



CT120G SERIES AC DRIVE

120G mini series ac drive is a general purpose small power inverter, it is compact, powerful functions, and suitable for small power motor adjusting speed. It has high output torque and strong anti-interference ability, featuring portable mini size, modular design, low temperature rise, low noise and prominent performance. Based on its advanced design, CT120G portable inverter is well-known for its good quality, high torque, high precision, high reliability, and competitive price.

Power range: 0.75kw~2.2kw, 220;

Power range: 0.75kw~4.0kw, 380v



**Safe
packing**



**Rich
terminals**



Fan cool





CT120G Models

Model	Power (KW)	Input current (A)	Output current (A)	Motor power (KW)
Single phase 220Vac 50/60Hz				
CT120G-2S-0.7-B	0.75	8.2	4.5	0.75
CT120G-2S-1.5-B	1.5	14.0	7.0	1.5
CT120G-2S-2.2-B	2.2	23.0	9.6	2.2
Three phase 380Vac 50/60Hz				
CT120G-4T-0.7-B	0.75	3.4	2.5	0.75
CT120G-4T-1.5-B	1.5	5.0	3.7	1.5
CT120G-4T-2.2-B	2.2	5.8	5.3	2.2
CT120G-4T-4.0-B	4.0	12	9.5	4.0

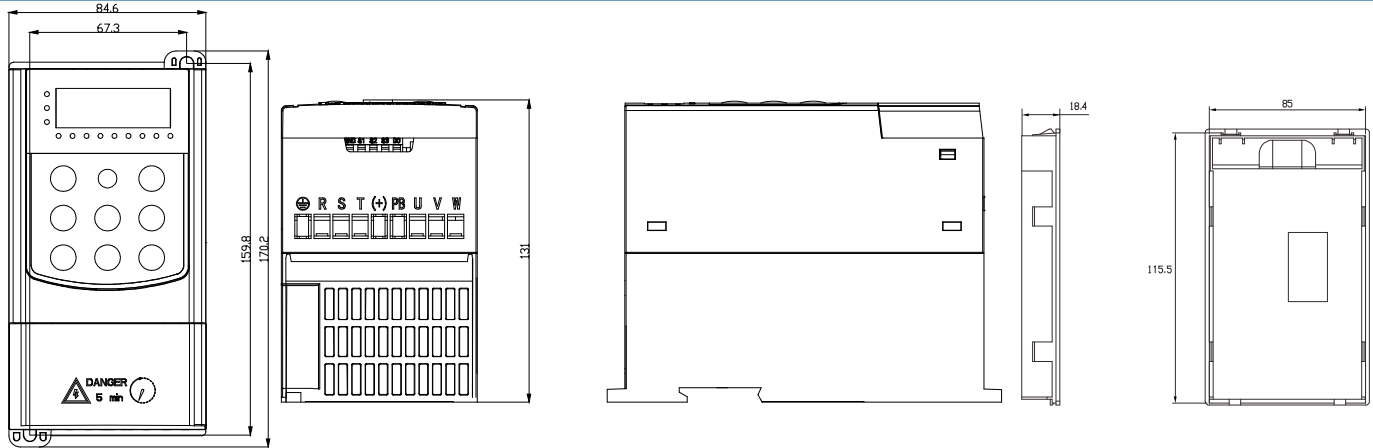
CT120G Technical Table

Input and output parameters	Input voltage	Single-phase 220VAC±15%, three-phase 380VAC±15%,.
	Input frequency	50~60Hz±5%
	Output voltage	0~Rated input voltage
	Output frequency	0~500Hz

