

# V&T INVERTER PRODUCT CATALOGUE

*Development from Accumulation, Achievement from Innovation  
Following Tide of the World, Forging Paradigm of Industry*

English Version: VX-20190612-H-4.0 (BOM:37110050) print for the first time  
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## V&T Technologies Co.,Ltd.

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- V6 series high performance torque control inverter
- V5 series high performance vector control inverter
- E5 series high performance universal inverter
- High performance Electric Vehicle motor controller
- TS/VY series high performance synchronous/asynchronous servo drive
- V9-H Series General Purpose Inverter
- VTS General Purpose Inverter / Servo Drive



**V&T Technologies Co.,Ltd.**  
Listed Company, Stock Code:300484



## Company Introduction

Shenzhen V&T Technologies Co., Ltd. was certificated as a "National Hi-tech and Double-Software Enterprise", which has fully intellectual property rights and devotes to the R&D, manufacture, sales and technical service of Inverter, Servo Drive, Electric Vehicle Motor Controller, etc. V&T has won the "Technical Innovation" prize awarded by the Inverter Industry Association, "The Most Competitive Brands" prize awarded by China Electrical Association, "2012 Electric Vehicle Excellent Technology" prize respectively awarded by China Electro-technical Society (CES), the Specialized Committee of Electric Vehicles, the Automotive Engineering Society of China, and the Branch Association of Electric Vehicles. V&T has been ranked as one of the "Top 10 Chinese Inverter Enterprises". V&T successfully listed on the Stock Exchange of China in 2016 (stock code: 300484).

In regard to core and mainstream motor control technologies, Shenzhen V&T Technologies Co., Ltd. has mastered both advanced "Vector Control" and "Torque Control" technology so far. Through continuous technological innovation, international technical exchange and cooperation with other countries, V&T has completely grasped the key control technique, also possesses the capacity of industrialization design and manufacturing. Company has developed and reserved many product series. The product voltage grade mainly contains 200V, 400V, 690V, 1140V, and the power grade varies from 0.4kW to 3000kW, which could meet various application demands for high, medium and low-end market.

Under the premise of meeting international standards and satisfying different industries' application requirements, we further strengthened the product reliability and environment adaptability to suit harsh and extreme environments. Customized product and industrialized design can better meet medium and high-end application demands. The products have been widely used in electric vehicles, metallurgy, crane, oil, chemicals, machine tools, metal processing, building materials, stone, wood processing, ceramics, plastics, air compressor, washing machine, water supply, air conditioning, municipal engineering, textile, printing, mining, solar pump and other industries.

## Main Product Series

### Product Series

- TS series high performance synchronous motor servo drive. (Voltage Grade: 200V, 400V. Power Range: 0.4kW~200kW)
- V6 series high performance torque control inverter. (Voltage Grade: 400V, 690V. Power Range: 0.4kW~500kW)
- V5 series high performance vector control inverter. (Voltage Grade: 200V, 400V, 690V, 1140V. Power Range: 0.4kW~3MW)
- E5 series general purpose vector control inverter. (Voltage Grade: 200V, 400V, 690V, 1140V. Power Range: 0.4kW~3MW)

### Special Purpose Product Series

- Electric vehicle motor controller
- Special purpose inverter for crane
- Special purpose inverter for mine winch
- Special purpose inverter for water supply
- Special purpose inverter for ceramic industry
- Special purpose inverter for printing industry
- Special purpose inverter for tension control
- Special purpose drive for solar-powered pumps
- Integrated energy-saving control cabinet
- Special inverter for stone processing industry
- High frequency inverter (max 3200Hz)
- Special purpose inverter for music fountain
- Servo drive
- Asynchronous servo drive
- Special purpose inverter for air compressor
- Special purpose inverter for textile spinning machine
- Special purpose inverter for centrifugal machine
- Explosion-proof inverter (690V/1140V)



With the dedicated spirit of continuous R&D and technology to promote evolution in the last decade, Shenzhen V&T Technologies Co., Ltd. was officially listed on the Growth Enterprise Market (GEM) of Shenzhen Stock Exchange (SSE) on March 22, 2016 (stock name "LHHT", stock code: "300484")



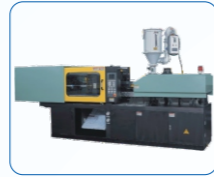


# Applications of Typical Industries



## Electric Vehicle Drive

- Prominent structure design of high protection level, simple and convenient wiring
- Accurate torque control perfectly matches with engine working
- Energy saving mode, super battery endurance
- Professional built-in CAN-BUS adapter card of cars



## Injection molding industry

- There are 2 ways of solutions to be chosen: Integrated Energy-Saving Control Cabinet or specific inverter for Plastic Machine
- The motor drive solution can be chosen as optional: asynchronous servomotor solution or synchronous servomotor solution with double closed-loop control
- No high-pressure throttle and loss of overflowed energy, energy-saving rate can reach to 25%~70%
- Design of independent duct makes rear parts and top fan can be convenient to disassemble and easy to maintain; it has strong environmental adaptability and high protection level as well

## Air Compressor Industry

- High precision vector frequency conversion; Closed-loop constant pressure control; Multi-machine networking control
- Energy saving rate can reach to 20%~50%; Intelligent sleeping and low voltage awakening
- Standard inverter solution, specific converter solution for air compressor, integrated cabinet solution for air compressor energy saving are optional



## Machine Tool Industry

- Supporting 1000Kbps high-speed communication
- Drive spindle 180 thousand rpm successfully to operate
- For the spindle closed-loop control: the inverter with orientation servo features
- For the spindle open-loop control: diversified vector control methods to adapt to various machine tools



