



IST201 Series

Low Voltage VFD

Application for Solar Water Pump

SHANGHAI ISTECH ELECTRIC CO., LTD.



Shanghai ISTECH Electric Co., Ltd. is a high-tech enterprise belongs to CNC Electric Group. The headquarters is located in Shanghai, China. The acreage of manufacturing base covers 200 acres with construction area of 200000 square meters.

As a professional industrial electric supplier, ISTECH focuses on R&D, manufacture and sales of Variable Frequency Drive (VFD). With the pursuit of "green energy saving and customer

value promotion", ISTECH committed to providing quality products and services to customers and always enjoy a good reputation on the global VFD market.

The IST201 Series is applicable for solar pump system. The DC generated by solar modules is input to the VFD and then converted into the AC to drive various pumps directly.

CNC



CNC Electric Group was founded in 1988, specializing in R&D, manufacture, sales and service of industrial electrical products. The business also involves real estate, investment, energy and other fields. CNC holds 10 billion RMB total assets, 9 billion RMB annual output and over 10000 employees.

CNC key value is innovation and quality to ensure clients with safe, reliable products. We have set up advanced assembly line, test center,

R&D Center and quality control center. We have got the certificates of ISO9001, ISO14001, OHSAS18001 and CE, CB, SEMKO, KEMA, TUV etc. The business covers over 100 countries.

As a well-known brand in China, CNC has been awarded many honors in recent years.

China Top 500 Enterprise

China Top 500 Manufacturing Enterprise

China Top 100 Industrial Electrical Enterprise

National High-tech Enterprise

Application

Mainly applied to industries of agriculture and forestry irrigation, desert control, grassland animal husbandry and municipal water.

Feature

1. Vector Control, More Power to Pump;
2. MPPT Max. power tracking, More Efficiency to Pump;
3. Automatic Stop and Restart
 - (1) Stop at high water level and restart at low water level;
 - (2) Stop at sunrise and sundown and restart at strong sunlight;
4. Protection of water level sensor avoiding pumping after water supply dries up;
5. TI DSP technology , Infineon PIM design, Built-in C3 filter;
6. Protection functions of overcurrent, overvoltage and over temperature, achieving reliable, automatic and unattended running.

Specifications

Items	Descriptions
Control mode	Sensorless vector control(SVC); Flux vector control(FVC); Voltage/Frequency(V/F) control
Startup torque	G type: 0.5Hz/150%(SVC); 0Hz/180%(FVC);
MPPT efficiency	99.9%
MPPT type	1. Max. power tracking; 2. Voltage reference (CVT);
Input channel	1
Output frequency range	0-60Hz
Max efficiency of the machine	97%
Ambient temperature range	-10°C~50°C, derate if the temperature is above 40°C
Cooling method	Air cooling
Protection degree	IP20
Altitude	Below 1000m; above 1% for every additional 100m

Recommended PV Voltage and Power

Model	Solar PV Input Parameter(DC)			
	Max Voltage (V)	Min Voltage (V)	Recommended Voltage(V)	Recommended Power(kW)
220V				
IST201-2T0.7GB	DC400	DC200	DC280-360	0.9-1.2
IST201-2T1.5GB				1.8-2.4
IST201-2T2.2GB				2.7-3.5
IST201-2T3.7GB				4.5-6
IST201-2T5.5GB				6.5-9
IST201-2T7.5GB				9-12
IST201-2T11GB				14-18
IST201-2T15GB				18-24
IST201-2T18.5G				22-30
IST201-2T22G				27-35
IST201-2T30G				36-48
IST201-2T37G				45-60

Recommended PV Voltage and Power

Recommended PV Voltage and Power

Model	Solar PV Input Parameter(DC)			
	Max Voltage (V)	Min Voltage (V)	Recommended Voltage(V)	Recommended Power(kW)

