JT550
Технические характеристики

JT550

Series High Performance Vector Control Inverter

JT550 series inverter is a high-performance vector and torque control inverter. With the speed sensorless vector control technology and torque control technology that is synchronized with the current international leading technology, it not only has the same excellent control performance as the international high-end inverter but also further strengthens the reliability of the product and the adaptability of the environment. Its customized and industrialized design can better meet the needs of various transmission applications as well.

Features

■Industry-leading thermal simulation design

With the industry's advanced tools and technologies, scientifically conduct a comprehensive and efficient thermal simulation of products to ensure scientific and reasonable product design

■Independent Air Duct Design

The air duct is independently designed to effectively improve the heat dissipation efficiency; at the same time, it can effectively prevent foreign objects from entering the inverter and causing short circuits and other faults.

■High precision of stable speed and wide range of speed regulation

Precision of stable speed: ±0.5%（SVC）、±0.2%（FVC）
Speed range: 1:100（SVC）、1:1000（FVC）
Overload capacity: 150% rated current for 60s;
180% rated current for 3s

·zero-speed start

Super-short acceleration time, the acceleration time can be automatically adjusted according to the drive, and can reach the rated speed within 0.2s and run stably

·Speed Tracking Restart
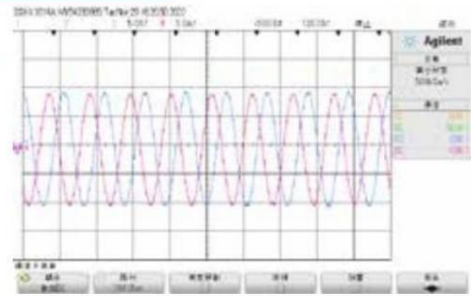
The device can be restarted by speed tracking when the motor is still at the initial speed and can realize non-disturbance start at any speed. This method avoids the dissipation of motor energy, simplifies the process, and saves energy.

·Non-stop function

If there is a sudden power failure, the device will not stop. The bus voltage threshold can be preset. If low bus voltage is detected, it can be kept constant by reducing speed and generating power to ensure that the device does not stall and report an error. After the power supply returns to normal, the device can continue to operate.

Full protection

•Three-proof paint automatic spraying process

Environmentally friendly and high-quality three-proof paint is used to strengthen the product's tolerance to the environment; the automatic spraying process ensures that the printed circuit board is sprayed evenly.

■ Perfect protection

Output-to-ground short-circuit protection, over-current protection, inverter overload protection, motor overload protection, inverter over-temperature protection, etc.

Item		Specification	
Standard functions	Maximum frequency	320Hz	
	Carrier frequency	0.5kHz~16.0kHz The carrier frequency is automatically adjusted based on the temperature	
	Input frequency resolution	Digital setting:0.01Hz Analog setting:maximum frequency*0.025%	
	Control mode	Voltage/Frequency(V/F) control SVC: Sensorless Vector Control FVC: Feedback Vector Control	
	Startup torque	G type: 0.5Hz/150% (SVC); 0Hz/180% (FVC) P type: 0.5Hz/100%	
	Speed range	1:100(SVC)	1:1000(FVC)
	Speed stability accuracy	±0.5%(SVC)	±0.02%(FVC)
	Torque control accuracy	FVC: ±3%; SVC: ±5% above 5Hz	
	Overload capacity	G type: 60s for 150% of rated current and 3s for 180% of rated current P type: 60s for 120% of rated current and 3s for 150% of rated current	
	Torque boost	Automatic torque boost Manual torque boost 0.1%~30.0%	
	V/F curve	Straight-line V/F curve Multi-point V/F curve N^h power V/F curve (1.2 power, 1.4 power, 1.6 power, 1.8 power, 2 power)	
	Ramp mode	Straight-line ramp S-curve ramp Four groups of acceleration/deceleration time with the range of 0.0-6500.0s	
	DC braking	DC braking frequency: 0.00Hz to max.frequency Braking time: 0.0-100.0s Braking action current value: 0.0%~100.0%	
	JOG control	JOG frequency range: 0.00-50.00 Hz JOG acceleration/deceleration time: 0.0-6500.0s	
	Simple PLC, multiply speed running	The system implements up to 16 speeds by using simple PLC function or by using digital input signals.	
	Onboard PID	It implements the closed-loop process control system easily.	
	Auto voltage regulation (AVR)	The system maintains a constant output voltage automatically when the grid voltage changes through the permissible range.	
	Over-voltage& Over-current stall control	The current and voltage are limited automatically during the running process so as to avoid frequent tripping due to over-voltage and over-current.	
	Rapid current limit	It decreases the over-current faults to the minimum and ensures normal running of the AC drive.	
	Torque limit and control	In speed control mode, the torque is automatically limited (can be set) to prevent frequent over-current trips; in vector control mode, torque control can be realized.	

