- Induction Heating
- Industrial Automation
- Photovoltaic energy storage

Canroon

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CV900N High Performance Vector Frequency Inverter

Intelligent Age, Drive The Future

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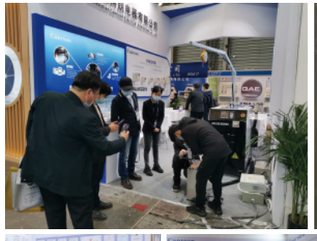
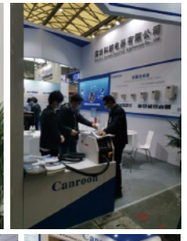
About Canroon

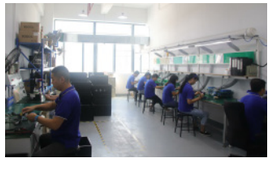
Canroon is a leading provider of power electronics products and solutions. We focus on the field of power electronics. Our products include induction heating machine, industrial automation and photovoltaic energy storage.

Canroon has a strong product R&D and engineering team. We are committed to transforming wisdom into leading products and services to meet the needs of different customers and continuously create value for customers. With our comprehensive advantages in the field of power electronics, we strive to become the industry leader.

Canroon always adheres to the concept of "co-create, co-share", and uses continuous innovation as a means to bring more reliable products and better solutions to users, and make human and nature more harmonious.







Enterprise Qualification

High tech enterprise certificate

ISO9001 quality certification

IP authentication

CE certification

Software registration certificate

Appearance Patent Certificate

Utility model patent certificate

Catalogue

CV900N

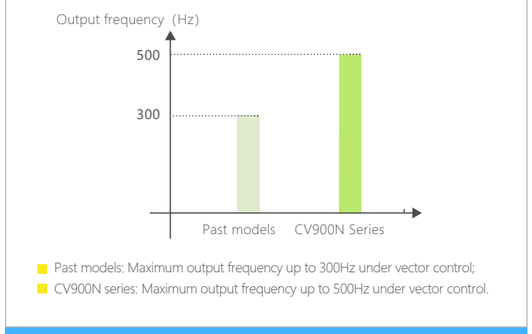
High Performance Vector Frequency Inverter

CV900N high-performance vector frequency inverter adopts advanced vector frequency conversion control technology, which has large torque at low frequency, fast dynamic torque response and high speed stability accuracy. With high-performance current vector technology, it can easily drive and control motors.

With years of technical precipitation, Canroon frequency inverter can easily solve technical and performance problems encountered in machine tools, petrochemical industry, lifting equipment, natural gas, pulp and paper, ceramics, plastic machinery and other industry equipment.

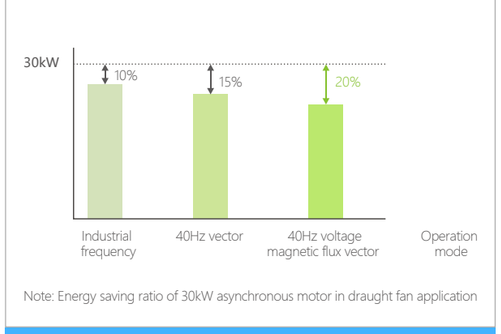
High performance, high quality, high power density design, as well as significant improvements in easy of use, maintainability, environmental protection, installation space and design standards, can further optimize the user experience.

Excellent Performance



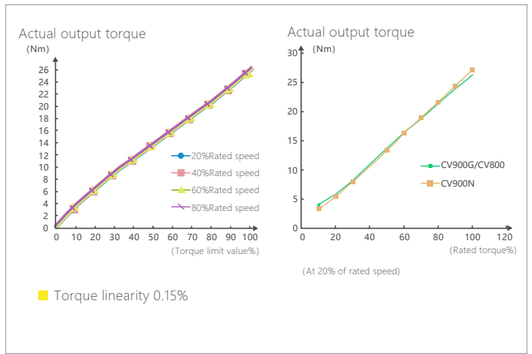
High performance vector control, improve precision control

The maximum output frequency under vector control is 500Hz, which can realize the high-precision speed output within the range of 10 times weak magnetic speed regulation.



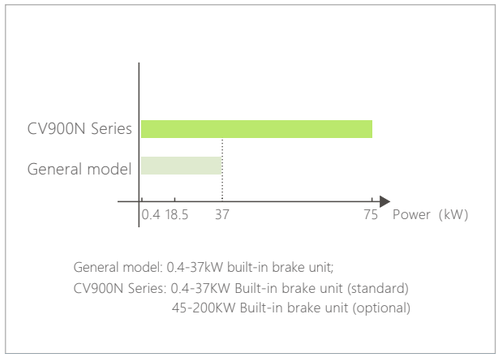
Smart Energy Saving Function

Through the voltage magnetic flux vector algorithm, the closed-loop control of the output voltage is realized; when the motor torque requirement is low, the excitation current is reduced according to the load current; the motor efficiency is maximized; the motor loss and energy loss are reduced.



