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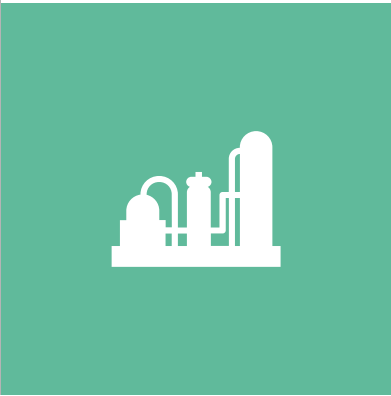
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PRODUCT CATALOGUE



■ About MICNO

Shenzhen MICNO Electric Co., Ltd. is a national high-tech enterprise, which specializes in R&D, manufacture, sale and service of electrical drive, industrial automation products. MICNO headquarters is located in Guangming District Shenzhen city, has modern office and professional factory. MICNO has been a public company of NEEQ in China in 2016, with stock code 839477.

MICNO masters the leading synchronization, asynchronization current vector control technology, torque control technology and solar pump driving technology, including the main products such as general purpose inverter, various kinds of inverters of special industries and solar pump inverter. The products cover 220V, 380V, 460V, 525V, 660V voltage level with 0.4kW --1.6MW power range, which are widely used in electric power, metallurgy, petroleum and chemical, mining,

textile and chemical fiber, printing and packaging, paper-making, machine tool, plastic, hoisting, solar agricultural irrigation 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 60 countries all over the world.

MICNO adheres to the enterprise core value of "Quality, Innovation, Integrity, Win-Win", dedicated to be the world famous 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.

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AE300 sensorless vector control inverter

AE300 incorporates perfectly the optimized asynchronous driving and years of experience; it is born for asynchronous driving motors! AE300 is built on TI's powerful DSP-based motor control chip, with the adoption of the sensorless current vector control (SVC) and open-loop torque control (TC). AE300 can be widely used for the asynchronous motor driving where better speed control and low-frequency torque are required.

S2 1AC 220V 0.4~11kW

T2 3AC 220V 0.4~200kW

T4 3AC 380V 0.75~1400kW

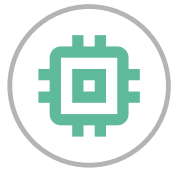
T6 3AC 660V 15~1600kW

Product feature

01

Excellent design and superb manufacturing process

With large design margin for key components and PCB;
Adopting industry-leading automatic spraying and strict automatic testing standards, making sure more stable and reliable products;
With optimized control algorithms and comprehensive protection functions, making more outstanding performance of the complete product.



02

Powerful hardware speed tracking

With powerful hardware speed tracking, easily responding to the applications with large inertia requiring quick start.



03

Accurate parameter identification

With an optimized motor parameter autotuning model, providing more precise identification.



04

Enhanced oscillation suppression

With enhanced oscillation suppression, equal to all applications of motor current oscillation with facility.



05

Fast current limiting

With fast current limiting function, easily responding to the conditions with sudden load, greatly reducing the probability of inverter's frequent over-current fault.



06

Dual PID switching

With dual PID switching function, adapting to varied complicated conditions with flexibility.



07

Original energy-saving mode

With an original energy-saving mode, when at a light load, reducing the output voltage automatically, making more efficient energy saving.



08

Optimized V/F separation

With optimized V/F separation function, easily meeting various demands of the power inverter industry.



09

Flux-weakening control

Flux-weakening control, the max. frequency could be up to 3000Hz, easy for the applications requiring high speed.



10

Powerful PC monitoring software

With various background monitoring functions, facilitating on-site data collection and commissioning;

Capable of batch parameters upload and download, and autogeneration of commissioning documents.



Application

AE300 is widely applicable to fan, water pump, air compressor, machine tool, winding, centrifuge, conveyor belt, mixer, ball mill, medium frequency power supply, woodworking machinery, petrochemical industry, plastic machinery, industrial washing, simple hoisting equipment, etc., which require better speed control and low-frequency torque for asynchronous motor driving.