	Overload capacity	150% of rated current: 60s; 180% of rated current: 10s; 200% of rated current: 1s
Technical control parameters	Control mode	V/F control, sensorless vector control
	Speed ratio	Open loop vector control 1:200; V/F 1: 100
	Speed control accuracy	±0.5%
	Speed wave	±0.5%
	Start torque	0.5Hz/150%(V/F) 0.25Hz/150% (SVC)
Based functions	Starting frequency	0.00~10.00Hz
	ACC and DEC time	0.1~65000.0s
	Carrier frequency	0.5KHz~16.0KHz
	Frequency setting	UP/DOWsetting, Analog setting, digital setting, multi-step speed setting, PID setting, MODBUS communication setting
	Start mode	Start frequency, DC braking and start
	Stop mode	DEC stop, free stop, DEC +DC braking
	Energy braking capability	Braking unit braking voltage:320~750V
	DC braking capability	DC braking frequency: 0~500Hz; DC braking waiting time: 0~10s; DC braking current: 0.0~100.0%; DC braking time: 0.0~100.0s;
	Auto voltage adjustment	Keep a stable voltage automatically when the grid voltage transients
Sudden frequency down	Keep stable bus voltage while power net low-voltage	
Control terminals	Digital input	Standard 5-channel inputs, one of which can be high-speed pulse input (HDI)
	Analog input	Standard 2-channel inputs, AI1,AI2: 0~10V or 4~20mA input optional by F03.34
	Digital output	Standard 2-channel multi-function collector outputs, one of which can be high-speed pulse output (HDO).
	Relay output	Standard 2-channel relay outputs
Communication interface	Communication	communication interface for external communication.
Fault protection	ACC overcurrent, DEC overcurrent, constant speed overcurrent, ACC overvoltage, DEC overvoltage, constant speed overvoltage, bus under voltage, motor overload, inverter overload, input power failure, output phase loss, rectifier module overheating, inverter module overheating, external fault, communication fault, current detection fault, EEPROM operation fault, PID feedback fault, factory setting time arrive etc.	
Keypad display	LED display	Highlight LED digital tube displays the inverter information
Others	Running environment	Indoors, less than 1km above sea level, without dust, corrosive gases or direct sunlight
	Ambient temperature	-10~+40°C, derate 1% for every additional 1°C when the ambient temperature is between 40~50°C
	Humidity	5~95% (no condensation)


	Altitude	0~2000m, derate 1% for every additional 100m when the sea level is above 1000m
	Vibration	Less than 0.5g
	Storage temperature	-40~+70°C


CT120G Size



Model	Size (mm)					Mounting hole size (mm)	Weight (kg)
	W	W1	H	H1	D		
CT120G-2S-0.7-B	84.6	67.3	170.2	159.8	131	5.5	1.2
CT120G-2S-1.5-B							
CT120G-2S-2.2-B							
CT120G-4T-0.7-B							
CT120G-4T-1.5-B							
CT120G-4T-2.2-B	97	85	194	184	144	5	1.6
CT120G-4T-4.0G							

CT120G Main Terminals

	R/L	S/N	T	(+)	PB	U	V	W
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Terminal name	Function
R、S、T	3phase power input
L、N	2phase power input
(+)、PB	Connect braking resistor
U、V、W	3phase output
	Earth terminal (PE)

CT120G Control Board Terminals

485+	485-	GND	AI1	AI2	10V	AO	DO	T1A	T1B	T1C
24V	COM	DI1	DI2	DI3	DI4	HDI	HDO	T2A	T2B	T2C

Type	Terminal name	Function	Specification
Digital input	+24V	+24V power	24V±10%, isolated to GND
	DI1~DI4	Digital input terminals 1~4	Input specification:24V, 5mA
	HDI	high-speed pulse input or digital input	Pulse input frequency range:0~20KHz High power level voltage:24V
	COM	+24V power or out power	Isolated to GND
Digital output	DO	Collector outputs, public terminal COM	Out connect voltage:0~24V
	HDO	High-speed pulse output or collector outputs, public terminal COM	Pulse output frequency range:0~50KHz
	COM	DO,HDO public terminal	Isolated to GND
Analog input	+10V	+10V output support	Output voltage:10V, output current range:0~50mA (If potentiometer connected between +10V and GND, resist of potentiometer should not be lower than 2k)
	AI1~AI2	Analog input terminal	Input voltage selection Input voltage range:0V~10V Input current range:0/4~20mA
	GND	Analog earth	Isolated to GND
Analog output	AO1~AO2	Analog output terminal	Output voltage selection Output voltage range:0V~10V Output current range:0/4~20mA
	GND	Analog earth	Isolated to GND
Relay output	T1A/T1B/T1C	Relay output	T1A-T1B:always close T1A-T1C:always open Contractor capability:250VAC/3A, 30VDC/1A
	T2A/T2B/T2C	Relay output	T2A-T2B: always close T2A-T2C:always open Contractor capabilit:250VAC/3A, 30VDC/1A
Communication interface	485+/485-	communication interface	communication interface



CT100G series universal vector inverter

Based on DSP control system, has high performance open loop vector control or VF control technology, achieving excellent performance and high reliability. It can be applied to asynchronous motors, providing excellent drive performance.

