- Induction Heating
- Industrial Automation
- Photovoltaic energy storage

Canroon

CV900G General Purpose Vector Control Inverter

Powerful,Precise , Durable

Official WeChat

Official website



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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.









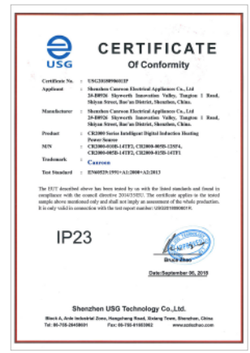
Enterprise Qualification



High tech enterprise certificate



ISO9001 quality certification



Conformity authentication



CE certification



Software registration certificate



Appearance Patent Certificate



Utility model patent certificate

Catalogue

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CV900G Series
General Purpose Vector Control Inverter

CV900G series frequency inverter included advanced technology of flux vector control. High torque output of full frequency, quick response, perfect load adaptability, high control precision of speed and good reliability, all of which ensure it to meet high requirement of various field application.

It can easily drive and control motors, and is suitable for industries such as textiles, paper industry, metallurgy, chemicals, fans and pumps, plastic machinery, and various automated production equipment.

Excellent Performance

4 Control Modes

- V/F Control
- Electric Current Vector Control
- V/F Separation Control
- Advanced V/F Control

Ultralow Noise

- Carrier freq. modulation: 1~16KHz

High Running Freq.

- Max. 3000Hz

Excellent Torque Output

VF Control 150% rated torque in 30Hz

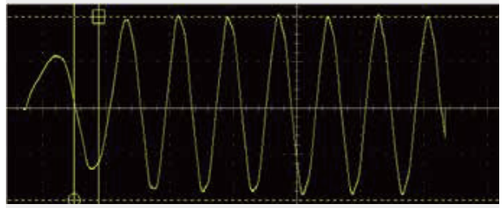
- Electric Current Vector Control 180% rated torque in 0.5Hz

High Overload Capacity

- last for 60s with 150% rated torque

Stable & Reliable

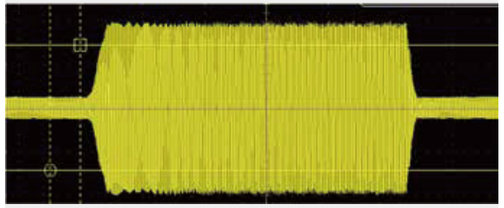
- Independent air duct design, resistant to various harsh environmental pollution



Stable operation current waveform at 0.5Hz with 150% of rated load current

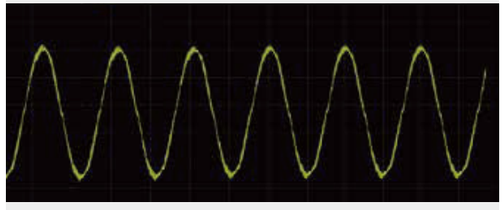
High torque at low speed, low speed pulsation

Large low frequency torque, 0.5Hz in open-loop vector mode stable operation with load (150% of rated load)

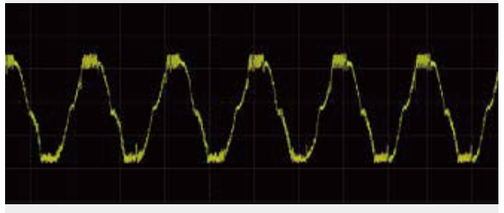


Excellent current control capability

When there is a sudden change in load, the inverter can maintain sufficient torque output capacity, no tripping operation