## Ceramics Machinery

- Strong adaptability of environmental temperature
- Professional solutions for anti-interference and lightning protection
- Reliable and stable operation, corrosion prevention
- Non-trip, reliable control and protection for power modules

## Oil Field



- Special inverter for pumping unit, do not need energy feedback or dynamic braking
- Higher power saving effect, less harmonic and reactive current
- Select high quality Outdoor Control Cabinet Box products constant temperature control box can be long-term working reliably in the field of high and low temperature
- Rich and flexible monitoring function can wirelessly transmit inverter data or record data through relevant storage medium

## Explosion-proof Products



- Passed National Detection and Testing Certificate
- Various voltage levels of products 200/400/690/1140V
- Wide operating voltage, continuously operating in low voltage and interference electricity, strong environmental adaptability
- Supporting automatic restart when power resume normal

## Mine Winch



- Abundant experience in the renovation of winch, providing different types of winch renovation solutions
- Vector technology platform providing excellent control performance for the winch
- A variety of protection functions to ensure more secure and reliable system
- Intelligent fault diagnosis to reduce maintenance and repair work

## Industry EPS



- Adopting digital control technology of DSP and CPLD and high efficiency technology of IGBT, higher reliability, lower loss
- Superior load characteristic, tracking synchronously, sinusoidal output, switching on line
- Man-machine interface of LCD, perfect function of protection, convenient to use
- Dynamic characteristics of high performance and the shortest switching time is less than 3ms



## Textile industry

- Reducing the rate of breakage and improving the efficiency of production
- Specially made external heat radiator, cotton easy clean
- Unique function of swing frequency is suitable for equipment of yarn winding
- Rich indication signals: full indication, broken wire indication, power failure indication, etc.

## Wood Processing

- Built-in technology algorithm of rotary cutting machine, rolling machine, peeling machine
- Wide voltage range, particularly suitable for harsh conditions in the rural power grid
- High precision and fast rotary cutting to increase the yield under the premise of keeping the uniformity of thickness for the wood veneer
- Stable and reliable work makes customers enjoy quality green power



## Printing And Packaging Industry

- High performance vector control and torque control technology can achieve the constant linear speed control and constant tension control
- Applicable for devices of cutting machine, coating machine, paper-made machine, printing machine, compound machine, rolling dyeing machine, etc.
- Torque control without encoder speed feedback and it can replace torque motor widely



## Municipal Engineering

- Central air conditioning/refrigeration house: for constant temperature control, high efficiency of energy-saving, and low noise
- Centralized water supply in constant pressure: Built-in one-for-all expansion card for water supply, multi-period water supply in constant pressure with timing loop, solving the phenomena of overflowing and water hammer in the switching process
- Sewage treatment: Built-in adaptive torque control in the main and auxiliary drive of centrifugal equipment for quick acceleration and deceleration, suitable for harsh environment
- Various fan drives: Designed for the fan, high efficiency of energy-saving, noise optimization, built-in automatic speed tracking function, maximum power up to 800kW



## Crane

- Excellent torque control, reliable brake control sequence;
- Professional crane control functions: speed monitoring, torque monitoring, torque verification, power optimization, position processing, intelligent deceleration, etc.
- Extensively apply to: port, shipping, ocean engineering, mine, architecture, metallurgy, factory and various kinds of industries' lifting machines.



## Stone Processing

- Simple and convenient operation, less connection line
- Smooth running curve to reduce the board damage rate, smooth starting to reduce mechanical damage and maintenance costs
- Providing the constant tension control for broken rope, main and auxiliary functions for frequency operation, safe stopping function, and alarm prompt function



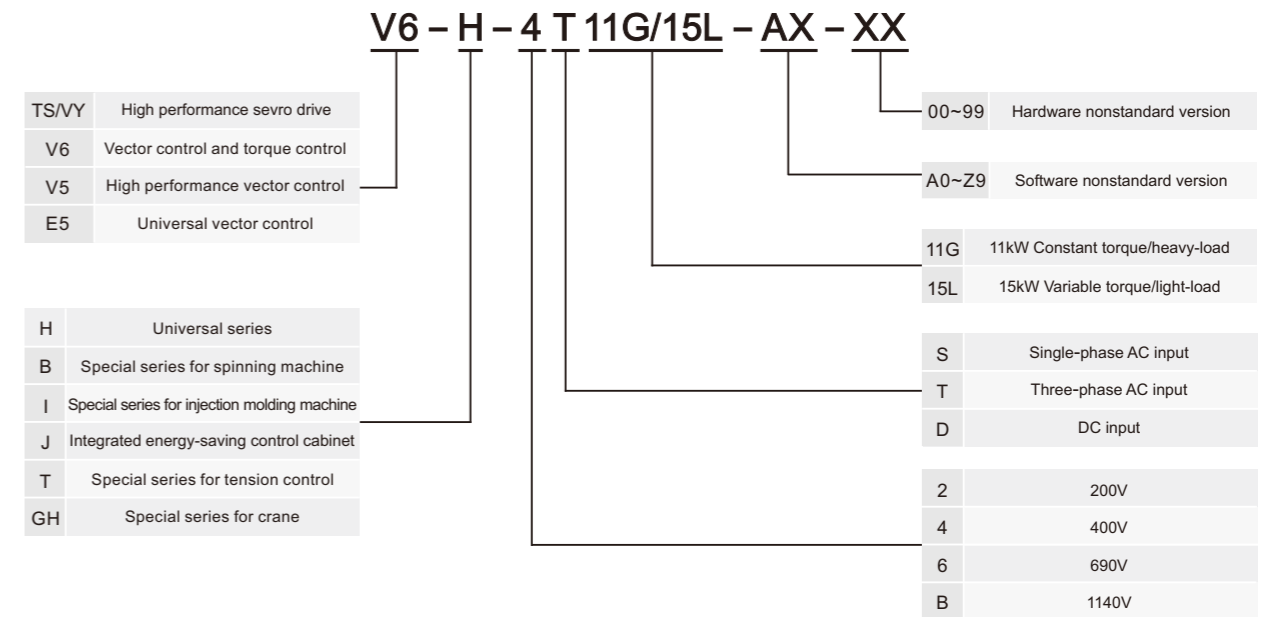
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## Technical Specifications