380V

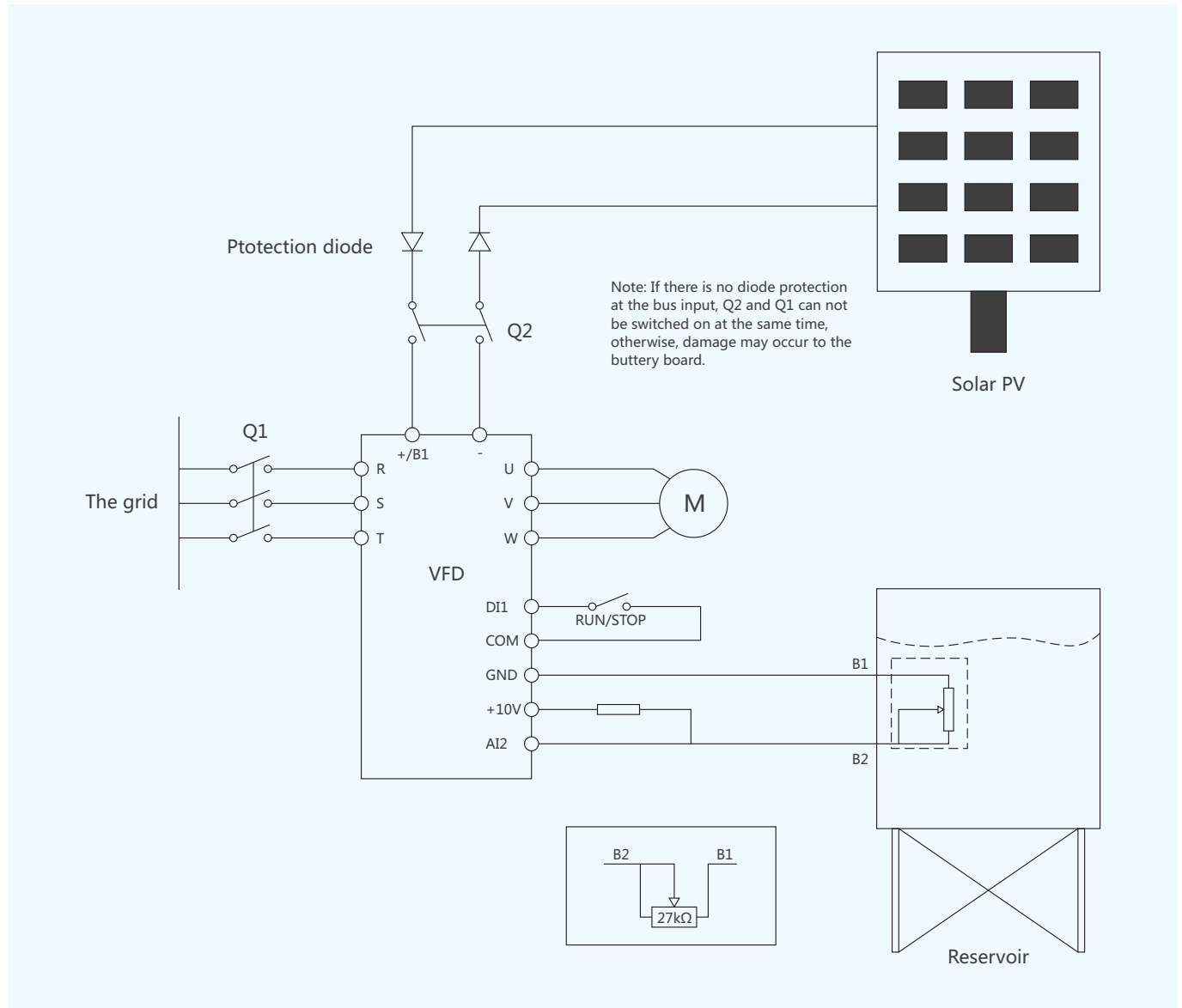
IST201-T0.7GB	DC800	DC350	DC500-600	0.9-1.2
IST201-T1.5GB				1.8-2.4
IST201-T2.2GB				2.7-3.5
IST201-T3.7GB				4.5-6
IST201-T5.5GB				6.5-9
IST201-T7.5GB				9-12
IST201-T11GB				14-18
IST201-T15GB				18-24
IST201-T18.5G				22-30
IST201-T22G				27-35
IST201-T30G				36-48
IST201-T37G				45-60