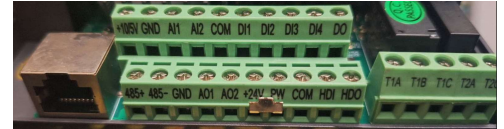
CT100G Series Features



**High speed high performance control
DSP core control unit**



**Infineon PIM or similar quality
integrated power module**



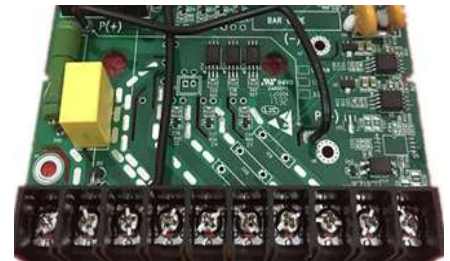
Stable multi-function terminals



High torque at low speed



For Asynchronous motor



Function of automatic voltage regulator(AVR)



Multiple fault protection



Over-voltage stall protection



Steady speed precision high speed

Application

CT100G Series can be widely applied in lifting/printing and packaging/metal products/wire and cable/Plastics/textile/building materials/metallurgy/mining/water supply/gas supply/automotive and other industries.

CT100G Series Model Data

Inverter mode	Power (KW)	Input current (A)	Output current (A)	Applicable motor power (KW)
Single phase 220V 50/60Hz				
CT100G-2S-0.7G-B	0.75	8.2	4.5	0.75
CT100G-2S-1.5G-B	1.5	14.0	7.0	1.5
CT100G-2S-2.2G-B	2.2	23.0	9.6	2.2
Three phase 380V 50/60Hz				
CT100G-4T-0.7G-B	0.75	3.4	2.5	0.75
CT100G-4T-1.5G-B	1.5	5.0	3.7	1.5
CT100G-4T-2.2G-B	2.2	5.8	5.3	2.2
CT100G-4T-4.0G-B	4.0	12.0	9.5	4.0
CT100G-4T-5.5G-B	5.5	18.5	14	5.5
CT100G-4T-7.5G-B	7.5	22.5	18.5	7.5
CT100G-4T-11G-B	11	30.0	25.0	11
CT100G-4T-15G-B	15	39.0	32.0	15
CT100G-4T-18.5G-B	18.5	45.0	38.0	18.5
CT100G-4T-22G-B	22	54.0	45.0	22
CT100G-4T-30G-B	30	68.0	60.0	30
CT100G-4T-37G	37	84.0	75.0	37
CT100G-4T-45G	45	98.0	92.0	45
CT100G-4T-55G	55	123.0	115.0	55
CT100G-4T-75G	75	157.0	150.0	75
CT100G-4T-90G	90	188.0	180.0	90
CT100G-4T-110G	110	221.0	215.0	110
CT100G-4T-132G	132	267.0	260.0	132
CT100G-4T-160G	160	309.0	305.0	160
CT100G-4T-185G	185	344.0	340.0	185
CT100G-4T-200G	200	384.0	380.0	200
CT100G-4T-220G	220	429.0	425.0	220
CT100G-4T-250G	250	484.0	480.0	250
CT100G-4T-280G	280	539.0	530.0	280
CT100G-4T-315G	315	612.0	600.0	315
CT100G-4T-355G	355	665.0	650.0	355
CT100G-4T-450G	450	805	795.0	450
CT100G-4T-500G	500	890	860.0	500
CT100G-4T-560G	560	1045	1015	560

CT100G-4T-630G	630	1224	1200	630
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CT100G Series Size