Before wave-by-wave current limiting



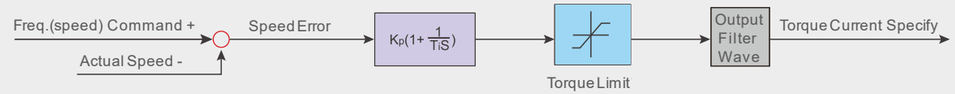
After wave-by-wave current limiting

Excellent wave-by-wave current limiting capability

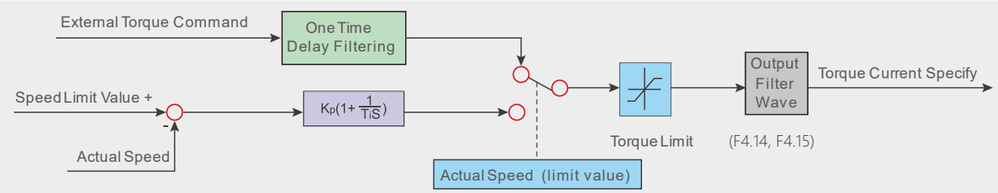
Can limit the motor current to a certain level without affecting the output torque operation

Comprehensive Functions

Speed & Torque Control

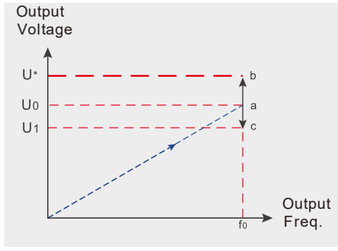


Speed Regulator Diagram

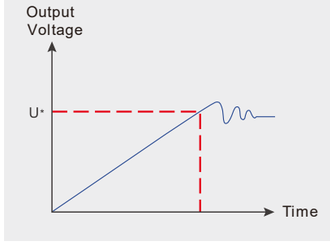


Torque Control Diagram

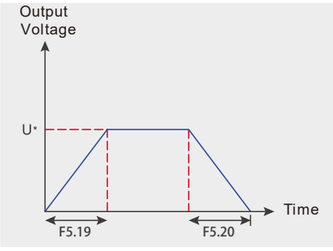
VF Separation Control



VF half separation mode open loop voltage output

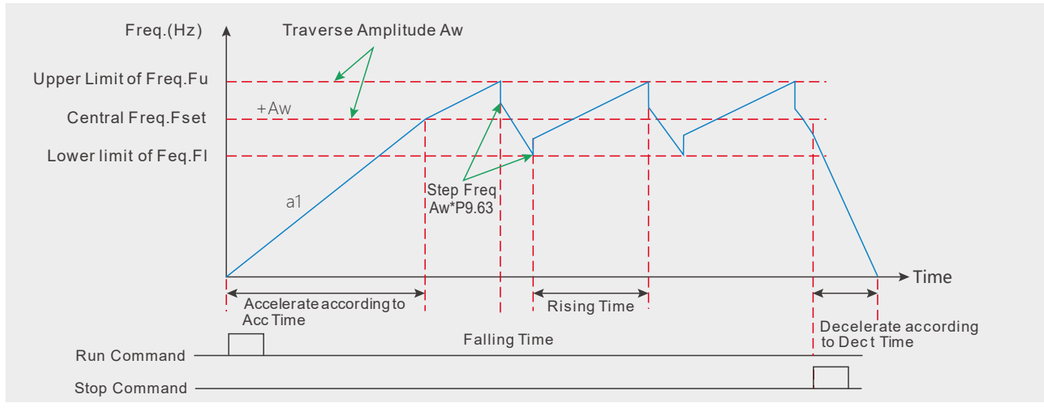


VF half separation mode voltage closed-loop output



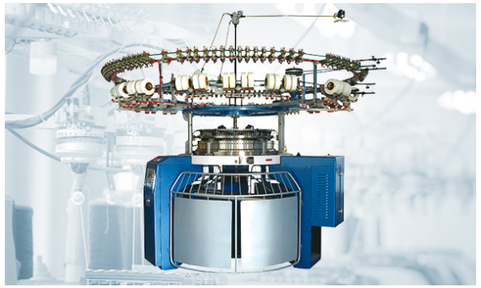
VF fully separation mode open loop voltage output

Swing Frequency Control



Traverse function applies to textile and chemical fiber industry, or others that requires lateral movement or rolling.

