V&T DRIVE

PRODUCT CATALOGUE

- TS/VY Synchronous/Asynchronous servo drive
- V7 Series high performance crane inverter
- 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 driver

ECMG Worldwide Certification Solutions
EMC Compliance Management Group

NVLAP Lab code:200068-0
ISO/IEC 17025:1999;ISO 9002:1994

CE

Shenzhen 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" engaged in Variable Frequency Drive, Servo Drive, Electric Vehicle Controller, Inverter and other power electronics product with independent intellectual property rights covering R&D,manufacturing,marketing, with the profound drive know-how, we has won the technical innovation prize, the most competitive brands prize, Champions of National Hybrid Electric Vehicle competition and one of Top Ten Variable Frequency Drive Enterprises in China and etc.

ShenZhen V&T Technologies Co.,Ltd. has advanced asynchronous vector control technology and torque control technology which is the core control technologies in motor drive section,Through continuous technological innovation and international technical exchange,V&T developed core technology with most experienced R&D team in China and completed industrial design and production capacity. Our self-developed products cover a wide range including V5,V6,V7 and E5, voltage level from 220V to 1140V and power rating from 0.4KW to 3MW; can meet many kinds of applications.

For the different environment and industries applications requirement, we strengthen the product reliability and environment adaptability and improve product performance. Customized product and industrialized design meet high level applications. which has been widely used in metallurgy, crane, oil, chemicals, machine tools, electric vehicles, metal processing, building materials, stone, wood processing, ceramics, plastics, air compressor, washing machine, water supply, air conditioning, multiple engineering, textile, printing, mining and etc.

Main Product Series

Standard Platform Series

- V7 series high performance crane inverter.(Voltage degree: 400V,690V. Power Range:0.7kW~500kW)
- V6 series high performance torque control inverter.(Voltage degree: 200V,400V. Power Range:0.4kW~500kW)
- V5 series high performance vector control inverter.(Voltage degree: 200V,400V,690V,1140V. Power Range:0.4kW~3MW)
- E5 series high performance universal inverter.(Voltage degree: 200V,400V,690V,1140V.Power Range:0.4kW~3MW)

Industrialized Platform Series

- Electric vehicle motor driver series
- Port crane special inverter
- Mine winch special inverter
- Water supply special inverter
- Ceramic industry special drive
- Printing industry special inverter
- Tension control curl special inverter
- Hybrid electro-hydraulic servo driver
- Integration drive injection molding machine
- Stone processing industry-specific inverter
- 3200Hz high frequency special inverter
- High energy saving ball mill special inverter
- Tool servo drive
- Air compressor inverter
- Paper industry special inverter
- Textile spinning special inverter
- Centrifugal machine special inverter with torque control
- Explosion-proof special inverter (690/1140V)