Low speed large torque, stable control at low speed

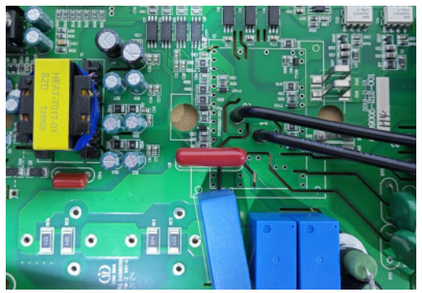
The torque output is stable, the low frequency torque is large, and it can realize the stable load running at an ultra-low speed of 0.01Hz.



Built-in brake unit

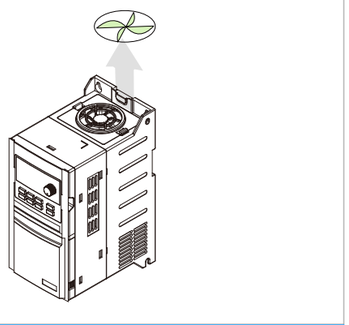
0.4kW~37kW (G) built-in brake unit; Strong braking ability: short-time braking ability can reach 1.1~1.4 times the rated power of the inverter;Brake protection is more comprehensive and intelligent: it has brake resistor short circuit protection, brake circuit overcurrent protection, braking pipe overload protection, braking pipe straight-through detection, etc.

Stable&Reliable



Refined design, stronger and more durable

The modular design of the hardware circuit ensures the stable and efficient operation of the circuit; Selected high-quality components and refined design ensure the entire product life cycle healthy and stability; the automatic spraying process of conformal coating increases the board environmental resistance and comprehensively improves the board protection ability.

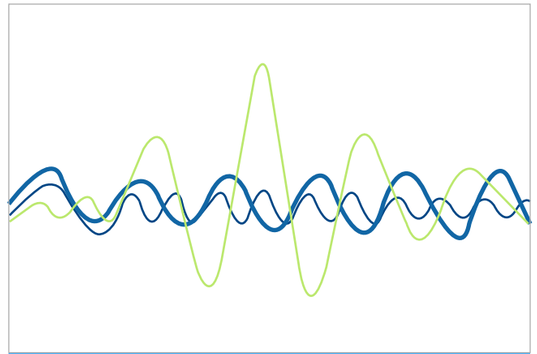


Independent air duct design, stronger anti-pollution ability

Structure adopts independent air duct design, free disassembly, can effectively prevent dust into the inverter, avoid short circuit and other faults, improve reliability;The cooling fan with long life and large air volume is selected to effectively reduce the inverter temperature rise and ensure the reliable and stable running of the inverter.

International certification, global support

Higher safety and certification, CE, ISO9001:2015 certification, etc., meet the high-end users equipment export certification requirement.



Wide voltage design in line with international standards

Meet the needs of 380-480V three-phase power grids include Europe, North America, India, etc.

Wide Range Applications

More than 80,000 units are sold each year and more than 300,000 are in running in the market.

In China, the United States, Germany, Brazil, India, Vietnam, the Middle East and other dozens of countries around the world, more than 300,000 units have been operating in various industries, driving global industrial development.

Machine tools

Petrochemical industry

Hoisting Machinery

Natural gas

Ceramics

Plastic machinery

Model Selection

Naming Rules

CV900N - 007 G -1 4 T B

① ② ③ ④ ⑤ ⑥ ⑦

①	Product series	CV900N (Inverter series)
②	Model power	00A：0.4KW~750：750KW
③	Load type	G：Constant torque
④	Output	1：3-phase
		2：1-phase
⑤	Voltage level	1：110V
		2：220V
		4：380V
⑥	Input	S：1-phase
		T：3-phase
⑦	Cooling mode	B：Air cooling (Equipped with built-in brake unit)
		F：Air cooling(No built-in brake unit)

Technical Index and Specification

Specification model	Rated Power (KW)	Rated output current (A)
1-phase 220V 50/60Hz		
CV900N-00AG-12SB	0.4	2.4
CV900N-00BG-12SB	0.75	4.5
CV900N-001G-12SB	1.5	7
CV900N-002G-12SB	2.2	10
CV900N-003G-12SB	3	13
CV900N-004G-12SB	3.7	16
CV900N-005G-12SB	5.5	20
CV900N-007G-12SB	7.5	30
CV900N-011G-12SB	11	42