Product Application



Textile



Paper Industry



Fan and Pump



Plastic Machinery



Chemical Industry



Ferrous Metallurgy

Model Selection

Naming Rules

CV900G - 015 G/P -1 4 T F

① ② ③ ④ ⑤ ⑥ ⑦

①	Product series	CV900G(Inverter model)
②	Model power	00A：0.4KW
		500：500KW
③	Load type	G：constant torque
		P：variable 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	F：air cooling
		W：water cooling

Technical Index and Specification

Specification model	Rated Power (KW)	Rated output current (A)
1-phase 220V 50/60Hz		
CV900G-00AG-12SF	0.4	2.4
CV900G-00BG-12SF	0.75	4.5
CV900G-001G-12SF	1.5	7
CV900G-002G-12SF	2.2	10
CV900G-003G-12SF	3	13
CV900G-004G-12SF	3.7	16
CV900G-005G-12SF	5.5	20
CV900G-007G-12SF	7.5	30
CV900G-011G-12SF	11	42

Specification model	Rated Power (KW)	Rated output current (A)
3-phase 380V 50/60Hz		
CV900G-00BG-14TF	0.75	2.5
CV900G-001G-14TF	1.5	3.7
CV900G-002G-14TF	2.2	5
CV900G-003G/004P-14TF	3/3.7	6.8/9
CV900G-004G/005P-14TF	3.7/5.5	9/13
CV900G-005G/007P-14TF	5.5/7.5	13/17
CV900G-007G/011P-14TF	7.5/11	17/25
CV900G-011G/015P-14TF	11/15	25/32
CV900G-015G/018P-14TF	15/18.5	32/37

Specification model	Rated Power (KW)	Rated output current (A)
3-phase 380V 50/60Hz		
CV900G-018G/022P-14TF	18.5/22	37/45
CV900G-022G/030P-14TF	22/30	45/60
CV900G-030G/037P-14TF	30/37	60/75
CV900G-037G/045P-14TF	37/45	75/90
CV900G-045G/055P-14TF	45/55	90/110
CV900G-055G/075P-14TF	55/75	110/150
CV900G-075G/090P-14TF	75/90	150/176
CV900G-090G/110P-14TF	90/110	176/210
CV900G-110G/132P-14TF	110/132	210/253
CV900G-132G/160P-14TF	132/160	253/300
CV900G-160G/185P-14TF	160/185	300/340
CV900G-185G/200P-14TF	185/200	340/380
CV900G-200G/220P-14TF	200/220	380/420
CV900G-220G-14TF	220	420
CV900G-250G-14TF	250	470
CV900G-280G-14TF	280	520
CV900G-315G-14TF	315	600
CV900G-355G-14TF	355	640
CV900G-400G-14TF	400	750
CV900G-450G-14TF	450	830
CV900G-500G-14TF	500	930

