CT112 SERIES SOLAR PUMP INVERTER



CT112 series solar pump inverter applied in solar pumping 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 solar pump inverter are widely used in agriculture irrigation, drinking water, desert control, saline land improvement, animal husbandry, fishery oxygenation, fountain, etc.

CT112 Series Features

dolycon

- 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.
- PV reversed connection protection.

CT112 Series Technical Parameters

dolycon

Model			CT112-2S0.4G~4.0G	CT112-2T-0.7G~5.5G	CT112-4T-0.7G~132G
Input Specification	PV Input	Max. 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 Voltage	1PH220V (-15%~30%)	1PH & 3PH220V (-15%~30%)	3PH380VAC (-15%~30%)
Output Specification		Rated Output Voltage	1PH220V	1PH & 3PH220V	3PH380VAC
		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°C~50°C (Environment Temperature be 40°C~50°C, please keep derated use.)		
		Humidity	5~95%, non-condensation		
		Vibration	Less than 5.9 m/s2 (0.6g)		
		Storage Temperature	-20°C~+70°C		
		Efficiency	Rated Power Run≥93%		
		Installation	Wall or rail mounting		
		Cooling	Forced Air Cooling		

CT112 Series Rated Parameters

dolycon

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)
CT112-2S-0.7G	0.75	300~450	388~450	320~370	8.5	5.5	1PH 220
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
CT112-2T-0.7G	0.75	200~450	388~450	320~370	8.5	4.5	3PH220
CT112-2T-1.5G	1.5	200~450	388~450	320~370	14	7	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
CT112-2T-5.5G	5.5	200~450	388~450	320~370	50	20	3PH220
CT112-4T-0.7G	0.75	300~780	670~780	540~ 630	8.5	2.5	3PH380
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	300~780	670~780	540~630	23	9.5	3PH380
CT112-4T-5.5G	5.5	300~780	670~780	540~ 630	23	14	3PH380
CT112-4T-7.5G	7.5	300~780	670~780	540~630	35	18.5	3PH380
CT112-4T-11G	11	300~780	670~780	540~630	35	25	3PH380
CT112-4T-15G	15	300~780	670~780	540~630	50	32	3PH380
CT112-4T-18.5G	18.5	300~780	670~780	540~ 630	50	38	3PH380
CT112-4T-22G	22	300~780	670~780	540~630	75	45	3PH380
CT112-4T-30G	30	300~780	670~780	540~630	75	60	3PH380
CT112-4T-37G	37	300~780	670~780	540~630	100	75	3PH380
CT112-4T-45G	45	300~780	670~780	540~ 630	100	92	3PH380
CT112-4T-55G	55	300~780	670~780	540~630	150	115	3PH380
CT112-4T-75G	75	300~780	670~780	540~630	225	150	3PH380
CT112-4T-90G	90	300~780	670~780	540~630	300	180	3PH380
CT112-4T-110G	110	300~780	670~780	540~ 630	375	215	3PH380
CT112-4T-132G	132	300~780	670~780	540~630	450	260	3PH380

CT112A SERIES SOLAR PUMP INVERTER



CT112A Series solar pump inverter 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 Product Specification

dolycon

Model		CT112A-2S-0.7	CT112A-2S-1.5	CT112A-2S-2.2
DC INPUT	Max. DC current(V)	450		
	Starting voltage(V)	80	100	
	Min. Operation voltage(V)	60	80	
	Recommend 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°C~60°C(derate when the temperature is above 45°C)		
	Operation altitude	3000 m(derate when the altitude is above 2000m)		
	Warranty	18 months		

ENGINEERING CASE

5.5KW Solar Pumping System in Morocco







Shenzhen Dolycon's 5.5kW solar pumping system was successfully installed in Morocco to provide domestic water for nearby residents. The system is powered by solar power generation, does not require energy storage batteries, and runs fully automatically. It not only ensures clean drinking water for local residents, but also improves household hygiene and health, and is highly praised by local residents.



Project Configuration:

- 6KW solar panels
- 4KW water pump
- 5.5KW solar pump inverter

0.35MW PV+Gird Complementary System in Yunnan Province






Shenzhen Dongli's 0.35MW PV+Gird Complementary System was successfully installed in a reservoir in Luliang County, Qujing City, Yunnan Province.

Project Configuration:

- 1280 275W polycrystalline components
- 4 sets of 75 kilowatt inverters
- 6 sets of 55-kilowatt water pumps, 4 used and 2 spare
- Mobile phone remote monitoring system
- Remote monitoring of water volume, power generation, etc.



SOLAR PUMPING SYSTEM APPLICATION CASE



26KW Solar Water Saline Land Improvement in Ningxia



222KW Solar Pumping System in Sichuan Province



Solar Water Desert Control in Dubai



11KW Solar Irrigation in Saudi Arabia



Solar Pumped Hydropower Station in Kunming Daguan Wetland Park



5.5KW PV+Gird Complementary System in Guizhou Province



Solar Orchard Irrigation System in Yunnan Province



Solar Irrigation in Pakistan



Solar Irrigation in Guizhou Province



Solar Water Against Drought in Ningxia



Solar Oxygenation System in Kunming



Solar Central Pivot in Jiangsu Province