Model description

AE300-5R5G / 7R5P-T4

Sensorless vector control inverter series

Power rating
5R5: 5.5kW
7R5: 7.5kW

G/P
G: Constant torque type
P: Variable torque type

Input voltage
S2: 1AC 220V
T2: 3AC 220V
T4: 3AC 380V
T6: 3AC 660V

Selection guide

Model	Motor		Rated Input Current (A)	Rated Output Current (A)
	kW	HP		
1AC 220~240V±15%				
AE300-0R4G-S2	0.4	0.5	5.4	2.3
AE300-0R7G-S2	0.75	1.0	8.2	4.0
AE300-1R5G-S2	1.5	2.0	14.0	7.0
AE300-2R2G-S2	2.2	3.0	23.0	9.6
AE300-004G-S2	4.0	5.0	25.0	15.0
AE300-5R5G-S2	5.5	7.5	38.0	23.0
AE300-7R5G-S2	7.5	10.0	50.0	32.0

3AC 220~240V±15%				
AE300-0R4G-T2	0.4	0.5	3.4	2.3
AE300-0R7G-T2	0.75	1.0	5.0	4.0
AE300-1R5G-T2	1.5	2.0	7.7	7.0
AE300-2R2G-T2	2.2	3.0	10.5	9.0
AE300-004G-T2	4.0	5	18	17
AE300-5R5G-T2	5.5	7.5	26	25
AE300-7R5G-T2	7.5	10	35	32
AE300-011G-T2	11	15	46.5	45
AE300-015G-T2	15	20	62.5	60
AE300-018G-T2	18.5	25	76	75
AE300-022G-T2	22	30	92	91
AE300-030G-T2	30	40	113	112
AE300-037G-T2	37	50	157	150
AE300-045G-T2	45	60	180	176
AE300-055G-T2	55	75	214	210
AE300-075G-T2	75	100	307	304
AE300-090G-T2	90	125	350	340

3AC 380~415V±15%				
AE300-0R7G/1R5P-T4	0.75/1.5	1/2	3.4/5.0	2.1/3.8
AE300-1R5G/2R2P-T4	1.5/2.2	2/3	5.0/6.8	3.8/6
AE300-2R2G/004P-T4	2.2/4.0	3/5	6.8/10	6/9
AE300-004G/5R5P-T4	4.0/5.5	5/7.5	10/15	9/13
AE300-5R5G/7R5P-T4	5.5/7.5	7.5/10	15/20	13/17
AE300-7R5G/011P-T4	7.5/11	10/15	20/26	17/25
AE300-011G/015P-T4	11/15	15/20	26/35	25/32
AE300-015G/018P-T4	15/18.5	20/25	35/38	32/37
AE300-018G/022P-T4	18.5/22	25/30	38/46	37/45
AE300-022G/030P-T4	22/30	30/40	46/62	45/60
AE300-030G/037P-T4	30/37	40/50	62/76	60/75
AE300-037G/045P-T4	37/45	50/60	76/90	75/90
AE300-045G/055P-T4	45/55	60/75	92/113	90/110

AE300-055G/075P-T4	55/75	75/100	112/157	110/150
AE300-075G/090P-T4	75/90	100/125	157/180	150/176
AE300-090G/110P-T4	90/110	125/150	180/214	176/210
AE300-110G/132P-T4	110/132	150/175	214/256	210/253
AE300-132G/160P-T4	132/160	175/210	256/307	253/304
AE300-160G/185P-T4	160/185	210/250	307/350	304/340
AE300-185G/200P-T4	185/200	250/260	350/385	340/377
AE300-200G/220P-T4	200/220	260/300	385/430	377/423
AE300-220G/250P-T4	220/250	300/330	430/468	423/465
AE300-250G/280P-T4	250/280	330/370	468/525	465/520
AE300-280G/315P-T4	280/315	370/420	525/590	520/585
AE300-315G/350P-T4	315/350	420/470	590/665	585/640
AE300-350G/400P-T4	350/400	470/530	665/785	640/720
AE300-400G/450P-T4	400/450	530/600	785/840	720/820
AE300-450G/500P-T4	450/500	600/660	840/880	820/900
AE300-500G/560P-T4	500/560	660/750	880/980	900/1000
AE300-560G/630P-T4	560/630	750/840	980/1130	1000/1100
AE300-630G/710P-T4	630/710	840/950	1130/1290	1100/1250
AE300-710G-T4	710	950	1290	1250
AE300-800G-T4	800	1070	1450	1400
AE300-900G-T4	900	1200	1630	1580
AE300-1000G-T4	1000	1330	1800	1750
AE300-1200G-T4	1200	1600	2160	2100
AE300-1400G-T4	1400	2120	2420	2350

