CT112M Solar Pump Inverter

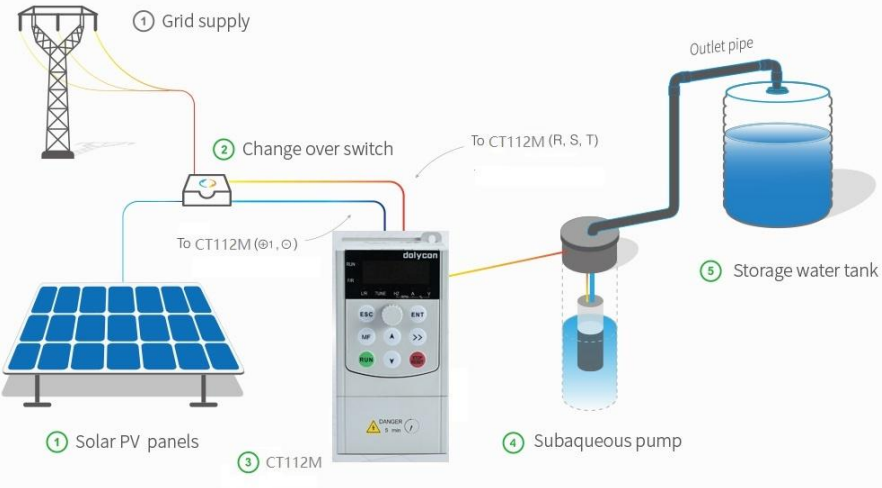
CT112M mini series solar pump inverter is a small power inverter converter solar panel dc to ac power, specially for AM or PMSM solar pump control. It is compact, powerful functions, and suitable for small power pump motor adjusting speed. It has high output torque and strong anti-interference ability, featuring portable mini

Safe packing

Rich terminals

Fan cool

CT112M Application



CT112M Models

CT112M Solar Pump Inverter								
Model	Rated Power (KW)	DC Input VOC Voltage (V)	Recommend VOC Voltage (V)	Recommend MPPT Voltage (V)	Max. DC Input Current (A)	Rated Output Current(A)	Rated output Voltage (V)	Output Frequency (Hz)
CT112M-2T-0.7G	0.75	300~450	388~450	320~370	8.5	4.5	3PH 220	0-50/60
CT112M-2T-1.5G	1.5	300~450	388~450	320~370	14	7.0	3PH 220	0-50/60
CT112M-2T-2.2G	2.2	300~450	388~450	320~370	23	9.6	3PH 220	0-50/60
CT112M-4T-0.7G	0.75	300~780	670~780	540~ 630	8.5	2.5	3PH380	0-50/60
CT112M-4T-1.5G	1.5	300~780	670~780	540~630	8.5	3.7	3PH380	0-50/60
CT112M-4T-2.2G	2.2	300~780	670~780	540~630	14	5.3	3PH380	0-50/60
CT112M-4T-4.0G	4.0	300~780	670~780	540~630	23	9.5	3PH380	0-50/60

CT112M Technical Table

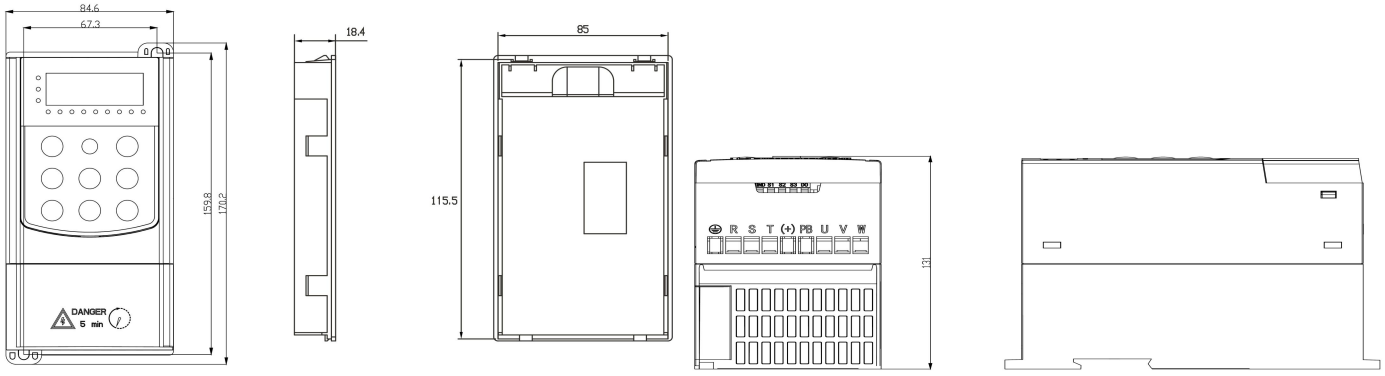
CT112M-2T-0.7~2.2G	Input specification	Maximum Input PV Voltage (PV Open-Circuit Voltage)	450VDC
		Recommended MPPT Voltage Range	320~370VDC(Vmp)
		Recommended Input Operation Voltage	388~450VDC (VOC)
	Input specification (Grid or backup generator input)	Input voltage	1PH 220V(-15%～30%)
	Output specification	Rated output voltage	3PH 220V
		Output frequency	0～500.00Hz(default: 0～50.00Hz)
	Fault protection	Built-in Protection	Protection of light load, over-current, over-voltage, output phase-lose, under-load, under-voltage, short circuit, overheating, water pump run dry etc.
CT112M-4T-0.7~4G	Input specification (PV Input)	Maximum Input DC Voltage (PV Open-circuit Voltage)	780VDC
		Recommended MPPT Voltage Range	540~630VDC (Vmp)
		Recommended Input Operation Voltage	670~780VDC (VOC)
	Input specification (Grid or backup generator input)	Input Voltage Range	Three phase 380VAC(-15%～30%)
	Output specification	Rated output voltage	3PH 380VAC
		Output frequency	0～500.00Hz(Default 0～50.00Hz)
	Fault protection	Built-in Protection	Protection of light load, over-current, over-voltage, output phase-lose, under-load, under-voltage, short circuit, overheating, water pump run dry etc.