	Control mode	Vector control 1 without encoder speed feedback	Vector control 2 without encoder speed feedback	Vector control 2 with encoder speed feedback	
Control characteristics	Starting torque	0.50Hz 180%	0.25Hz 180%	0.00Hz 180%	
	Range of speed regulation	1:100	1:200	1:1000	
	Precision of steady speed	± 0.5%	± 0.2%	± 0.02%	
	Torque control	NO	YES	YES	
	Torque control precision	—	± 5%	± 5%	
	Torque response time	—	<20ms	<10ms	
	General functions	Key functions	Under-voltage regulation, switching of start command source, speed tracing function, torque limitation, multi-step frequency reference (up to 23 stages), motor parameters auto-tuning, S curve acceleration and deceleration, slip compensation, PID regulation, droop control, current limitation, on-line switching of torque control and speed control, manual torque boost and auto torque boost, multi-function input and output terminals.		
Frequency reference modes		Operation panel setting, multi-function input terminal setting, Up/Dn setting(operation panel or terminal ),communication setting, analog setting(A11/A12/A13) , high speed pulse setting(DI terminal)			
Frequency range		0.00~300.00 Hz Note: Frequency range between 0.0~3000.0Hz, can be customized according to customers' requirements under vector control 1			
Start-up frequency		0.00~60.00Hz			
Acceleration time and deceleration time		0.1~3600.0s or 1~36000s, can be chosen as option			
Dynamic braking capacity		Braking unit action voltage:650~750V; Operation period: 100.0s Braking unit can be built-in under V6-H-4T-75G/90L and below power class			
DC braking capability		DC braking initial frequency: 0.00-300.00Hz DC braking current: Constant torque 0.0 -120.0%; Variable torque 0.0 -90.0% DC braking time: 0.0~30.0s, without initial waiting time for DC braking to realize quick braking			
Magnetic flux braking function		Action or no action is optional, action during deceleration as default			
Unique Characteristics		Multi-functional button M	The unique multifunction key can be set to the frequently used operations, such as JOG, emergency shutdown, running command source switching , display menu switching , etc.		
		Multi menu mode	Basic menu mode, fast menu mode, menu mode of non-factory setting function codes		
	Parameters copy	The standard digital panel can realize the parameters uploading, downloading and display the copy progress. Users can select to forbid the overwriting of the uploaded parameters.			
	Show/hide function code	Users can customize any function code to be shown or hidden			
	Double 485 communication ports	Dual 485 communication ports support Modbus protocol (RTU). The standard digital panel can realize the function of a remote control box within 500m			
	Operation panel	Button or shuttle type digital panel optional, protection level: offered in IP20 as standard, offered in IP54 as option			
	Common DC-BUS	All series can realize common DC-BUS supply for several inverters			
	Independent duct	All series adopts independent duct design and supports the installation of heat-sink outside the cabinet			
Protection function	Power On Self-Test (POST)	Realizing the POST of internal and peripheral circuits, including motor grounding, +10V power supply output, analog input, disconnection etc.			
		Power supply under-voltage, over-current protection, over-voltage protection, interference protection, abnormal comparison reference input, auto-tuning failure, module(IPM) protection, heat sink overheating protection, inverter overload protection, motor overload protection, peripheral protection, abnormal current detection, output to ground short circuit, abnormal power failure during operation, abnormal input power, output power phase failure, abnormal EEPROM operation, abnormal relay contact, temperature sampling disconnection, encoder disconnection, abnormal +10V power supply output, abnormal analog input, motor overheating (PTC), abnormal communication, abnormal version compatibility, abnormal copying, abnormal expansion card connection, terminal mutual exclusion detection failure, hardware overload protection			
Efficiency	At rated power, 7.5kW and below, ≥93%;11kW~45kW, ≥95%;55kW and above, ≥95%				
Environment	Operating site	The product shall be mounted vertically in the electric control cabinet with good ventilation. Horizontal or other installation modes are not allowed. The cooling medium is the air. The product shall be installed in the environment without dust, corrosive gas, combustible gas, oil mist, steam, drip and free from direct sunlight,			
	Ambient temperature	-10~+40°C; Derated at 40~50°C, the rated output current shall be decreased by 1% for every temperature rise of 1°C			
	Humidity	5~95%, no condensing			
	Altitude	0~2000m;Derated above 1000m, the rated output current shall be decreased by 1% for every rise of 100m			
	Vibration	3.5m/s <sup>2</sup> , 2~9Hz;10 m/s <sup>2</sup> ,9~200Hz;15 m/s <sup>2</sup> ,200~500Hz			
	Storage temperature	-40~+70°C			