Structure and Dimensions

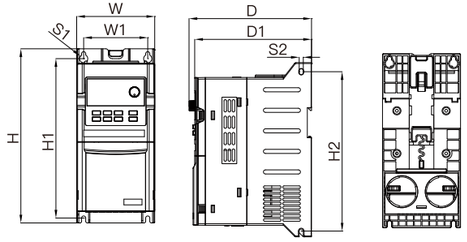


Figure 1：CV900G-00AG-12SF ~ 005G/007P-14TF

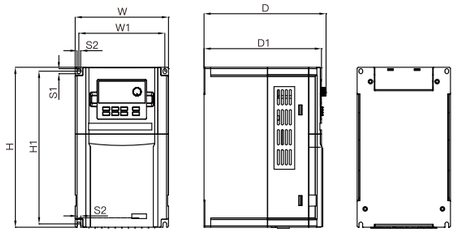


Figure 2：CV900G-004G-12SF ~ 011G/015P-14TF

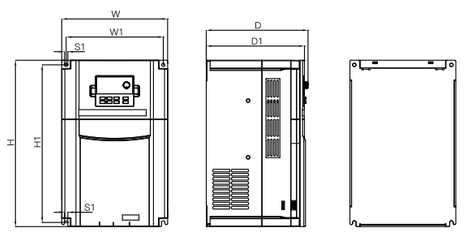


Figure 3：CV900G-007G-12SF ~ 022G/030P-14TF

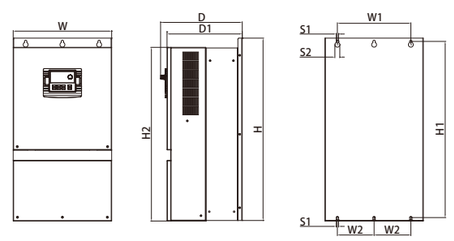


Figure 4：CV900G-030G/037P ~ 160G/185P-14TF

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)	
CV900G-00AG-12SF	95	212	149	142	78	194	194	Ø10	Ø5	1
CV900G-00BG-12SF										
CV900G-001G-12SF										
CV900G-002G-12SF										
CV900G-003G-12SF										
CV900G-00BG-14TF										
CV900G-001G-14TF										
CV900G-002G-14TF										
CV900G-003G/004P-14TF										
CV900G-004G/005P-14TF										
CV900G-005G/007P-14TF										
CV900G-004G-12SF	140	240	183	176	129	229	/	Ø8	Ø6	2
CV900G-005G-12SF										
CV900G-007G/011P-14TF										
CV900G-011G/015P-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)	
CV900G-007G-12SF	205	322	197	190	/	188	/	305	Ø7	/	3
CV900G-011G-12SF											
CV900G-015G/018P-14TF											
CV900G-018G/022P-14TF											
CV900G-022G/030P-14TF											
CV900G-030G/037P-14TF	270	463	223.9	206.3	437.7	201.5	/	444.5	Ø6.5	Ø13.5	4
CV900G-037G/045P-14TF											
CV900G-045G/055P-14TF	320	522	257.6	240	489	200	100	499	Ø9	Ø16.5	
CV900G-055G/075P-14TF											
CV900G-075G/090P-14TF	340	720	305.6	288	663	260	130	700.5	Ø9	Ø16.5	
CV900G-090G/110P-14TF											
CV900G-110G/132P-14TF											
CV900G-132G/160P-14TF	380	720	305.6	288	663	260	130	700.5	Ø9	Ø16.5	
CV900G-160G/185P-14TF											

Structure and Dimensions

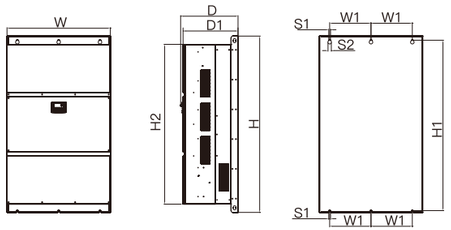
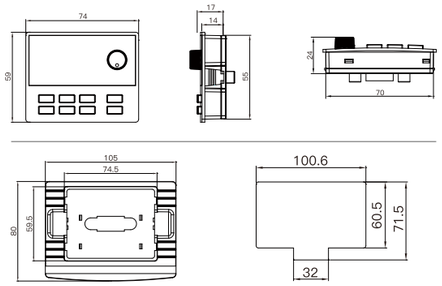