Technical Specifications

	Control mode	Vector control 1	Vector control 2(Without PG card)	Vector control 2(With PG card)
Control features	Startup torque	0.50Hz 180%	0.25Hz 180%	0.00Hz 180%
	Speed adjusting range	1:100	1:200	1:1000
	Speed stabilization precision	± 0.5%	± 0.2%	± 0.02%
	Torque control	NO	YES	YES
	Torque precision	–	± 5%	± 5%
	Torque response time	–	<20ms	<10ms
Product functions	Key functions	Undervoltage adjustment, switching of AC operation grounding, protective grounding and DC operation grounding, rotation speed tracing, torque limitation, multi-speed operation (up to 23 speeds), auto tuning, S curve acceleration/deceleration, slip compensation, PID adjustment, drooping control, current limiting control, torque control mode and speed control mode switching, manual/auto torque boost. current limiting, multi-functional input/output terminal		
	Frequency setting mode	Operation panel setting, terminal UP/DN setting, host computer communication setting, analog setting AI1/AI2/AI3, terminal pulse DI setting		
	Frequency range	0.00~300.00Hz Note: Upon vector control 1, 0.0 ~ 3200.0Hz can be customized		
	Startup frequency	0.00~60.00Hz		
	Acceleration/deceleration time	0.1~36000.0s		
	Powered braking capacity	Braking unit action voltage: 650 ~ 750V		
	DC braking capacity	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, there is no waiting time for DC braking to realize quick braking		
	Magnetic flux braking function	Ongoing action and no action upon deceleration as option, no action upon		
Unique functions	Multi functional M key	The unique multifunctional key is frequently used for setting these useful operations: JOG, emergency shutdown, running command reference mode switch , menu switching		
	Multiple menu modes	Basic menu mode, fast menu mode. Menu mode of non-factory setting function codes, Menu mode of last changed 10 function codes		
	Parameter copy	The standard operation panel can realize the parameter upload, download and display the copy progress. The user can select to forbid the overwriting of the uploaded parameters.		
	Displayed/hidden function code	Display function codes or hide the function codes can be selected by users		
	Dual 485 communication ports	Dual 485 communication ports support Modbus protocol (RTU). The standard operation panel can realize remote control box function with a maximum distance of 500m		
	Operation panel	Button or shuttle type operation panel optional, protection class: IP20 as standard, IP54 as option		
	Common DC bus	The full series can realize common DC bus supply for several inverters		
	Independent duct	The full series adopts independent duct design and supports the installation of heatsink outside the cabinet		
	Universal expansion interface	Universal expansion board equipped with CPU for supporting secondary development of customers: physical interface SPI bus, software protocol Modbus		
	Expansion card	User's secondary development card. Molding machine interface card, PG feedback card, Air compressor control card. Communication adapter card. Power monitoring card, Phase sequence detection card, External power rectifying card etc		
	Power-up auto detection	Realizing the power-up auto-detection of internal and peripheral circuits, including motor grounding, abnormal +10V power supply output, abnormal analog input, and disconnection.		
Protection functions	Power supply undervoltage, overcurrent protection, overvoltage protection, interference protection, abnormal comparison reference input, auto-tuning failure, module protection, heatsink overtemperature 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 phase failure, abnormal EEPROM, abnormal relay contact, temperature sampling disconnection, encoder disconnection, abnormal +10V power supply output, abnormal analog input, motor overtemperature (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 power class ⩾93%, 45kW and below power class ⩾95%, 55kW and above power class ⩾98%			
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 media is the air. The product shall be installed in the environment free from direct sunlight, dust, corrosive gas, combustible gas, oil mist, steam and drip		
	Ambient temperature	-10~+40ºC, derated at 40~50ºC, the rated output current shall be decreased by 1% for every temperature rise of 1ºC		
	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	3.5mm, 2~9Hz；10 m/s², 9~200Hz；15 m/s², 200~500Hz		
	Storage temperature	-40~+70ºC		

Applications Of Some Typical Industries

Injection Molding Machine

- Integration of energy-saving control cabinet or injection molding machine special inverter program can be optional
- Asynchronous servo program and the dual-loop synchronous servo program can be optional
- No high-pressure throttle, the overflow energy loss, energy saving rate as high as 25% to 70%
- Independent air duct design, after the parts, at the top of the fan can be easily demolished, easy maintenance,environmental adaptability, high degree of protection

Electric Vehicle Drive

- High degree of protection structure design, easy wiring
- Precise torque control and engine perfect matched
- Energy saving mode and long duration
- Built-in professional CAN bus adapter

Ceramics Machinery

- Good adaptablity to the ambient temperature
- Interference, professional Lightning-Protection solution
- Reliable and stable, Anti-corrosion treatment
- No trip, reliable control and protection of power module

Oilfield

- Oil extraction machine special inverter, without feedback energy or braking energy
- Higher energy saving, smaller harmonic and reactive current
- Provides digital control of outdoor cabinets, constant temperature control cabinet can be long-term reliability in the field work of high or low temperature
- Rich and flexible monitoring function, the inverter data can be storage or wireless transmission