3AC 660~690V±15%				
AE300-015G-T6	15	20	21	19
AE300-018G-T6	18	25	28	22
AE300-022G-T6	22	30	35	28
AE300-030G-T6	37	40	40	35
AE300-037G-T6	37	50	47	45
AE300-045G-T6	45	60	55	52
AE300-055G-T6	55	75	65	63

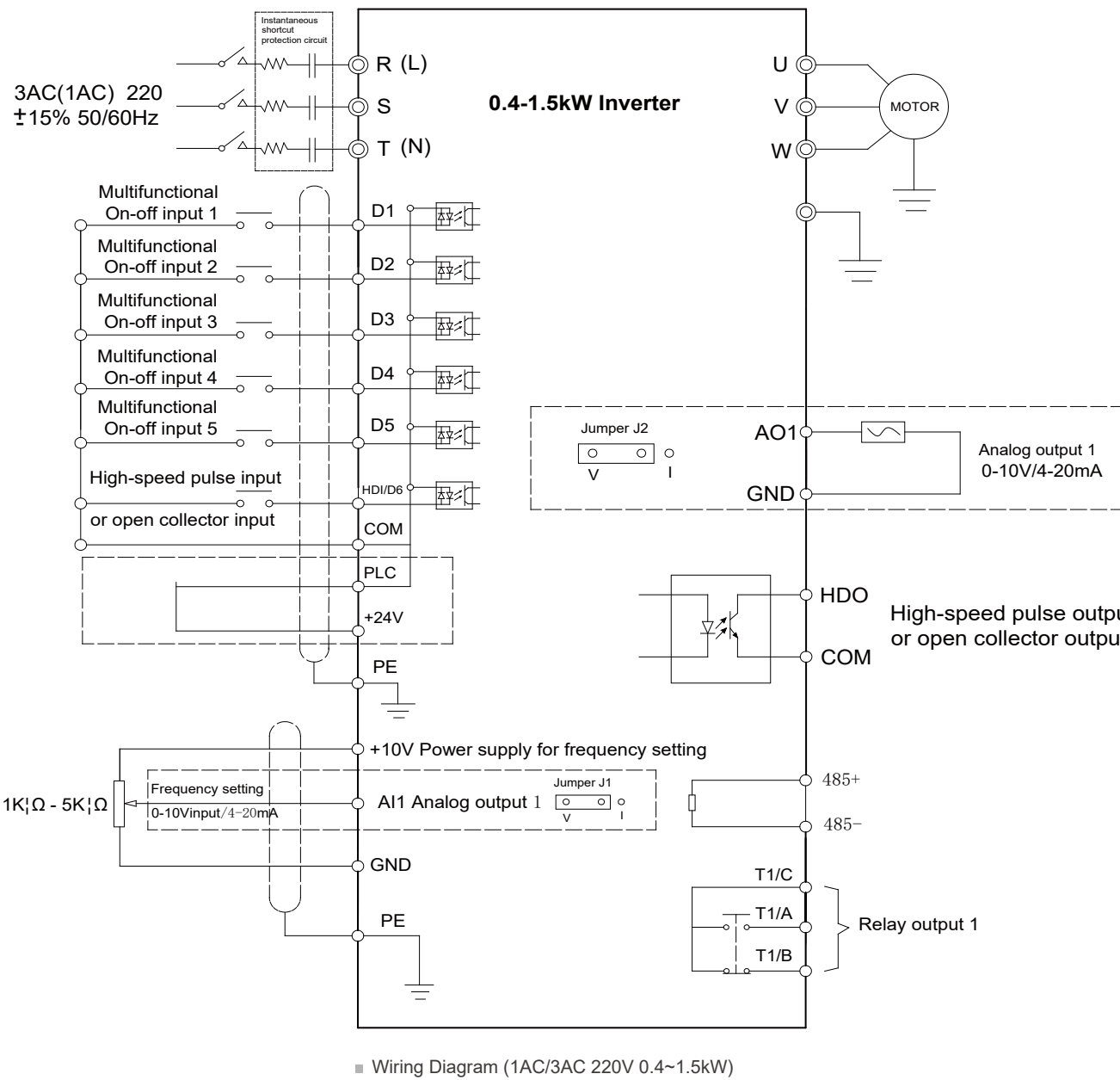
AE300-075G-T6	75	100	90	86
AE300-090G-T6	90	105	100	98
AE300-110G-T6	110	130	130	121
AE300-132G-T6	132	175	170	150
AE300-160G-T6	160	210	200	175
AE300-185G-T6	185	250	210	195
AE300-200G-T6	200	260	235	215
AE300-220G-T6	220	300	257	245
AE300-250G-T6	250	330	265	260
AE300-280G-T6	280	370	305	300
AE300-315G-T6	315	420	350	330
AE300-350G-T6	350	470	382	374
AE300-400G-T6	400	530	435	410
AE300-450G-T6	450	600	490	465
AE300-500G-T6	500	660	595	550
AE300-560G-T6	560	745	610	590
AE300-630G-T6	630	840	710	680
AE300-710G-T6	710	950	800	770
AE300-800G-T6	800	1050	900	865
AE300-900G-T6	900	1150	1000	970
AE300-1000G-T6	1000	1330	1120	1080
AE300-1200G-T6	1200	1600	1290	1280
AE300-1400G-T6	1400	1860	1510	1460
AE300-1600G-T6	1600	2130	1780	1720

