



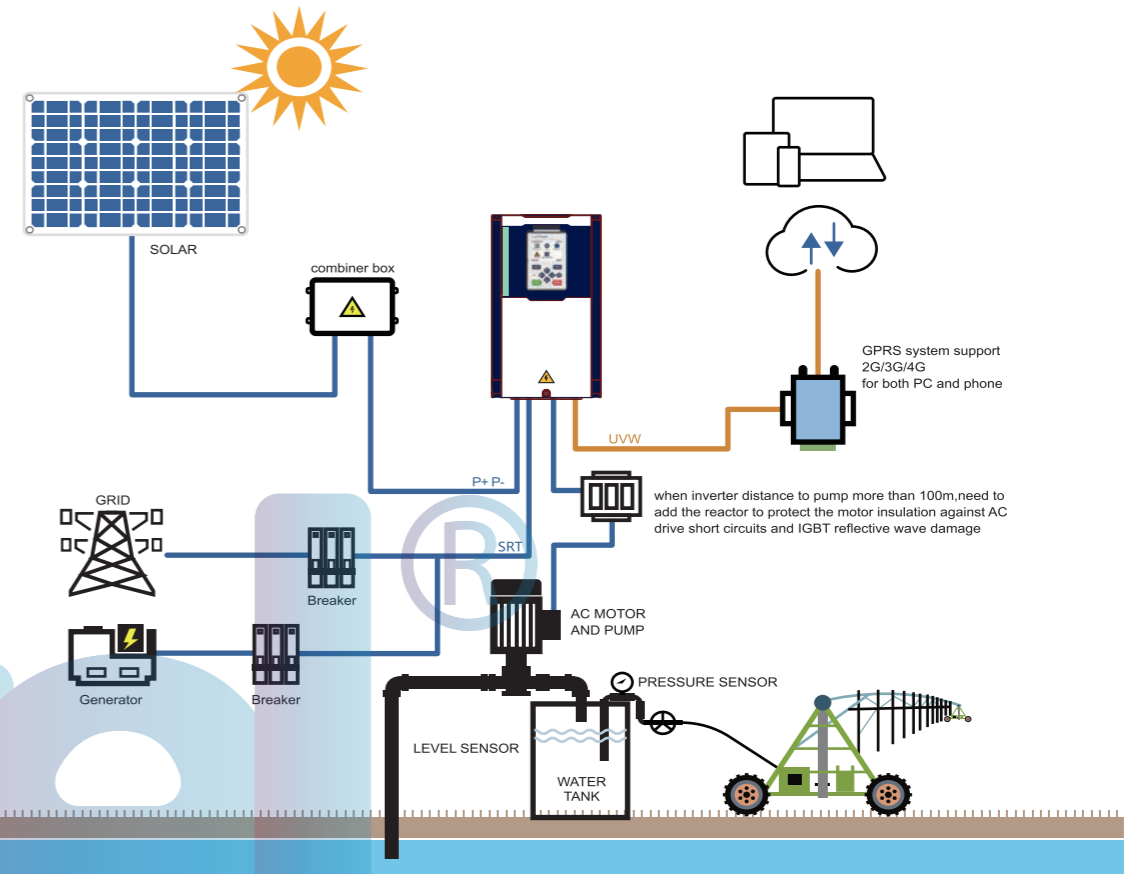
Solar pump inverter working principle



VFD500-PV Hybrid Solar Pump Inverter



Model reference



Electrical Specifications

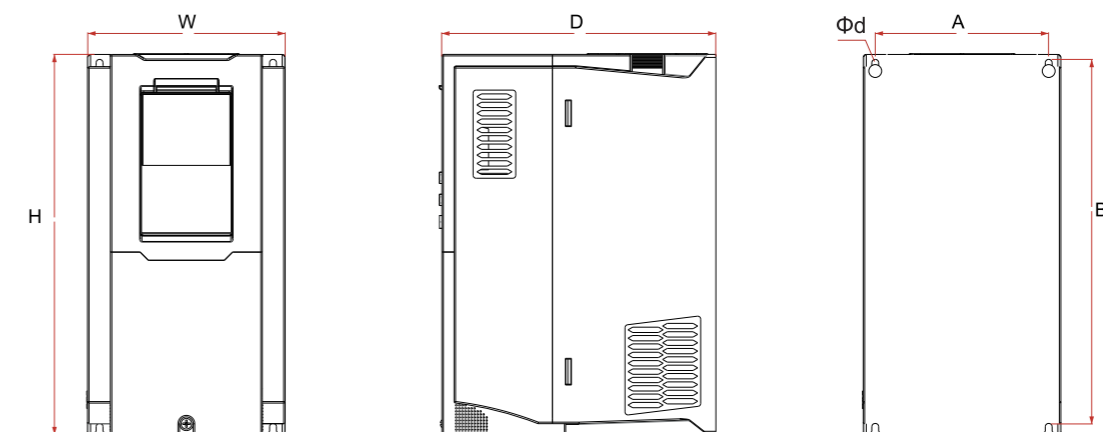
	220V	380V
Max input DC voltage(VOC)	450V	800V
DC voltage range	160V-450V	350V-800V
Recommended DC input voltage range(Vmpp)	250V-400V	450V-600V
Recommended input operation voltage	305V(Vmpp)	530V(Vmpp)
MPPT efficiency	>99%	
Rated output voltage	1/3-phase 220VAC	3-phase 380V-480V VAC
Output frequency range	50/60Hz(maximum 600hz)	
Max efficiency of the machine	99%	
Ambient temperature range	-10 °C-50 °C, derating if the temperature is above 40 °C	
Cooling method	Air cooling	
Protection degree	IP20/P21	
Altitude	Below 1000m; above 1% for every additional 100m.	
Standard	IEC CE	

Model Range

Drive Model	Related Voltage	Max DC input voltage (V)	Rated output current (A)	Applicable water pump (KW)	SIZE	Inverter photo
VFD500M-20T00150-PV	220V	450V	7	1.5	SIZE A	
VFD500M-20T00220-PV	220V	450V	10.6	2.2	SIZE A	
VFD500M-40T00150-PV	380V	800	3.7	1.5	SIZE A	
VFD500M-40T00220-PV	380V	800	5	2.2	SIZE A	
VFD500M-40T00400-PV	380V	800	9.4	4	SIZE A	
VFD500M-40T00550-PV	380V	800	13	5.5	SIZE A	
VFD500M-40T00750-PV	380V	800	17	7.5	SIZE A	
VFD500-20T00150-PV	220V	450	7	1.5	SIZE A	
