

INNOVATION • CONCENTRATION • SERVICE • WIN-WIN



Solar Pumping Inverter

FRECON

FRECON ELECTRIC (SHENZHEN) CO.,LTD

Add: Floor3,Block C,F&D technology Park Baoan
Road Baoan District,Shenzhen,China

Tel: (+86)-0755-33067999

Fax: (+86)-0755-33067186

E-mail: frecon@frecon.com.cn

[Http://www.frecon.com.cn](http://www.frecon.com.cn)



For FRECON Website

20140710(V1.0)



P

C

PRODUCTS

CONTENTS



Products» 01
Company Profile» 03/04
System Structure» 05/05
Products Application» 06/08
Product Selection» 09/12
Mounting Dimensions» 13/14
Company Honor» 15/16
Service Network» 17/18





COMPANY

PROFILE

- ◆ CANTON SINO INTERNATIONAL LIMITED, established in the year 2011, business refer to design and production of telecommunications, electrical, and clothing. Group has 3 R&D centers, 5 MFG centers, 30 agents, about 2,000 staffs, turnover of 2013 exceeds 3 billion HKD.
- ◆ FRECON Electric (Shenzhen) Co.,Ltd.is subsidiary of CANTON SINO INTERNATIONAL LIMITED, locates in F&D technology Park Baoan Road Baoan District, Shenzhen, China, the "double soft enterprise" certified by Shenzhen Government (software enterprises qualified for a double-layered certification, which consists of software enterprise certification and national software product registration), the key high-tech enterprise supported by National, the professionalized enterprise in the field of industrial automation, energy-efficient, green energy. Our R&D team has more than 12 years experience in developing the field of Frequency Inverters, Servo Drives, Saving Cabinet, New Energy and other drive control systems, products power range 0.2KW~1MW, products conform to EU Safety Standard requirements in EMC and Safety

0.2KW~1MW, products conform to EU Safety Standard requirements in EMC and Safety Regulations, obtained CE Certificates, we obtained Inventions, utility models, Product appearance, software copyright, etc. dozen patents in independent intellectual property. Quality system strictly compliance with standards ISO9001 : 2008, fully confirming products coming with leading technology and reliable quality. Products widely use for equipment manufacture and energy-saving projects, main covers elevator, petroleum, chemical, steel, ceramics, air compressors, textile, drawing machine, machine tools, solar energy and other fields.

- ◆ FRECON established five regional logistic centers in East China (Wuxi), South China (Shenzhen), North China (Beijing), West-South China (Chongqing), East-North China (Shenyang), a dozen agents in the whole country, built national coverage logistic and service network, also has regional partners in Russian, India, Vietnam, Iran, etc. with many years cooperation.



System Structure



Energy Input

- ◆ Solar PV Power Supply [Without Batteries]
- ◆ Diesel Generator Power Supply
- ◆ 380V mains supply

Dedicated Controller

- ◆ Solar Power Input
- ◆ No batteries, reduce costs, reduce pollution
- ◆ Generators or mains supply is also available
- ◆ Possess function of inverter

Loads can be used

- ◆ Three-phase asynchronous motor
- ◆ Three-phase water pumps

Products Application

Solar Water Pump System---Agro-forestry



- | | | |
|----------------------------|-----------------------------|----------------------------|
| Pumping of ground-water | Water-storage irrigation | Residential Domestic Water |
| Irrigation facilities | Water-saving irrigation | Water treatment |
| Wells Pumping | Irrigation Drip Irrigation | |
| Sunshine drought resisting | Constant pressure micro jet | |

PV pumping system---City Life Applications



- | | | |
|------------------------|--|--------------------------------------|
| Domestic Water | Urban Landscape Micro landscape greening | Suburban Water Conservation |
| Safety Drinking Water | Community Involvement Waterscape | Fountain Diesel Power Sharing |
| Water Purification | Civic Square Artificial Lakes | Hydrological monitoring power supply |
| Sea Water Desalination | | |



Product Features

- ◆ Built-in self-adaptive high-accuracy photovoltaic array MPPT algorithm, accuracy up to 99%
- ◆ The maximum water flow output in equal environment
- ◆ Compatible with AC/DC two inputs
- ◆ LED displays the real-time system status and parameters
- ◆ RS485-based real-time remote monitoring system
- ◆ Motor soft-start can avoid water hammer effect, improve the system life
- ◆ Quick installation design, no additional maintenance
- ◆ Built-in all-directional protection and diagnostic mechanisms