Anti-explosion Products

- Identified through the National Testing Center
- A variety of voltage range of product 200/400/690/1140V
- Wide voltage range of work, low voltage power can work when electric-dazzling, environmental adaptability
- Support automatic restart function after power recovery

Mine Winch

- Rich experience of winch Transformation,can provide different types of transformation programs
- Vector control technology platform for the winch to provide excellent control performance
- Several protection features to ensure the system more
- Intelligent fault diagnosis, reducing the workload of maintenance

Industry EPS

- DSP and CPLD digital control technology and efficient IGBT technology, higher reliability and lower loss
- Superior load characteristics, synchronization tracking, the sinusoidal output, on-line switching
- LCD interface, comprehensive protection, easy to use
- High-performance dynamic characteristics, the shortest switching time is less than 3ms

Air Compressor Industry

- High-precision vector control
- Close loop control for constant pressure
- Control of multi-machine network
- Energy saving rate as high as 20% to 50%
- Smart Sleep and Wake-up
- Inverter program, air compressor special inverter program,compressor energy-saving cabinet can be optional

Machine Tool Industry

- Support for high-speed communication 1000Kbps
- 18 million drivers to run a successful transfer
- Closed-loop control with the directional axis servo drive functionality
- Spindle open-loop control, a variety of vector control to adapt to a variety of machine tools

Printing And Packaging Industry

- High-performance vector control and torque control to achieve constant linear speed control, and constant tension control
- For cutting machine, coating machine, paper machine,printing machine, laminating machine, dyeing machines andother equipment
- Without speed encoder program:alternative torque motor can be widely

Municipal Engineering

- Central air conditioning and cold storage,to achieve constant temperature control,high energy saving, low noise
- Concentration constant pressure water supply:built-in control board for one inverter drive several motor, and more regular rotation cycle time pressure water supply,solve the over-current and hammer phenomenon when switching process
- Sewage treatment, centrifuge equipment, the main auxiliary drive built-in torque matching adaptive, fast acceleration and deceleration, environmental adaptability
- Many types of fan drives: for fan design,high energy saving, noise optimization,built-in automatic speed tracking function, maximum power up to 800kW

Lifting Crane

- Excellent torque control, reliable brakes control timing
- Professional crane control functions: velocity 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

- Easy and convenient to operate, connectting wires required to install are few
- Running curve is smooth, lower breakage rate of sheet, start smoothly Lower mechanical damage, lower the cost of maintenance
- Internally set anti broken rope and constant tension control, frequency of main and auxiliary operations, safe shutdown, and alarm functions

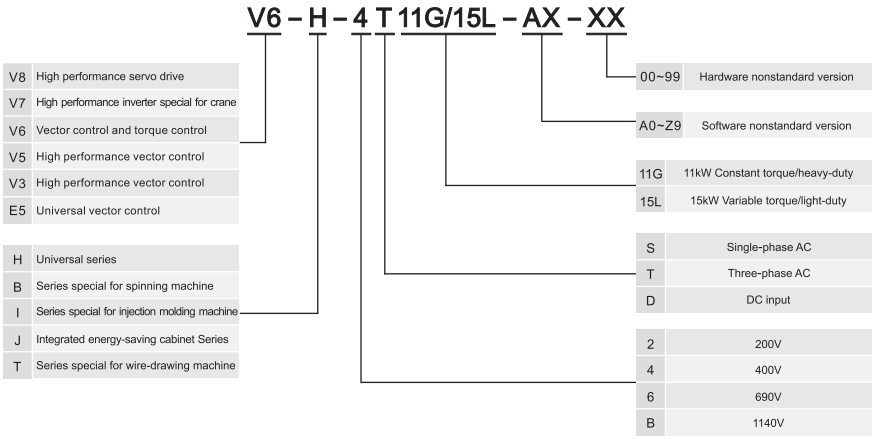
Textile industry

- Reduce the end breakage rate, increase production efficiency
- Unique external-mounted radiator, easy to clean the cotton
- Unique function of the pendulum frequency for yarn and winding machine
- Rich signal instructions, yarn full instructions, yard broken instructions, power-off instructions and other instructions

