&D, manufacture, sale and service of electrical drive, industrial automation control products. Micno has obtained ISO9001: 2008 Quality System approval, SGS certification and CE certification.

Micno masters the leading synchronization, asynchronization current vector control technology and torque control technology. The products cover 115V, 220V, 380V, 525V, 660V, 1140V voltage level with 0.2kW --1.2MW power range, which are widely used in electric power, metallurgy, petroleum and chemical, mining, machine tool, paper-making, elevator, lifting and other industries.

With "market-oriented, customer-centric" business philosophy, Micno provides high cost performance products and service to customers, make the customers more competitive. The sales and service network is nationwide in domestic market. And our products have also been exported to more than 30 countries all over the world.

Micno adheres to the enterprise core value of "Quality, Innovation, Integrity, Win-Win", dedicated to be the world leading supplier of products and services in the electric drive, industrial automation control fields, and would like to achieve customer, staff and enterprise values growing together.

Contents

PART I

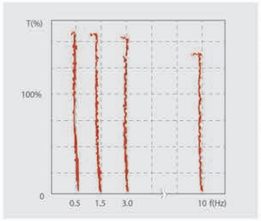
KE300 sensorless vector control inverter

KE300 is launched based on the perfect combination of years of experience and advanced drive technology.

According to the perfect understanding to customers' requirements, KE300 integrates with sensorless vector control, V/f control, torque control and soft start functions, widely applied in pump & fan, and the applications which require high speed control accuracy, rapid torque response and high performance at low frequency.

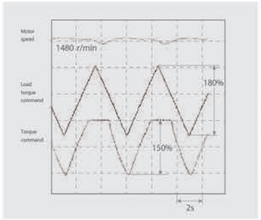
1AC 220V 0.4-2.2kW

3AC 220V-660V 0.4-630kW



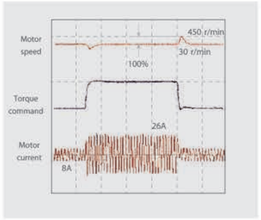
01 New SVC technology

Sensorless vector control can realize locked-rotor running, outputs 150% rated torque at 0Hz, reduces the dependence of the sensibility of motor parameters, improve the site adaptability, applied in winding control, balances the load distribution when one load is driven by several motors.



02 "Rooter" feature

When the torque generated by motor reaches to a certain value, the output frequency can be adjusted according to the overload situation, which is helpful to protect the machinery and improve the reliability of continuous running.



03 Fast dynamic response

Dynamic response time＜20ms when sensorless vector control mode.

Feature

04 Fast current limiting function

Fast limit the current in the protection, avoid over current fault causing by sudden load or interference. The inverter can reduce the probability of over current fault to protect the device.

05 Precise parameter identification ability

Optimized motor parameter autotuning model, reduce the sensibility to motor parameters, the identification ability is better.

06 High torque control accuracy

When sensorless vector control mode, torque control is available, the control accuracy is ±5%; suitable for tension control of winding machine.

07 Automatic voltage regulation (AVR) function

When the input voltage fluctuates, it can keep output voltage constant automatically, which could effectively solve the problem of low frequency oscillation of large power motor.

08 Dual PID switch function

KE300 can set two groups of PID parameters, to achieve process close loop control.

09 More functions

For more functions, please refer to "KE300 Brochure" and "KE300 User Manual".

Application

KE300 sensorless vector control inverter is widely used for applications as follows :

Pumps & Fans

Washing industry

Machine tool equipment

Other medium-end applications

Woodworking equipment

Simple lifting equipment

Air compressor, centrifugal, etc.

Selection Guide

1AC 220V	Adaptive motor kW	HP	Rated input current (A)	Rated output current (A)
KE300-0R4G-S2	0.4	0.5	5.4	2.3
KE300-0R7G-S2	0.75	1	8.2	4
KE300-1R5G-S2	1.5	2	14	7
KE300-2R2G-S2	2.2	3	23	9.6

3AC 220V	Adaptive motor kW	HP	Rated input current (A)	Rated output current (A)
KE300-0R4G-T2	0.4	0.5	3.4	2.3
KE300-0R7G-T2	0.75	1	5	4
KE300-1R5G-T2	1.5	2	7.7	7
KE300-2R2G-T2	2.2	3	10.5	9
KE300-004G-T2	4.0	5	18	17
KE300-5R5G-T2	5.5	7.5	26	25
KE300-7R5G-T2	7.5	10	35	32
KE300-011G-T2	11	15	46.5	45
KE300-015G-T2	15	20	62.5	60
KE300-018G-T2	18.5	25	76	75
KE300-022G-T2	22	30	92	91
KE300-030G-T2	30	40	113	112
KE300-037G-T2	37	50	157	150
KE300-045G-T2	45	60	180	176
KE300-055G-T2	55	75	214	210
KE300-075G-T2	75	100	307	304