Individualized functions	High performance	Realize asynchronous motor control with high-performance current vector control technology
	Power dip ride-through	In the case of instantaneous power failure, the load feedback energy is used to compensate for the drop in voltage, and to maintain the inverter to continue running in a short time
	Timing control	Time range: 0.0-6500.0 minutes
	RS-485 bus support	Modbus-RTU protocol
Running	Running command source	Operation panel control Terminal control Communication control Allows different methods of switching between command sources:
	Frequency setting channel	Digital setting, analog voltage setting, analog current setting, pulse setting, serial port setting. Allows different methods of switching.
	Auxiliary frequency setting channel	Digital setting, analog voltage setting, analog current setting, pulse setting, serial port setting. Auxiliary frequency fine-tuning and frequency synthesis can be flexibly realized.
	Input terminals	5 digital input (DI) terminals, X5 supports up to 100 kHz high-speed pulse input; 2 analog input (AI) terminals, AH & AI2 support 0-10V voltage input or 0~20mA current input.
	Output terminals	1 high-speed pulse output terminal, supporting 0~100kHz high-speed pulse output 1 digital output terminal; 2 relay output terminals 2 analog output terminals, support 0~20mA current output or 0-10V voltage output
Display & operate panel	LED display	Display parameters (three display modes: Basic mode, Quick menu mode, Non-factory value mode).
	Protection function	Power-on motor short circuit detection, input and output phase loss protection, over-current protection, over-voltage protection, under-voltage protection, overheat protection, overload protection, etc.
	Optional parts	Braking unit, IO expansion card, RS485 communication card, differential input PG card, OC input PG card, sin/cos PG card
Environment	Installation location	Indoor, free from direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapour, drip or salt.
	Altitude	Lower than 1000 m (Derate if higher than 1000 m, for every 100m rise, the rated output current will be reduced by 1 %)
	Ambient temperature	-10°C to +40°C (Derate if the ambient temperature is between 40°C and 50°C, for every 1°C increase, the rated output current will be reduced by 1%).
	Humidity	Less than 95%RH, without condensing
	Vibration	Less than 5.9 m/s2 (0.6 g)
	Storage temperature	—20°C~+60°C

Model Description ◄

JT550 - T3 - 011G / 015P B	
® @ ③ @ ®	
(D Inverter series	(3) Heavy Load011:11 kW
(?) Voltage Class:	S2: AC Single-phase 220V	® Light load015:15kW
	T3: AC Three-phase 380V	® With Built-in Braking Unit: B: Yes Blank: No

