



IST200 Series

High-Performance

Low Voltage Variable Frequency Drive

SHANGHAI ISTTECH 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 IST200 Series is a high-performance vector control AC drive. It is used to drive various automatic production equipments involving textile, paper-making, wiredrawing, machine tool, packing, food, fan and pump etc.

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

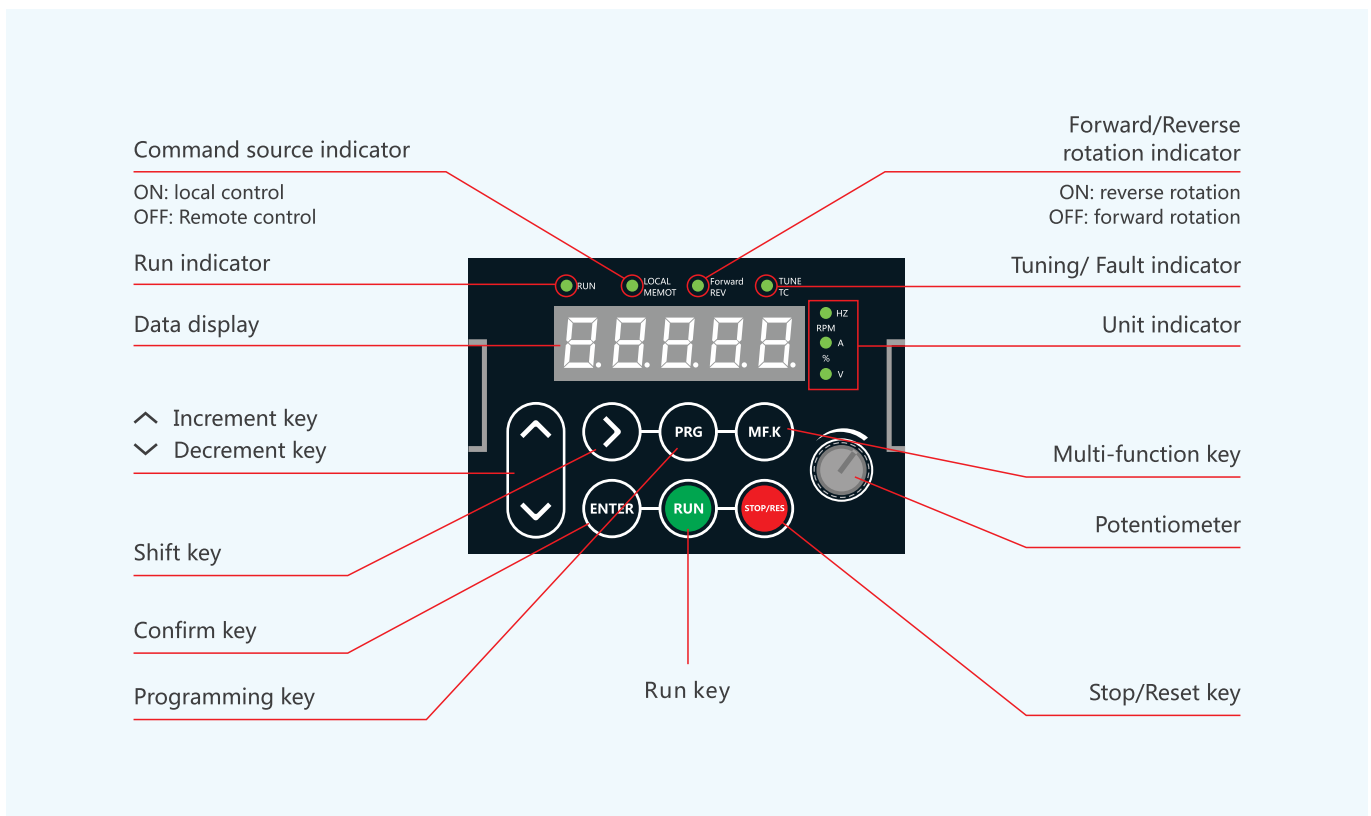
China Top 100 Industrial Electrical Enterprise