Keypad display	LED display	Highlight LED digital tube displays the inverter information
	LCD display	LCD displays inverter information
Others	Application Site	No direct sunshine, no dust, corrosive gas, combustible gas, oil mist, steam, dripping or salinity etc.
	Altitude	0～2000m, Derated use above 1000m,per100m, the rated output current decrease 1%.
	Environment Temperature	-10℃～50℃ (Environment Temperature be 40℃～50℃, please keep derated use.)
	Humidity	5～95%,non-condensation
	Vibration	less than 5.9 m/s^2(0.6g)
	Storage Temperature	-20℃～+70℃
	Efficiency	Rated Power Run≥93%
	Installation	Wall or rail mounting
	Cooling	Forced Air Cooling

CT112M Size

Model	Size（mm）					Mounting hole size (mm)	Weight (kg)
	W	W1	H	H1	D		
CT112M-2T-0.7G	84.6	67.3	170.2	159.8	131	5.5	1.2
CT112M-2T-1.5G							
CT112M-2T-2.2G							
CT112M-4T-0.7G							
CT112M-4T-1.5G							
CT112M-4T-2.2G							
CT112M-4T-4.0G	97	85	194	184	144	5	1.6

Keypad wire can not more than 30m



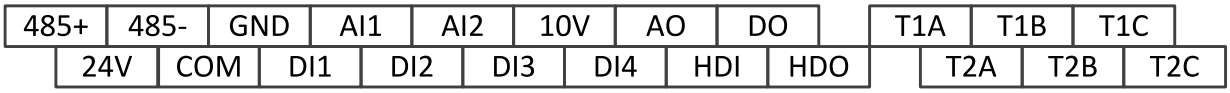
CT112M Main Terminals

⏚	R/L	S/N	T	(+)	PB	U	V	W

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)

CT112M Control Board Terminals



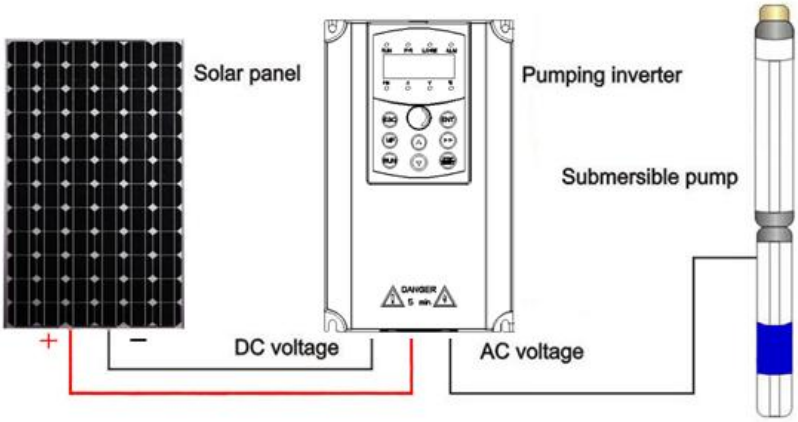
Type	Terminal name	Function	Specification
Digital input	+24V	+24V power	24V±10%, isolated to GND
	DI1～DI4	Digital input terminals 1～4	Input specification:24V，5mA
	HDI	high-speed pulse input or digital input	Pulse input frequency range:0～20KHz High power level voltage:24V
	COM	+24V power or out power	Isolated to GND
Digital output	DO	Collector outputs, public termial COM	Out connect voltage:0～24V
	HDO	High-speed pulse output or collector outputs, public termial 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）
	AI11～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/TIB/TIC	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

CT112 Series solar pump inverter

applied in solar pump system can convert DC power from solar PV array to AC power to run pump motors. Inverter controls the system operation and adjust the output frequency in real-time according to the variation of sunlight intensity to realize the maximum power point tracking (MPPT).

CT112 Series Features

- Apply to all kinds of single phase or 3 phase AC induction motor.
- Equipped with TI DSP digital control technique and Infineon IGBT power integration module design.
- Maximum power point tracking (MPPT) algorithm for dynamic VI.MPPT efficiency can be 99%
- Fast response speed and good stability.
- AC and DC input available,but do not use DC and AC at the same time.
- Remote control,support RS485 protocol.
- Automatic sleep&awake function:
  1)auto sleep and awake according to the high and low water level in the tank respectively.
  2)auto sleep and awake according to the weak and strong sunlight respectively.
- Full protections:overload,over-current,over-voltage,under-voltage,short circuit,dry pumping etc.
- PV reversed connection protection.



CT112 Series Application

Widely applied in agriculture and forestry irrigation, desert control, solar pasture irrigation, grassland animal husbandry, urban water supply and other landscapes.

CT112 Series Technical Parameters

Mode			CT112-2S0.4G~4.0G	CT112-2T-0.7G~5.5G	CT112-4T-0.7G~132G
Input specification	PV input	Maximum Input PV Voltage (PV Open-Circuit Voltage)	450VDC	450VDC	780VDC
		Recommended MPPT Voltage Range	320~370VDC(Vmp)	320~370VDC(Vmp)	540~630VDC(Vmp)
		Recommended Input Operation Voltage	388~450VDC (VOC)	388~450VDC (VOC)	670~780VDC (VOC)
	Grid or backup generator input	Input voltage	1PH 220V(-15%～30%)	1PH &3PH 220V(-15%～30%)	Three phase 380VAC(-15%～30%)
Output specification		Rated output voltage	1PH 220V	1PH &3PH 220V	3PH 380VAC
		Output frequency	0～600.00Hz（default: 0～60.00Hz）	0～600.00Hz（default: 0～60.00Hz）	0～600.00Hz（Default 0～60.00Hz）
Protection		Built-in Protection:Lighting Protection, over-current, over-voltage, output phase-lose, under-load, under-voltage, short circuit, overheating, water pump run dry etc.			
General Parameters		Application Site	No direct sunshine, no dust, corrosive gas, combustible gas, oil mist, steam, dripping or salinity etc.		
		Altitude	0~2000m,derated use above 1000m,per100m, the rated output current decrease 1%.		
		Environment Temperature	-10℃～50℃ (Environment Temperature be 40℃～50℃, please keep derated use.)		
		Humidity	5～95%,non-condensation		
		Vibration	less than 5.9 m/s2（0.6g）		
		Storage Temperature	-20℃～+70℃		
		Efficiency	Rated Power Run≥93%		
		Installation	Wall or rail mounting		
		Cooling	Forced Air Cooling		