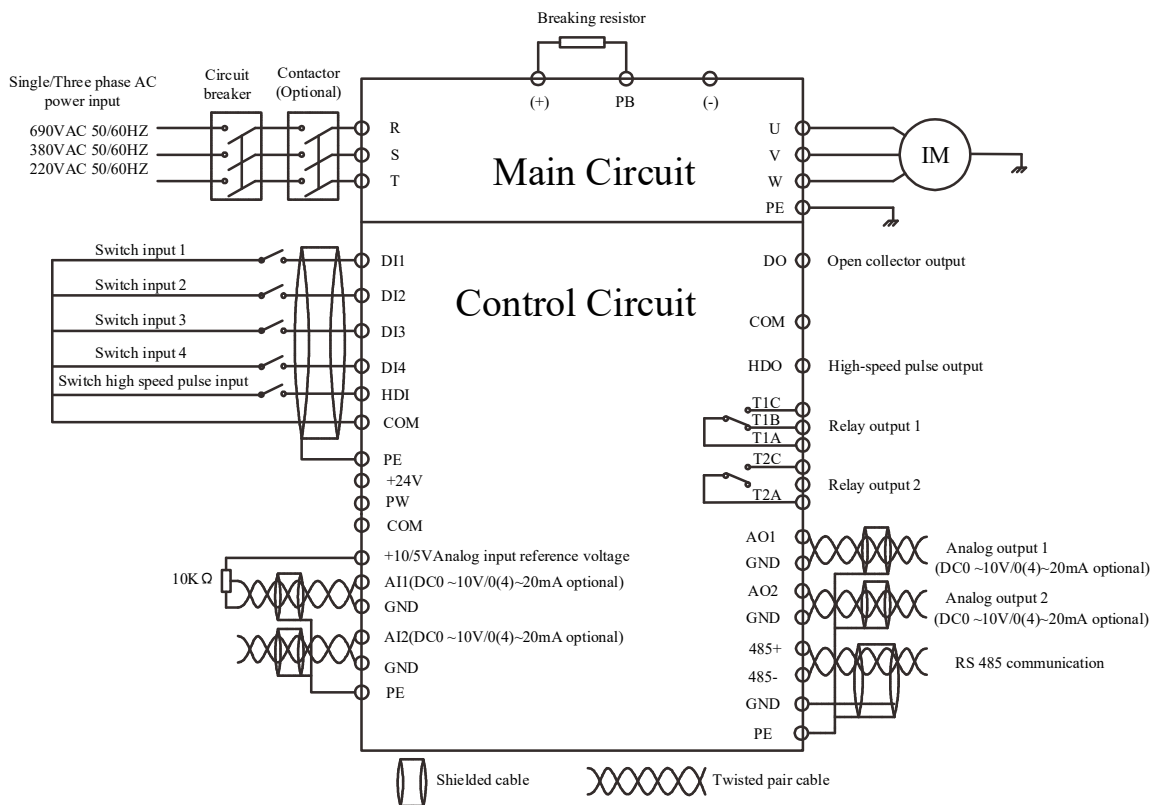
Inverter mode	Appearance and dimensions (mm)						Installing hole(mm)	weight	cabinet
	W	H	D	W1	H1	H2			
CT100G-2S-0.7G-B	126	186	155	115	175	---	5	1.6	C0
CT100G-2S-1.5G-B									
CT100G-2S-2.2G-B									
CT100G-4T-0.7G-B									
CT100G-4T-1.5G-B									
CT100G-4T-2.2G-B									
CT100G-4T-4.0G-B									
CT100G-4T-5.5G-B									
CT100G-4T-7.5G-B	140	230	172	128	218	---	5.5	3.5	C1
CT100G-4T-11G-B	165	285	200	153	273	---	5.5	5.2	C2
CT100G-4T-15G-B									
CT100G-4T-18.5G-B	214	402	205	184	360	385	7	11.5	C3
CT100G-4T-22G-B									
CT100G-4T-30G-B									
CT100G-4T-37G	250	442	230	220	405	425	7	19	C4
CT100G-4T-45G									
CT100G-4T-55G	299	602	276	240	540	580	9	30	C5
CT100G-4T-75G									
CT100G-4T-90G									
CT100G-4T-110G									
CT100G-4T-132G	329	660	332	250	601	640	9	56	C6
CT100G-4T-160G									
CT100G-4T-185G	480	853	354	180	772	826	11	110	C7
CT100G-4T-200G									
CT100G-4T-220G									
CT100G-4T-250G									
CT100G-4T-280G									
CT100G-4T-315G	680	940	370	290	908	---	13	165	C8
CT100G-4T-355G									
CT100G-4T-400G									
CT100G-4T-450G	880	962	370	170	928	180	13	200	C11
CT100G-4T-500G									
CT100G-4T-560G	950	962	380	314	923	---	13	220	C12
CT100G-4T-630G									