Agricultural irrigation --- tower

Waterscape Facilities --Application



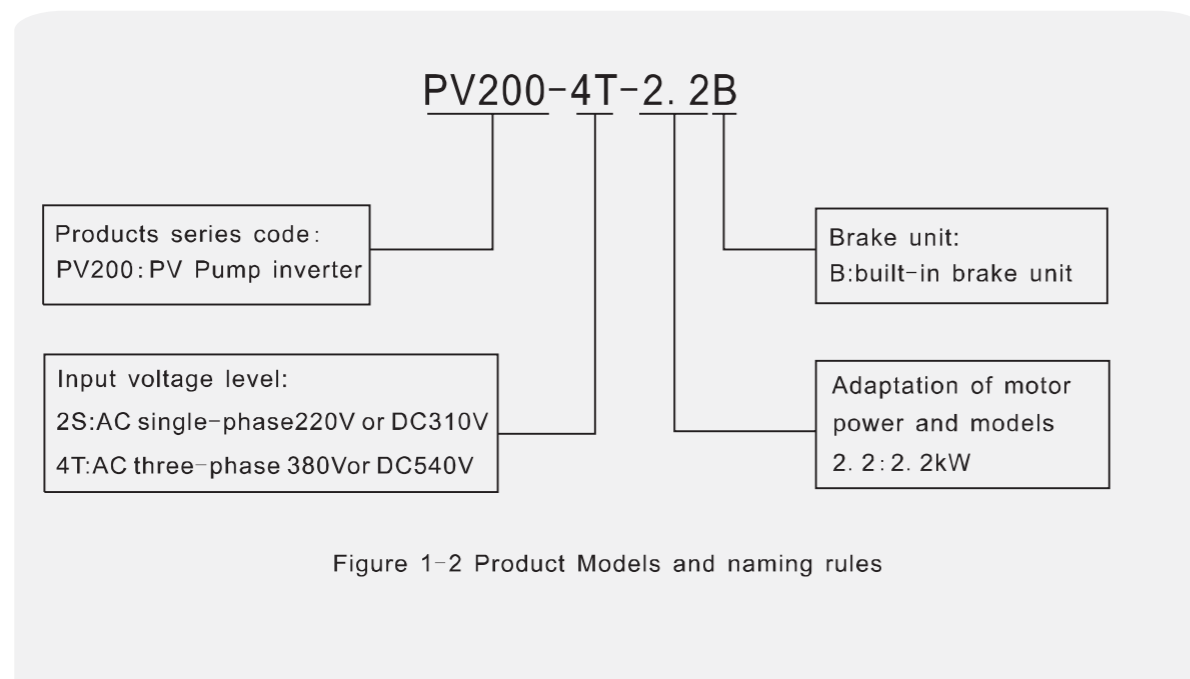
Farmland water conservancy application--- Greenhouses



Product Selection

Model Description

Numbers, marks and letters combined on product-sticker expresses their belong series, suitable power supply kinds, power level and other informations.



Three-phase 220V output product models and the technical parameters

Models	kWP Solar Array Power Recommended	A Max Input DC Current A	A Output current A	Adaptive Motor kW
PV100-2S-0.2B	0.35	2.5	1.6	0.18、0.2、0.25
PV100-2S-0.4B	0.6	4.5	2.5	0.37、0.4
PV100-2S-0.7B	1.1	7.5	4.2	0.75
PV100-2S-1.5B	2.25	10	7.5	1.5
PV100-2S-2.2B	3.3	18	9.5	2.2

Input Parameters	
PV Input	
Max Input DC Voltage	400VDC
MPPT Voltage Range Recommended	250~350VDC
Input Operation Voltage Recommended	310VDC
Power Grid or Back-up Generator Input	
Input Voltage	Single-phase 220V(-15%~30%)
Output Parameters	
Rated Output Voltage	3PH 220V
Output Frequency	0~600.00Hz(OFF 0~50.00Hz)
Protection	
Built-in Protection	Lightning-proof, over-current, overvoltage, output phase protection, underrun, under-voltage, short circuit, overheat, pumps 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°C ~ 40°C (Environment Temperature be 40°C ~ 50°C, please keep derated use.
Humidity	5~95%, non-condensation
Vibration	less than 5.9 m/s ² (0.6g)
Storage Temperature	-20°C ~ +70°C
Efficiency	Rated Power Run ≥ 93%
Installation	Wall or rail mounting
Protection Grade	IP20
Cooling	Forced Air Cooling