Wood Processing

- Built-in process methods for peeling machine, rolling pape machine
- Wide voltage adaptation range, particularly apply to the bad occassions for rural grid
- Precisely and rapidly peel, Increase production assuring uniform thickness for wood veneer
- Stably and reliably work, let customers enjoy high quality green power

Product Model Description



Typical Industry Selection Table

Industrial Application	Equipment	Type	Characteristics
Standard series product	V8 series: high performance sevro drive；V7 series: high performance crane inverter;V6 series: high performance torque control inverter;V5 series: high performance vector control inverter;V3 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	Brick molding press	V5-H-A3	High energy saving, large torque, rapidly lifting and falling
	Stone-cutters	V5-H-C8	Cutting force evenly with torque current control, large torque under low speed
	Veneer lathe/Guillotine skin machine	V5-S	Rapidly start and stop the machine, build-in process control
	Wood planning machine	V5-H	High speed stabilization precision,large torque, high finished product rate
Plastic Metal Extrusion Processing	Injection molding machine (asynchronous motor)	VY-IS	Standard inverter cabinet with injection moulding machine interface card
		VY-JY	Integration energy-saving control cabinet suppord power frequency mode and variable frequency drive mode switch on line
		V5-I1	Built-in recharge function supports energy management contract (EMC) mode
	Injection molding machine (synchronous servo)	TS-I	Pressure and flow double close loop control, high energy saving
	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
	Blow molding machine	VY-IS	High energy saving, with power frequency mode and variable frequency drive mode switch on line!
Textile industry	Knitting machine	V5-H	Large start torque, Wide voltage fluctuation adaptability
	Spinning machine(protection series)	V5-B	Closed structure to avoid air duct blockage, with wobble function
	Spinning machine(process series)	V5-H-Y4	Build-in number of worker record, with process curve
	Stretch yarn machine	V5-W	Closed-loop process to realize high precision synchronization
	Net tube machine	V5-W	With fixed-length function
	Winding machine	V5-H-Y3	Realize open-loop control for permanent magnet synchronous motor
Machine tool	Engraving and milling/drilling machine	V5-H-H3	3200Hz
	Spindle open loop control	V5-H-Z9	Arge cutting force, High speed stabilization precision
	Spindle close loop control	V6-H-M0	Can realize multi-point positioning
	Grinding machine	V5-H-H3	Stable operation at high speed
	Series special for high speed communication	V5-H-M4	Terminal 485 supports 500K communication rate