3AC 380V	Adaptive motor kW	HP	Rated input current（A）	Rated output current（A）
KE300-0R7G-T4	0.75	1	3.4	2.1
KE300-1R5G-T4	1.5	2	5.0	3.7
KE300-2R2G-T4	2.2	3	6.8	6
KE300-004G/5R5P-T4	4.0/5.5	5/7.5	10/15	9/13
KE300-5R5G/7R5P-T4	5.5/7.5	7.5/10	15/20	13/17
KE300-7R5G/011P-T4	7.5/11	10/15	20/26	17/25
KE300-011G/015P-T4	11/15	15/20	26/35	25/32
KE300-015G/018P-T4	15/18.5	20/25	35/38	32/37
KE300-018G/022P-T4	18.5/22	25/30	38/46	37/45
KE300-022G/030P-T4	22/30	30/40	46/62	45/60
KE300-030G/037P-T4	30/37	40/50	62/76	60/75
KE300-037G/045P-T4	37/45	50/60	76/90	75/90
KE300-045G/055P-T4	45/55	60/75	92/113	90/110
KE300-055G/075P-T4	55/75	75/100	112/157	110/150
KE300-075G/090P-T4	75/90	100/125	157/180	150/176
KE300-090G/110P-T4	90/110	125/150	180/214	176/210
KE300-110G/132P-T4	110/132	150/175	214/256	210/253
KE300-132G/160P-T4	132/160	175/210	256/307	253/304
KE300-160G/185P-T4	160/185	210/250	307/350	304/340
KE300-185G/200P-T4	185/200	250/260	350/385	340/377
KE300-200G/220P-T4	200/220	260/300	385/430	377/423
KE300-220G/250P-T4	220/250	300/330	430/468	423/465
KE300-250G/280P-T4	250/280	330/370	468/525	465/520
KE300-280G/315P-T4	280/315	370/420	525/590	520/585
KE300-315G/350P-T4	315/350	420/470	590/620	585/640

3AC 380V	Adaptive motor kW	HP	Rated input current（A）	Rated output current（A）
KE300-350G-T4	350	470	665	650
KE300-400G-T4	400	530	785	720
KE300-450G-T4	450	600	880	820
KE300-500G-T4	500	660	960	900
KE300-560G-T4	560	750	1050	1000
KE300-630G-T4	630	840	1130	1100

3AC 660V	Adaptive motor kW	HP	Rated input current（A）	Rated output current（A）
KE300-015G-T6	15	20	21	19
KE300-018G-T6	18.5	25	28	22
KE300-022G-T6	22	30	35	28
KE300-030G-T6	30	40	40	35
KE300-037G-T6	37	50	47	45
KE300-045G-T6	45	60	55	52
KE300-055G-T6	55	75	65	63
KE300-075G-T6	75	100	90	86
KE300-090G-T6	90	105	100	98
KE300-110G-T6	110	130	130	121
KE300-132G-T6	132	175	170	150
KE300-160G-T6	160	210	200	175
KE300-185G-T6	185	250	210	195
KE300-200G-T6	200	260	235	215
KE300-220G-T6	220	300	257	245
KE300-250G-T6	250	330	265	260

3AC 660V	Adaptive motor kW	HP	Rated input current（A）	Rated output current（A）
KE300-280G-T6	300	370	305	300
KE300-315G-T6	330	420	350	330
KE300-350G-T6	374	470	382	374
KE300-400G-T6	410	530	435	410
KE300-450G-T6	450	600	490	465
KE300-500G-T6	500	660	595	550
KE300-560G-T6	560	745	610	590
KE300-630G-T6	630	840	700	680

Specification

01 Input

Input voltage	1AC 220V±15%，3AC 220V±15%，3AC 380V±15%，3AC 660V±15%
Input frequency	47~63Hz

02 Output

Output voltage	0～Rated voltage
Output frequency	V/f contol：0~3000Hz SVC：0~300Hz

03 Control feature

Control mode	V/f , SVC, Torque control
Operation command mode	Keypad control, Terminal control, Serial communication control
Frequency setting mode	Digital setting, analog setting, pulse frequency setting, serial communication setting, multi-step speed setting & simple PLC, PID setting, etc. These frequency settings can be combinated & switched in various modes.
Overload capacity	G model: 150% 60s, 180% 10s, 200% 3s P model: 120% 60s, 150% 10s, 180% 3s
Starting torque	0.5Hz/150% (SVC)，1Hz/150% (V/f)
Speed adjustment range	1:100 (SVC)，1:50(V/f)
Speed control precision	±0.5%（SVC）
Carrier frequency	1.0--16.0kHz, automatically adjusted according to temperature and load characteristics
Frequency accuracy	Digital setting: 0.01Hz Analog setting: maximum frequency ×0.05%
Torque boost	Automatically torque boost; manually torque boost : 0.1%~30.0%

03 Control feature

V/f curve	Three types: straight line, multiple point and square type（1.2 power, 1.4 power, 1.6 power, 1.8 power, square）
ACC/DEC mode	Linear/S curve; four kinds of acceleration/deceleration time, range: 0.1s~3600.0s
DC braking	DC braking when starting and stopping DC braking frequency: 0.0Hz~maximum frequency, braking time: 0.0s~100.0s
Jog operation	Jog operation frequency: 0.0Hz~maximum frequency Jog acceleration/deceleration time: 0.1s~3600.0s
Simple PLC & multi-step speed operation	Max. 16 steps speed running via built-in PLC or control terminal
Built-in dual PID	Built-in PID control to easily realize the close loop control of the process parameters (such as pressure, temperature, flow, etc.)
Automatic voltage regulation	Keep output voltage constant automatically when input voltage fluctuating

04 Control function

Common DC bus	Common DC bus for several inverters, energy balanced automatically
Torque control	Torque control without PG
Torque limit	“Rooter” feature: limit torque automatically and prevent frequent over-current tripping when running
Wobble frequency control	Multiple triangular-wave frequency control, special for spinning
Timing/length/counting control	Timing/length/counting control function
Over-voltage & over current stall control	Limit current & voltage automatically when running, prevent frequent over-current & over-voltage tripping
Fault protection function	Up to 30 fault protections including over-current, over-voltage, under-voltage, overheating, default phase, overload, shortcut, etc., can record the detailed running status during failure and has fault automatic reset function