VFD500-20T00220-PV	220V	450	10.6	2.2	SIZE A	
VFD500-20T00400-PV	220V	450	17	4	SIZE A	
VFD500-40T00150-PV	380V	800	4.2	1.5	SIZE A	
VFD500-40T00220-PV	380V	800	6	2.2	SIZE A	
VFD500-40T00400-PV	380V	800	9.4	4	SIZE A	
VFD500-40T00550-PV	380V	800	13	5.5	SIZE B	
VFD500-40T00750-PV	380V	800	17	7.5	SIZE B	
VFD500-40T01100-PV	380V	800	25	11	SIZE C	
VFD500-40T01500-PV	380V	800	32	15	SIZE C	
VFD500-40T01850-PV	380V	800	37	18.5	SIZE D	
VFD500-40T02200-PV	380V	800	45	22	SIZE D	
VFD500-40T03000-PV	380V	800	60	30	SIZE E	
VFD500-40T03700-PV	380V	800	75	37	SIZE E	
VFD500-40T04500-PV	380V	800	90	45	SIZE F	
VFD500-40T05500-PV	380V	800	110	55	SIZE F	
VFD500-40T07500-PV	380V	800	152	75	SIZE G	
VFD500-40T09000-PV	380V	800	176	90	SIZE G	
VFD500-40T11000-PV	380V	800	210	110	SIZE H	
VFD500-40T13200-PV	380V	800	253	132	SIZE I	
VFD500-40T16000-PV	380V	800	304	160	SIZE I	
VFD500-40T18500-PV	380V	800	360	185	SIZE J	
VFD500-40T20000-PV	380V	800	380	200	SIZE J	
VFD500-40T22000-PV	380V	800	426	220	SIZE K	
VFD500-40T25000-PV	380V	800	465	250	SIZE K	
VFD500-40T28000-PV	380V	800	520	280	SIZE L	
VFD500-40T31500-PV	380V	800	585	315	SIZE L	
VFD500-40T35500-PV	380V	800	650	355	SIZE M	
VFD500-40T40000-PV	380V	800	725	400	SIZE M	
VFD500-40T45000-PV	380V	800	820	450	SIZE N	
VFD500-40T50000-PV	380V	800	900	500	SIZE N	