## Product Model Description



## Typical Industry Selection Table

Industrial Application	Equipment	Type	Characteristics
Standard series product	V6 series: high performance torque control inverter;V5 series: high performance vector control inverter;E5 series: high performance universal inverter.All Series support 200V, 400V and 690V voltage input, maximum power up to 3MW.		
Stone, brick,wood	Wood planning machine	V5-H	High speed stabilization precision,large torque, high finished product rate
Plastic Metal Extrusion Processing	Extruder	V5-H	Large extrusion pressure,without tripping, discharge and flow uniform
	Die casting machine	V5-H	Rapid response and large torque, multi-pump and good synchronization performance
Textile industry	Knitting machine	V5-H	Large start torque, wide voltage fluctuation adaptability
Metal processing	Wire drawing machine	V6-H	Stretching control smooth, Take-Two options are available with or without pendulum
	Micro wire drawing machine	V5-H	Can stretch 0.001mm filaments
	Replace torque motor wire collection	V6-H	Extensive use, first open-loop tension control
Fans & pumps, air conditioning, air compressor	Fan	E5-H	Support built-in speed tracking card
	Water supply(1 inverter drive 1 motor)	E5-H	Closed-loop, sleep wake, and overpressure protection functions
	Central air conditioning/Cold storage	E5-H	Realize constant temperature control , high energy saving
Printing and packing machine	Compressor integration	V5-H	Small and high efficient, national popular inverter compressor suite
	Plastics blow molding machine	V5-H	Super rapid acceleration and deceleration performance, ensure product consistency
	Leather paring machine	V6-H	Open loop torque control, smoothly switch with speed control and torque control
	Fishing net machine	V6-H	Open torque control, for wire fishing net
Lifting machine	Paper machine	V6-H	Bus control acts as executive body, multi-point transmission
	Paper cutting machine	V6-H	Fast response the frequency reference, cutting with high speed, large torque and high precision
	Mine winch	V5-H	Run stably and reliably, working together with mechanical brake to realize mid-slope stop and start
Oilfield machine Industrial supplies and external power supply operation	Ship crane/crane	V5-H	Wide range voltage, low voltage or voltage fluctuation can work continuously, environmental adaptability
	Belt conveyor	V5-H	Multi-speed transmission, excellent synchronization performance, large torque under low-speed, strong load capability
	Building lifting machine	V5-H	Large lifting torque, high energy saving
Other applications	Oil transfer pump/sand pump	V5-H	With zero frequency function, you can auto start and shutdown according to the conditions
	Single EPS	V5-H	Reliable short-circuit protection, running with auto reset, additionally,running with 50Hz heat cut into motor
Other applications	System EPS	V5-H	Mature system solution, 3ms synchronization traces AC
	Ceramic machine	V5-H	Running reliably and steadily, with anti-corrosion treatment
	Mechanical vibration generator system	V5-H	Ultra fast acceleration and deceleration performance, excellent motor change direction control
	Pile drive	V5-H	High energy saving efficiency, large torque, easy to change speed
	Mixer	V5-H	"Bulldozer" feature, not trip, excellent IGBT control and protection

Note:If you have any requirement, please contact with manufacturer.



## Universal Series

### V5, V6, E5-H Series Three-phase 400V Constant torque/heavy-load application

Type (V5/V6/E5-H-4T□□□G)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	
Motor power(kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	
Voltage (V)	Three-phase 0 to rated input voltage																
Output Rated current (A)	2.5	3.8	5.5	9	13	17	24	30	39	45	60	75	91	112	150	176	
Overload capacity	150% 1 minute, 180% 10 seconds, 200% 0.5 second																
Rated voltage/frequency	Three-phase 380V/480V; 50Hz/60Hz																
Input Allowable voltage range	323V ~ 528V; Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%																
Rated current (A)	2.8	4.2	6.1	10	15	19	26	33	43	50	66	83	100	123	165	160	
Braking unit	Built-in as standard								Built-in as option								
Protection class	IP20																
Cooling mode	Self-cooling		Forced air cooling														
Type (V5/V6/E5-H-4T□□□G)	110	132	160	185	200	220	250	280	315	355	400	450	500				
Motor power(kW)	110	132	160	185	200	220	250	280	315	355	400	450	500				
Voltage (V)	Three-phase 0 to rated input voltage																
Output Rated current (A)	210	253	304	350	380	426	470	520	600	650	690	775	860				
Overload capacity	150% 1 minute, 180% 10 seconds, 200% 0.5 second																
Rated voltage/frequency	Three-phase 380V/480V; 50Hz/60Hz																
Input Allowable voltage range	323V ~ 528V; Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%																
Rated current (A)	196	232	282	326	352	385	437	491	580	624	670	755	840				
Braking unit	External braking unit needed																
Protection class	IP20																
Cooling mode	Forced air cooling																

### V5, V6 Series Three-phase 400V Variable torque/light-load application

Type (V5/V6-H-4T□□□L)	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	
Motor power(kW)	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	
Voltage (V)	Three-phase 0 to rated input voltage																
Output Rated current (A)	3.3	5.0	7.5	11	17	22	30	37	44	56	72	91	110	142	176	210	
Overload capacity	115% 1 minute, 160% 0.5 second																
Rated voltage/frequency	Three-phase 380V/480V; 50Hz/60Hz																
Input Allowable voltage range	323V ~ 528V; Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%																
Rated current (A)	3.6	5.5	8.3	12	19	25	33	40	50	62	80	100	121	156	194	196	
Braking unit	Built-in as standard								Built-in as option								
Protection class	IP20																
Cooling mode	Self-cooling		Forced air cooling														
Type (V5/V6-H-4T□□□L)	132	160	185	200	220	250	280	315	355	400	450	500	560				
Motor power(kW)	132	160	185	200	220	250	280	315	355	400	450	500	560				
Voltage (V)	Three-phase 0 to rated input voltage																
Output Rated current (A)	253	304	350	380	426	470	520	600	650	690	775	860	950				
Overload capacity	115% 1 minute, 160% 0.5 second																
Rated voltage/frequency	Three-phase 380V/480V; 50Hz/60Hz																
Input Allowable voltage range	323V ~ 528V; Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%																
Rated current (A)	232	282	326	352	385	437	491	580	624	670	755	840	920				
Braking unit	External braking unit needed																
Protection class	IP20																
Cooling mode	Forced air cooling																

Note: If you have any requirement, please contact with manufacturer.

