



RANATECH Solar Pump Inverter

Description :

Solar pumping system converts solar energy directly into electric energy, and then drives motors to drive water pumps to pump water from deep wells, rivers, lakes and other water sources. The system consists of solar panels, solar pump inverter and water pump.

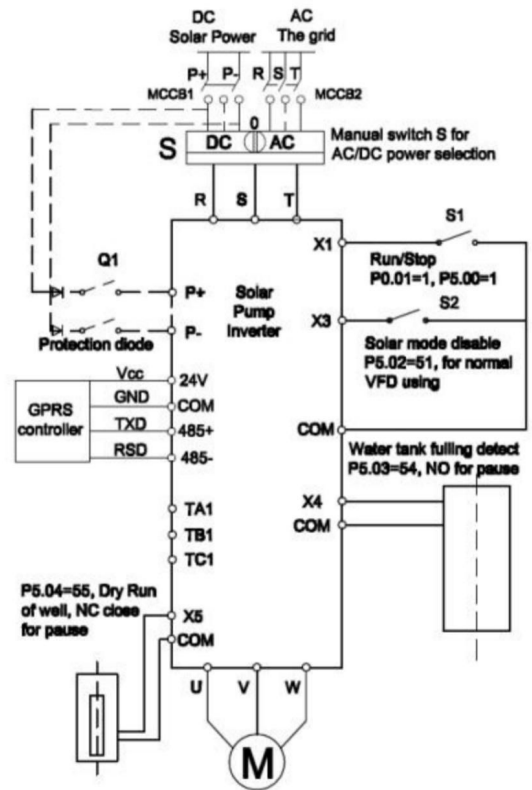
Solar pump inverter, also called solar variable frequency drive, converts the direct current of solar panel into alternating current, thereby driving various AC motor water pumps (centrifugal pump, irrigation pump, deep well water pump, swimming pool pump, etc.), the input can be the solar DC power supply (DC 150V-450V, DC 250V-800V), also can be single phase or three phase AC power supply (AC 220V, 380V, 400V, 460V, 480V), is very suitable for use in remote and dry areas.

220V models: It uses for 220VAC pumps, 150VDC to 450VDC input, recommend 310Vmp.

380V models: It uses for 380VAC pumps, 250VDC to 800VDC input, recommend 540Vmp.

Main Features : (Power range:0.75kw-11kw 220v, 0.75kw-400kw 380v)

- .Built-in MPPT function and efficiency up to 99.6%
- .Could drive both AM and PMSM pump
- .Advanced software technology and perfect in driving PMSM pump
- .Perfect stability in output frequency
- .DC and AC as input power source accepted
- .Dry run function to protect the pump
- .Automatic start and stop function
- .GPRS Controller



Model list selection :



2T series, 150 to 450 VDC or 220VAC input, V_{mp} 310VDC, 372VDC

	Power	Related current(amp)	Output voltage(AC)	Applicable for pumps	Packing size(mm)	MPPT voltage (VDC)	G.W(Kgs)
1	2T-1.5KW	7A	0-220V	1.5KW	265*180*210	260 to 355	3.3
2	2T-2.2KW	10A	0-220V	2.2kw	265*180*210	260 to 375	3.3
3	2T-4KW	16A	0-220V	3.7kw	335*225*245	260 to 355	5.3

4T series, 250 to 800 VDC or 380VAC, V_{mp}540VDC, V_{oc} 648VDC

1	4T-3.7KW	10A	0-440V	3.7KW	265*180*210	486 to 650	3.3
2	4T-5.5KW	13A	0-440V	5.5KW	400*270*290	486 to 650	7.3
3	4T-7.5KW	16A	0-440V	7.5KW	400*270*290	486 to 650	7.3
4	4T-11KW	25A	0-440V	11KW	440*330*310	486 to 650	11.7
5	4T-15KW	32A	0-440V	15KW	440*330*310	486 to 650	11.8
6	4T-18KW	38A	0-440V	18.5KW	540*400*365	486 to 650	17.3
7	4T-22KW	45A	0-440V	22KW	540*400*365	486 to 650	17.5
8	4T-30KW	60A	0-440V	30KW	540*400*365	486 to 650	21
9	4T-37KW	75A	0-440V	37KW	660*420*415	486 to 650	27.4
10	4T-45KW	90A	0-440V	45KW	660*420*415	486 to 650	26.9
11	4T-55KW	110A	0-440V	55KW	700*480*410	486 to 650	33.1
12	4T-75KW	150A	0-440V	75KW	700*480*410	486 to 650	34
13	4T-93KW	170A	0-440V	93KW	700*480*490	486 to 650	50.7

Technical Specifications:

Recommended MPPT voltage range	V _{mp} 280 to 375VDC for 2S model (150V to 450VDC input, 3PH 220 to 240VAC output)
	V _{mp} 486 to 750 VDC for 4T model (250V to 800VDC input, 3PH 380 to 440VAC output)
Recommended input voltage (V _{oc} and V _{mp})	V _{oc} 355V DC, V _{mp} 310V DC for 2S model or 220V AC pumps
	V _{oc} 620V DC, V _{mp} 540V DC for 4T model or 380V AC pumps
Motor type	Control for permanent magnet synchronous motor(PMSM) and asynchronous motor(AM)
Input power	DC power from solar arrays or AC grid power
Maximum DC power input	450VDC for 220V AC Pump / 800VDC for 380V AC Pump
Rated output voltage	3-phase 220V or 3-phase 380V/440V
Output frequency range	0~50/60Hz
MPPT efficiency	99.60%
Ambient temperature range	-10°C TO 50°C
Solar pump control special performance	MPPT (maximum power point tracking), CVT (constant voltage tracking), auto/manual operation, dry run protection, low stop frequency protection, minimum power input, motor maximum current protection, flow calculating, energy generated calculating
Protection function	Phase loss protection, phase short circuit protection, ground to phase circuit protection, input and output short circuit protection. Stall protection
Protection degree	IP20/IP54-Air force cooling
Running mode	MPPT,CVT, variable frequency mode
Altitude	Below 1000m; above 1000m, derated 1% for every additional 100m
Standard	CE certificate.Design based on vector control inverter