05 I/O terminals

Input terminals	Programmable DI: 7 on-off inputs, 1 high-speed pulse input 2 programmable AI: AI1: voltage -10～10V A12: voltage 0～10V or current 0/4～20mA
Output terminals	1 programmable open collector output: 1 analog output (open collector output or high-speed pulse output) 2 relay outputs 2 analog output: 0/4~20mA or 0~10V
Communication terminal	Offer RS485 communication interface, support MODBUS-RTU communication protocol

06 Human machine interface

LED display	Display frequency setting, output frequency, output voltage, output current, etc.
Multifunction key	QUICK/JOG key, can be used as multifunction key
Powerful host software	Support upload, download and real time display between inverter and PC

07 Enviorment limit

Ambient temperature	-10℃～40℃, derated 4% when the temperature rise by each1℃ (40℃～50 ℃).
Humidity	90%RH or less (non-condensing)
Altitude	⩽1000M: output rated power, ＞1000M: output derated
Storage temperature	-20℃～60℃
Storage atmosphere	Indoor, without direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapor, drip, salt, vibration, etc.

PART II

KE600 close loop vector control inverter

KE600 is developed on the basic of KE300, with more powerful functions, fit for more complex applications.

Integrated with close loop vector control, sensorless vector control, V/f control, torque control and soft start functions, KE600 has been widely applied in the applications which require high speed control accuracy, rapid torque response and high performance at low frequency, such as crane, lift, printing & packaging, winding, etc.

3AC 220V-660V 1.5-630kW

Feature

01 High efficient drive

Integrated with close loop vector control, sensorless vector control, V/f control and torque control, you can find the suitable control

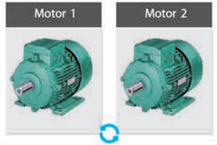
THAT'S
Efficient
Drive

02 Support different kinds of encoders

KE600 support different kinds of encoders: A.B.Z differential encoder, open collector encoder.

03 Two motors switching

KE600 has two groups of motor parameters for switching motors.



04 Networking

Optional RS-485 interface, support MODBUS communication protocol

05 Precise parameter identification ability

Optimized motor parameter autotuning model, reduce the sensibility to motor parameters, the identification ability is better.

06 High torque control accuracy

When sensorless vector control mode, torque control is available, the control accuracy is ±5%; suitable for tension control of winding machine.

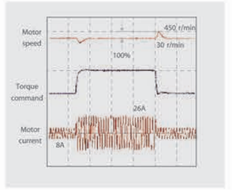
07 High starting torque

150% of rated torque at 0.5Hz (SVC), 180% of rated torque at 0Hz (VC)

08 Fast dynamic response

Dynamic response time < 20ms (SVC)

dynamic response time < 5ms (VC)



09 Strong extension ability

KE600 has strong extension ability, you can select the extension card according to your requirement: IO extension card, injection molding machine card, PG card, communication card.

PS: please refer to chapter 4 "Parts" for details

11 More functions

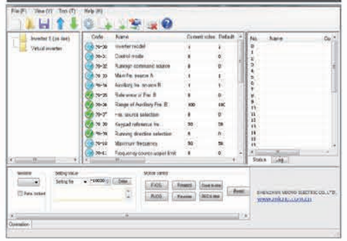
KE600 has many excellent functions, please refer to " KE600 Brochure" and "KE600 User Manual" for details.

10 Powerful Micno host software

Micno host computer software can support upload, download and real time display between KE600 and PC.

Login interface

Parameters interface



Application

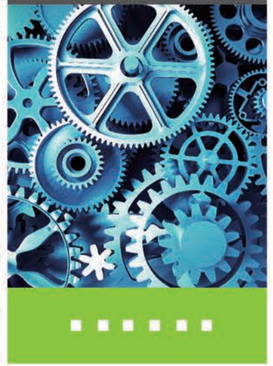
KE600 close-loop vector control inverter is widely used for applications as follows :

Injection molding industry

Hoisting equipment, belt conveyer

Machine tool equipment

Other high-end applications



Textile industry

Metalworking industry

Pharmaceutical industry, food processing industry

Selection Guide

3AC 220V	Adaptive motor kW	HP	Rated input current (A)	Rated output current (A)
KE600-1R5G-T2	1.5	2	7.7	7
KE600-2R2G-T2	2.2	3	10.5	9
KE600-004G-T2	4.0	5	18	17
KE600-5R5G-T2	5.5	7.5	26	25
KE600-7R5G-T2	7.5	10	35	32
KE600-011G-T2	11	15	46.5	45
KE600-015G-T2	15	20	62.5	60
KE600-018G-T2	18.5	25	76	75
KE600-022G-T2	22	30	92	91
KE600-030G-T2	30	40	113	112
KE600-037G-T2	37	50	157	150
KE600-045G-T2	45	60	180	176
KE600-055G-T2	55	75	214	210
KE600-075G-T2	75	100	307	304