## Universal Series

### V5-H Series Three-phase 690V Constant torque/heavy-load application

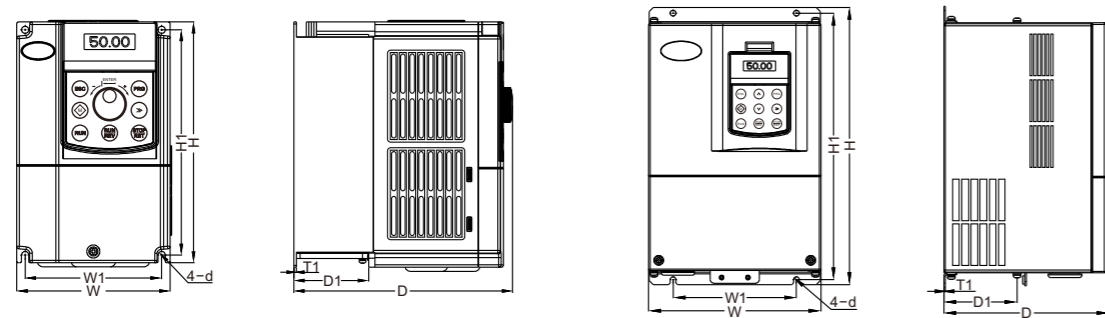
Type (V5-H-6T□□□G)	15	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220	
Motor power(kW)	15	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220	
Voltage (V)	Three-phase 0 to rated input voltage															
Output Rated current (A)	20	25	28	35	45	52	65	86	98	120	150	176	204	220	245	
Overload capacity	150% 1 minute, 180% 10 seconds, 200% 0.5 second															
Rated voltage/frequency	Three-phase 690V/790V; 50Hz/60Hz															
Input Allowable voltage range	587V ~ 793V; Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%															
Rated current (A)	25	30	35	40	47	52	65	85	96	116	145	168	196	210	230	
Braking unit	Built-in as option								External braking unit needed							
Protection class	IP20															
Cooling mode	Forced air cooling															
Type (V5-H-6T□□□G)	250	280	315	355	400	450	500	560	630							
Motor power(kW)	250	280	315	355	400	450	500	560	630							
Voltage (V)	Three-phase 0 to rated input voltage															
Output Rated current (A)	275	325	350	395	435	490	545	600	680							
Overload capacity	150% 1 minute, 180% 10 seconds, 200% 0.5 second															
Rated voltage/frequency	Three-phase 690V/790V; 50Hz/60Hz															
Input Allowable voltage range	587V ~ 793V; Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%															
Rated current (A)	255	290	335	378	415	466	520	580	655							
Braking unit	External braking unit needed															
Protection class	IP20															
Cooling mode	Forced air cooling															

### V5-H, V6-H Series Single-phase/Three-phase 200V Constant torque/heavy-load application

Type (V5/6-H-2T□□□G)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	
Motor power(kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	
Voltage (V)	Three-phase 0 to rated input voltage															
Output Rated current (A)	3	5	7.5	10	17	24	32	46	64	71	87	115	145	175	215	
Overload capacity	150% 1 minute, 180% 10 seconds, 200% 0.5 second, interval: 10 minutes (inverse time lag feature)															
Rated voltage/frequency	Three/single-phase 200V/240V								Three-phase 200V/240V; 50Hz/60Hz							
Input Allowable voltage range	180V ~ 260V; Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%															
Rated current (A)	3.8	5.5	8.3	12	18.5	26	35	51	70	78	95	124	156	185	230	
Braking unit	Built-in as standard								Built-in as option							
Protection class	IP20															
Cooling mode	Self-cooling		Forced air cooling													
Type (V5/6-H-2T□□□G)	75	90	110	132												
Motor power(kW)	75	90	110	132												
Voltage (V)	Three-phase 0 to rated input voltage															
Output Rated current (A)	283	346	432	520												
Overload capacity	150% 1 minute, 180% 10 seconds, 200% 0.5 second, interval: 10 minutes (inverse time lag feature)															
Rated voltage/frequency	Three-phase 200V/240V; 50Hz/60Hz															
Input Allowable voltage range	180V ~ 260V; Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%															
Rated current (A)	298	365	445	530												
Braking unit	External braking unit needed															
Protection class	IP20															
Cooling mode	Forced air cooling															

Note: If you have any requirement, please contact with manufacturer.