CT100G Series Technical Parameter

Input and output parameters	Input voltage	Single-phase 220VAC±15% Three-phase 380VAC±15%
	Input frequency	50~60Hz±5%
	Output voltage	0~Rated input voltage
	Output frequency	0~500Hz, unit 0.01Hz
	Overload capacity	150% of rated current: 60s; 180% of rated current: 10s; 200% of rated current: 1s
Running control parameters	Control mode	V/F control, sensorless vector control (SVC)
	Adjustable-speed ratio	1:100 (V/F); 1:200 (SVC)
	Speed control accuracy	±0.5%
	Speed wave	± 0.5%
	Start torque	0.5Hz/150% (V/F) 0.25Hz/150% (SVC)
Based functions	Starting frequency	0.00~10.00Hz
	ACC and DEC time	0.1~65000.0s
	Carrier frequency	0.5KHz~16.0KHz
	Frequency setting	UP/DOW setting, analog setting, digital setting, multi-step speed setting, PID setting, MODBUS communication setting, to realize switch of combination and channel setting.
	Start mode	Start frequency, DC braking and start
	Stop mode	DEC stop, free stop, DEC +DC braking
	Energy braking capability	Braking unit braking voltage: 320~750V
	DC braking capability	DC braking frequency: 0~500Hz; DC braking waiting time: 0~100s; DC braking current: 0.0~100.0%; DC braking time: 0.0~100.0s;
	Auto voltage adjustment	Keep a stable voltage automatically when the grid voltage transients
	Sudden frequency down	Keep stable bus voltage while power net low-voltage
Control terminals	Digital input	Standard 5-channel inputs, one of which can be high-speed pulse input (HDI)
	Analog input	Standard 2-channel inputs, AI1, AI2(0~10V or 0/4~20mA output optional)
	Digital output	Standard 2-channel multi-function collector outputs, one of which can be high-speed pulse output (HDO).
	Analog output	Standard 2-channel outputs, AO1, AO2(0~10V or 0/4~20mA output optional)
	Relay output	Standard 2-channel relay outputs
Communication	RS485 Communication	RS485 communication interface for external communication, support Modbus

interface		protocol (RTU mode).
Fault protection	ACC overcurrent, DEC overcurrent, constant speed overcurrent, ACC overvoltage, DEC overvoltage, constant speed overvoltage, bus under voltage, motor overload, inverter overload, input power failure, output phase loss, rectifier module overheating, inverter module overheating, external fault, communication fault, current detection fault, EEPROM operation fault, PID feedback fault, factory setting time arrive etc.	
Keypad display	LED display	Highlight LED digital tube displays the inverter information
Others	Running environment	Indoors, less than 1km above sea level, without dust, corrosive gases or direct sunlight
	Ambient temperature	-10~+40°C, derate 1% for every additional 1°C when the ambient temperature is between 40~50°C
	Humidity	5~95% (no condensation)
	Altitude	0~2000m, derate 1% for every additional 100m when the sea level is above 1000m
	Vibration	Less than 0.5g
	Storage temperature	-40~+70°C