Typical Industry Selection Table

Industrial Application	Equipment	Type	Characteristics
Metal processing	Dual-inverter wire drawing machine	V5-E	Stretching and collecting inverter should be match
	Wire drawing machine	V5-T;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
	Power supply frame	V5-T	Work synchronously
	Replace torque motor wire collection	V6-H	Extensive use, first open-loop tension control
	Steel cutting machine	V6-H-M1	Cut length High precision
	Cold rolling mill	V6-T	Good synchronization performance, easy to change speed, and fast torque response
Fans,pump, air conditioning, air compressor	Fan	E5-H;V5-H-Y2	Support built-in Speed tracking card
	Water supply(1 inverter drive 1 motor)	E5-H	Closed-loop, sleep wake, and overpressure protection functions
	Water supply (1 inverter drive several motor)	E5-H-Y7	Build-in extensive water supply card to realize 1 inverter drive many motor, with clock function
	Central Air Conditioning/Cold storage	E5-H	Realize constant temperature control , high energy saving
	Compressor integration	V5-H	Small and high efficient, national popular inverter compressor suite
	Air compressor transformation	VY-JY	With power frequency mode and variable frequency drive mode switch on line, support extension air compressor controller
	Conditioning for bus	V5-H-Y6	Build-in compressor air logic control
Printing and packing machine	Sub-cutting machine/integrated machine	V6-T	Replace PLC with its coil diameter calculation, synchronize multi-point transmission
	Edge machine/rewinding machine	V5-T	With disconnection warning, automatic shutdown,Pendulum, floating roller reach place at a time
	Plastics blow molding machine	V5-H	Super rapid acceleration and deceleration performance, ensure product consistendy
	Marking press machine/coating machine	V6-T	Under closed-loop torque control, 30g ultra-thin paper can be pulled
	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
	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
	Anilox printing machine	V5-H-2T	Movement back and forth, with short acceleration and deceleration time, positioning is accurate
	Material eceiving machine	V5-H-D4	Torque control mode, winding stabilization
Lifting machine	Mine winch	V5-H	Run stably and reliably, working together with mechanical brake to realize mid-slope stop and start
	Travelling crane main hook	V6-H-D6	Low-medium-high multi-speed lifting and landing. Don't slide groove, can share DC bus
	Gantry crane	V5-H-D6	Compatible with Yaskawa independent protocol
	Ship crane/crane	V5-H	Wide range voltage, low voltage or voltage fluctuation can work continuously, environmental adaptabilitye
	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
	Port machine	V7-G	Special for port machine, supply integrated electronic control program
Oilfield machine	Oil extraction machine	V5-U;V6-U	Built-in energy saving mode, voltage and current limit function
	Oil transfer pump/sand pump	V5-H	With zero frequency function, you can auto start and shutdown according to the conditions
	Integrated digital control cabinet for oilfield	U5-J	Temperature control outdoor cabinet, with USB data store and wireless transfer function
Industrial supplies and external power supply operation	Single EPS	V5-H	Reliable short-circuit protection, running with auto reset, additionally,running with 50Hz heat cut into motor
	System EPS	V5-H	Mature system solution, 3mS synchronization traces AC
	Convert frequency and voltage power	V5-H-C9	200V/400V series, voltage and frequency output can be changed independently
Other applications	Industrial Washing Machine	V5-H-B4	National first-class brand has been use, large washing torque , high spin stability
	Centrifuge	V5-H-B6	Arge torque, rapid acceleration and deceleration,environmental adaptability
	Music Conduit	V5-H-B7	Large start torque, with current limited function and triples
	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 pressing-in machine	V5-H-F1	Multi-speed operation, with "Bulldozer" feature
	Electrically operated gate	V5-H-F6	Build-in self-test program if in-place, even if limit signal is invalid, it can stop automatically
	Electronic belt weigher	V5-H-F0	Built-in weight flow totalizer, save speed sensor and flow meter
	Pile drive	V5-H	High energy saving efficiency, large torque, easy to change speed
	Ball grinder	V5-Q	Multi-speed operation, timing, large start torque
	Mixer	V5-H	"Bulldozer" feature, not trip, excellent IGBT control and protection
	Electric treadmill	V5-H-2T	Running with steady speed, not tremble feet, strong weight-bearing ability
	Torque drive	V6-H (20090805)	After torque control objectives arrive, output preset torque
	Handrail lift	V5-H (20100109)	When two-way infrared detection sensors start, automatically switch frequency inverter power-saving mode

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

Universal Series

V5, V6, V8-H, E5-H Series Three-phase 400V Constant torque/heavy-duty application

Type (V5/6/8/E5-□-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	176
	Braking unit	Built-in as standard								Built-in as option							
	Protection class	IP20															
	Cooling mode	Self-cooling		Forced air convection cooling													

Type (V5/6/8/E5-□-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 convection cooling															

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

Type (V5/V6-□-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	210
	Braking unit	Built-in as standard								Built-in as option							
	Protection class	IP20															
	Cooling mode	Self-cooling		Forced air convection cooling													