Technical specifications

Item	Technical Index	Specification
Input	Input voltage	1AC/3AC 220V±15%, 3AC 380V±15%, 3AC 660V±15%
	Input frequency	47~63Hz
Output	Output voltage	0~rated input voltage
	Output frequency	V/f control: 0~3000Hz Sensorless vector control: 0~300Hz
Control Features	Control mode	V/f control Sensorless vector control 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 combined & 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%
	V/f curve	Three types: linear, multiple point and square type (1.2 power, 1.4 power, 1.6 power, 1.8 power, square)
	Acceleration/deceleration mode	Straight line/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	It can realize a maximum of 16 segments speed running via the built-in PLC or control terminal.
	Built-in 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

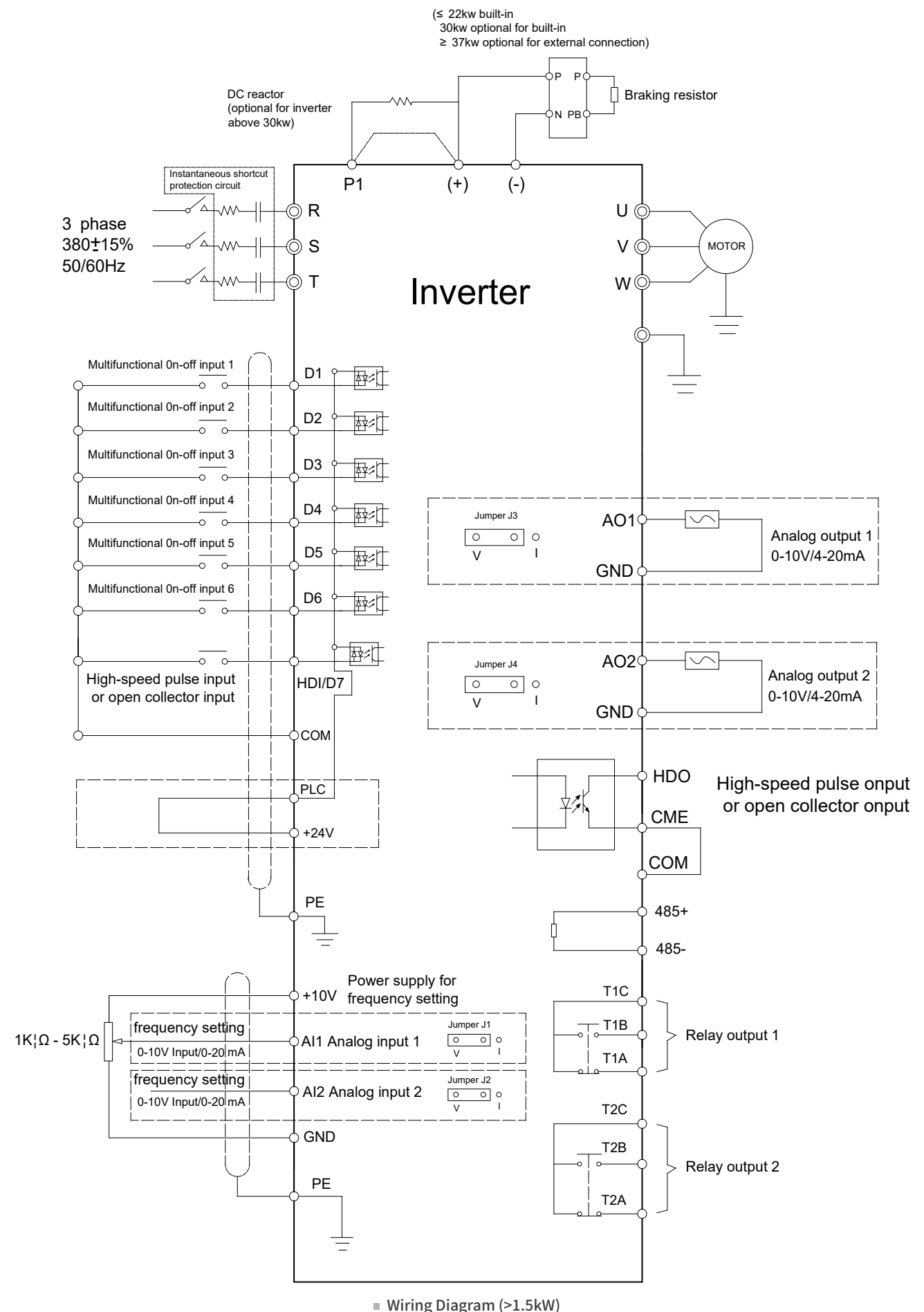
Control Function	Common DC bus	Common DC bus for several inverters, energy balanced automatically
	Torque control	Torque control without PG
	Torque limit	"Rooter" characteristics, limit the torque automatically and prevent frequent over-current tripping during the running process
	Wobble frequency control	Multiple triangular-wave frequency control, special for textile
	Timing/length/counting control	Timing/length/counting control function
	Over-voltage & over-current stall control	Limit current & voltage automatically during the running process, prevent frequent over-current & over-voltage tripping
Input/output terminals	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 automatic reset function
	Input terminals	Programmable DI: 7 on-off inputs, 1 high-speed pulse input 2 programmable AI: AI1: 0~10V or 0/4~20mA A12: 0~10V or 0/4~20mA
	Output terminals	1 programmable open collector output: 1 analog output (open collector output or high-speed pulse output) 2 relay output 2 analog output: 0/4~20mA or 0~10V
	Communication terminals	Offer RS485 communication interface, support MODBUS-RTU communication protocol
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
Environment	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℃

Wiring diagram



KE600A/KE600B

close-loop vector control inverter



KE600A, an all-round drive, integrates a variety of control modes: sensorless current vector control, close-loop current vector control, V/F control, and torque control. With a modular design, KE600A is more flexible in application, more powerful in function, and more stable in performance. With close-loop vector control, KE600A can maximize the control performance of any motor (asynchronous motor or synchronous motor).

KE600B, built-in position loop and servo positioning function, could be widely used in motor driving applications with a higher requirement on position control.

