



Technical DATA UPI200-4T-18.5B

Solar Pump Inverter 18.5 kw - 25hp / 3Phase - 380V

Input specification	
PV Input	
Maximum Input DC Voltage	800VDC
Recommended MPPT Voltage Range	450~600VDC
Recommended Input Operation Voltage	540VDC (Vmpp)
Grid or backup generator input	
Input Voltage	Three phase 380V(-15%~30%)
Output specification	
Rated output voltage	3PH 380V
Output frequency	0~600.00Hz (Default 0~60.00Hz)
Protection	
Built-in Protection	Lighting Protection, over-current, overvoltage, 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	0~2000 m Derated use above 1000m,per 100m, the rated output current decrease 1%.
Environment Temperature	-10℃~40℃ (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

1.1 Brief Introduction

A complete solar pumping system consist of solar array, pump and solar pumping inverter. UPI series solar pumping inverter can convert the DC power from solar PV array to AC power to run pump motors.

Solar array, an aggregation of many solar modules connected in series and parallel, absorbs sunlight radiation and converts it into electrical energy, providing dynamical water for the whole system.

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).

Pump, drive by 3-phase AC motor, can draw water from the deep wells or rivers and lakes to pour into the storage tank or reservoir, or directly connect to the irrigation system, fountain system, etc.

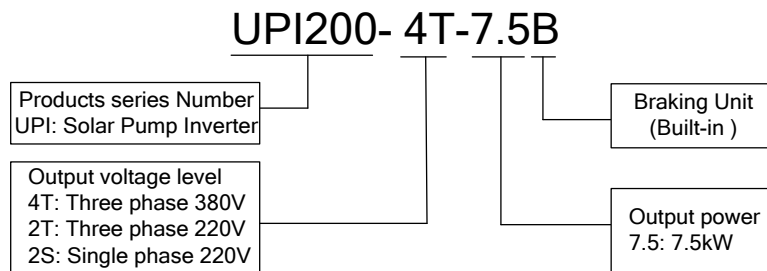


Figure 2 Structure of solar pumping system

2.1 Inverter Specification

Model Description

Model numbers on name plate consist of numbers, symbols, and letters, to express its respective series, suitable power type, power level and other information.



2.2 Inverter Features

- Apply to all kinds of single phase or 3 phase AC induction motor .
- With Infineon IGBT .Maximum power point tracking (MPPT) algorithm for dynamic VI, fast response speed,
- Good stability, the efficiency of MPPT 99.99%;
- Both AC and DC input, but can not use DC and AC at the same time.
- For single phase inverter , MPPT working voltage is 180V~450V ; for three phase inverter , MPPT working voltage is 250V~800V .
- Remote control , support RS323/RS485 protocol.
- Outdoor working environment temperature: -10 ~+40
- Start in the morning and stop in the late afternoon full automatically.
- Full protections : overload , overcurrent, over voltage , undervoltage ,short circuit , dry pumping etc, PV reversed connection protection.

2.3Parameters :

Solar Pump Inverter						Solar Array	AC Pump
Model	Rated Power(KW)	Max. DC Input Voltage(V)	MPPT Voltage(V)	Rated output Voltage(V)	Output Frequency(Hz)	DC Power(KW)	Rated Power(KW)
UPI100-2S-0.7B	0.75	450	250-400	Single PH 220	0-50/60	0.825	0.75
UPI100-2S-1.5B	1.5	450	250-400	Single PH 220	0-50/60	2.25	1.5
UPI100-2S-2.2B	2.2	450	250-400	Single PH 220	0-50/60	3.3	2.2
UPI100-2S-4.0B	4	450	250-400	Single PH 220	0-50/60	6.0	4.0
UPI100-2T-0.7B	0.75	450	250-400	3PH220	0-50/60	0.825	0.75
UPI100-2T-1.5B	1.5	450	250-400	3PH220	0-50/60	2.25	1.5
UPI100-2T-2.2B	2.2	450	250-400	3PH220	0-50/60	3.3	2.2
UPI100-2T-4.0B	4	450	250-400	3PH220	0-50/60	6.0	4.0
UPI100-2T-5.5B	5.5	450	250-400	3PH220	0-50/60	8.25	5.5
UPI200-4T-0.7B	0.75	800	450-800	3PH380	0-50/60	0.825	0.75
UPI200-4T-1.5B	1.5	800	450-800	3PH380	0-50/60	2.25	1.5
UPI200-4T-2.2B	2.2	800	450-800	3PH380	0-50/60	3.3	2.2
UPI200-4T-4.0B	4.0	800	450-800	3PH380	0-50/60	6	4.0
UPI200-4T-5.5B	5.5	800	450-800	3PH380	0-50/60	8.25	5.5
UPI200-4T-7.5B	7.5	800	450-800	3PH380	0-50/60	11.25	7.5
UPI200-4T-11B	11	800	450-800	3PH380	0-50/60	16.5	11
UPI200-4T-15B	15	800	450-800	3PH380	0-50/60	20	15
UPI200-4T-18.5B	18.5	800	450-800	3PH380	0-50/60	24	18.5
UPI200-4T-22B	22	800	450-800	3PH380	0-50/60	29	22
UPI200-4T-30B	30	800	450-800	3PH380	0-50/60	39	30
UPI200-4T-37B	37	800	450-800	3PH380	0-50/60	48	37
UPI200-4T-45B	45	800	450-800	3PH380	0-50/60	54	45
UPI200-4T-55B	55	800	450-800	3PH380	0-50/60	66	55
UPI200-4T-75B	75	800	450-800	3PH380	0-50/60	90	75
UPI200-4T-90B	90	800	450-800	3PH380	0-50/60	108	90
UPI200-4T-110B	110	800	450-800	3PH380	0-50/60	132	110