Product Outline, Mounting Dimension, and Weight



V5/V6-H-2T3.7G and below power range  
V5/V6-H-4T7.5G/11L, E5-H-4T7.5G and below power range

V5-H-6T15G and above power range  
V5/V6-H-2T5.5G and above power range  
V5/V6-H-4T11G/15L, E5-H-4T11G and above power range

Voltage class	Inverter type	Outline and mounting dimension (mm)								Approximate weight(kg)	Type of main circuit terminal
		W	H	D	W1	H1	D1	T1	d		
200V	V□-H-2T0.4G	118	190	155	105	173	40.8	3	5.5	1.5	A
	V□-H-2T0.75G			175							
	V□-H-2T1.5G			155							
	V□-H-2T2.2G			175							
	V□-H-2T3.7G	155	249	185	136	232	69	8	5.5	3	
	V□-H-2T5.5G	210	337	200	150	324	107.5	2.5	7	8.5	
	V□-H-2T7.5G										
	V□-H-2T11G										
	V□-H-2T15G	285	440	220	200	425	107.5	2.5	7	17	
	V□-H-2T18.5G										
	V□-H-2T22G	315	575	227	220	553	123.5	2.5	10	25	
	V□-H-2T30G	400	615	265	270	590	123.5	3.0	10	35	
	V□-H-2T37G										
	V□-H-2T45G										
	V□-H-2T55G	465	745	325	343	715	156	3.0	12	55	
	V□-H-2T75G	540	890	385	370	855	205.5	4.0	14	85	
V□-H-2T90G											
V□-H-2T110G											
V□-H-2T132G											
V□-H-2T150G	700	1010	385	520	977	210	4.0	14	125		
V□-H-4T0.75G/1.5L, E5-H-4T0.75G	118	190	155	105	173	40.8	3	5.5	1.5	A	
V□-H-4T1.5G/2.2L, E5-H-4T1.5G	118	190	175	105	173	60.5	4	5.5	2.6		
V□-H-4T2.2G/3.7L, E5-H-4T2.2G											
V□-H-4T3.7G/5.5L, E5-H-4T3.7G											
V□-H-4T5.5G/7.5L, E5-H-4T5.5G	155	249	185	136	232	69	8	5.5	3	A	
V□-H-4T7.5G/11L, E5-H-4T7.5G	210	337	200	150	324	107.5	2.5	7	8.5		
V□-H-4T11G/15L, E5-H-4T11G											
V□-H-4T15G/18.5L, E5-H-4T15G											
V□-H-4T18.5GA/22LA, E5-H-4T18.5GA	285	440	220	200	425	107.5	2.5	7	17		
V□-H-4T22GA/30LA, E5-H-4T22GA											
V□-H-4T30GA/37LA, E5-H-4T30GA											

Product Outline, Mounting Dimension, and Weight

Voltage class	Inverter type	Outline and mounting dimension (mm)								Approximate weight(kg)	Type of main circuit terminal								
		W	H	D	W1	H1	D1	T1	d										
400V	V□-H-4T37GA/45LA, E5-H-4T37GA	315	575	227	220	553	123.5	2.5	10	25	B								
	V□-H-4T45GA/55LA, E5-H-4T45GA																		
	V□-H-4T55GA/75LA, E5-H-4T55GA	400	615	265	270	590	123.5	3.0	10	35									
	V□-H-4T75GA/90LA, E5-H-4T75GA																		
	V□-H-4T90G/110L, E5-H-4T90G	465	745	325	343	715	156	3.0	12	55									
	V□-H-4T110G/132L, E5-H-4T110G																		
	V□-H-4T132G/160L, E5-H-4T132G																		
	V□-H-4T160G/185L, E5-H-4T160G	540	890	385	370	855	205.5	4.0	14	85									
	V□-H-4T185G/200L, E5-H-4T185G																		
	V□-H-4T200G/220L, E5-H-4T200G																		
	V□-H-4T220G/250L, E5-H-4T220G																		
	V□-H-4T250G/280L, E5-H-4T250G	700	1010	385	520	977	210	4.0	14	125		C							
	V□-H-4T280G/315L, E5-H-4T280G	810	1358	425	520	1300	210	4.0	14	215									
	V□-H-4T315G/355L, E5-H-4T315G																		
	V□-H-4T355G/400L, E5-H-4T355G																		
	V□-H-4T400G/450L, E5-H-4T400G																		
V□-H-4T450G/500L, E5-H-4T450G																			
V□-H-4T500G/560L, E5-H-4T500G																			
V5-H-6T15G	285	440	220	200	425	107.5	2.5	7	17	B									
V5-H-6T18.5G																			
V5-H-6T22G																			
V5-H-6T30G																			
V5-H-6T37G																			
V5-H-6T45G											315	575	227	220	553	123.5	2.5	10	25
V5-H-6T55G																			
V5-H-6T75G											400	615	265	270	590	123.5	3.0	10	35
V5-H-6T90G																			
V5-H-6T110G											465	745	325	343	715	156	3.0	12	55
V5-H-6T132G																			
V5-H-6T160G																			
V5-H-6T185G											540	890	385	370	855	205.5	4.0	14	85
V5-H-6T200G																			
V5-H-6T220G																			
V5-H-6T250G																			
V5-H-6T280G	700	1010	385	520	977	210	4.0	14	125										
V5-H-6T315G																			
V5-H-6T355G																			
V5-H-6T400G																			
V5-H-6T450G																			
V5-H-6T500G										810	1358	425	520	1300	210	4.0	14	215	
V5-H-6T560G																			
V5-H-6T630G																			

Note: V□ indicates V5 or V6 series inverter.