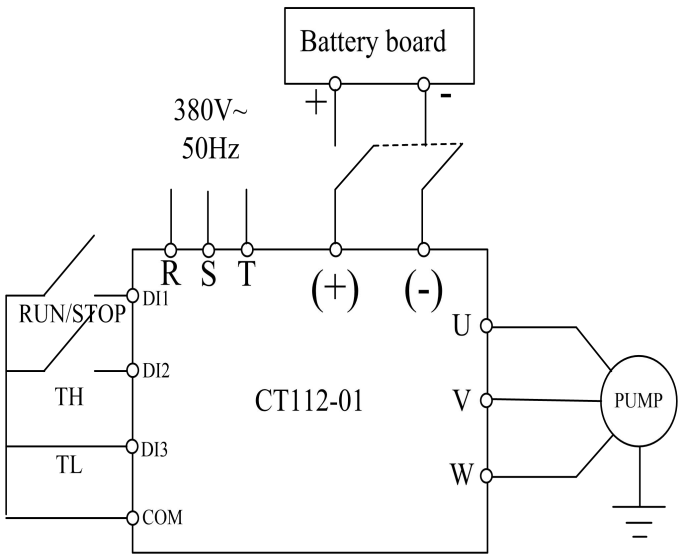
CT112 Series Rated Parameters

Model	Rated Power (KW)	DC Input VOC Voltage(V)	Recommend VOC Voltage (V)	Recommend MPPT Voltage(V)	Max. DC Input Current (A)	Rated Output Current(A)	Rated output Voltage (V)	Appearance(refer to appendix1)
CT112-2S-0.7G	0.75	300~450	388~450	320~370	8.5	5.5	1PH 220	C0
CT112-2S-1.5G	1.5	300~450	388~450	320~370	14	10	1PH 220	
CT112-2S-2.2G	2.2	300~450	388~450	320~370	23	13.8	1PH 220	
CT112-2S-4.0G	4	300~450	388~450	320~370	35	20	1PH 220	C1
CT112-2T-0.7G	0.75	200~450	388~450	320~370	8.5	4.5	3PH220	C0
CT112-2T-1.5G	1.5	200~450	388~450	320~370	14	7.0	3PH220	
CT112-2T-2.2G	2.2	200~450	388~450	320~370	23	10	3PH220	
CT112-2T-4.0G	4	200~450	388~450	320~370	35	16	3PH220	C1
CT112-2T-5.5G	5.5	200~450	388~450	320~370	50	20	3PH220	C2

CT112-4T-0.7G	0.75	300~780	670~780	540~ 630	8.5	2.5	3PH380	C0
CT112-4T-1.5G	1.5	300~780	670~780	540~630	8.5	3.7	3PH380	
CT112-4T-2.2G	2.2	300~780	670~780	540~630	14	5.3	3PH380	
CT112-4T-4.0G	4.0	300~780	670~780	540~630	23	9.5	3PH380	
CT112-4T-5.5G	5.5	300~780	670~780	540~ 630	23	14.0	3PH380	C1
CT112-4T-7.5G	7.5	300~780	670~780	540~630	35	18.5	3PH380	C2
CT112-4T-11G	11	300~780	670~780	540~630	35	25.0	3PH380	
CT112-4T-15G	15	300~780	670~780	540~630	50	32.0	3PH380	C3
CT112-4T-18.5G	18.5	300~780	670~780	540~ 630	50	38.0	3PH380	
CT112-4T-22G	22	300~780	670~780	540~630	75	45.0	3PH380	
CT112-4T-30G	30	300~780	670~780	540~630	75	60.0	3PH380	C4
CT112-4T-37G	37	300~780	670~780	540~630	100	75.0	3PH380	
CT112-4T-45G	45	300~780	670~780	540~ 630	100	92.0	3PH380	C5
CT112-4T-55G	55	300~780	670~780	540~630	150	115.0	3PH380	
CT112-4T-75G	75	300~780	670~780	540~630	225	150.0	3PH380	
CT112-4T-90G	90	300~780	670~780	540~630	300	180.0	3PH380	
CT112-4T-110G	110	300~780	670~780	540~ 630	375	215.0	3PH380	C6
CT112-4T-132G	132	300~780	670~780	540~630	450	260.0	3PH380	

Note:The output current is defined as the rated current when the output voltage is 380v.The output current should be calculated according to the power when the output voltage are 400v,415v and 440v. From April 2020, CT112-4T-4.0G standard to be shape C0, 75KW and 90kw standard to be shape C5. 132kw standard to be shape C6

CT112 Series Wiring Diagram



CT112A Series with Booster type

Based on **CT112** Series and equipped with auto-voltage boost function to satisfy operating demands of low voltage and simplify solar battery panel configuration, reducing system cost.

CT112A Series Power Level

CT112A-2S/2T-XXX	0.7	1.5	2.2
Rated output power(kW）	0.7	1.5	2.2
Max. DC input current（A）	9	12	12
Rated AC input current—AC type（A）	9.3	15.7	24
Rated output current（A）	4.5	10	14

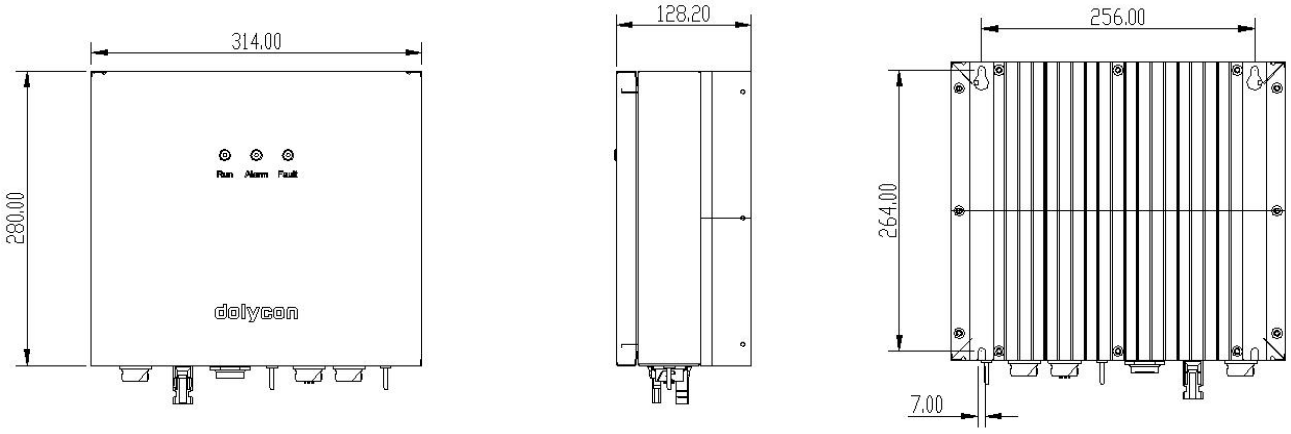
Note:Output current is defined as rated value at single 220V output voltage,and output current at three phase output is counted additionally according to the power.

CT112A Series Product Specification

Mode	CT112A-2S-0.7 CT112A-2T-0.7	CT112A-2S-1.5 CT112A-2T-1.5	CT112A-2S-2.2 CT112A-2T-2.2
DC INPUT			
Max. DC current(V)	450		
Starting voltage(V)	80	100	
Min. Operation voltage(V)	60	80	
Recommended MPPT voltage(V)	80~400	100~400	
Input channel	One channel:MC4		
Max. DC input current(A)	9	12	
Bypass AC input (model supports mains input)			
Input voltage(Vac)	220/230/240(1PH)（-15%~+10%）		
Input frequency（Hz）	47~63		
AC input terminal	1P2L		
AC output			
Rated（W）	750	1500	2200
Rated current（A）	5.1（1PH） 4.2（3PH）	10.2（1PH） 7.5（3PH）	14（1PH） 10（3PH）