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Technical Parameters

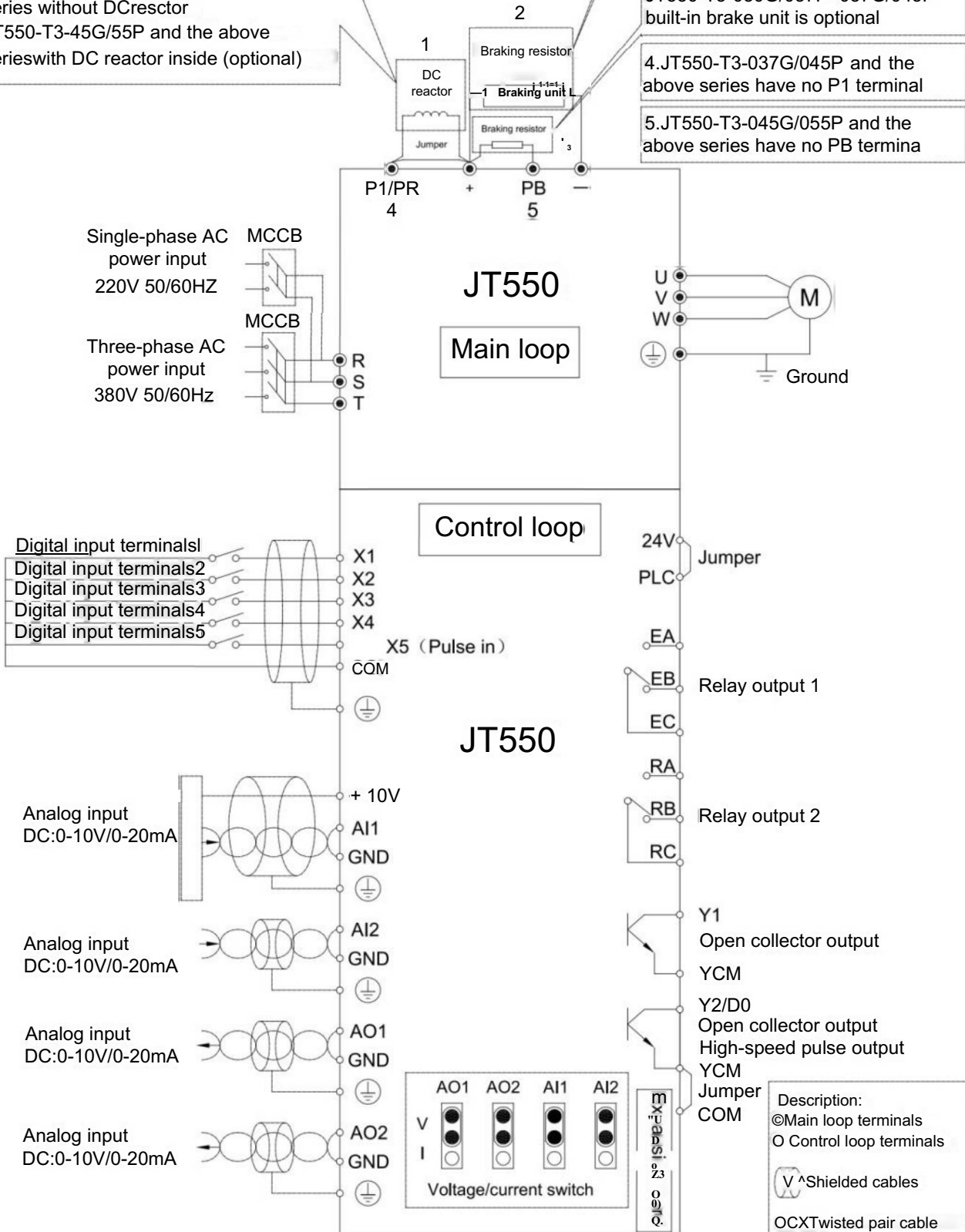| Product Model	Power Capacity kVA	Input Current A	Output Current A	Motor (kW)	(HP)
Three-phase: 380V. 50/60Hz					
JT550-T3-0R7G/1R5PB	1.5	3.4	2.1	0.75	1
JT550-T3-1R5G/2R2PB	3	5	3.8	1.5	2
JT550-T3-2R2G/4R0PB	4	5.8	5.1	2.2	3
JT550-T3-4R0G/5R5PB	5.9	10.5	9	3.7	5
JT550-T3-5R5G/7R5PB	8.9	14.6	13	5.5	7.5
JT550-T3-7R5G/011PB	11	20.5	17	7.5	10
JT550-T3-011G/015PB	17	26	25	11	15
JT550-T3-015G/018PB	21	35	32	15	20
JT550-T3-018G/022PB	24	38.5	37	18.5	25
JT550-T3-022G/030PB	30	46.5	45	22	30
JT550-T3-030G/037P	40	62	60	30	40
JT550-T3-037G/045P	57	76	75	37	50
JT550-T3-045G/055P	69	92	91	45	60
JT550-T3-055G/075P	85	113	112	55	75
JT550-T3-075G/090P	114	157	150	75	100
JT550-T3-090G/110P	134	180	176	90	125
JT550-T3-110G/132P	160	214	210	110	150
JT550-T3-160G/200P	231	307	304	160	210
JT550-T3-200G/220P	250	385	377	200	270
JT550-T3-220G/250P	280	430	426	220	300
JT550-T3-250G/280P	355	468	465	250	335
JT550-T3-280G/315P	396	525	520	280	380
JT550-T3-315G/355P	445	590	585	315	420
JT550-T3-355G/400P	500	665	650	355	470
JT550-T3-400G/450P	565	785	725	400	530
JT550-T3-450G	630	883	820	450	600
JT550-T3-500G	766	838	900	500	670
JT550-T3-560G	868	950	1020	560	750
JT550-T3-630G	957	1043	1120	630	840
JT550-T3-710G	1071	1171	1260	710	950