3AC 380V	Adaptive motor kW	HP	Rated input current (A)	Rated output current (A)
KE600-1R5G-T4	1.5	2	5.0	3.7
KE600-2R2G-T4	2.2	3	6.8	6
KE600-004G-T4	4.0	5	10	9
KE600-5R5G-T4	5.5	7.5	15	13
KE600-7R5G-T4	7.5	10	20	17
KE600-011G-T4	11	15	26	25
KE600-015G-T4	15	20	35	32
KE600-018G-T4	18.5	25	38	37
KE600-022G-T4	22	30	46	45
KE600-030G-T4	30	40	62	60
KE600-037G-T4	37	50	76	75
KE600-045G-T4	45	60	92	90
KE600-055G-T4	55	75	112	110
KE600-075G-T4	75	100	157	150
KE600-090G-T4	90	125	180	176
KE600-110G-T4	110	150	214	210
KE600-132G-T4	132	175	256	253
KE600-160G-T4	160	210	307	304
KE600-185G-T4	185	250	350	340
KE600-200G-T4	200	260	385	377
KE600-220G-T4	220	300	430	423
KE600-250G-T4	250	330	468	465
KE600-280G-T4	280	370	525	520
KE600-315G-T4	315	420	590	585

3AC 380V	Adaptive motor kW	HP	Rated input current (A)	Rated output current (A)
KE600-350G-T4	350	470	665	650
KE600-400G-T4	400	530	785	720
KE600-450G-T4	450	600	880	820
KE600-500G-T4	500	660	960	900
KE600-560G-T4	560	750	1050	1000
KE600-630G-T4	630	840	1130	1100

3AC 660V	Adaptive motor kW	HP	Rated input current (A)	Rated output current (A)
KE600-015G-T6	15	20	21	19
KE600-018G-T6	18.5	25	28	22
KE600-022G-T6	22	30	38	28
KE600-030G-T6	30	40	40	35
KE600-037G-T6	37	50	47	45
KE600-045G-T6	45	60	55	52
KE600-055G-T6	55	75	65	63
KE600-075G-T6	75	100	90	86
KE600-090G-T6	90	105	100	98
KE600-110G-T6	110	130	130	121
KE600-132G-T6	132	175	170	150
KE600-160G-T6	160	210	200	175
KE600-185G-T6	185	250	210	195
KE600-200G-T6	200	260	235	215
KE600-220G-T6	220	300	257	245
KE600-250G-T6	250	330	265	260

3AC 660V	Adaptive motor kW	HP	Rated input current (A)	Rated output current (A)
KE600-280G-T6	280	370	305	300
KE600-315G-T6	315	420	350	330
KE600-350G-T6	350	470	382	374
KE600-400G-T6	400	530	435	410
KE600-450G-T6	450	600	490	465
KE600-500G-T6	500	660	595	550
KE600-560G-T6	560	745	610	590
KE600-630G-T6	630	840	700	680

Specification

01 Input

Input voltage	3AC 220V±15%, 3AC 380V±15%，3AC 660V±15%
Input frequency	47~63Hz

02 Output

Output voltage	0～Rated voltage
Output frequency	V/f：0~3000Hz VC：0~300Hz

03 Control feature

Control mode	V/f , SVC, VC, Torque control
Operation command mode	Keypad control, Terminal control, Serial communication control
Frequency setting mode	Digital setting, analog setting, pulse frequency setting, serial communication setting, multi-step speed setting & simple PLC, PID setting, etc. These frequency settings can be combinated & switched in various modes.

03 Control feature

Overload capacity	150% 60s, 180% 10s, 200% 3s.
Starting torque	0Hz/180% (VC); 0.5Hz/150% (SVC)
Speed adjustment range	1:1000 (VC); 1:100 (SVC)
Speed control precision	±0.5% (SVC); ±0.02% (VC)
Carrier frequency	0.5--16.0kHz, automatically adjusted according to temperature and load characteristics
Frequency accuracy	Digital setting: 0.01Hz Analog setting: maximum frequency ×0.05%
Torque boost	Automatically torque boost; manually torque boost 0.1%~30.0%
V/f curve	
ACC/DEC mode	Three types: straight line, multiple point and square type (1.2 power, 1.4 power, 1.6 power, 1.8 power, square) Linear/S curve; four kinds of ACC/DEC time, range 0.1s~3600.0s
DC braking	DC braking when starting and stopping DC braking frequency: 0.0Hz~maximum frequency, braking time: 0.0s~36.0s; Braking current: 0.0%~100.0%
Jog operation	Jog operation frequency: 0.0Hz~maximum frequency Jog ACC/DEC time: 0.1s~3600.0s
Simple PLC & multi-step Speed operation	Max. 16 steps speed running via built-in PLC or control terminal.
Built-in dual PID	Built-in PID control to easily realize the close loop control of the process parameters (such as pressure, temperature, flow, etc.)
Automatic voltage regulation	Keep output voltage constant automatically when input voltage fluctuating

04 Control function

Common DC bus	Common DC bus for several inverters, energy balanced automatically
Torque control	Torque control with / without PG
Torque limit	“Rooter” feature, limit the torque automatically and prevent frequent over-current tripping when running
Wobble frequency control	Multiple triangular-wave frequency control, special for spinning
Timing/length/counting control	Timing/length/counting control function
Over-voltage & over-current stall control	Limit current & voltage automatically when runing, prevent frequent over-current & over-voltage tripping
Speed tracking restart	Start the running motor smoothly without impact, protect the safety of motor and load at the most
Fault protection function	Up to 30 fault protections including over-current, over-voltage, under-voltage, overheating, default phase, overload, shortcut, etc., can record the detailed running status during failure & has fault