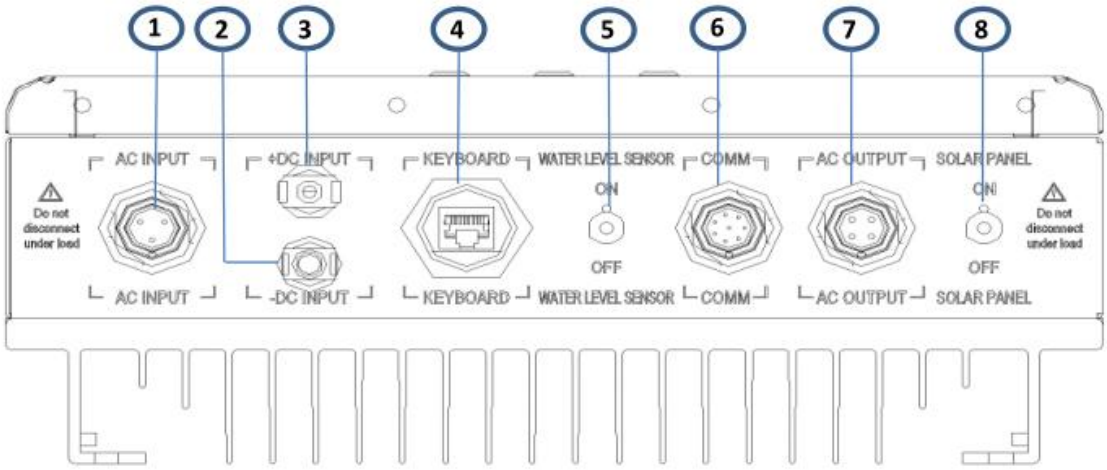
Output voltage(Vac)	0~input voltage
Output wiring mode	1P2L/2P3L/3P3L
Output frequency（Hz）	1~400
Control performance	
Control mode	V/F
Motor type	Asynchronous motor
Other parameters	
Dimension（L*W*H）（mm）	314*280*128
Protection level	IP54
Cooling mode	Natural cooling
HMI	External LED keypad
Communication terminal	
External communication	RS485/3 digital inputs
Operation environment	
Ambient temperature	-25℃~60℃（derate when the temperature is above 45℃）
Operation altitude	3000 m（derate when the altitude is above 2000m）
Warranty	18 months

CT112A Series External Dimension



Mode	Height H1 (mm)	Width W1 (mm)	Depth D (mm)	Height H2 (mm)	Width W2 (mm)	Installation hole
CT112A-2S/2T-0.7	280	314	128.2	264	256	M6
CT112A-2S/2T-1.5						
CT112A-2S/2T-2.2						

CT112A Series Main Circuit Terminals



No	Terminal name	Pin definition	
1	AC input terminal	1．L	
		2．N	
		3．PE	
2	PV input terminal:negative	-DC INPUT	
3	PV input terminal:positive	+DC INPUT	
4	External keypad terminal	RJ45	
5	Water level indication switch	1. DI3	Short circuit:water shortage.Direct short-circuit running without water level sensor
		2.COM	
6	Functional terminal	1．485+	
		2．485-	
		3．DI2	Short circuit:full water
		4．DI3	Short circuit:water shortage
		5．COM	
		6．AIN	Pressure sensor
		7．+24V	
		8．PE	
7	AC output terminal	1．U	
		2．V	
		3．W	
		4．PE	
8	Solar/mains switch	1. DI4	Solar restrict switch,F05.05=42,DI5 setting
		2. COM	

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;

Ⅰ Mini-size design

Ⅱ Sensorless vector control or V/F control

Ⅲ 150% of rated current: 60s;
180% of rated current: 10s;
200% of rated current: 1s

Ⅳ Start torque: 0.5Hz/150%(V/F)
0.25Hz/150% (SVC)

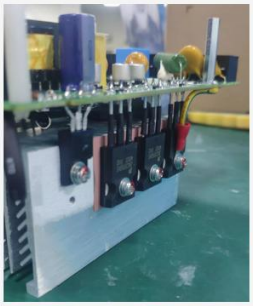
Ⅴ Speed ratio: Open loop vector control 1:200;
V/F 1: 100

Ⅵ Standard RS485 communication protocol

Safe packing

Rich terminals

Fan cool



CT120G-2S-2.2G 220V 2.2KW

CT120G Models

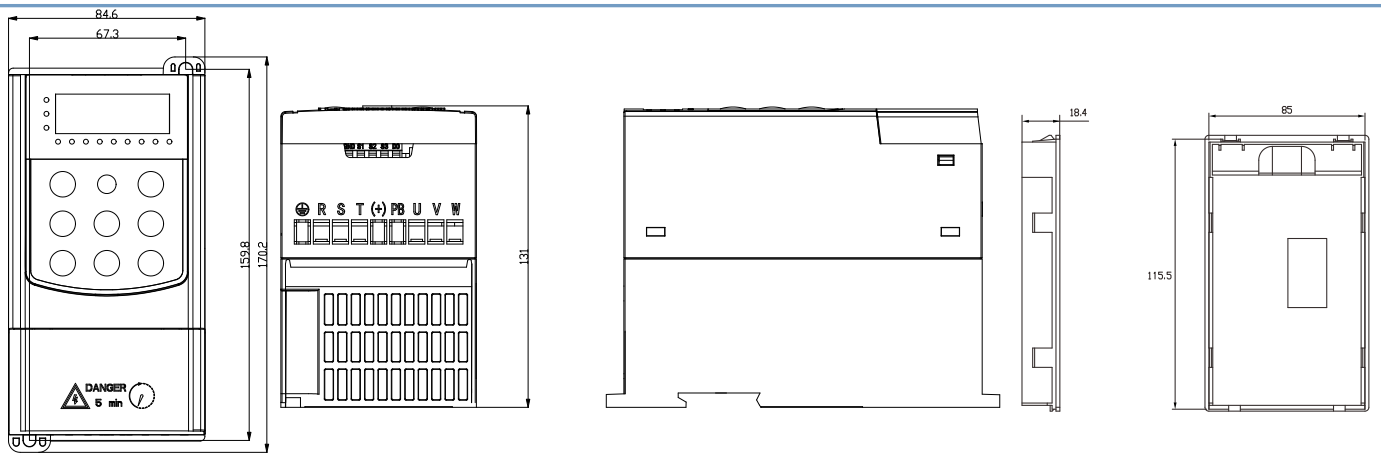
Model	Power（KW）	Input current（A）	Output current（A）	Motor power（KW）
Single phase 220Vac 50/60Hz				
CT120G-2S-0.7-B	0.75	8.2	4.5	0.75
CT120G-2S-1.5-B	1.5	14.0	7.0	1.5
CT120G-2S-2.2-B	2.2	23.0	9.6	2.2
Three phase 380Vac 50/60Hz				
CT120G-4T-0.7-B	0.75	3.4	2.5	0.75
CT120G-4T-1.5-B	1.5	5.0	3.7	1.5
CT120G-4T-2.2-B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

CT120G 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℃, derate 1% for every additional 1℃ when the ambient temperature is between 40～50℃
	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℃