## Functions of Main Circuit Terminal

### Type A

R/L1	S/L2	T/L3	⊕1	⊕2/B1	B2	⊖	U/T1	V/T2	W/T3
POWER			OPTION			MOTOR			



### Type B

R/L1	S/L2	T/L3	⊕1	⊕2	⊖	U/T1	V/T2	W/T3
POWER			OPTION			MOTOR		



### Type C

POWER		
R/L1	S/L2	T/L3



⊕1	⊕2	⊖
OPTION		



U/T1	V/T2	W/T3
MOTOR		

V□-H-2T15G-06~V□-H-2T45G-06、V5/V6-□-4T18.5GA/22LA-06~V5/V6-□-4T75GA/90LA-06、V5-H-6T15G-06 ~ V5-H-6T90G-06(-06 indcate built-in braking unit)

R/L1	S/L2	T/L3	B1	B2	⊖	U/T1	V/T2	W/T3
POWER			OPTION			MOTOR		



Terminal symbol	Terminal name and function description
R/L1,S/L2,T/L3	Three-phase AC power input terminal
⊕1,⊕2/B1 or ⊕1,⊕2	DC reactor connecting terminal, 4T90G/110L and below power class short circuited with copper bus upon delivery
⊕2/B1,B2 or B1,B2	Connecting terminal of braking resistor
⊕2/B1,⊖ or ⊕2,⊖	DC power input terminal; DC input terminal of external braking unit
U/T1,V/T2,W/T3	Three-phase AC power output terminal
⊕	Grounding terminal PE

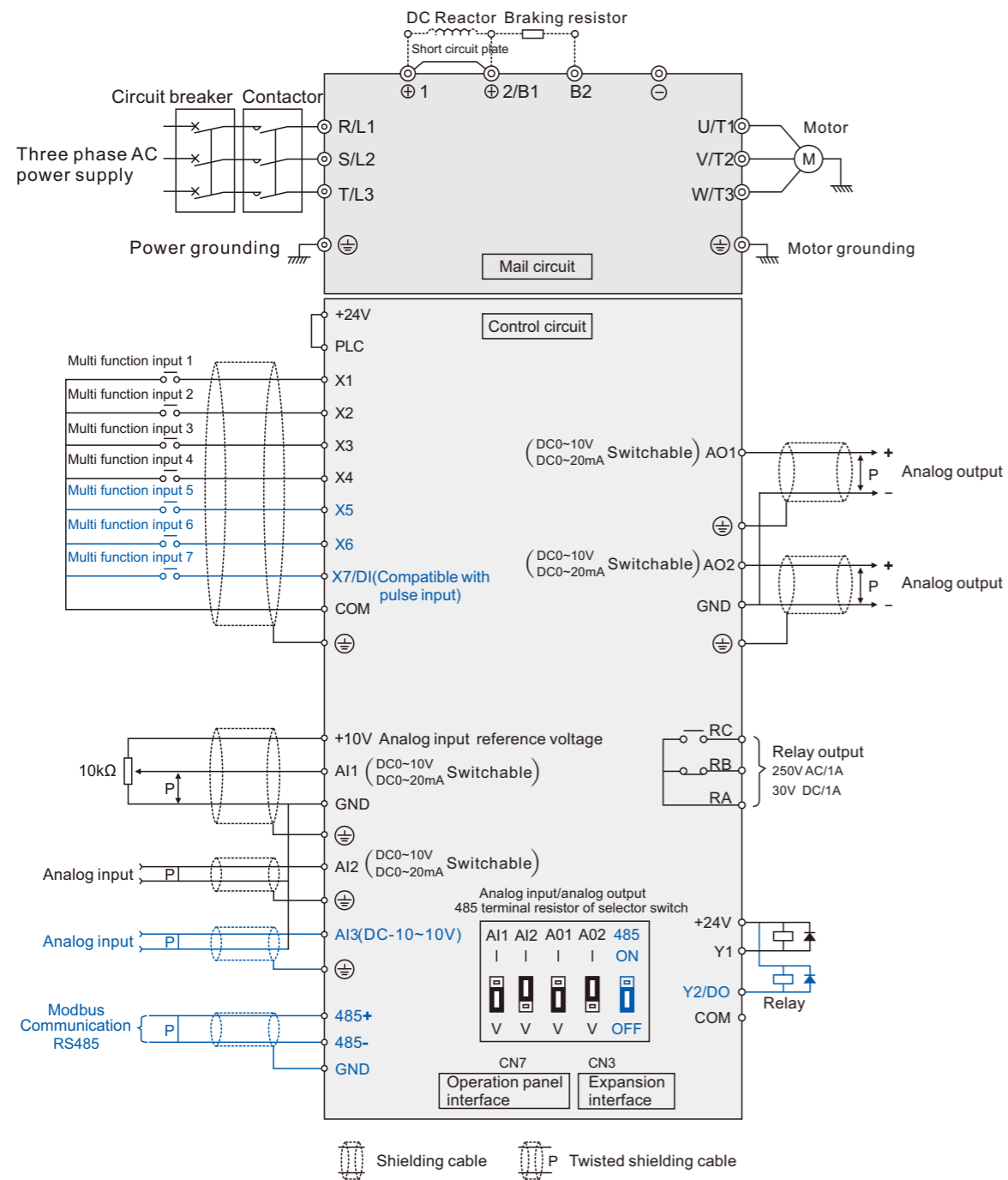
Note:V□ indicates V5, V6 series inverter.