1. JT550-T3-045G/055P-132G/160P
The jumper bar across terminals P1
and (+) must be removed when DC
 reactor is outside
Notes:
JT550-T3-037G/45P and the below
series without DCresctor
JT550-T3-45G/55P and the above
serieswith DC reactor inside (optional)

2. JT550-T3-045G/055P-710G
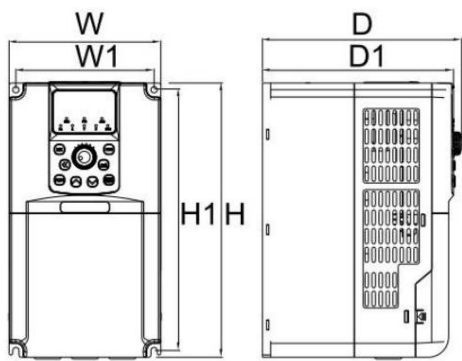need to connect with braking unit
and beaking resistor outside

3. JT550-T3-0R4G-022G/030PB
with braking unit inside,just need to
connect with braking resistor
JT550-T3-030G/037P~037G/045P
built-in brake unit is optional

4. JT550-T3-037G/045P and the
above series have no P1 terminal

5. JT550-T3-045G/055P and the
above series have no PB termina

1
DC reactor
Jumper

2
Braking resistor
Braking unit L
Braking resistor

P1/PR 4   +   PB 5   —

JT550
Main loop

Single-phase AC power input 220V 50/60HZ   MCCB

Three-phase AC power input 380V 50/60Hz   MCCB   R S T

U V W   M

Ground

Control loop

Digital input terminalsl   X1
Digital input terminals2   X2
Digital input terminals3   X3
Digital input terminals4   X4
Digital input terminals5   X5（Pulse in）
COM