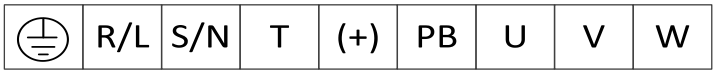
CT120G Size



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							

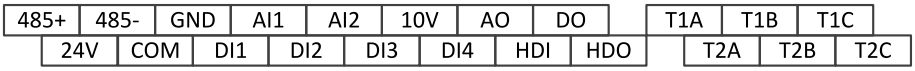
CT120G-4T-2.2-B							

CT120G Main Terminals



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



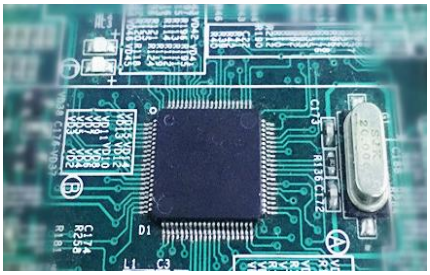
Type	Terminal name	Function	Specification
Digital input	+24V	+24V power	24V±10%, isolated to GND
	DI1～DI4	Digital input terminals 1～4	Input specification:24V，5mA
	HDI	high-speed pulse input or digital input	Pulse input frequency range:0～20KHz High power level voltage:24V
	COM	+24V power or out power	Isolated to GND
Digital output	DO	Collector outputs, public termial COM	Out connect voltage:0～24V
	HDO	High-speed pulse output or collector outputs, public termial 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）
	AI11～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/TIB/TIC	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

Type	Terminal name	Function	Specification
			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



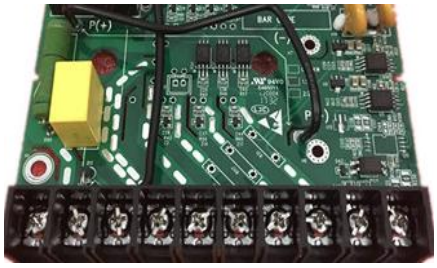
High speed high performance control DSP core control unit

Infineon PIM integrated power module

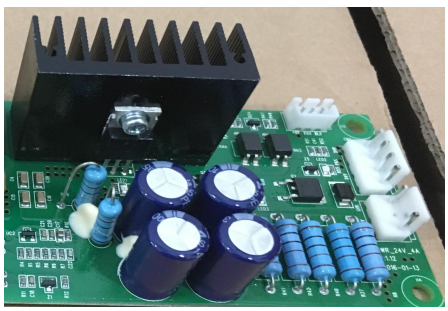
Stable multi-function terminals

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 ics/textile/building materials/metallurgy/mining/water supply/gas supply/automotive and other industries.

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

CT100G Series Size

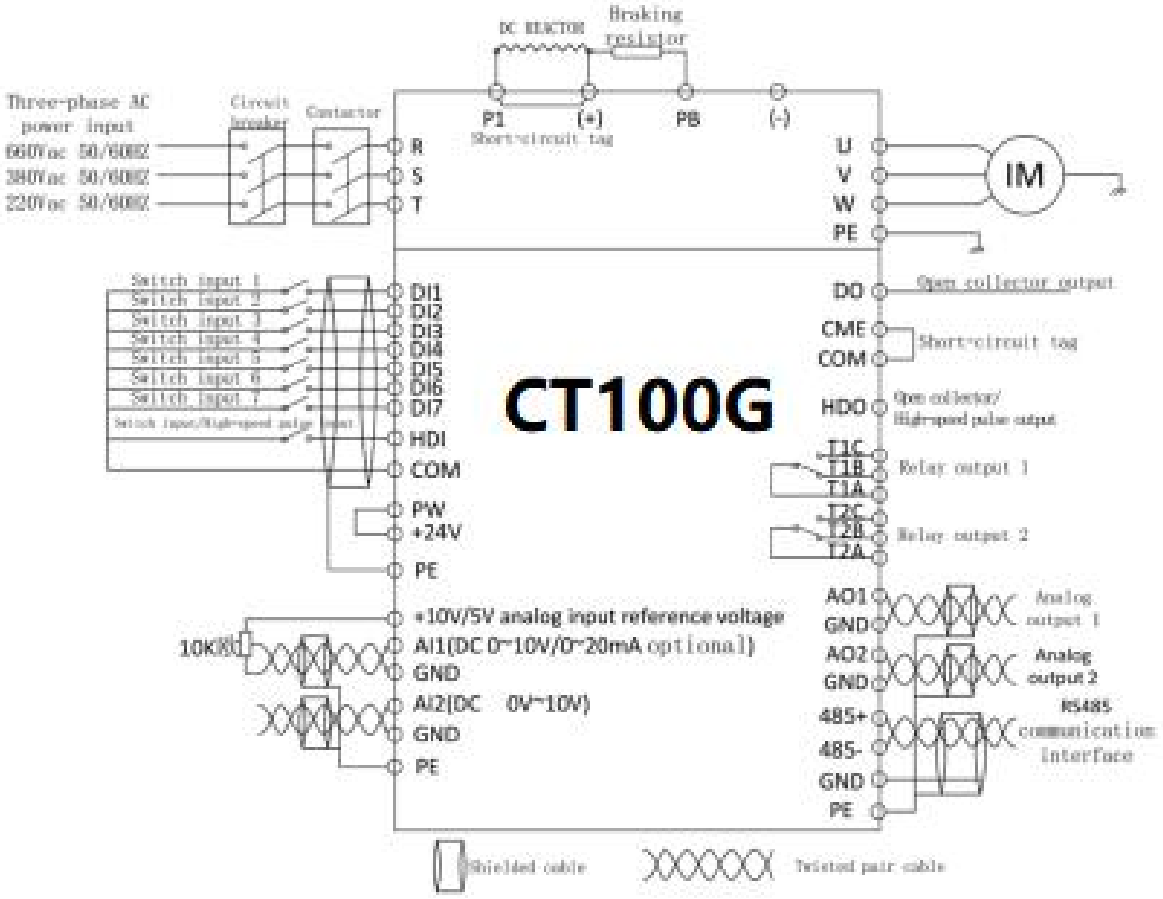
Inverter mode	Appearance and dimensions（mm）						Installing hole(mm)	weight	cabinet
	W	H	D	W1	H1	H2			
CT100G-2S-0.7G-B	126	186	155	115	175	---	5	1.6	C0
CT100G-2S-1.5G-B									
CT100G-2S-2.2G-B									
CT100G-4T-0.7G-B									
CT100G-4T-1.5G-B									
CT100G-4T-2.2G-B									
CT100G-4T-4.0G-B									
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: 0～10s; 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 8-channel inputs, one of which can be high-speed pulse input (HDI)
	Analog input	Standard 2-channel inputs, AI1: 0～10V or 0/4～20mA input optional, AI2:0V0～+10V
	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	RS485 Communication	RS485 communication interface for external communication, support Modbus 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℃, derate 1% for every additional 1℃ when the ambient temperature is between 40～50℃
	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℃
Control terminals	Digital input	Standard 8-channel inputs, one of which can be high-speed pulse input (HDI)