National High-tech Enterprise

Individual function

Items	Descriptions
Key Component	TI DSP technology, Infineon PIM design, Built-in C3 filter.
Instantaneous power stop	When the power supply instantaneous stop, the load can feedback energy to compensates the voltage reduction, ensure the LV VFD can continuous operation for a short time.
Virtual I/O	Five groups of virtual DI/Do can realize simple logic control.
Timing control	Setting time range: 0.0min.~ 6500.0min.
Multi-motor switchover	Four motors can be switched over via four groups of motor parameters.
Multiple communication protocols	It supports 3 types communication via RS-485, Profibus-DP, Modbus.
Motor overheat protection	The optional I/O extension card enables AI3 to receive the motor temperature sensor input.
Multiple encoder types	It supports various encoders such as differential encoder, open-collector encoder, resolver and UVW encoder.
Overvoltage / Over current stall control	The current and voltage are limited automatically during the running process so as to avoid frequent tripping due to overvoltage/overcurrent.
Rapid current limit	It helps to avoid frequent over current faults of the AC drive.
Torque limit and control	It can limit the torque automatically and prevent frequent over current tripping during the running process. Torque control can be implemented in the FVC mode.

Operation Panel

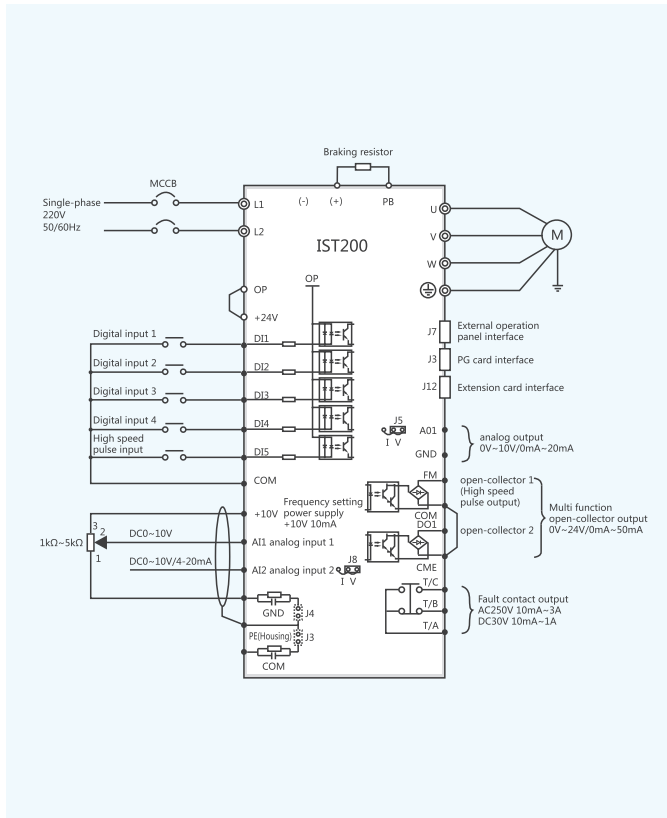


Technical Specifications

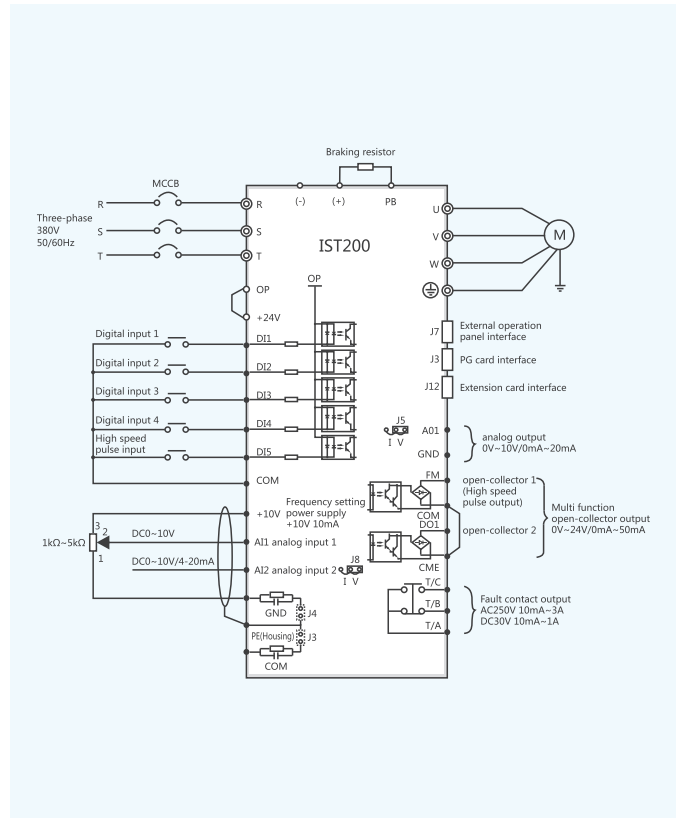
Items		Specifications
Control	Max. frequency	Vector control: 0~320 Hz; V/F control: 0~3200 Hz
	Carrier frequency	0.5~16 kHz
	Input frequency resolution	Digital setting: 0.01 Hz; Analog setting: max. frequency×0.025%
	Control mode	Sensorless vector control (SVC); Flux vector control (FVC); Voltage/Frequency (V/F) control
	Startup torque	G type: 0.5Hz/150% (SVC); 0Hz/180% (FVC); P type: 0.5Hz/100%
	Speed range	1:100 (SVC) 1:1000 (FVC)
	Speed stability precision	±0.5% (SVC) ±0.02% (FVC)
	Torque control precision	±5% (FVC)
	Overload capacity	G type: 60s for 150% rated current, 3s for 180% rated current P type: 60s for 120% rated current, 3s for 150% rated current