## Optional Accessories

Accessories name	Type	Function description	
Built-in braking unit	Type with “-06”	Built-in braking unit from 18.5kW to 75kW is optional and support common DC bus	
	Type with “-26”	Built-in braking unit from 18.5kW to 75kW is optional and support external DC reactor	
485 Communication	Type with “-34”	E5 Series increase 485 and high speed pulse terminals	
Vectorque monitoring software	CD-RM01	V1.00	
PG01 feedback card	EX-PG01	A/B/Z Open collector input (12V)	
PG02 feedback card	EX-PG02	A/B/Z Differential input (5V)	
PG03 feedback card	EX-PG03	A/B/Z Open collector input with frequency division output (12V)	
PG04 feedback card	EX-PG04	A/B/Z Differential input with frequency division output (5V)	
PG06 feedback card	EX-PG06	UV/W encoder input	
PG07 feedback card	EX-PG07	Resolver input	
Injection molding machine interface card 1	EX-PM01	Two-circuit isolation input 0-1A/0-2A/0-24V	
Injection molding machine interface card 2	EX-PM02	Two-circuit isolation input 0-1A/0-2A	
Digital terminal expansion card	EX-DT01	Externally expand four multi-function input terminals and three relay output terminals	
	EX-DT02	Externally expand seven controllable relay output terminals.	
Programmable clock control card	EX-DT03	Independent clock, has eight controllable relay output terminals.	
Power Monitoring card	EX-PA01	Power lacks/instantaneous power-off monitor	
Phase sequence detection card	EX-PA02	Three-phase input power phase sequence detection	
Speed tracking card	EX-PA03	Realize speed tracking	
External power rectifier bridge	EX-RF01	Control power provided by an external power supply	
External capacitor box	EX-CB01	Expand inverter main circuit capacitance for users	
Operation panel	Shuttle type	V6-DP01	7.5kW and below as standard
	Bottom type	V6-DP02	11kW and above as standard
	False panel	V6-DP03	Guest selection accessories
	Pallets	V6-DP04	Operation panel installation of accessories
Test display	EX-MT01	Man-machine interface - Text display	
Touch screen	EX-MT02	Man-machine interface - Touch screen	
Communication adapter	EX-CA06	PROFIBUS communication adapter	
	EX-CA02	RS232 convert to RS485 communication adapter	
	EX-CA03	USB convert RS485 communication adapter	
CANopen communication adapter card	EX-CA04	Support CAN2.0A, CANopen DS301 V4.02, DS303, Ds305	
Keyboard extension line	CB1-150	1.5m Keyboard extension line	
	CB1-300	3.0m Keyboard extension line	
Communication cables	CB2-RS232	Standard RS232 cable	
	CB3-USB	1.0m USB convert RS232 cable	
	RXHG/RXLG series	Braking resistor Annex	
DC reactor	DCL series	DC Reactor	
AC input reactor	ACL series	AC input Reactor Annex	
AC output reactor	OCL series	AC output Reactor Annex	
Input noise filter	EBK5/40 series	CE specifications Annex	
Output noise filter	EBL series	CE specifications Annex	

Note:If you have any requirements, please feel free to contact us

## Terminal Wiring



Take V6-H-4T5.5G/7.5L as an example  
 (Blue part represents that the function is not included in E5 series)

## Control Circuit Terminal

V5 and V6 series inverter control circuit terminal

+10V	AI1	AI2	AI3	GND	AO1	AO2	GND	485+	485-	RA	RB	RC
+24V	PLC	COM	X1	X2	X3	X4	X5	X6	X7/DI	Y1	Y2/DO	COM

E5 series inverter control circuit terminal

+10V	AI1	AI2	GND	AO1	AO2	RA	RB	RC
+24V	PLC	COM	X1	X2	X3	Y1	COM	

## Control Circuit Terminal Function

Type	Terminal symbol	Terminal function description	Technical specification
Terminal 485	485+	Positive end of 485 signal	Rate: 4800/9600/19200/38400/57600 bps
	485-	Negative end of 485 signal	Up to 32 inverter can be paralleled. If exceeds 32, relay shall be used
	GND	Grounding end of 485	Maximum distance: 500m (Adopt standard twisted shielding cable)
Operation panel 485	CN7	485 port of operation panel	Internal isolated with COM
			Connection of communication with host computer, it is the same as terminal 485
Digital input	+24V	+24V	The maximum distance is 15m for the communication connection of operation panel (Adopt standard twisted shielding cable)
	PLC	Common end of multi-functional input terminal	24V±10%; Maximum load: 200mA, with overload and short circuit protection
	X1~X6	Multi-functional input terminals	Short circuited with +24V upon factory setting
	X7/DI	Multi-functional input or pulse input	Input specification: 24VDC, 5mA; Frequency range: 0~200Hz; Voltage range: 24V±20%
Digital output	COM	+24V GND	Multi-functional input: same as X1~X6; Pulse input: 0.1Hz~50kHz; Voltage range: 24V±20%
	Y1	Open collector output	Internal isolated with COM
	Y2/DO	Open collector or pulse output	Voltage range: 24V±20%, maximum input current: 50mA
Analog input	COM	Open collector output common end	Open collector: Same as Y1; Pulse output: 0~50kHz; voltage range: 24V±20%
	+10V	Analog input reference voltage	Internal isolated with GND
	AI1	Analog input channel 1	10V ±3%, internal isolated with COM; Maximum output current: 10mA, with short circuit and overload protection
	AI2	Analog input channel 2	0~20mA: Input impedance 500Ω, maximum input current: 30mA
Analog output	AI3	Analog input channel 3	0~10V: Input impedance 20kΩ, maximum input voltage: 15V
	GND	Analog GND	Resolution: 12 bits (0.025%)
	AO1	Analog output channel 1	-10V~10V: Input impedance 20kΩ, Resolution: 12 bits (0.025%), Maximum input voltage: ±15V
	AO2	Analog output channel 2	Internal isolated with COM
Relay output	Y1	Relay output	0~20mA: allowable output impedance 200~500Ω
	Y2/DO	Relay output	0~10V: allowable output impedance ≥10kΩ
	COM	Relay output	Output precision: 2%, resolution: 10 bits (0.1%), with short circuit protection function
	RA/RB/RC	Relay output	Internal isolated with COM
			RA-RB: Normally closed; RA-RC: Normally open, Contact capacity: 250VAC/1A, 30VDC/1A