480V

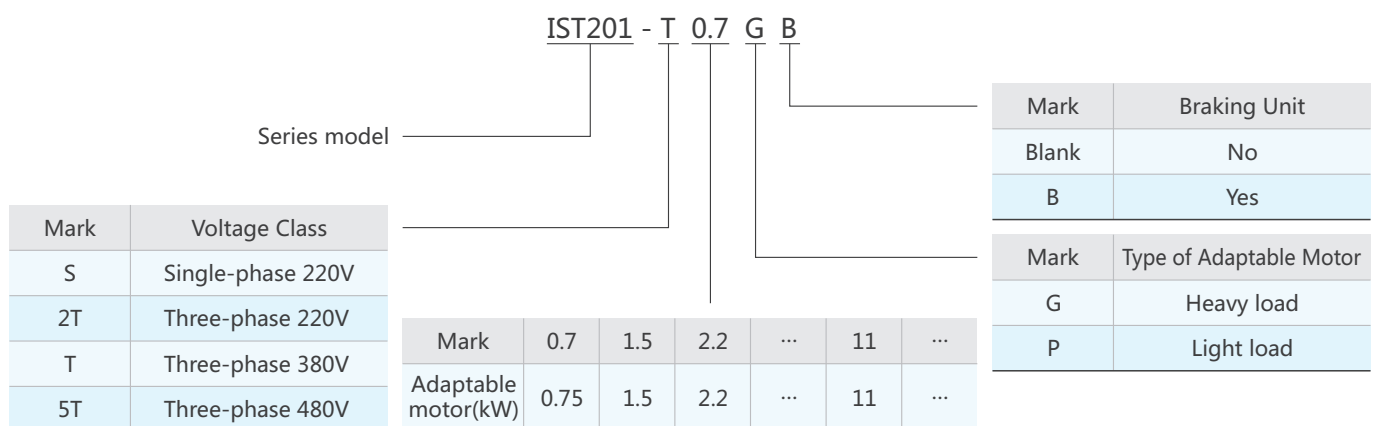
IST201-5T0.7GB	DC890	DC350	DC580-720	0.9-1.2
IST201-5T1.5GB				1.8-2.4
IST201-5T2.2GB				2.7-3.5
IST201-5T3.7GB				4.5-6
IST201-5T5.5GB				6.5-9
IST201-5T7.5GB				9-12
IST201-5T11GB				14-18
IST201-5T15GB				18-24
IST201-5T18.5G				22-30
IST201-5T22G				27-35
IST201-5T30G				36-48
IST201-5T37G				45-60