T2	3AC	220V	1.5~90kW
T4	3AC	380V	1.5~800kW
T6	3AC	660V	15~1000kW

Optional parts

MDC braking unit



01

MDC braking unit is used for converting the excess electric energy of the DC circuit of the inverter into the thermal energy of the braking resistor. The brake unit cannot be used alone; it must be used in conjunction with the braking resistor.

MICNO standard inverters of 30kW and below have a standard built-in braking unit; for 30kW inverter, the built-in braking unit is optional; for 37kW and above inverters, an external braking unit is required.

Model

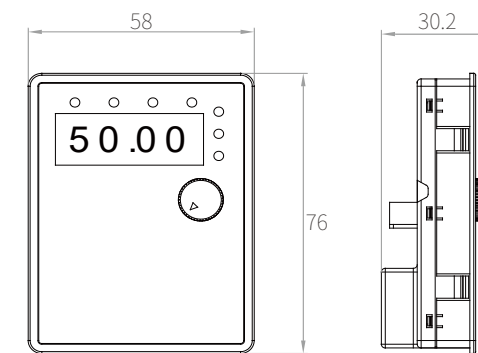
MDC-100-4

MDC-200-4

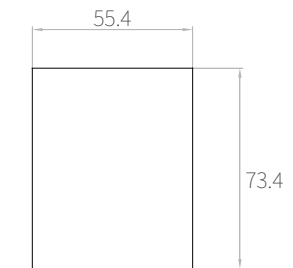
Keypad

01 LED keypad (standard part)

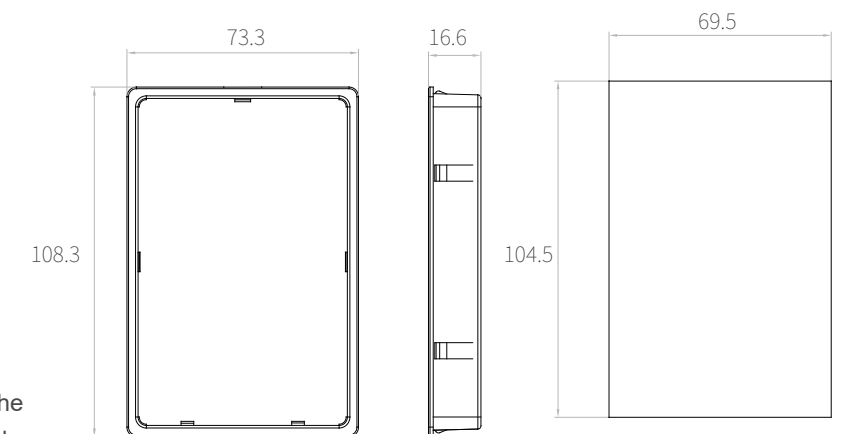
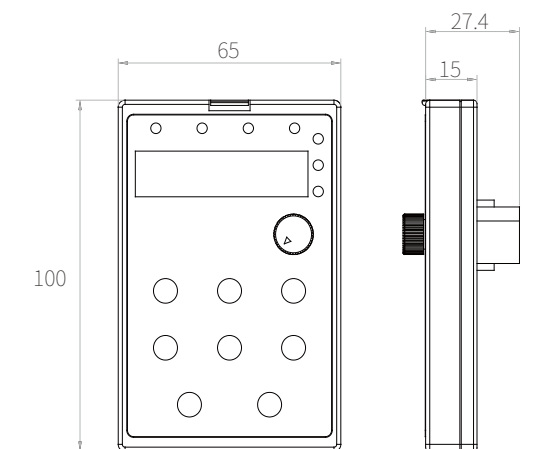
Illustration This keypad can be connected with the inverter externally by ordinary network cable, also can be mounted on the front side of panel directly. The suggested thickness of panel is 1.2mm.



■ Mini keypad dimension



■ Installation size on the panel while using this keypad



■ Standard keypad bracket dimension

■ Hole dimension of standard keypad bracket

Illustration

This keypad can be connected with the inverter externally by ordinary network cable, and it needs an additional bracket to fix it.