Specification model	Rated Power (KW)	Rated output current (A)
3-phase 380V 50/60Hz		
CV900N-00BG-14TB	0.75	2.5
CV900N-001G-14TB	1.5	3.7
CV900N-002G-14TB	2.2	5
CV900N-003G-14TB	3	6.8
CV900N-004G-14TB	3.7	9
CV900N-005G-14TB	5.5	13
CV900N-007G-14TB	7.5	17
CV900N-011G-14TB	11	25
CV900N-015G-14TB	15	32
CV900N-018G-14TB	18.5	37
CV900N-022G-14TB	22	45
CV900N-030G-14TB	30	60
CV900N-037G-14TB	37	75

Specification model	Rated Power (KW)	Rated output current (A)
3-phase 380V 50/60Hz		
CV900N-045G-14TF	45	90
CV900N-055G-14TF	55	110
CV900N-075G-14TF	75	150
CV900N-090G-14TF	90	176
CV900N-110G-14TF	110	210
CV900N-132G-14TF	132	253
CV900N-160G-14TF	160	300
CV900N-185G-14TF	185	340
CV900N-200G-14TF	200	380
CV900N-220G-14TF	220	420
CV900N-250G-14TF	250	470
CV900N-280G-14TF	280	520
CV900N-315G-14TF	315	600
CV900N-355G-14TF	355	640
CV900N-400G-14TF	400	750
CV900N-450G-14TF	450	830
CV900N-500G-14TF	500	930
CV900N-630G-14TF	630	1150
CV900N-750G-14TF	750	1360

Structure and Dimensions

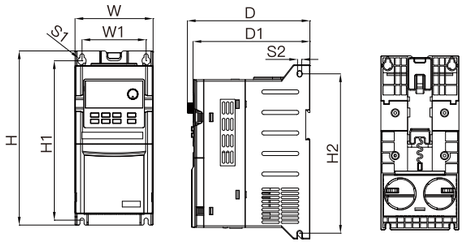


Figure 1: CV900N-00AG-12SB ~ 005G-14TB

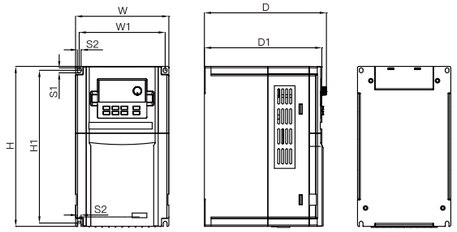


Figure 2: CV900N-004G-12SB ~ 011G-14TB

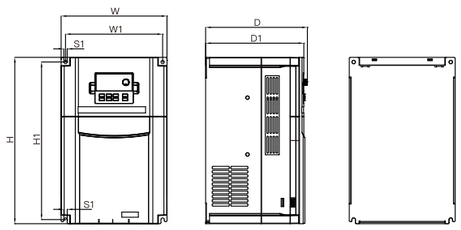


Figure 3: CV900N-007G-12SB ~ 022G-14TB

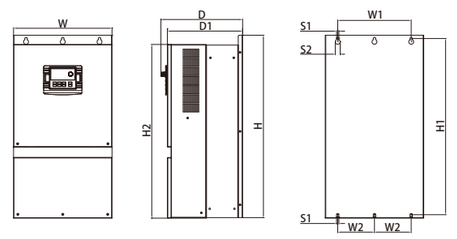


Figure 4: CV900N-030G-14TB ~ 160G-14TF

Specification model	Overall dimensions (mm)				Installation hole position (mm)			Installation hole diameter (mm)		Figure
	W (mm)	H (mm)	D (mm)	D1 (mm)	W1 (mm)	H1 (mm)	H2 (mm)	S1 (mm)	S2 (mm)	
CV900N-00AG-12SB	95	212	149	142	78	194	194	Ø10	Ø5	1
CV900N-00BG-12SB										
CV900N-001G-12SB										
CV900N-002G-12SB										
CV900N-003G-12SB										
CV900N-00BG-14TB										
CV900N-001G-14TB										
CV900N-002G-14TB										
CV900N-003G-14TB										
CV900N-004G-14TB										
CV900N-005G-14TB										
CV900N-004G-12SB	140	240	183	176	129	229	/	Ø8	Ø6	2
CV900N-005G-12SB										
CV900N-007G-14TB										
CV900N-011G-14TB										