24V   Jumper
PLC

EA
EB   Relay output 1
EC

RA
RB   Relay output 2
RC

JT550

Analog input DC:0-10V/0-20mA   + 10V
AI1
GND

Analog input DC:0-10V/0-20mA   AI2
GND

Analog input DC:0-10V/0-20mA   AO1
GND

Analog input DC:0-10V/0-20mA   AO2
GND

Y1
Open collector output
YCM

Y2/D0
Open collector output
High-speed pulse output
YCM
Jumper
COM

AO1	AO2	AI1	AI2
V			
I			

Voltage/current switch

Description:
©Main loop terminals
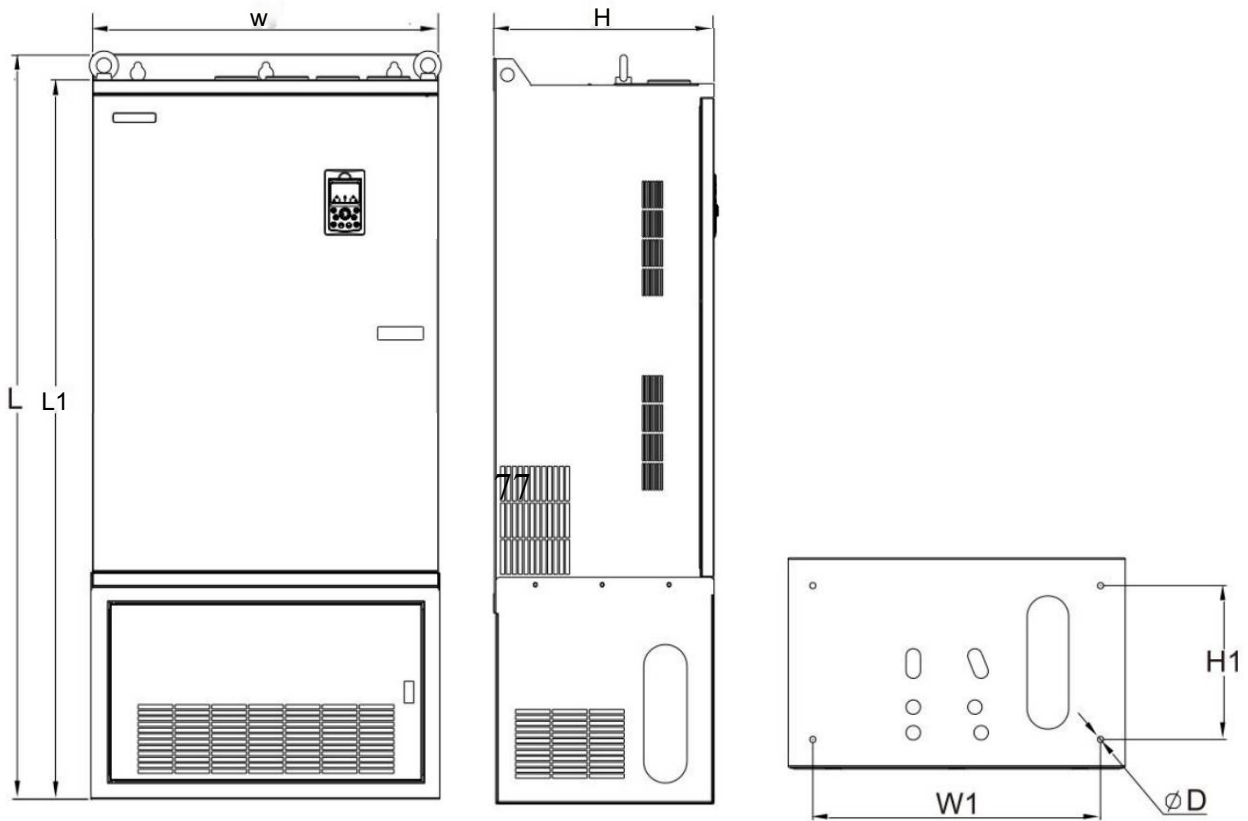O Control loop terminals