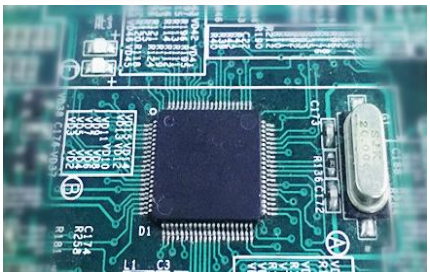
CT100G Series Diagram



CT100F PMSM Vector control inverter

CT100F is based one CT100G hard-ware, designed a new software to suppor V/F control, sensorless vector control for PMSM, vector control for PMSM with sensor, its size, diagram, basic date same as CT100G

CT100F Series Features



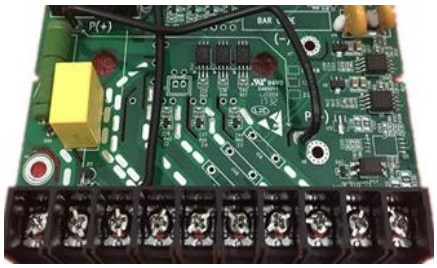
High speed high performance control DSP core control unit

Infineon PIM integrated power module

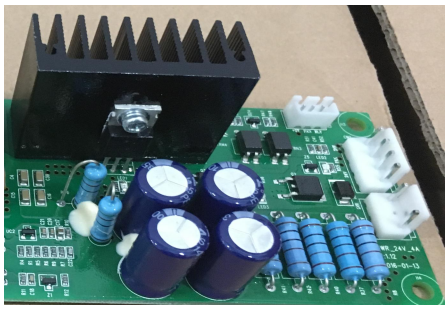
Stable multi-function terminals

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

CT100F Series can be widely applied in PMSM applications

CT100F Series Model Data

Inverter mode	Power （KW）	Input current （A）	Output current （A）	Applicable motor power （KW）
Single phase 220V 50/60Hz				
CT100F-2S-0.7G-B	0.75	8.2	4.5	0.75
CT100F-2S-1.5G-B	1.5	14.0	7.0	1.5
CT100F-2S-2.2G-B	2.2	23.0	9.6	2.2
Three phase 380V 50/60Hz				
CT100F-4T-0.7G-B	0.75	3.4	2.5	0.75
CT100F-4T-1.5G-B	1.5	5.0	3.7	1.5
CT100F-4T-2.2G-B	2.2	5.8	5.3	2.2
CT100F-4T-4.0G-B	4.0	12.0	9.5	4.0
CT100F-4T-5.5G-B	5.5	18.5	14	5.5
CT100F-4T-7.5G-B	7.5	22.5	18.5	7.5
CT100F-4T-11G-B	11	30.0	25.0	11
CT100F-4T-15G-B	15	39.0	32.0	15
CT100F-4T-18.5G-B	18.5	45.0	38.0	18.5
CT100F-4T-22G-B	22	54.0	45.0	22
CT100F-4T-30G-B	30	68.0	60.0	30
CT100F-4T-37G	37	84.0	75.0	37
CT100F-4T-45G	45	98.0	92.0	45
CT100F-4T-55G	55	123.0	115.0	55
CT100F-4T-75G	75	157.0	150.0	75
CT100F-4T-90G	90	188.0	180.0	90
CT100F-4T-110G	110	221.0	215.0	110
CT100F-4T-132G	132	267.0	260.0	132
CT100F-4T-160G	160	309.0	305.0	160
CT100F-4T-185G	185	344.0	340.0	185
CT100F-4T-200G	200	384.0	380.0	200
CT100F-4T-220G	220	429.0	425.0	220
CT100F-4T-250G	250	484.0	480.0	250
CT100F-4T-280G	280	539.0	530.0	280
CT100F-4T-315G	315	612.0	600.0	315
CT100F-4T-355G	355	665.0	650.0	355
CT100F-4T-450G	450	805	795.0	450
CT100F-4T-500G	500	890	860.0	500
CT100F-4T-560G	560	1045	1015	560
CT100F-4T-630G	630	1224	1200	630

CT100F Series Size

Inverter mode	Appearance and dimensions（mm）						Installing hole(mm)	weight	cabinet
	W	H	D	W1	H1	H2			
CT100F-2S-0.7G-B	126	186	155	115	175	---	5	1.6	C0
CT100F-2S-1.5G-B									
CT100F-2S-2.2G-B									
CT100F-4T-0.7G-B									
CT100F-4T-1.5G-B									
CT100F-4T-2.2G-B									
CT100F-4T-4.0G-B									
CT100F-4T-5.5G-B									
CT100F-4T-7.5G-B	140	230	172	128	218	---	5.5	3.5	C1
CT100F-4T-11G-B	165	285	200	153	273	---	5.5	5.2	C2
CT100F-4T-15G-B									
CT100F-4T-18.5G-B	214	402	205	184	360	385	7	11.5	C3
CT100F-4T-22G-B									
CT100F-4T-30G-B									
CT100F-4T-37G	250	442	230	220	405	425	7	19	C4
CT100F-4T-45G									
CT100F-4T-55G	299	602	276	240	540	580	9	30	C5
CT100F-4T-75G									
CT100F-4T-90G									
CT100F-4T-110G									
CT100F-4T-132G	329	660	332	250	601	640	9	56	C6
CT100F-4T-160G									
CT100F-4T-185G	480	853	354	180	772	826	11	110	C7
CT100F-4T-200G									
CT100F-4T-220G									
CT100F-4T-250G									
CT100F-4T-280G									
CT100F-4T-315G	680	940	370	290	908	---	13	165	C8
CT100F-4T-355G									
CT100F-4T-400G									
CT100F-4T-450G	880	962	370	170	928	180	13	200	C11
CT100F-4T-500G									
CT100F-4T-560G	950	962	380	314	923	---	13	220	C12
CT100F-4T-630G									