Three-phase 380V output products model and the technical parameter

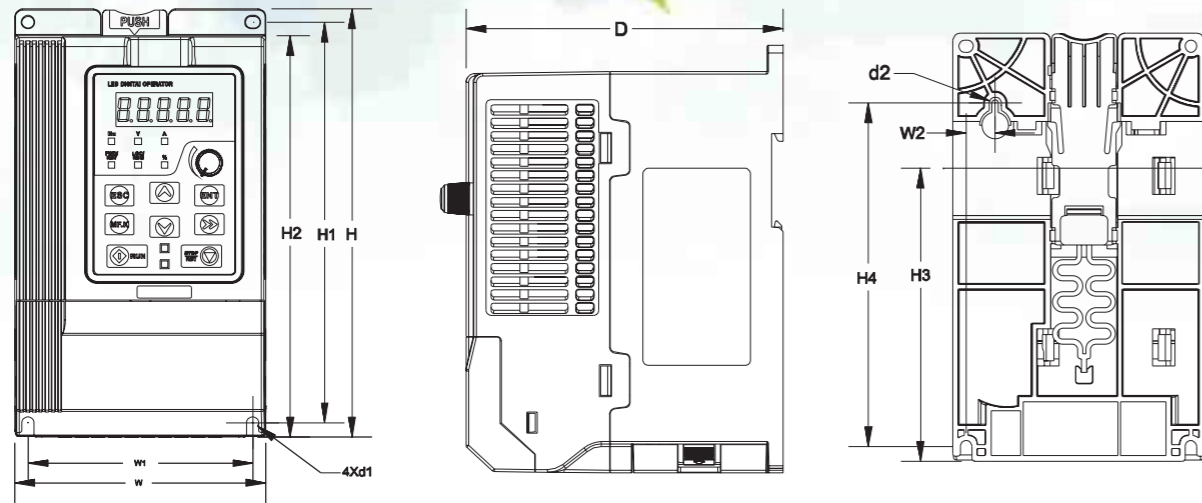
Models	kWP Solar Array Power Recommended	A Max Input DC Current A	A Output current A	Adaptive Motor kW
PV100-4T-0.7B	1.1	4.5	2.5	0.75
PV100-4T-1.5B	2.25	7.5	4.2	1.5
PV100-4T-2.2B	3.3	10	5.5	2.2
PV100-4T-4.0B	6	18	9.5	3.7、4
PV200-4T-0.7B	1.1	4.5	2.5	0.75
PV200-4T-1.5B	2.25	7.5	4.2	1.5
PV200-4T-2.2B	3.3	10	5.5	2.2
PV200-4T-4.0B	6	18	9.5	3.7、4
PV200-4T-5.5B	8.3	20	13	5.5
PV200-4T-7.5B	11	30	17	7.5
PV200-4T-011B	16	40	25	11
PV200-4T-015B	22	50	32	15
PV200-4T-018B	25.9	60	37	18.5
PV200-4T-022B	33	80	45	22
PV200-4T-030B	45	100	60	30

Input Parameters	
PV Input	
Max Input DC Voltage	800VDC
MPPT Voltage Range Recommended	450~ 600VDC
Input Operation Voltage Recommended	540VDC
Power Grid or Back-up Generator Input	
Input Voltage	Three-phase 220V(-15%~30%)
Output Parameters	
Rated Output Voltage	3PH 380V
Output Frequency	0~ 600.00Hz(OFF 0~ 50.00Hz)
Protection	
Built-in Protection	Lightning-proof, over-current, overvoltage, output phase protection, underrun, under-voltage, short circuit, overheat, pumps 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°C ~ 40°C (Environment Temperature be 40°C ~ 50°C, please keep derated use.
Humidity	5~ 95%, non-condensation
Vibration	less than 5.9 m/s ² (0.6g)
Storage Temperature	-20°C ~ +70°C
Efficiency	Rated Power Run ≥ 93%
Installation	Wall-mounted or flange (wall) installation
Protection Grade	IP20
Cooling	Forced Air Cooling