Specification model	Overall dimensions (mm)					Installation hole position (mm)			Installation hole diameter (mm)		Figure
	W (mm)	H (mm)	D (mm)	D1 (mm)	H2 (mm)	W1 (mm)	W2 (mm)	H1 (mm)	S1 (mm)	S2 (mm)	
CV900N-007G-12SB	205	322	197	190	/	188	/	305	Ø7	/	3
CV900N-011G-12SB											
CV900N-015G-14TB											
CV900N-018G-14TB											
CV900N-022G-14TB											
CV900N-030G-14TB	270	463	223.9	206.3	437.7	201.5	/	444.5	Ø6.5	Ø13.5	4
CV900N-037G-14TB											
CV900N-045G-14TF	320	522	257.6	240	489	200	100	499	Ø9	Ø16.5	
CV900N-055G-14TF											
CV900N-075G-14TF	340	720	305.6	288	663	260	130	700.5	Ø9	Ø16.5	
CV900N-090G-14TF											
CV900N-110G-14TF											
CV900N-132G-14TF	380	720	305.6	288	663	260	130	700.5	Ø9	Ø16.5	
CV900N-160G-14TF											

Structure and Dimensions

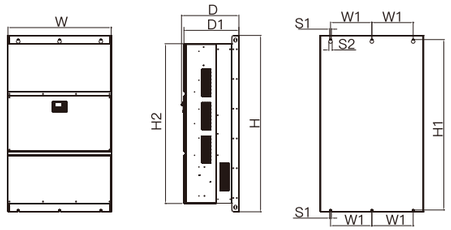


Figure 5：CV900N-185G ~ 500G-14TF

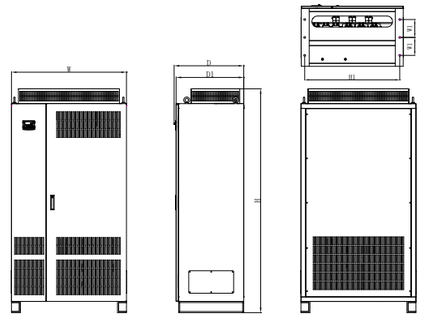


Figure 6：CV900N-630G ~ 750G-14TF

Specification model	Overall dimensions (mm)					Installation hole position (mm)			Installation hole diameter (mm)		Figure
	W (mm)	H (mm)	D (mm)	D1 (mm)	H2 (mm)	W1 (mm)	W2 (mm)	H1 (mm)	S1 (mm)	S2 (mm)	
CV900N-185G-14TF	470	830	347.1	329.5	743	343	171.5	791	Ø11	Ø24	5
CV900N-200G-14TF											
CV900N-220G-14TF											
CV900N-250G-14TF	540	1060	416.6	399	970	420	210	1031.5	Ø13	Ø26	
CV900N-280G-14TF											
CV900N-315G-14TF											
CV900N-355G-14TF	650	1090	416.6	399	1000	420	210	1061.5	Ø13	Ø26	
CV900N-400G-14TF											
CV900N-450G-14TF	750	1280	416.6	399	1160	600	300	1237	Ø13	Ø26	
CV900N-500G-14TF											
CV900N-630G-14TF	1024.5	1862	619.4	602.5	/	180	/	954.5	Ø18	/	6
CV900N-750G-14TF											