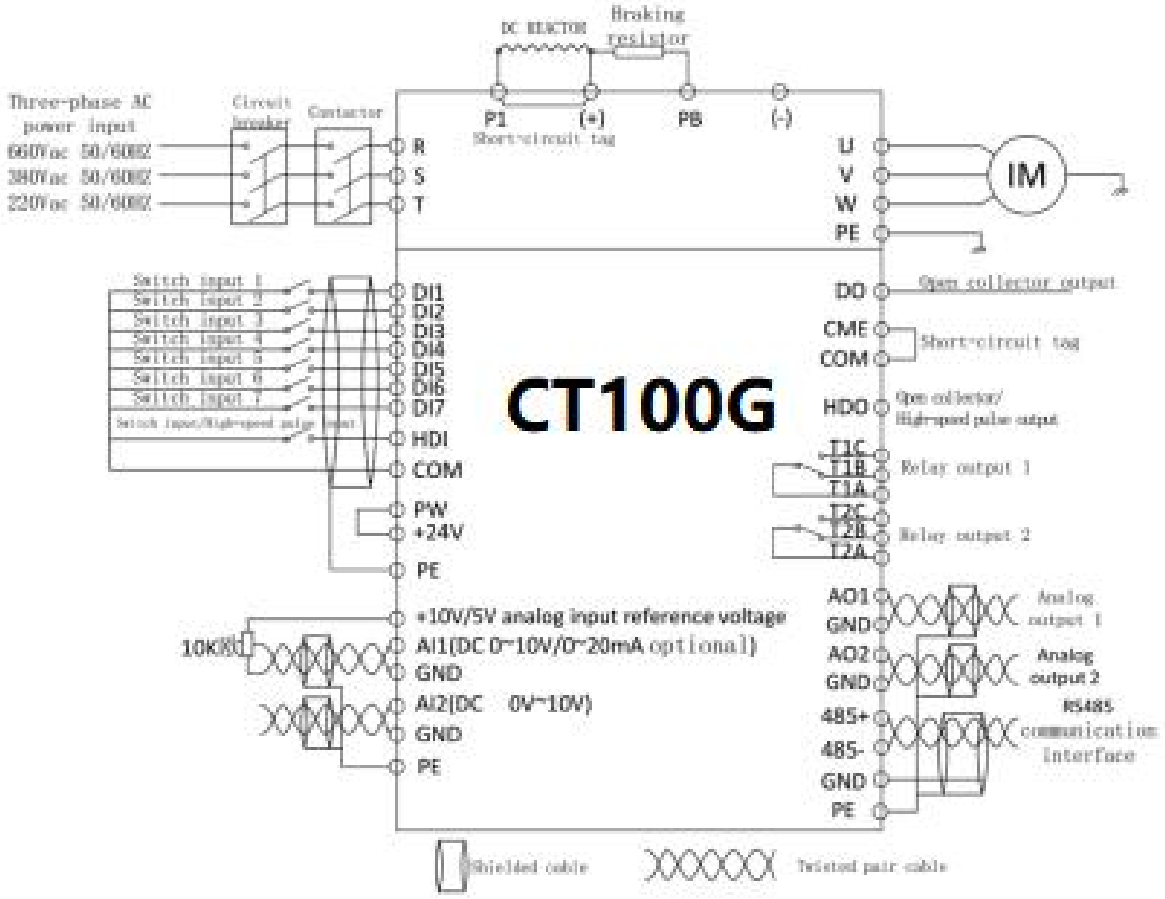
CT100G Series Technical Parameter

Input and	Input voltage	Single-phase 220VAC±15%

output parameters		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 for PMSM, vector control for PMSM with sensor
	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: 0～10s; 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 8-channel inputs, one of which can be high-speed pulse input (HDI)
	Analog input	Standard 2-channel inputs, AI1: 0～10V or 0/4～20mA input optional, AI2:0V0～+10V
	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	RS485 Communication	RS485 communication interface for external communication, support Modbus 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℃, derate 1% for every additional 1℃ when the ambient temperature is between 40～50℃
	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℃
Control terminals	Digital input	Standard 8-channel inputs, one of which can be high-speed pulse input (HDI)

CT100F Series Diagram is same as CT100G



CT100 series universal vector inverter

It is G/P models in one. Some models are bigger size than CT100G. Based on DSP control system,has high performance open loop vector control technology, achieving excellent performance and high reliability.It can be applied to asynchronous motors, providing excellent drive performance.

Application

CT100 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.

CT100 in chemical, textile and many differen factories

CT100 185KW for conveyer belt

Dolycon inverter for sand belt machine

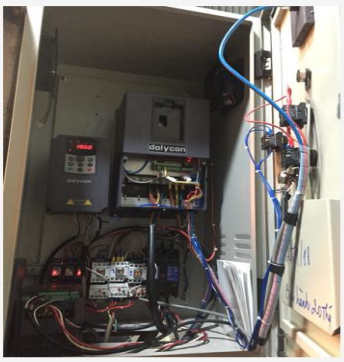
Inverter CT100-15KW controls screw air compressor

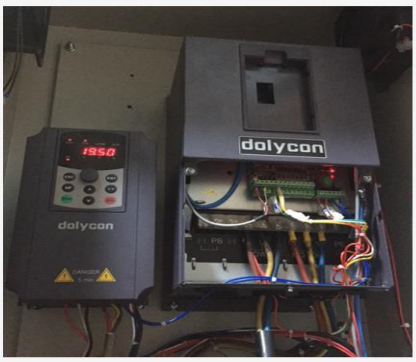
Inverter CT100 - 15KW controls rotary tank dyeing machine



Inverter CT100 2.2KW & 22KW synchronously controls the conveyor to feed the boiler 20 tons







Inverter CT100- synchronous control with INVT & Fuji & Toshiba inverter for high pressure dyeing