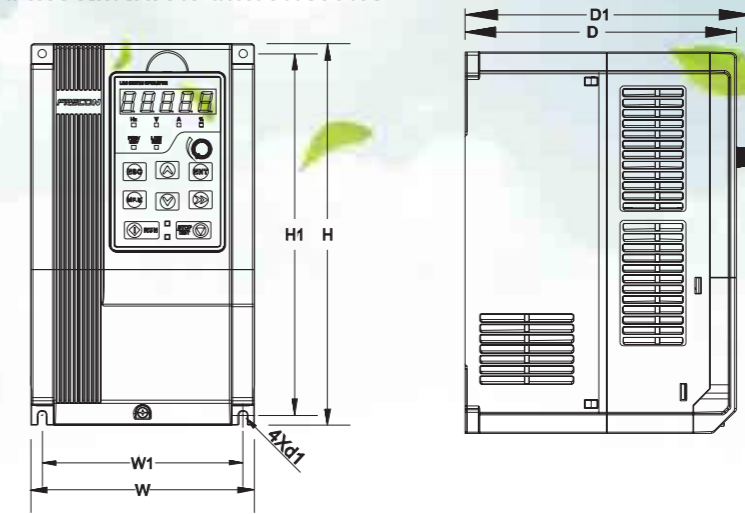
Mounting Dimensions

PV100 overall and installation dimensions

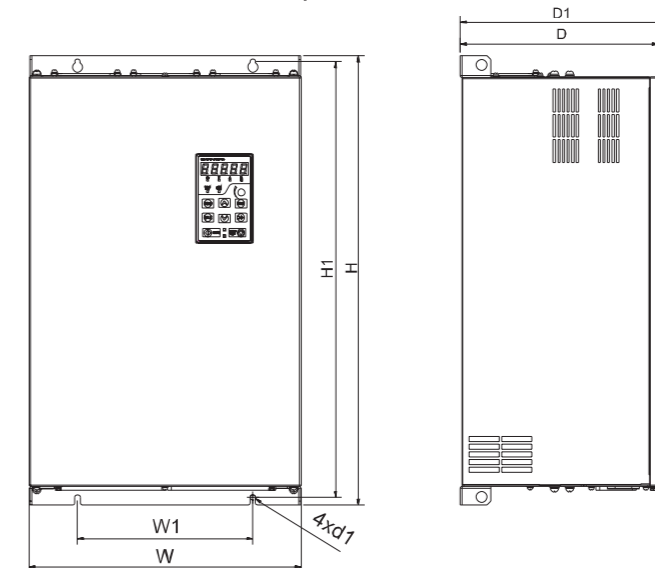


Model	Appearance and mounting dimensions (mm)											Weight (kg)
	W	H	D	W1	W2	H1	H2	H3	H4	Mounting Aperture d1	Mounting Aperture d2	
Single-phase power : 220V , 50/ 60Hz												
PV100-2S-0. 2B	95	162	120	85	11	151. 5	152	110. 8	130	4. 5	4. 5	1. 1
PV100-2S-0. 4B												
PV100-2S-0. 7B												
PV100-2S-1. 5B	110	173	135	100	11	163	163	121. 8	140. 5	4. 5	5	1. 5
PV100-2S-2. 2B												
Three-phase power : 380V , 50/ 60Hz												
PV100-4T-0. 7B	110	173	135	100	11	163	163	121. 8	140. 5	4. 5	5	1. 5
PV100-4T-1. 5B												
PV100-4T-2. 2B												
PV100-4T-4.0B												

PV200 overall and installation dimensions



Schematic shape 0. 75kW to 15kW



Schematic shape 18.5kW to 30kW

Model	Appearance and mounting dimensions (mm)						Weight (Kg)
	W	W1	H	H1	D	Mounting Aperture	
Three-phase power : 380V , 50/60Hz Range : -15% ~+30%							
PV200-4T-0.7B	117	106.6	187	176.6	160	4.5	2.2
PV200-4T-1.5B							
PV200-4T-2.2B							
PV200-4T-4.0B	146	131	249	236	177	5.5	3.2
PV200-4T-5.5B							
PV200-4T-7.5B							
PV200-4T-011B	198	183	300	287	185	5.5	5.4
PV200-4T-015B							
PV200-4T-018B	255	176	459	443	220	7	15.5
PV200-4T-022B							
PV200-4T-030B							



COMPANY HONOR

R&D and Production management system certified by TUV, quality management conform to ISO9001:2000 standard.



Service Network