	Torque boost	Fixed boost; Customized boost 0.1%~30.0%
	V/F Curve	Straight-line V/F curve; Multi-point V/F curve N-power V/F curve (1.2-power, 1.4-power, 1.6-power, 1.8-power, square)
	V/F Separation	Complete separation; Half separation
	Ramp mode	Straight-line ramp; S-curve ramp Four kinds of acceleration/deceleration time with the range of 0.0~6500.0s
Operation	Running command Source	Operation panel; Control terminals; Serial communication port
	Frequency source	Total 10 types, such as digital Setting; analog voltage setting; analog current setting; pulse setting and serial communication port setting
	Auxiliary frequency Source	Total 10 types. It can implement fine tuning of auxiliary frequency and frequency synthesis.
	Input terminal	Standard: 5 digital input (DI) 1 supports up to 100 kHz high-speed pulse input; 2 analog input(AI); 1 only supports 0~10V voltage input; 1 supports 0~10V voltage input or 4~20mA current input. Expanding capacity: 5 DI 1 AI supports -10~10V voltage input and also supports PT100\PT1000
	Output terminal	Standard: 1 high-speed pulse output (open-collector) that supports 0~100 kHz square wave signal output; 1 digital output(DO); 1 relay output; 1 analog output(AO) that supports 0~20mA current output or 0~10 V voltage output Expanding capacity: 1 DO; 1 relay output; 1 AO supports 0~2mA current output or 0~10 V voltage output
	Standard operation functions	Onboard PID; Auto voltage regulation; Multi-Reference and simple PLC; JOG control
Display & Operation Panel	LED display	It displays the parameters.
	Key locking and function selection	It can lock the keys partially or completely and define the function range of some keys so as to prevent mistake operation.
	Protection mode	Motor short-circuit detection at power-on, input/output phase loss protection, over current protection, overvoltage protection
Environment	Installation location	Indoor, free from direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapour, drip or salt.
	Altitude	Lower than 1000 m
	Ambient temperature	-10°C to +40°C
	Humidity	Less than 95%RH, without condensing
	Vibration	Less than 5.9 m/s ² (0.6 g)
	Storage temperature	-20°C to +60°C