Optional Accessories

LCD keyboard

Keyboard base

Keyboard connector

Brake unit

Input/output filter

Brake resistor

Input and output reactor

Technical Parameter

Functional description			Specification index
Input	Rated Voltage,Frequency		3-phase (4T) AC 380V, 47-63Hz; 1-phase (2S) AC 220V, 47-63 Hz
Input	Allowed Voltage Range		3-phase (4T) AC 320V～480V; 1-phase (2S) AC 160V～260V
Output	Voltage		14T，0～480V；12S，0～260V
Output	Frequency		Vector control: 0~500Hz V/F control: 0~500Hz
Output	Overload Capacity		150% rated current 60s, 180% rated current 5s; 195% rated current 0.5s
Control Mode			V/F control, speed-sensor-less vector control (SVC)
Control Character	Frequency Setting Resolution	Analog Input	Maximum frequency X0.025%
Control Character	Frequency Setting Resolution	Digital Setting	0.01Hz
Control Character	V/F Control	V/F Curve(voltage frequency character)	Three types: linear type; multi-point type; Nth power type V/F curve (to the power of 1.2, 1.4,1.6,1.8,2)
Control Character	V/F Control	V/F separation	2 types: full separation, half separation
Control Character	V/F Control	Torque Compensation	Manual setting: 0.0~30% of rated output Automatic compensation: according to output current and motor parameter
Control Character	V/F Control	Automatic Currentlimiting and Voltage-limiting	During acceleration, deceleration or steady running, detect automatically the current and voltage of motor stator, and control it within bounds based on unique algorithm, minimize fault-trip chanc
Control Character	Senseless Vector Control	Voltage Frequency Character	Adjust pressure/frequency ratio according to motor parameter and unique algorithm
Control Character	Senseless Vector Control	Torque Character	Starting torque:150% rated torque at 1.0Hz (VF control) 150% rated torque at 0.25Hz (SVC) Running speed steady-state accuracy: ≤±0.2% of rated synchronous speed Speed fluctuation: ≤±0.5% rated synchronous speed Torque response: ≤20ms (SVC)
Control Character	Senseless Vector Control	Motor Parameter Self-measurement	Being able to detect parameter automatically under static state and dynamic state of motor, thus guarantee an optimum control.
Control Character	Senseless Vector Control	Current and Voltage Restrain	Current closed-loop control, free from current impact, perfect restrain function of overcurrent and overvoltage
Control Character	Undervoltage Restrain during Running		Specially for users with a low or unsteady voltage power grid: even lower than the allowable voltage range, the system can maintain the longest possible operating time based on its unique algorithm and residual energy allocation strategy
Typical Function	Multi-velocity and Traverse Operation		16 segments programmable multi-velocity control, multiple operation mode. Traverse operation: preset frequency and center frequency adjustable, parameter memory and recovery after power cut.
Typical Function	PID Control RS485 Communication		Built-in PID controller (frequency can be preset) Standard RS485 communication function
Typical Function	Frequency Setting	Analog Input	Direct voltage 0~10V, direct current 0~20mA (optional up limit and lower limit)
Typical Function	Frequency Setting	Digital Input	Operation panel setting, RS485 port setting, UP/DOWN terminal control, or combined with analog input
Typical Function	Output Signal	Digital Output	2-way Y terminal open collector output and 2-way programmable relay output (TA, TB, TC), up to 44 kinds of meaning options
Typical Function	Output Signal	Analog Output	2 channel analog signal output, output ranging within 0~20mA or 0~10V with flexibly setting, achievable output of physical quantities like set frequency, output frequency
Typical Function	Automatic Steady voltage Operation		Dynamic steady state, static steady state, and unsteady voltage for choices to obtain the steadiest operation
Typical Function	Acceleration and Deceleration Time Setting		0.0s～65000.0s can be set continuously, S-type and linear type are optional
Typical Function	Brake	Dynamic Braking	Dynamic braking initial voltage, backlash voltage and dynamic braking continuous adjustable
Typical Function	Brake	DC Braking	Halt DC braking initial frequency: 0.00~[F00.10] upper limit frequency Braking time: 0.0~100.0s; Braking current: 0.0%~100.0% of rated current
Typical Function	Low Noise Running		Carrier frequency 0.5kHz~16.0kHz continuous adjustable, minimize motor noise
Typical Function	Speed Tracking and Restart Function		Smooth restart during operation, instantaneous stop and restart
Typical Function	Counter		A built-in counter, facilitate system integration
Typical Function	Operation Function		Upper limit and lower limit frequency setting, frequency hopping operation, reversal running restraint, slip frequency compensation, RS485 communication, frequency control of progressive increase and decrease, failure recovery aomatically, etc.
Display	Operation Panel Display	Running State	Output frequency, output current, output voltage, motor speed, set frequency, module temperature, PID setting, feedback, analog input and output.
Display	Operation Panel Display	Alarm	There are 8 running parameter records include output frequency, set frequency, output current, output voltage, DC voltage, module temperature, power-on time, and running time when tripped by three-time faults.
Protective Function			Overcurrent, overvoltage, undervoltage, module fault, electric thermal relay, overheat, short circuit, default phase of input and output, motor parameter adjustment abnormality, internal memory fault, etc.
Environment	Ambient Temperature		-10°C ~ +40°C (please run the VFD in derated capacity when ambient temperature is 40°C~50°C)
Environment	Ambient Humidity		5%~95%RH, without condensing drops
Environment	Surroundings		Indoors (without direct sunlight, corrosive or flammable gas, oil fog and dust)
Environment	Altitude		Running in derated capacity above 1000m, derate 10% for every 1000m rise.
Structure	Protection Level		IP20
Structure	Cooling Method		Air cooling with fan control
Installation Method			Wall-hanging type

Operation Wiring Diagram

Inverter wiring part, divided into the main loop and control loop. The user can lift the cover of the output/input terminals, then can see the main loop terminal and the control loop terminal. Connect the wiring loop correctly as shown in the figure below.