Type (V5/V6-4T□□□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 convection cooling															

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

Universal Series

V5-H Series Three-phase 690V Constant torque/heavy-duty 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 convection 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 convection cooling														

V5-H,V6-H,V8-H Series Single-phase/Three-phase 200V Constant torque/heavy-duty application

Type (V5/6/8-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 convection cooling												

Type (V5/6/8-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 convection cooling														

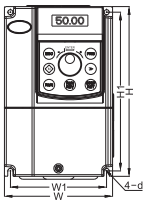
Note:If you have any requirement, please contact with manufacturer.

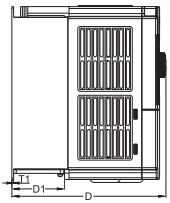
Optional Accessories

Accessories name		Type	Function description
Built-in brake 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	U/V/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 adapterr
		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
Brake resistance		RXHG/RXLG series	Brake resistance 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 requirement, please contact with manufacturer.

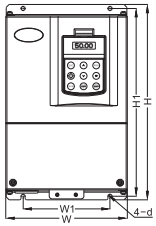
Product Outline, Mounting Dimension, and Weight

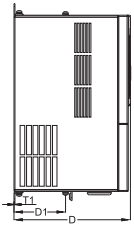




V5/V6/V8-H-2T3.7G and below power class

V5/V6-□ -4T7.5G/11L,V8/E5-H-4T7.5G and below power class





V5-H-6T15G and above power class

V5/V6/V8-H-2T5.5G and above power class

V5/V6-□ -4T11G/15L,V8/E5-H-4T11G and above power class

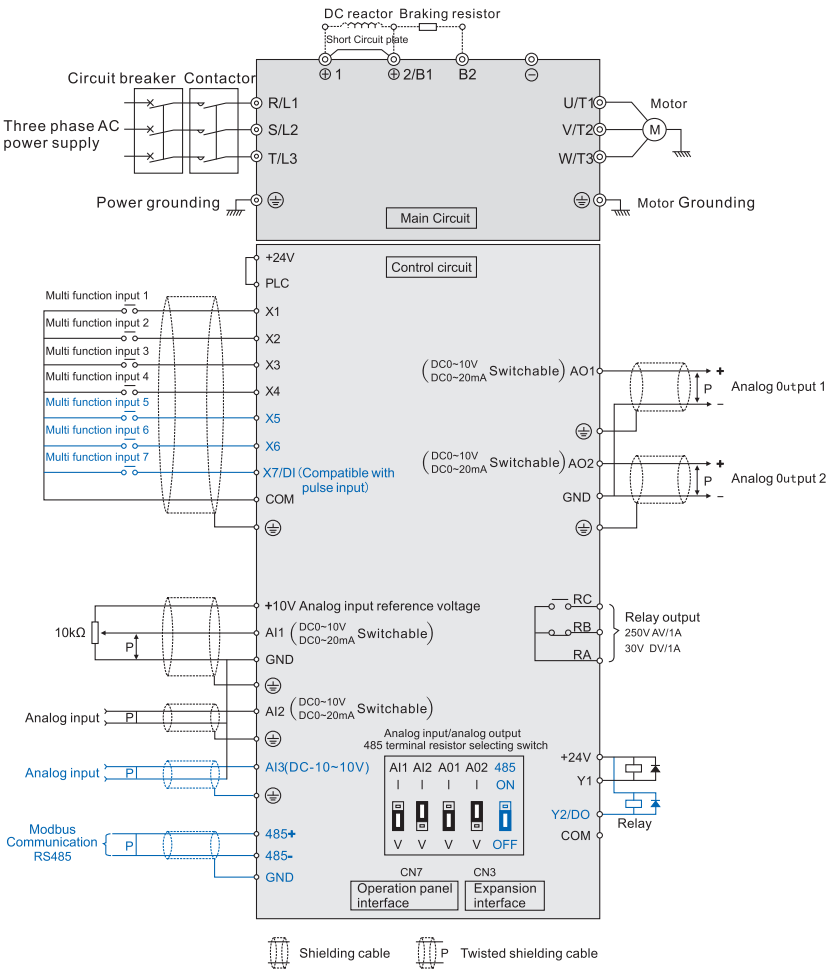
Voltage class	Inverter type	Outline and mounting dimension (mm)								Approximate weight(kg)
		W	H	D	W1	H1	D1	T1	d	
200V	V□-H-2T0.4G	118	190	155	105	173	40.8	3	5.5	1.5
	V□-H-2T0.75G			175			60.5	4		2.2
	V□-H-2T1.5G			155			40.8	3		1.5
	V□-H-2T2.2G			175			60.5	4		2.2
	V□-H-2T3.7G	155	249	185	136	232	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									
	V□-H-2T90G	540	890	385	370	855	205.5	4.0	14	85
	V□-H-2T110G									
	V□-H-2T132G	700	1010	385	520	977	210	4.0	14	125
400V	V□-□-4T0.75G/1.5L，E5-H-4T0.75G	118	190	155	105	173	40.8	3	5.5	1.5
	V□-□-4T1.5G/2.2L，E5-H-4T1.5G	118	190	175	105	173	60.5	4	5.5	2.6
	V□-□-4T2.2G/3.7L，E5-H-4T2.2G									
	V□-□-4T3.7G/5.5L，E5-H-4T3.7G									
	V□-□-4T5.5G/7.5L，E5-H-4T5.5G	155	249	185	136	232	69	8	5.5	3
	V□-□-4T7.5G/11L，E5-H-4T7.5G									
	V□-□-4T11G/15L，E5-H-4T11G	210	337	200	150	324	88	2	7	8.5
	V□-□-4T15G/18.5L，E5-H-4T15G									
	V□-□-4T18.5GA/22LA,E5-H-4T18.5GA	289	440	220	200	425	88	2.5	7	17
	V□-□- 4T22GA/30LA,E5-H-4T22GA									
	V□-□- 4T30GA/37LA,E5-H-4T30GA									