Wiring Diagram

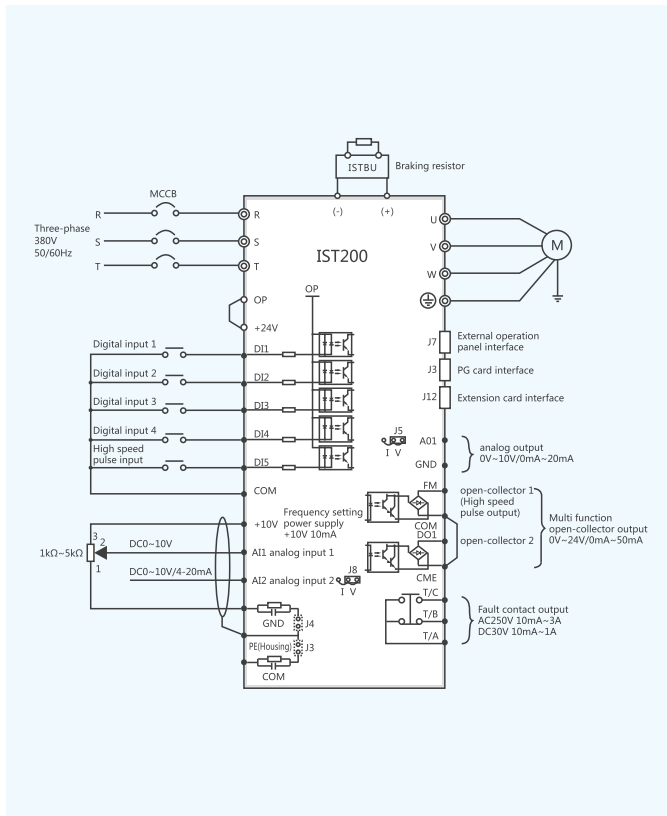
IST200 Single-phase



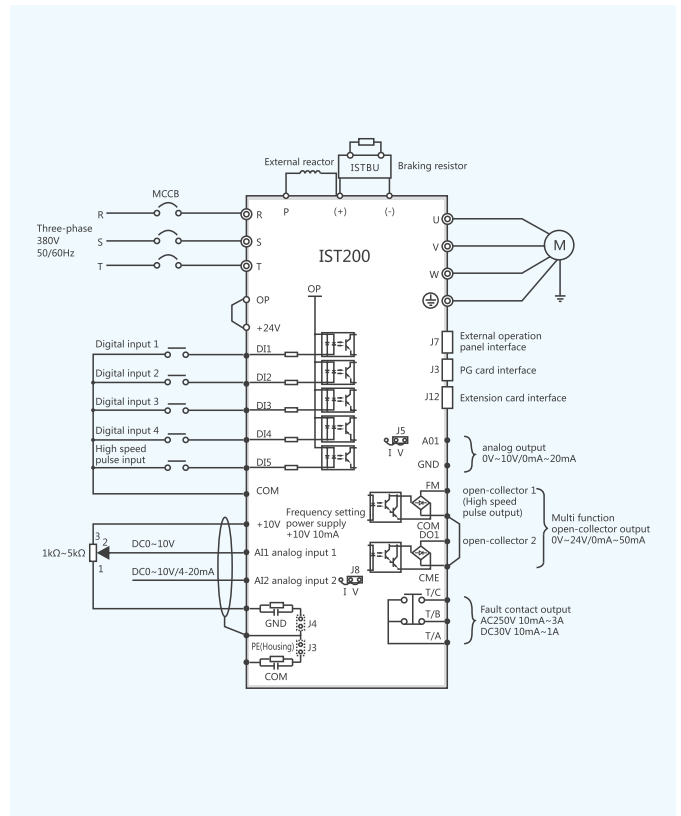
IST200 Three-phase ≤30kW



IST200 Three-phase 37kW~55kW

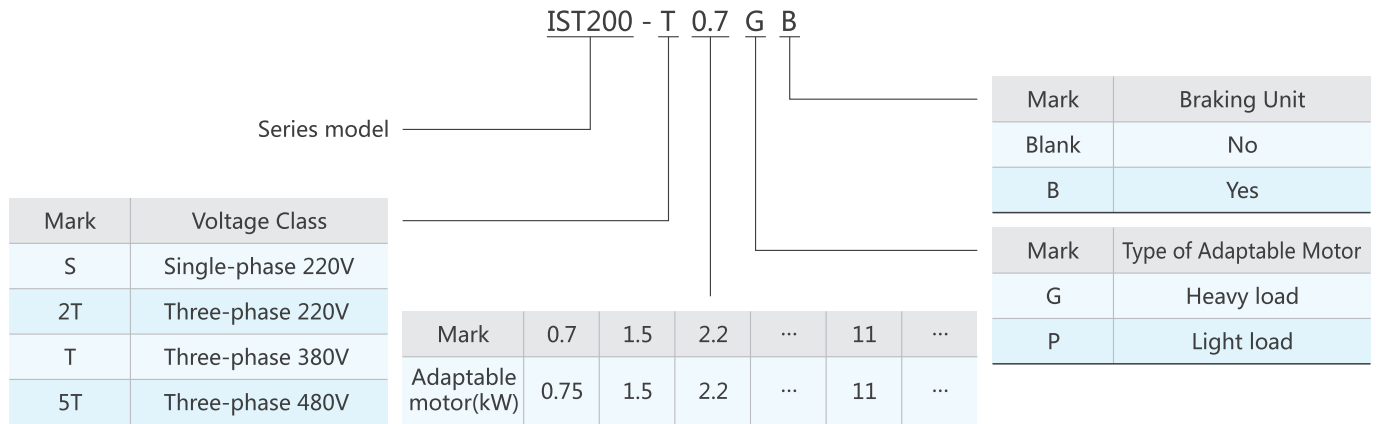


IST200 Three-phase ≥75kW



Type Designation & Selection Table

Type Designation



Selection Table

Model	Power Capacity (kVA)	Input Current (A)	Output Current (A)	Overload Capacity (60S)A	Adaptable Motor		Size
					kW	HP	
Input voltage: Single-phase 220V							
IST200-S0.7GB	1.5	8.2	4.0	6	0.75	1	A
IST200-S1.5GB	3	14.2	7.0	10.5	1.5	2	A
IST200-S2.2GB	4	23	9.6	14.4	2.2	3	B
IST200-S3.7GB	6	28	13.0	19.5	3.7	5	B
IST200-S5.5GB	9	50	25.0	37.5	5.5	7.5	C
Input voltage: Three-phase 220V							
IST200-2T0.7GB	1.5	5	4.0	6	0.75	1	A
IST200-2T1.5GB	3	7.7	7.0	10.5	1.5	2	A
IST200-2T2.2GB	4	11	9.6	14.4	2.2	3	B
IST200-2T3.7GB	6	15	13.0	19.5	3.7	5	B
IST200-2T5.5GB	9	26	25.0	37.5	5.5	7.5	C
IST200-2T7.5GB	12	33	32.0	48	7.5	11	C
IST200-2T11GB	17	46	45.0	67.5	11	15	D
IST200-2T15GB	22	61	60.0	90	15	18.5	D
IST200-2T18.5G	30	76	75.0	112.5	18.5	22	E
IST200-2T22G	35	92	91.0	136.5	22	30	E
IST200-2T30G	45	114	112.0	168	30	37	E
IST200-2T37G	55	152	150.0	225	37	45	F
IST200-2T45G	70	179	176.0	264	45	55	F
IST200-2T55G	80	213	210.0	315	55	75	G
IST200-2T75G	110	306	304.0	456	75	90	G