Appearance and Mounting Hole Dimension



LED & LCD keypad

- Standard inverter are with LED keypad, LCD keypad is optional.
- LCD keypad can monitor 4 parameters at the same time. LED keypad show one parameter only.
- LCD keypad with detailed parameter explain, no need use user manual, more user friendly.
- LCD keypad with copy and update and download function, widely used for government projects and big farms.
- New version LCD and LED display for more options. New LCD with time clock. Multiple language and quick search etc. More user friendly.



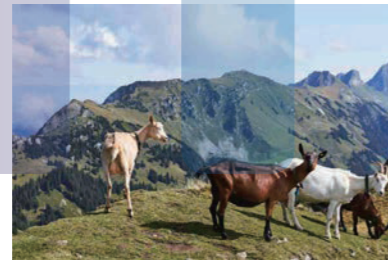
Product size

SIZE	Appearance and installation dimension mm							
	A	B	H	H1	W	D	Φd	Mounting screws
SIZE A	87	206.5	215	/	100	170	ø5.0	M4X16
SIZE B	113	239.5	250	/	130	180	ø5.0	M4X16
SIZE C	153	299	310	/	170	193	ø6.0	M5X16
SIZE D	165	350	370	335	210	196	ø6.0	M5X16
SIZE E	218	438	452.5	424	260	230	ø7.0	M6X16
SIZE F	250	535	555	520	320	275	ø10.0	M8X20
SIZE G	280	620	640	605	350	290	ø10.0	M8X20
SIZE H	280	695	715	660	370	313	ø11.0	M8X25
SIZE I	280	705	725	670	360	338	ø11.0	M8X25
SIZE J	360	795	816	762	490	358	ø11.0	M10X25
SIZE K	360	795	816	762	490	358	ø11.0	M10X25
SIZE L	450	1045	1075	1005	550	450	ø13.0	M12X30
SIZE M	630	1013	1495	970	730	450	ø13.0	M12X30
SIZE N	660	1065	1575	1095	785	450	ø13.0	M12X30

Application scenarios



Commercial/Agricultural irrigation system



Agricultural and animal husbandry water supply system



Barren hills governance system



Agricultural greenhouse water supply system



Landscape fountain system



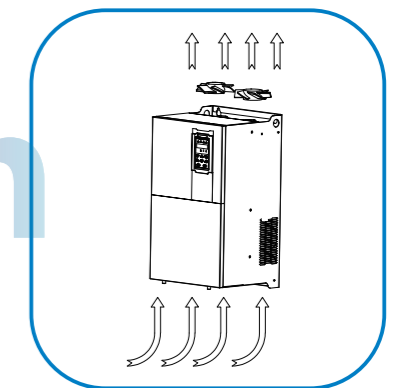
Solve water short problem

Key features

- Maximizing power generation efficiency of solar modules with the use of advanced MPPT control technology and automatic MPPT voltage tracking
- Adjust water outflow of pumps quickly on basis of sunlight intensity change
- Automatic hibernation and wake up
(1) Hibernate at high water level and wake up at low water level
(2) Hibernate at sunrise and sunset and wake up at strong sunlight
- Built-in C3 EMC filter and DSP technology and Infineon PIM design, with functions of light weak protection, dry run and low voltage, full water warning, overvoltage and over temperature protection
- Advanced calculation for Pump flow and LCD monitoring display
- Automatic running without any commissioning in keypad control and GPRS monitoring option
- Dual supply capability with change over switch-solar and grid compatible
- Special MPPT+PID function for better and more stable water supply

Independent duct design

- ▶ Independent air duct design, effectively preventing dust entering into inverter, causing short-circuit and other faults and improving reliability
- ▶ Use bigger air volume and long-life cooling fan effectively reduces the internal temperature rise of the inverter and ensures reliable and stable operation of inverter.



Perfect protection system

- ▶ Designed for 10 years of maintenance free operation.
- ▶ Cooling fan, capacitors, relays, and IGBTs have been carefully selected and designed for a life expectancy up to ten years.

* Assumes the drive is running continuously for 24 hours a day at 80% load with an ambient temperature of 40