05 Special Functions

Motor switching	Two groups of motor parameters to achieve two motors switching
Spare part	Braking parts, IO extension card, differential input PG card, open collector input PG card, injection molding machine card, communication card, etc.
Powerful host software	Support KE600 parameter setting and real time parameter monitor

06 I/O terminals

Input terminals	Programmable DI: 7 on-off inputs, 1 high-speed pulse input, can extend 3 inputs 2 programmable AI: AI1: voltage -10～10V A12: voltage 0～10V or current 0/4～20mA
Output terminals	1 programmable open collector output: 1 analog output (open collector output or high-speed pulse output), can extend 1 output 1 relay output, can extend 1 output 2 analog output: 0/4~20mA or 0~10V
Communication terminals*2	Offer RS485 communication interface, support MODBUS-RTU communication protocol

07 Human machine interface

LED display	Display frequency setting, output frequency, output voltage, output current, etc.
Multifunction key	QUICK/JOG key, can be used as multifunction key

08 Environment limit

Ambient temperature	-10℃～40℃, derated 4% when the temperature rise by every 1℃ (40℃～50 ℃).
Humidity	90%RH or less (non-condensing)
Altitude	⩽1000M: output rated power, ＞1000M: output derated
Storage temperature	-20℃～60℃
Atmosphere	Indoor, without direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapor, drip, salt, vibration, etc.

*1: Extended by I/O extension card, please refer to I/O extension card instruction in chapter 4 for details.

*2: Extended by I/O expansion card or communication expansion card, please refer to the instructions in chapter 4 for details.

PART Ⅲ

KE200 high performance vector control inverter

KE200 focus on high performance using experience

KE200 adopts optimized vector control technology, control motor excitation current and torque current directly, which has different kinds of advanced functions, such as zero-servo, slip compensation, torque compensation, speed control, mute control, accurate parameter identification ability, etc. KE200 can drive any brand motor in a high control level.

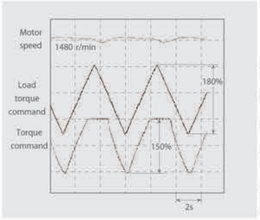
Integrated with vector control (with/without PG), V/f control (with/without PG), KE200 is widely used in precision machinery control and several motors driven applications.

3AC 220V	2.2-75kW
3AC 380V	4-300kW

Feature

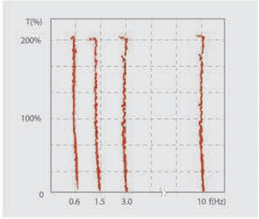
01 Integrate with four control modes

Integrated with close loop vector control, sensorless vector control, V/f control with PG and V/f without PG, KE200 is widely used in precision machinery control and several motors driven applications.



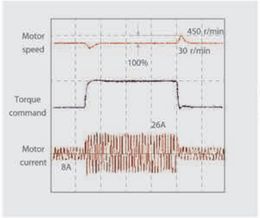
03 "Rooter" feature

When the torque generated by motor reaches to a certain value, the output frequency can be adjusted according to the overload situation, which is helpful to protect the machinery and improve the reliability of continuous running.



02 High starting torque

High starting torque can be provided by the support of current vector control technology even if without PG, as the left figure shows, zero speed full torque running can be achieved when with PG feedback.



04 Fast dynamic response

Dynamic response time < 20ms (SVC), dynamic response time < 3.5ms (VC)

05 Fast current limiting function

Fast limit the current in the protection, avoid over current fault causing by sudden load or interference. The inverter can reduce the probability of over current fault to protect the device.

06 Precise parameter identification ability

Optimized motor parameter autotuning model, reduce the sensibility to motor parameters, the identification ability is better.

07 High torque control accuracy

When closeloop vector control mode, torque control is available, the control accuracy is ±5%; suitable for tension control of winding machine.

08 DWELL function

DWELL function is suitable for heavy load device. During ACC and DEC, the output frequency can be kept in a certain period to adapt the load characteristic.

09 Speed searching running

KE200 can automatically lead the motor running freely to run at the setting frequency without speed detector of the motor. It's suitable for the inertial load driving.

10 KEB function

When power off or instantaneous power off, KE200 uses motor's regenerative energy to control motor continuously, which automatically slowdown and stop the motor rather than free running.

11 Instantaneous power off restart function

When instantaneous power off, KE200 can automatically restart after power on, to ensure the motor run continuously.

12 More functions

KE200 has many excellent functions, please refer to "KE200 Brochure" and "KE200 User manual".

Application

KE200 High performance vector control inverter is widely used for applications as follows :

Selection Guide

KE200-5R5G-T4

- KE200: High performance VC inverter
- 5R5: Power, 5R5: 5.5kW
- G: Constant torque
- T4: Voltage, T2: 3AC 220V, T4: 3AC 380V

3AC 220V	Adaptive motor (kW)	Rated input current (A)	Rated output current (A)
KE200-2R2G-T2	2.2	4.2	11
KE200-004G-T2	4.0	6.7	17.5
KE200-5R5G-T2	5.5	9.5	25
KE200-7R5G-T2	7.5	13	33
KE200-011G-T2	11	19	49
KE200-015G-T2	15	24	64
KE200-018G-T2	18.5	30	80
KE200-022G-T2	22	37	96
KE200-030G-T2	30	50	130
KE200-037G-T2	37	61	160
KE200-045G-T2	45	70	183
KE200-055G-T2	55	85	224
KE200-075G-T2	75	110	300