Selection Table

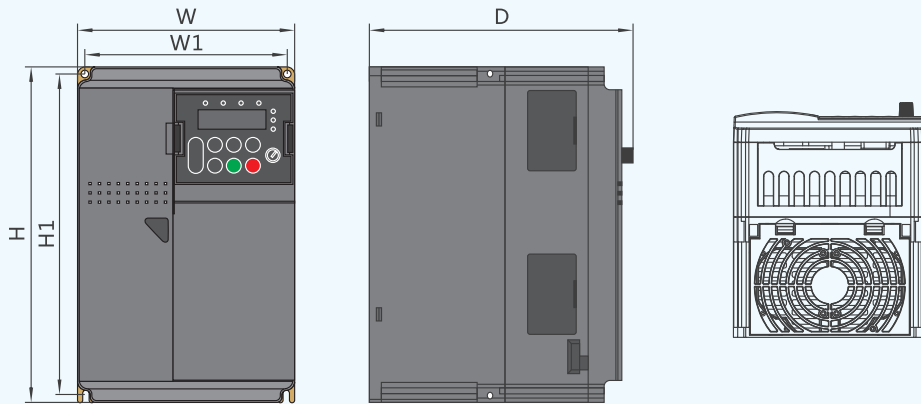
Model	Power Capacity (kVA)	Input Current (A)	Output Current (A)	Overload Capacity (60S)A	Adaptable Motor		Size
					kW	HP	
Input voltage: Three-phase 380V							
IST200-T0.7GB	1.5	3	2.1	3.15	0.75	1	A
IST200-T1.5GB	3	5	3.8	5.7	1.5	2	A
IST200-T2.2GB	4	6	5.1	7.65	2.2	3	A
IST200-T3.7GB	6	10	9	13.5	3.7	5	B
IST200-T5.5GB	9	15	13	19.5	5.5	7.5	B
IST200-T7.5GB	12	20	17	25.5	7.5	11	C
IST200-T11GB	17	26	25	37.5	11	15	C
IST200-T15GB	22	35	32	48	15	18.5	C
IST200-T18.5G	30	38	37	55.5	18.5	22	D
IST200-T22G	35	46	45	67.5	22	30	D
IST200-T30G	45	62	60	90	30	37	D
IST200-T37G	55	76	75	112.5	37	45	E
IST200-T45G	70	92	91	136.5	45	55	E
IST200-T55G	80	114	112	168	55	75	E
IST200-T75G	110	152	150	225	75	90	F
IST200-T90G	160	179	176	264	90	110	F
IST200-T110G	185	213	210	315	110	132	F
IST200-T132G	200	255	253	379.5	132	160	G
IST200-T160G	220	306	304	456	160	200	G
IST200-T200G	250	379	377	565.5	200	220	G
IST200-T220G	280	428	426	639	220	250	G
IST200-T250G	315	467	465	697.5	250	280	H
IST200-T280G	355	522	520	780	280	315	H
IST200-T315G	400	587	585	877.5	315	355	H
IST200-T355G	450	652	650	975	355	400	I
IST200-T400G	500	727	725	1087.5	400	450	I

Selection Table

Model	Power Capacity (kVA)	Input Current (A)	Output Current (A)	Overload Capacity (60S)A	Adaptable Motor		Size
					kW	HP	
Input voltage: Three-phase 480V							
IST200-5T0.7GB	1.5	3	2.1	3.15	0.75	1	A
IST200-5T1.5GB	3	5	3.8	5.7	1.5	2	A
IST200-5T2.2GB	4	6	5.1	7.65	2.2	3	A
IST200-5T3.7GB	6	10	9	13.5	3.7	5	B
IST200-5T5.5GB	9	15	13	19.5	5.5	7.5	B
IST200-5T7.5GB	12	20	17	25.5	7.5	11	C
IST200-5T11GB	17	26	25	37.5	11	15	C
IST200-5T15GB	22	35	32	48	15	18.5	C
IST200-5T18.5G	30	38	37	55.5	18.5	22	D
IST200-5T22G	35	46	45	67.5	22	30	D
IST200-5T30G	45	62	60	90	30	37	D
IST200-5T37G	55	76	75	112.5	37	45	E
IST200-5T45G	70	92	91	136.5	45	55	E
IST200-5T55G	80	114	112	168	55	75	E
IST200-5T75G	110	152	150	225	75	90	F
IST200-5T90G	160	179	176	264	90	110	F
IST200-5T110G	185	213	210	315	110	132	F
IST200-5T132G	200	255	253	379.5	132	160	G
IST200-5T160G	220	306	304	456	160	200	G
IST200-5T200G	250	379	377	565.5	200	220	G
IST200-5T220G	280	428	426	639	220	250	G
IST200-5T250G	315	467	465	697.5	250	280	H
IST200-5T280G	355	522	520	780	280	315	H
IST200-5T315G	400	587	585	877.5	315	355	H
IST200-5T355G	450	652	650	975	355	400	I
IST200-5T400G	500	727	725	1087.5	400	450	I