Product Outline, Mounting Dimension, and Weight

Voltage class	Inverter type	Outline and mounting dimension (mm)								Approximate weight(kg)
		W	H	D	W1	H1	D1	T1	d	
400V	V□-□-4T37GA/45LA，E5-H-4T37GA	319	575	218	220	553	90.5	2.5	10	25
	V□-□-4T45GA/55LA，E5-H-4T45GA									
	V□-□-4T55GA/75LA，E5-H-4T55GA	404	615	255	270	590	86.5	3.0	10	35
	V□-□-4T75GA/90LA，E5-H-4T75GA									
	V□-□-4T90G/110L，V8/E5-H-4T90G	465	745	325	343	715	151.5	3.0	12	55
	V□-□-4T110G/132L，V8/E5-H-4T110G									
	V□-□-4T132G/160L，V8/E5-H-4T132G	540	890	385	370	855	205.5	4.0	14	85
	V□-□-4T160G/185L，V8/E5-H-4T160G									
	V□-□-4T185G/200L，V8/E5-H-4T185G									
	V□-□-4T200G/220L，V8/E5-H-4T200G									
	V□-□-4T220G/250L，V8/E5-H-4T220G	700	1010	385	520	977	210	4.0	14	125
	V□-□-4T250G/280L，V8/E5-H-4T250G									
	V□-□-4T280G/315L，V8/E5-H-4T280G									
	V□-□-4T315G/355L，V8/E5-H-4T315G	810	1358	425	520	1300	210	4.0	14	215
	V□-□-4T355G/400L，V8/E5-H-4T355G									
	V□-□-4T400G/450L，V8/E5-H-4T400G									
	V□-□-4T450G/500L，V8/E5-H-4T450G									
	V□-□-4T500G/560L，V8/E5-H-4T500G									
690V	V5-H-6T15G	285	440	220	200	425	107.5	2.5	7	17
	V5-H-6T18.5G									
	V5-H-6T22G									
	V5-H-6T30G									
	V5-H-6T37G	315	575	227	220	553	123.5	2.5	10	25
	V5-H-6T45G									
	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	540	890	385	370	855	205.5	4.0	14	85
	V5-H-6T185G									
	V5-H-6T200G									
	V5-H-6T220G									
	V5-H-6T250G	700	1010	385	520	977	210	4.0	14	125
	V5-H-6T280G									
	V5-H-6T315G									
	V5-H-6T355G									
	V5-H-6T400G	810	1358	425	520	1300	210	4.0	14	215
	V5-H-6T450G									
	V5-H-6T500G									
	V5-H-6T560G									
	V5-H-6T630G									