Figure 5：CV900G-185G/200P ~ 500G-14TF



Keyboard base and installation dimensions

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)	
CV900G-185G/200P-14TF	470	830	347.1	329.5	743	343	171.5	791	Ø11	Ø24	5
CV900G-200G/220P-14TF											
CV900G-220G-14TF											
CV900G-250G-14TF	540	1060	416.6	399	970	420	210	1031.5	Ø13	Ø26	
CV900G-280G-14TF											
CV900G-315G-14TF											
CV900G-355G-14TF	650	1090	416.6	399	1000	420	210	1061.5	Ø13	Ø26	
CV900G-400G-14TF											
CV900G-450G-14TF	750	1280	416.6	399	1160	600	300	1237	Ø13	Ø26	
CV900G-500G-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（14T）380V，47～63Hz；1-phase（12S）220V，47～63Hz
	Allowed Voltage Range		3-phase（14T）320V～480V；1-phase（12S）160V～260V
Output	Voltage		14T，0～480V；12S，0～260V
	Frequency		Low frequency mode：0～300Hz；High frequency mode：0～3000Hz
	Overload Capacity		G type: 110% for long-term, 150% for 1 min, 180% for 5s P type: 105% for long-term, 120% for 1 min, 150% for 1s
Control Mode			V/F control, advanced V/F control, V/F separation control, electric current vector control
Control Character	Frequency Setting Resolution	Analog Input	0.1% of maximum output frequency
		Digital Setting	0.01Hz
	Frequency Precision	Analog Input	Within 0.2% of maximum output frequency
		Digital Setting	Within 0.01% of set output frequency
	V/F Control	V/F Curve (voltage frequency character)	Reference frequency setting 5~600 Hz, multipoint V/F curve setting, or fixed curve of constant torque, low decreasing torque 1, low decreasing torque 2, square torque
		Torque Compensation	Manual setting: 0.0~30% of rated output Automatic compensation: according to output current and motor parameter
		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
	Senseless Vector Control	Voltage Frequency Character	Adjust pressure/frequency ratio according to motor parameter and unique algorithm
		Torque Character	Starting torque: 3.0 Hz 150% rated torque (VF control) 0.5 Hz 180% rated torque (SVC) Operating speed precision in steady state: ≤±0.5% rated synchronous speed Torque response: SVC ≤ 20ms
		Motor Parameter Self-measurement	Being able to detect parameter automatically under static state and dynamic state of motor, thus guarantee an optimum control.
		Current and Voltage Restrain	Current closed-loop control, free from current impact, perfect restrain function of overcurrent and overvoltage
		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.
	PID Control RS485 Communication		Built-in PID controller (able to preset frequency). Standard configuration RS485 communication function, synchronizing control function.
	Frequency Setting	Analog Input	Direct voltage 0~10V, direct current 0~20mA (optional up limit and lower limit)
		Digital Input	Operation panel setting, RS485 port setting, UP/DW terminal control, or combined with analog input
	Output Signal	Digital Outnput	2 channel OC output and one channel relay output (TA, TB, TC), up to 16 choices
		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
	Automatic Steady voltage Operation		Dynamic steady state, static steady state, and unsteady voltage for choices to obtain the steadiest operation
	Acceleration and Deceleration Time Setting		0.1s~3600min continuous setting, S type and linear type mode for choice
	Brake	Dynamic Braking	Dynamic braking initial voltage, backlash voltage and dynamic braking continuous adjustable
		DC Braking	Halt DC braking initial frequency: 0.00~[F0.16] upper limit frequency Braking time: 0.0~100.0s; Braking current: 0.0%~150.0% of rated current
		Flux Restraint	0~100 0: invalid
	Low Noise Running		Carrier frequency 1.0kHz~16.0kHz continuous adjustable, minimize motor noise
	Speed Tracking and Restart Function		Smooth restart during operation, instantaneous stop and restart
	Counter		A built-in counter, facilitate system integration
	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.
		Alarm	The latest 6 faults record; running parameters record when the latest fault tripping happens including output frequency, set frequency, output current, output voltage, DC voltage4 and module temperature.
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)
	Ambient Humidity		5%~95%RH, without condensing drops
	Surroundings		Indoors (without direct sunlight, corrosive or flammable gas, oil fog and dust)
	Altitude		Running in derated capacity above 1000m, derate 10% for every 1000m rise.
Structure	Protection Level		IP20S
	Cooling Method		Air cooling with fan control
Installation Method			Wall-hanging type, cabinet 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.