3AC 380V	Adaptive motor (kW)	Rated input current (A)	Rated output current (A)
KE200-004G-T4	4.0	6.1	8
KE200-5R5G-T4	5.5	11	14
KE200-7R5G-T4	7.5	14	18
KE200-011G-T4	11	21	27
KE200-015G-T4	15	26	34
KE200-018G-T4	18.5	31	41
KE200-022G-T4	22	37	48
KE200-030G-T4	30	50	65
KE200-037G-T4	37	61	80
KE200-045G-T4	45	73	96
KE200-055G-T4	55	98	128
KE200-075G-T4	75	130	165
KE200-110G-T4	110	170	224
KE200-160G-T4	160	230	302
KE200-185G-T4	185	260	340
KE200-220G-T4	220	340	450
KE200-300G-T4	300	460	605

Specification

01 Input

Input voltage	3AC 220V±15% 3AC 380V±15%
Input frequency	47~63Hz

02 Output

Output voltage	0～rated voltage
Output frequency	0~400Hz

03 Control feature

Control mode	V/f control (with/without PG) Sensorless vector control Close loop vector control
Operation command mode	Digital setting, analog setting, serial communication setting, multi-step speed setting, PID setting, etc. These frequency settings can be combinated & switched in various modes.

03 Control feature

Overload capacity	150% 60s, 180% 10s, 200% 3s.
Starting torque	0Hz/150% (VC); 1Hz/150% (SVC)
Speed adjustment range	1:1000 (VC); 1:100 (SVC)
Speed control precision	±0.2% (SVC); ±0.02% (VC)
Speed response	＜20ms (SVC); ＜3.5ms (VC)
Torque limit	Available (parameter setting 4 modes)
Torque response	20Hz (SVC); 40Hz (VC)
Frequency control range	0.1~400Hz
Frequency accuracy	Digital command: ±0.01% (-10℃~40℃) Analog command: ±0.1% (25℃±10℃)
Setting frequency resolution	Digital keypad command: ±0.01Hz
Output frequency resolution	Analog command: ±0.03Hz/60Hz (11bit + code) 0.01Hz
Frequency setting signal	-10V~10V, 0~10V (20kΩ), 4~20mA
ACC/DEC mode	0.01s~6000.0s (ACC time and DEC time are set separately, four kinds of ACC/DEC time)
Braking torque	20% (150% when equipped with braking resistor)
V/f curve	15 fixed types and random V/f curve setting

04 Protection function

Motor overload protection	Protect by hot electric
Instantaneous over voltage	Motor coast to stop when the inverter outputs 200% rated current
Blown fuse protection	Motor coast to stop
Overload	Motor coast to stop when the inverter outputs 150% rated current for 1 minute (150% 2 minutes can be customized)
Over voltage	Stop when main circuit voltage＞410V(820V)*1
Under voltage	Stop when main circuit voltage＜190V(380V)*1
Instantaneous power off compensation	Set the motor stops in 2 sec when power off in the running motor, then the motor runs continuously
Radiator overheat	Protect by temperature switch
Stall protection	ACC and DEC, stall protection when running
Ground fault	Protect by circuit
Charging protection	No display if DC voltage of main circuit below 50V

*1: Threshold value A(B) (such as 410V(820V)), A represents the threshold value of 220V inverter, B represents the threshold value of 380V inverter.

*2: Extended by communication card, please refer to the instruction of communication card in chapter 4 for details.

05 I/O terminals

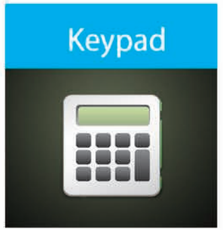
Input terminals	DI: 8 on-off inputs (2 fixed) 3 AI: 2 programmable. AI1: voltage 0~10V A12: voltage -10~10V or current 4～20mA
Output terminals	2 programmable open collector output 1 relay output (normally open) 1 programmable relay output 2 programmable analog output: -10~10V
Communication terminals*2	Offer RS485 communication interface, support MODBUS-RTU communication protocol

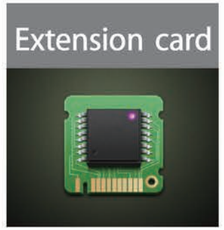
06 Enviorment limit

Ambient temperature	-10℃～40℃, derated 4% when the temperature rise by every 1℃ (40℃～50 ℃).
Humidity	90%RH or less (non-condensing)
Altitude	≤1000M: output rated power, ＞1000M: output derated
Storage temperature	-20℃～60℃
Atmosphere	Indoor, without direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapor, drip, salt, vibration, etc.

PART Ⅳ

Parts



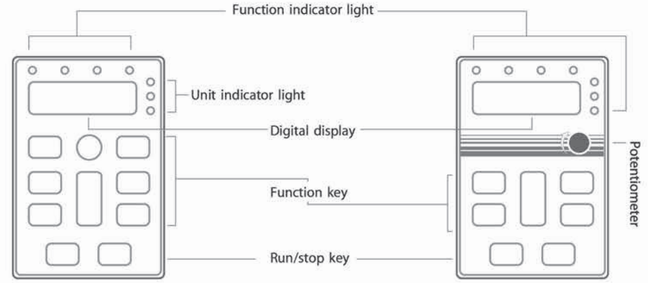


Keypad, standard spare parts

Suitable for KE200

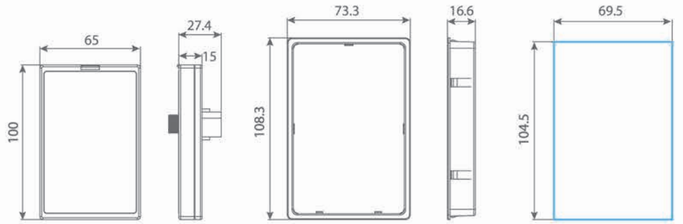
Communication medium:
normal network cable

Suitable for KE300, KE600*2



Size

Keypad size（mm）　Bracket size（mm）　Bracket hole size（mm）



*2: Only for the inverters above 1.5kW. 58×76 (mm) small keypad is designed for inverters below 1.5kW (its shape is similar as the bottom left figure), keypad size: W×H×D=58×76×30.2 (mm). It can be fixed on the inverter case directly. Fixed hole size: 55.5×73.4 (mm).