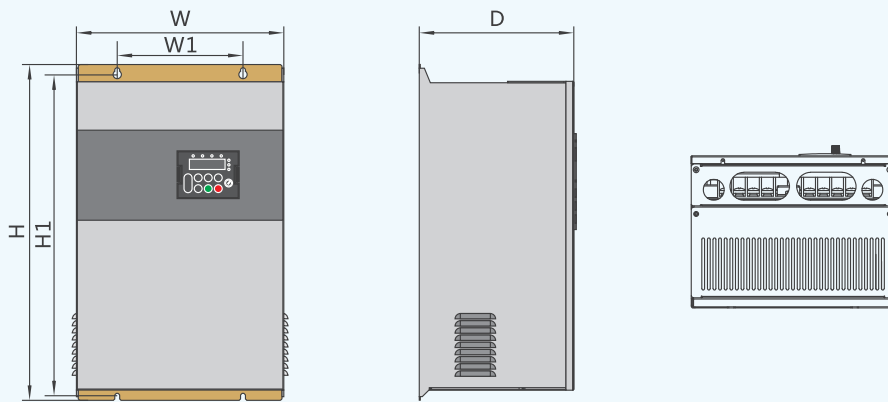
Appearance and Installation Dimensions

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

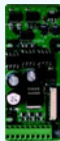





Metal Frame



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
G	935	380	955	550	332	Φ11	95
H	1030	420	1060	650	377	Φ12	130
I	1300	520	1358	800	400	Φ14	200

Optional Parts

Interface Card

Model	Description	Model	Description
 IST200PG1	Differential encoder interface card: It is adaptable to 5 V power supply	 IST200PG5	Open-collector encoder interface card with 1:1 frequency division output: It is adaptable to 15 V power supply.
 IST200PG3	UVW encoder interface card: It is suitable for the UVW differential encoder and applied to synchronous motor. It is adaptable to 5 V power supply	 IST200IO2	IO Extension card: RS485 communication interface, CAN communication interface
 IST200PG4	Resolver interface card: It is applied to the resolver. 10 kHz excitation frequency, DB9 interface	 IST200TX1	RS485 communication adapter card with isolation.

Braking Resistance

You can select different resistance and power based on actual needs. However, the resistance must not be lower than the recommended value. The power may be higher than the recommended value.

DC braking frequency: 0.00 Hz - max. frequency; Braking time: 0.0–36.0s; Braking action current value: 0.0%–100.0%

Model	Recommended Power	Recommended Resistance	Braking Unit	Remark
Single-phase 220V				
IST200S0.7GB~5.5GB	80W~100W	$\geq 150\Omega \sim 70\Omega$	Standard built-in	
Three-phase 380V				
IST200T0.7GB~15GB	150W~1000W	$\geq 300\Omega \sim 32\Omega$	Standard built-in	
IST200T18.5G	1300W	$\geq 25\Omega$	Built-in (optional)	Add "B" to the model
IST200T22G	1500W	$\geq 22\Omega$		
IST200T30G	2500W	$\geq 16\Omega$		
IST200T37G	3.7kW	$\geq 16.0\Omega$	External	ISTBU-35-B
IST200T45G	4.5kW	$\geq 16\Omega$	External	ISTBU-35-B
IST200T55G	5.5kW	$\geq 8\Omega$	External	ISTBU-70-B
IST200T75G	7.5kW	$\geq 8\Omega$	External	ISTBU-70-B
IST200T90G	4.5kW×2	$\geq 8\Omega \times 2$	External	ISTBU-70-B×2
IST200T110G	5.5kW×2	$\geq 8\Omega \times 2$	External	ISTBU-70-B×2
IST200T132G	6.5kW×2	$\geq 8\Omega \times 2$	External	ISTBU-70-B×2
IST200T160G	16kW	$\geq 2.5\Omega$	External	ISTBU-200-B
IST200T200G	20kW	$\geq 2.5\Omega$	External	ISTBU-200-B
IST200T220G	22kW	$\geq 2.5\Omega$	External	ISTBU-200-B
IST200T250G	12.5kW×2	$\geq 2.5\Omega \times 2$	External	ISTBU-200-B×2
IST200T280G	14kW×2	$\geq 2.5\Omega \times 2$	External	ISTBU-200-B×2
IST200T315G	16kW×2	$\geq 2.5\Omega \times 2$	External	ISTBU-200-B×2
IST200T355G	17kW×2	$\geq 2.5\Omega \times 2$	External	ISTBU-200-B×2
IST200T400G	14kW×3	$\geq 2.5\Omega \times 3$	External	ISTBU-200-B×3

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