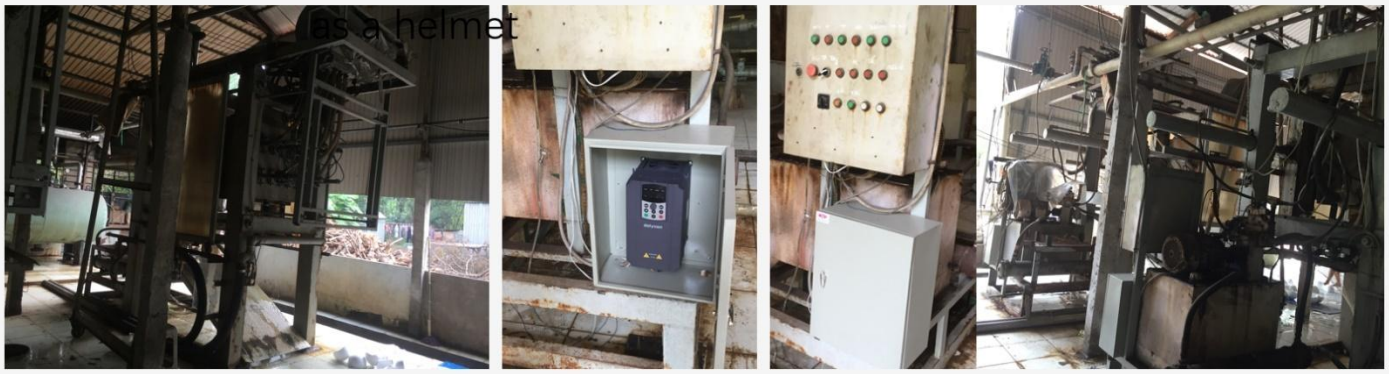


Inverter CT100 control for making rice paper



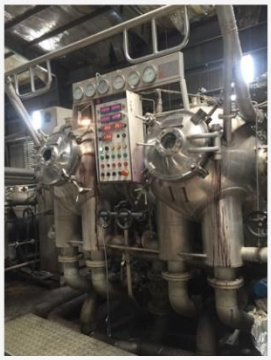

Inverter CT100 controls PE plastic forming machine

Inverter CT 100 controls foam sponge as a helmet



9- Inverter CT100 controls rotary turning kiln for fertilizer drying

Inverter CT100- 55KW to control two-level HDPE glue stirring machine



Dolycon inverter replace Danfort inverter for Z axis dyeing machine

Installation of inverter CT100 for extruding wet plastic glue machine










CT100 inverters for extruding machines for making plastic beads


Dolycon inverter for coating machine and spraying equipment





CT100 inverters for winch, plastic particle cutters and many other applications






CT100 Series Product data

Inverter mode	Power (kW)	Input current (A)	Output current (A)	Structure and mounting dimension (mm)						Weight (kg)	Cabinet
Constant torque(G type,heavy load)/constant power(P type,light load)				W	H	D	W1	H1	H2		
Single-phase 220Vac 50/60Hz				126	186	155	115	175	---	1.6	C0
CT100-2S-0.7G-B	0.75	8.2	4.0								
CT100-2S-1.5G-B	1.5	14.0	7.0								

CT100-2S-2.2G-B	2.2	23.0	9.6								
Three-phase 380Vac 50/60Hz											
CT100-4T-0.7G-B	0.75	3.4	2.5								
CT100-4T-1.5G-B	1.5	5.0	3.7								
CT100-4T-2.2G-B	2.2	5.8	5.3								
CT100-4T-4.0G/5.5P-B	4.0/5.5	12.0/18.5	9.5/14								
CT100-4T-5.5G/7.5P-B	5.5/7.5	18.5/22.5	14/18.5	140	230	172	128	218	---	3.5	C1
CT100-4T-7.5G/11P-B	7.5/11	22.530	18.5/25.0	165	285	200	153	273	---	5.2	C2
CT100-4T-11G/15P-B	11/15	30.0/39.0	25.0/32.0								
CT100-4T-15G/18.5P-B	15/18.5	39.0/45.0	32.0/38.0	214	410	203	184	360	385	11.5	C3
CT100-4T-18.5G/22P-B	18.5/22	45.0/54.0	38.0/45.0								
CT100-4T-22G/30P-B	22/30	54.0/68.0	45.0/60.0								
CT100-4T-30G/37P-B	30/37	68.0/84.0	60.0/75.0	250	450	230	220	400	425	19	C4
CT100-4T-37G/45P-B	37/45	84.0/98.0	75.0/92.0								
CT100-4T-45G/55P	45/55	98.0/123.0	92.0/115.0	300	600	280	240	540	580	30	C5
CT100-4T-55G/75P	55/75	123.0/157.0	115.0/150.0								
CT100-4T-75G/90P	75/90	157.0/188.0	150.0/180.0								
CT100-4T-90G/110P	90/110	188.0/221.0	180.0/215.0								
CT100-4T-110G/132P	110/132	221.0/267.0	215.0/260.0	330	660	330	250	600	640	56	C6
CT100-4T-132G/160P	132/160	267.0/309.0	260.0/305.0								
CT100-4T-160G/185P	160/185	309.0/344.0	305.0/340.0	485	850	355	180	772	826	110	C7
CT100-4T-185G/200P	185/200	344.0/384.0	340.0/380.0								
CT100-4T-200G/220P	200/220	384.0/429.0	380.0/425.0								
CT100-4T-220G/250P	220/250	429.0/484.0	425.0/480.0								
CT100-4T-250G/280P	250/280	484.0/539.0	480.0/530.0								
CT100-4T-280G/315P	280/315	539.0/612.0	530.0/600.0	680	940	355	240	850	900	165	C8
CT100-4T-315G/355P	315/355	612.0/665.0	600.0/650.0								
CT100-4T-355G	355	665.0	650.0	600	1900	600	520	548	---	200	C9
CT100-4T-400G	400	715	720								
CT100-4T-500G	500	890	860								
Three-phase 660Vac 50/60Hz											
CT100-6T-22	22	38	28	300	600	280	240	540	580	30	C5
CT100-6T-30	30	40	35								
CT100-6T-37	37	47	45								
CT100-6T-45	45	55	52								
CT100-6T-55	55	65	63	330	660	330	250	600	640	56	C6
CT100-6T-75	75	85	86								
CT100-6T-90	90	95	98								
CT100-6T-110	110	118	121								
CT100-6T-132	132	145	150								

CT100-6T-160	160	165	175	485	850	355	180	772	826	110	C7
CT100-6T-185	185	198	198								
CT100-6T-200	200	210	218								
CT100-6T-220	220	228	240								
CT100-6T-250	250	255	270	680	940	355	240	850	900	165	C8
CT100-6T-280	280	290	320								
CT100-6T-315	315	334	350								
CT100-6T-355	355	362	380								
CT100-6T-400	400	411	430	600	1900	600	520	548	---	200	C9
CT100-6T-500	500	518	540								
CT100-6T-560	560	578	600								
CT100-6T-630	630	655	680								

CT100 Series Technical features

Input and output parameters	Input voltage	Single-phase 220VAC±15%,three-phase 380VAC±15%,three-phase 660VAC±15%.
	Input frequency	50～60Hz±5%
	Output voltage	0～Rated input voltage
	Output frequency	0～600Hz
Technical control parameters	Control mode	V/F control, sensorless vector control, torque control
	Adjustable-speed ratio	Open loop vector control 1: 100
	Speed control accuracy	±0.5%
	Starting frequency	0.00～10.00Hz
	Overload capacity	150% of rated current: 60s; 180% of rated current: 10s; 200% of rated current: 1s
	ACC and DEC time	0.1～3000.0s
	Energy braking capacity	Operating voltage of braking unit: 320～750V
	DC braking capability	DC braking frequency: 0～300Hz; DC braking waiting time: 0～50s; DC braking current: 0.0～100.0%; DC braking time: 0.0～50.0s;
	Frequency setting	Analog quantity setting, high-speed pulse setting, multi-step speed setting,PID setting, 485 communication setting
	Auto voltage adjustment	Keep a stable output voltage automatically when the grid voltage transients
	Speed tracking	Start the rotating motor smoothly
Control terminals	Digital input	Standard 8-channel inputs, one of which can be high-speed pulse input (HDI)
	Analog input	Standard 2-channel inputs, AI1: 0～10V or 4～20mA input optional,AI2: -10V～+10V input.
	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 4～20mA optional)
	Relay output	Standard 2-channel relay outputs
Communication interface	RS485 communication	RS485 communication interface for external RS485 communication, Modbus protocol (RTU mode)
Fault protection	ACC overcurrent, DEC overcurrent, constant speed overcurrent, ACC overvoltage, DEC overvoltage, constant speed	

	overvoltage, busbar 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, 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℃, derate 1% for every additional 1℃ when the ambient temperature is between 40～50℃
	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℃

CT100 Series Wiring Diagram