Wiring Diagram & Type Designation

Wiring Diagram



Type Designation



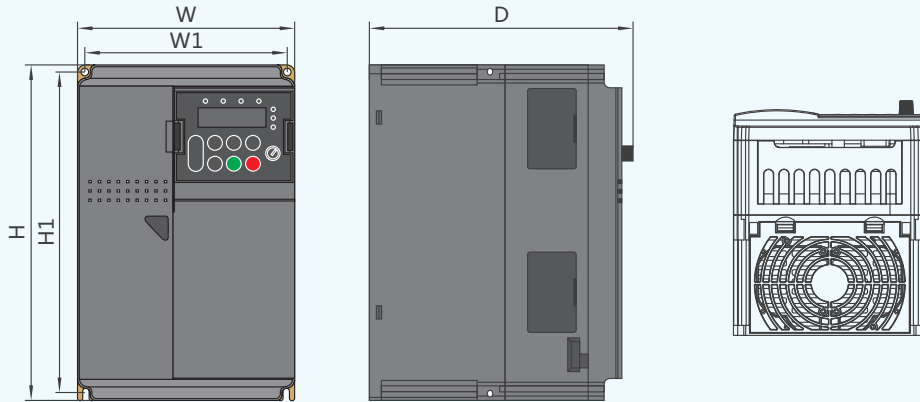
Selection Table

Selection Table

Model	Max DC Input Current (A)	Output Current (A)	Power Capacity (kVA)	Adaptable Motor		Size
				kW	HP	
Output voltage: Single-phase 220V						
IST201-S2.2GB	14.9	9.6	4	0.75	1	B
IST201-S3.7GB	20.2	13.0	6	1.5	2	B
IST201-S5.5GB	38.8	25.0	9	2.2	3	C
Output voltage: Three-phase 220V						
IST201-2T0.7GB	6.2	4.0	1.5	0.75	1	A
IST201-2T1.5GB	10.9	7.0	3	1.5	2	A
IST201-2T2.2GB	14.9	9.6	4	2.2	3	B
IST201-2T3.7GB	20.2	13.0	6	3.7	5.5	B
IST201-2T5.5GB	38.8	25.0	9	5.5	7.5	C
IST201-2T7.5GB	49.6	32.0	12	7.5	11	C
IST201-2T11GB	69.8	45.0	17	11	15	D
IST201-2T15GB	93.0	60.0	22	15	18.5	D
IST201-2T18.5G	116.3	75.0	30	18.5	22	E
IST201-2T22G	141.1	91.0	35	22	30	E
IST201-2T30G	173.6	112.0	45	30	37	E
IST201-2T37G	232.5	150.0	55	37	45	F
Output voltage: Three-phase 380V						
IST201-T0.7GB	3.3	2.1	1.5	0.75	1	A
IST201-T1.5GB	5.9	3.8	3	1.5	2	A
IST201-T2.2GB	7.9	5.1	4	2.2	3	A
IST201-T3.7GB	14.0	9.0	6	3.7	5.5	B
IST201-T5.5GB	20.2	13.0	9	5.5	7.5	B
IST201-T7.5GB	26.4	17.0	12	7.5	11	C
IST201-T11GB	38.8	25.0	17	11	15	C
IST201-T15GB	49.6	32.0	22	15	18.5	C
IST201-T18.5G	57.4	37.0	30	18.5	22	D
IST201-T22G	69.8	45.0	35	22	30	D
IST201-T30G	93.0	60.0	45	30	37	D
IST201-T37G	116.3	75.0	55	37	45	E
Output voltage: Three-phase 480V						
IST201-5T0.7GB	3.3	2.1	1.5	0.75	1	A
IST201-5T1.5GB	5.9	3.8	3	1.5	2	A
IST201-5T2.2GB	7.9	5.1	4	2.2	3	A
IST201-5T3.7GB	14.0	9.0	6	3.7	5.5	B
IST201-5T5.5GB	20.2	13.0	9	5.5	7.5	B
IST201-5T7.5GB	26.4	17.0	12	7.5	11	C
IST201-5T11GB	38.8	25.0	17	11	15	C
IST201-5T15GB	49.6	32.0	22	15	18.5	C
IST201-5T18.5G	57.4	37.0	30	18.5	22	D
IST201-5T22G	69.8	45.0	35	22	30	D
IST201-5T30G	93.0	60.0	45	30	37	D
IST201-5T37G	116.3	75.0	55	37	45	E

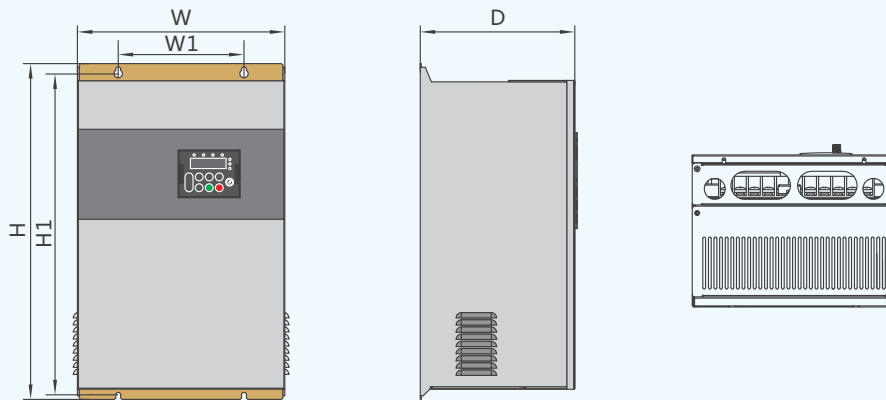
Appearance and Installation Dimensions

Plastic Frame



Size Type	Mounting Hole (mm)		Overall Dimensions (mm)			Mounting Hole Diameter (mm)	Weight kg
	H1	W1	H	W	D		
A	113	172	186	125	164	Φ5.0	1.5
B	148	236	248	160	183	Φ5.0	2.8
C	190	305	322	208	192	Φ6	5.8

Metal Frame



Size Type	Mounting Hole (mm)		Overall Dimensions (mm)			Mounting Hole Diameter (mm)	Weight kg
	H1	W1	H	W	D		
D	456	176	470	290	217	Φ6.5	16.5
E	567	230	582	375	263	Φ9	31
F	738	320	756	461	332	Φ9	56

 PRINTED ON RECYCLED PAPER

This manual is printed by SHANGHAI ISTECH ELECTRIC CO.,LTD, only used to show the relative information of this series. SHANGHAI ISTECH ELECTRIC CO.,LTD keep the right of amending this manual due to technical improved or new production process used, or mistake amended, etc without notice. Please contact with our company to confirm the relative information when place the order.



SHANGHAI ISTECH ELECTRIC CO., LTD.

Address: 777 Yuegong Road, Jinshan Industrial zone, Shanghai, China.

Tel: 0086-21-67290577

Fax: 0086-21-67290576

Email: sales@istech-electric.com

Http://www.istech-electric.com