Expansion cards, optional parts

I/O extension card*1

Model:KE600-DG-01

Used for terminal extension, can provide:

Digital input	3
Digital output	1, can used as HDO
Open collector output	1
Relay output	1（NO/NC）
Communication port	1, Standard RS485 physical interface

Communication card*1

Model:KE600-RS485-01

Used for communication terminal extension, provide 1 standard RS485 physical interface

Injection molding machine card*1

Model:KE600-ZS-01

Special for injection molding machine, collect & handle pressure, flow data

OC PG card*1

Model:KE600-PG-01

Used when close loop vector control, support open collector encoder signal input & frequency division output (provide +12V power drive)

Differential PG card*1

Model:KE600-PG-02

Used when close loop vector control. Support differential signal input & frequency division output (provide +5V power drive)

*1: Only for KE600

Communication card*2

Model:KE200-RS485-01

Used for communication terminal extension, provide 1 standard RS485 physical interface

PG card*2

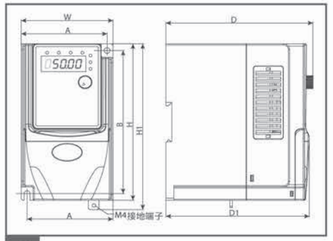
Model:KE200-PG-01

Used when close loop vector control, compatible with open collector encoder signal input & differential encoder signal input, support frequency division output (provide +12V power drive)

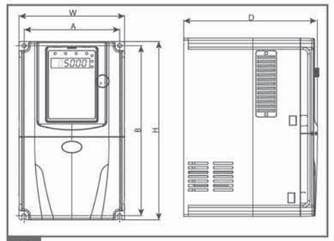
*2: Only for KE200

PART V

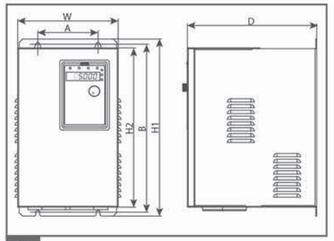
Appendix: Dimension



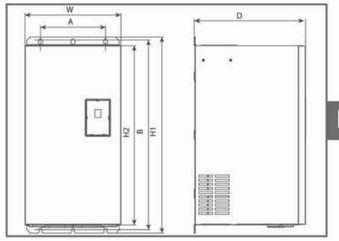
A



B

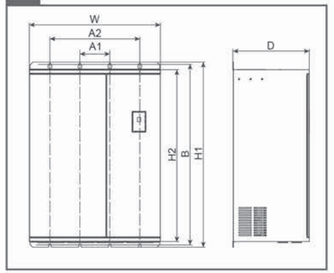


C

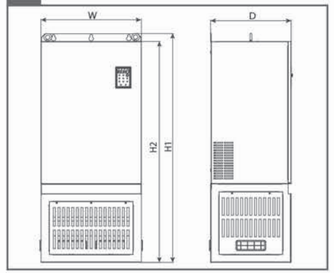


D

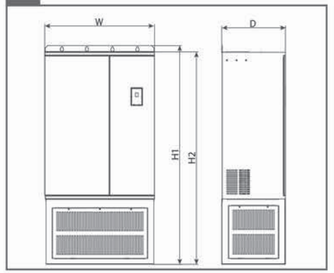
KE series dimension figures: shown as A ~ G figures, please search the size data according to the figure No. and model.



E



F

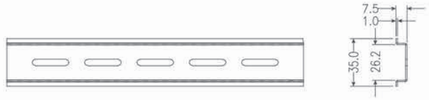


G

KE300

Figures A-B show the external and installation dimension of 1AC 220V inverter. Please refer to the table for details.

The models shown as figure A support the guide rail installation methods. Please check the suitable guide rail size as follow.



Power(kW)	NO.	W	H/H1	D	D1	A	B
0.4-1.5	A	78	140/148.4	124.8	121.8	73	128
2.2	B	110	185	153	-	98	174

Figures A~D show the external and installation dimension of 3AC 220V inverter. Please refer to the table for details.

The models shown as figure C support the guide rail installation methods. The suitable guide rail size is the same as 1AC 220V inverter.