V ^Shielded cables

OCXTwisted pair cable

Installation Dimensions of
Plastic Case Inverter

Installation Dimensions of
Metal Case Inverter

Model	Dimensions(mm)		Mounting Holes Position(mm)				Diameter of Mounting Holes
	W1	H1	H	W	D1	D	
JT550-S2-0R7GB	71.5	121.5	132	80	105.5	114.6	<p4.5
JT550-S2-1R5GB							
JT550-S2-2R2GB	88.4	168.4	180	100	152	159	<p5.5
JT550-T3-0R7G/1R5PB							
JT550-T3-1R5G/2R2PB							
JT550-T3-2R2G/4R0PB							
JT550-T3-4R0G/5R5PB	118.4	224.5	236	130	163.5	170.5	<p5.5
JT550-T3-5R5G/7R5PB							
JT550-T3-7R5G/011 PB	141	243	260	155	175	182	97
JT550-T3-011G/015PB							
JT550-T3-015G/018PB	190	273.5	291.5	197	175	182	<p6
JT550-T3-018G/022PB							
JT550-T3-022G/030PB							
JT550-T3-030G/037P	220	392	405	253	180	187	cp7
JT550-T3-037G/045P							
JT550-T3-045G/055P	260	555	575	340	250	259	cp10
JT550-T3-055G/075P							
JT550-T3-075G/090P	260	590	610	410	270	279	cp10
JT550-T3-090G/110P							
JT550-T3-110G/132P	320	690	720	455	325	334	cp12
JT550-T3-132G/160P							
JT550-T3-160G/185P							
JT550-T3-200G/220P	360	845	880	053	367	376	(p14
JT550-T3-220G/250P							
JT550-T3-250G/280P	480	1005	1040	650	411	420	<p14
JT550-T3-280G/315P							
JT550-T3-315G/355P	600	1252	1300	815	427	436	<p14
JT550-T3-355G/400P							
JT550-T3-400G/450P							
JT550-T3-450G							

Model	Dimensions(mm)				Mounting Holes Position(mrn)		Diameter of Mounting Holes
	H	W	L	L1	H1	W1	
JT550-T3-045G/055P	249	340	850	810	180	280	cp12
JT550-T3-055G/075P							
JT550-T3-075G/090P	265	416	880	840	190	350	<p10
JT550-T3-090G/110P							
JT550-T3-110G/132P	327	461	980	935	220	380	cp12
JT550-T3-132G/160P							
JT550-T3-160G/185P							
JT550-T3-200G/220P	367	536	1190	1142	290	460	<p12
JT550-T3-220G/250P							
JT550-T3-250G/280P	412	656	1400	1354	300	560	<p12
JT550-T3-280G/315P							
JT550-T3-315G/400P	428	815	1757	1702	300	730	<p12
JT550-T3-400G/450P							
JT550-T3-450G							
JT550-T3-500G	600	1150	1900	/	480	1050	<p18
JT550-T3-560G							
JT550-T3-630G	600	1310	2208	/	480	1210	<p18
JT550-T3-710G							

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Expansion card selection

Model	Suitable for	Name	Function Description	Picture
A00E01	All	485 communication card	Expand RS485 interface, support MODBUS communication protocol, inverter is a slave	
A00E02	All	OC output PG card	Corresponding to OC output encoders	
A00E05	All	I/O expansion card	Expand 5 digital inputs, support sink and source wiring methods, support external power supply	
A00E08	All	Resolver PG Card	Resolver Expansion Card	
A00E12	All	Injection molding machine current adapter card	Support proportional pressure and proportional flow input, support input signal 0-1 A, 0-2A, support one-key touch screen parameter setting	
A00E13	All	485+3I expansion card	Expand RS485 interface, support MODBUS communication protocol, inverter is a slave, expand 3 digital inputs	
A00E15	All	485+differential output expansion card	Corresponding to differential output encoder, 485 communication	
A00E18	All	Dual PT100 motor temperature acquisition card	Collect motor temperature	
A00E19	All	Rotary Encoder Expansion Card	Resolver Expansion Card	
A00E20	All	485+3DI expansion card	Expand RS485 interface, support MODBUS communication protocol, inverter is a slave, expand 3 digital inputs	