Note:V□ indicates V5 or V6 series inverter.

Terminal Wiring



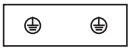
Take V6-H-4T5.5G/7.5L as an example

（Blue part of that series is not the function of E5）

Functions of Main Circuit Terminal

V□ -H-2T0.4G～V□ -H-2T11G、V5/V6-□ -4T0.75G/1.5L～V5/V6-□ -4T15G/18.5L、V8/E5-H-4T0.75G～V8/E5-H-4T15G

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



V□ -H-2T15G～V□ -H-2T45G、V5/V6-□ -4T18.5G/22L～V5/V6-□ -4T75G/90L、V8/E5-H-4T18.5G～V8/E5-H-4T75G、V5-H-6T15G～V5-H-6T90G

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

V□ -H-2T15G-06～V□ -H-2T45G-06、V5/V6-□ -4T18.5G/22L-06～V5/V6-□ -4T75G/90L-06、V8-H-4T18.5G-06～V8-H-4T75G-06、V5-H-6T15G-06～V5-H-6T90G-06(Internal Braking Unit Option)

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

V□ -H-2T55G、V5/V6-□ -4T90G/110L、E5-H-4T90G、V5-H-6T110G and above class adopt the top in and bottom out wiring mode

POWER		
R/L1	S/L2	T/L3

⊕1	⊕2	⊖
OPTION		

U/T1	V/T2	W/T3
MOTOR		

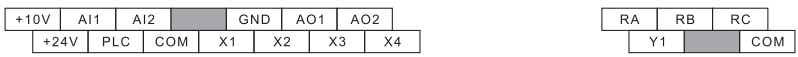
Terminal symbol	Terminal name and function description
R/L1,S/L2,T/L3	Three-phase AC power input terminal
⊖1,⊖2/B1 or ⊖1,⊖2	DC reactor connecting terminal, 4T90G/110L and below power class short circuited with copper bus upon delivery
⊖2/B1,B2 or B1,B2	Connecting terminal of braking resistor
⊖2/B1,⊖ 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 or V8 series inverter.

Control Circuit Terminal

V5, V6 and V8 series inverter Control Circuit Terminal

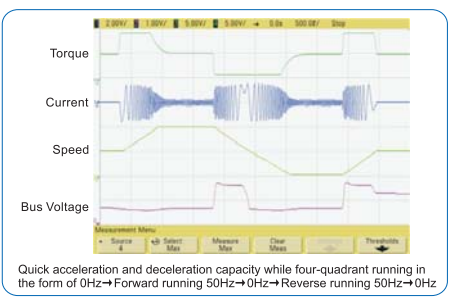
E5 series inverter Control Circuit Terminal



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

Excellent Performance



Quick acceleration and deceleration capacity while four-quadrant running in the form of 0Hz→Forward running 50Hz→0Hz→Reverse running 50Hz→0Hz

Development from Accumulation, Achievement from Innovation

Following Tide of the World, Forging Paradigm of Industry

English Version 04212016 print for the first time