Power(kW)	NO.	W	H/H1	H2	D	D1	A	B
0.4-1.5	A	78	140/148.4	-	124.8	121.8	73	128
2.2	B	110	185	-	153	-	98	174
4	B	135	240	-	173	-	122.6	229
5.5-7.5	C	200	330	300	188.8	-	90	317
11-15	C	255	440	403	229	-	140	423.6
18.5-22	D	280	570	521	300	-	190	552
30-37	D	320	600	552	330	-	230	582
45-55	D	320	715	662	356	-	230	695.5
75	D	480	790	725	385	-	360	768

Figures B~D show the external and installation dimension of 3AC 380V (0.75~75kW) standard inverter. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A	B
0.75-2.2	B	110	185	-	153	98	174
4-5.5	B	135	240	-	173	122.6	229
7.5-15	C	200	330	300	188.8	90	317
18.5-30	C	255	440	403	229	140	423.6
37-45	D	280	570	521	300	190	552
55-75	D	320	600	552	330	230	582

Power(kW)	NO.	W	H/H1	H2	D
90-110	F	320	992	962	356
132-200	F	480	1165	1125	385
220-315	G	700	1390	1350	408
350-630	G	940	1690	1650	458
With base					

3AC 380V (90~630kW) inverters have two models, standard model and nonstandard model. Standard model has no base, shown as figures D~E; non-standard model has base, shown as figures F~G. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A/A1	A2	B
90-110	D	320	715	662	356	230	-	695.5
132-200	D	480	790	725	385	360	-	768
220-315	E	700	970	900	408	160	480	946
350-630	E	940	1140	1100	458	240	660	1146
Without base								

Figure D shows the external and installation dimension of 3AC 660V (15~90kW) standard inverter. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A	B
15-37	D	280	650	601	333	190	631.5
45-90	D	320	808	754	356	230	780

3AC 660V (110~630kW) inverters have two models, standard model and nonstandard model. Standard model has no base, shown as figures D~E; non-standard model has base, shown as figures F~G. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A/A1	A2	B
110-160	D	480	790	725	385	360	-	768
185-250	E	700	970	900	408	160	480	946
280-630	E	940	1140	1100	458	240	660	1146
Without base								

Power(kW)	NO.	W	H1	H2	D
110-160	F	480	1165	1125	385
185-250	G	700	1390	1350	408
280-630	G	940	1690	1650	458
With base					

Figures B~D show the external and installation dimension of 3AC 220V inverter. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A	B
1.5-4	B	135	240	-	173	122.6	229
5.5-7.5	C	200	330	300	188.8	90	317
11-15	C	255	440	403	229	140	423.6
18.5-22	D	280	570	521	300	190	552
30-37	D	320	600	552	330	230	582
45-55	D	320	715	662	356	230	695.5
75	D	480	790	725	385	360	768

Figures B~D show the external dimension and installation dimension of 3AC 3800V (1.5~75kW) standard inverter. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A	B
1.5-5.5	B	135	240	-	173	122.6	229
7.5-15	C	200	330	300	188.8	90	317
18.5-30	C	255	440	403	229	140	423.6
37-45	D	280	570	521	300	190	552
55-75	D	320	600	552	330	230	582

3AC 380V (90~630kW) inverters have two models, standard model and nonstandard model. Standard model has no base, shown as figures D~E; nonstandard model has base, shown as figures F~G. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A/A1	A2	B
90-110	D	320	715	662	356	230	-	695.5
132-200	D	480	790	725	385	360	-	768
220-315	E	700	970	900	408	160	480	946
350-630	E	940	1140	1100	458	240	660	1146
Without base								

Power(kW)	NO.	W	H/H1	H2	D
90-110	F	320	992	962	356
132-200	F	480	1165	1125	385
220-315	G	700	1390	1350	408
350-630	G	940	1690	1650	458
With base					

Figure D shows the external and installation dimension of 3AC 660V (15~90kW) standard inverter. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A	B
15-37	D	280	650	601	333	190	631.5
45-90	D	320	808	754	356	230	780

3AC 660V (110—630kW) inverters have two models, standard model and nonstandard model. Standard model has no base, shown as figures D~E; nonstandard model has base, shown as figures F~G. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A/A1	A2	B
110-160	D	480	790	725	385	360	-	768
185-250	E	700	970	900	408	160	480	946
280-630	E	940	1140	1100	458	240	660	1146
Without base								

Power(kW)	NO.	W	H1	H2	D
110-160	F	480	1165	1125	385
185-250	G	700	1390	1350	408
280-630	G	940	1690	1650	458
With base					

KE200

Figures C~D show the external and installation dimension of 3AC 220V inverter. Please refer to the table for details.

Power(kW)	NO.	W	H1	H2	D	A	B
2.2-7.5	C	200	330	300	188.8	90	317
11-15	C	255	440	403	229	140	423.6
18.5-22	D	280	570	521	300	190	552
30-37	D	320	600	552	330	230	582
45-55	D	320	715	662	356	230	695.5
75	D	480	790	725	385	360	768

Figures C~D show the external and installation dimension of 3AC 380V (4~75kW) standard inverter. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A	B
4-5.5	C	150	280	253	206	90	266
7.5-15	C	200	330	300	210	90	317
18.5-30	C	255	440	403	247	140	423.6
37-45	D	280	570	521	320	190	552
55-75	D	320	600	552	337	230	582

3AC 380V (90~300kW) inverters have two models, standard model and nonstandard model. Standard model has no base, shown as figures D~E; nonstandard model has base, shown as figures F~G. Please refer to the table for details.

Power(kW)	NO.	W	H/H1	H2	D	A/A1	A2	B
90-110	D	320	715	662	356	230	-	695.5
132-200	D	480	790	725	385	360	-	768
220-300	E	700	970	900	408	160	480	946
Without base								

Power(kW)	NO.	W	H/H1	H2	D
90-110	F	320	992	962	356
132-200	F	480	1165	1125	385
220-300	G	700	1390	1350	408
With base