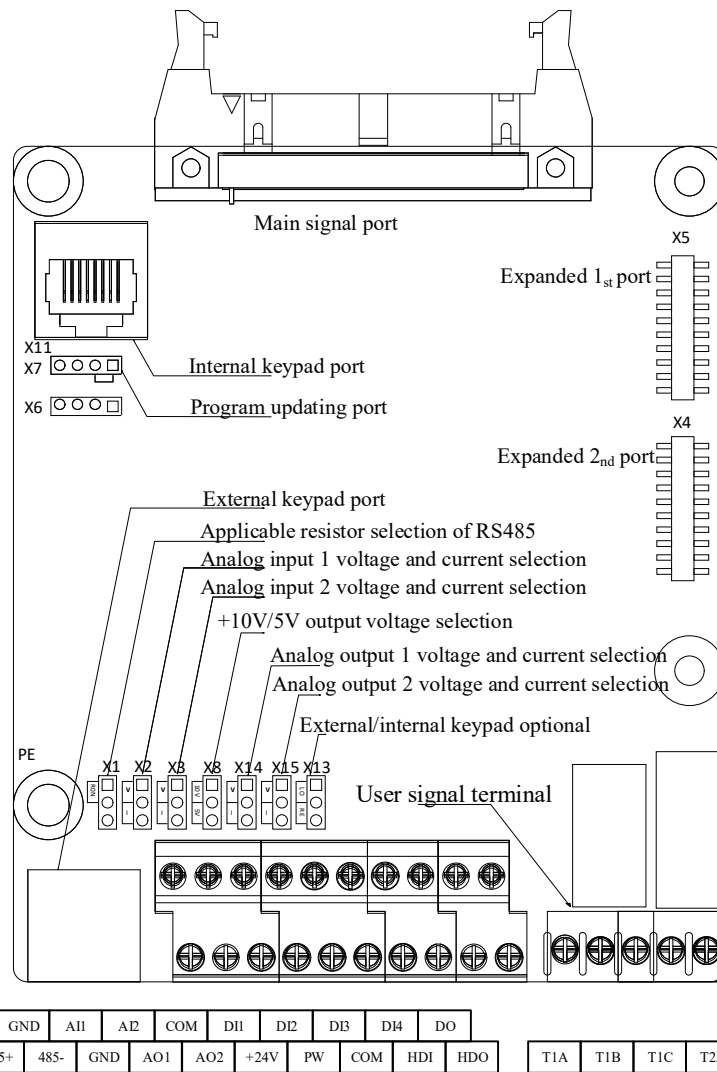
CT100G Series Diagram



Terminals	Function
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R, S, T	Three-phase power input terminals
(+), (-)	Reserved terminals for external braking units, common DC bus terminals
(+), PB	Reserved terminals for external braking resistors
P1, (+)	Reserved terminals for external DC reactors
(-)	DC negative bus output terminal
U, V, W	Three-phase AC output terminals
⊕	Grounding terminal (PE)

Diagram of the control plate



Category	Terminal name	Terminal function	Technical specification
Switch input	+24V	+24V power supply	24V±10%, internal isolation from GND. max. load 200mA
	PW	External power input terminal (power supply of digital input terminal)	Short circuit with +24V by default
	DI1~DI4	Switch input terminals 1~4	Input specifications: 24V, 5mA
	HDI	High speed pulse input or switch input	Pulse input frequency range: 0~50kHz

			High level voltage: 24V
	COM	+24V power supply or external power ground	Internal isolation from GND
Switch output	DO	Open collector output, common CME terminal	External voltage range: 0~24V
	HDO	High speed pulse output or open collector output, common COM terminal	Pulse output frequency range: 0~50kHz
	COM	HDO common terminal	Internal isolation from GND
Analog input	+10V	The local supplies +10V or 5V power output	Output voltage: 10V or 5V available via X13, optional Output current range: 0~50mA (If the potentiometer is connected between +10V and GND, the resistance should not be less than 2kΩ.)
	A11/AI2	Analog input terminal 1	Input voltage and current are optional Input voltage range: 0~10V Input current range: 0/4~20mA
	GND	Analog ground	Internal isolation from COM
Analog output	AO1/AO2	Analog output terminal	Output voltage and current are optional Output voltage range: 0~10V Output current range: 0/4~20mA
	GND	Analog ground	Internal isolation from COM
Relay output	T1A/T1B/T1C	Relay output	T1A-T1B: normally closed T1A-T1C: normally open Contact capacity: 250VAC/3A, 30VDC/1A
	T2A/T2C	Relay output	T2A-T2C: normally open Contact capacity: 250VAC/3A, 30VDC/1A
Communication interface	485+/485-	RS485 communication interface	RS485 communication interface