



Shenzhen V&T Technologies Co.,Ltd.

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- V9 Series Universal Variable Speed AC Drives
 VTS Series High Performance Multi-functional AC Drives
- VA Series Drives for Machine Tool Spindle
- VTF Series Regenerative Braking Unit
- V6/V5/E5 Series Universal Inverter
- Electric Vehicle Motor Controller



V&T AC DRIVE V9 SERIES CATALOGUE

- DTS800/VTS800 Series Multi-drives/AFE
- FV20 Mini Series Inverter
- Integrated Elevator Controller

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

Company Introduction

Shenzhen V&T Technologies Co., Ltd. is 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. In addition, V&T has been ranked as one of the "Top 10 Chinese Inverter Enterprises". V&T successfully listed on the Shenzhen Stock Exchange 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, and also possesses the capacity of industrialization design and manufacturing. Our company has developed and reserved many product series. The product voltage grade mainly contains 200V, 400V, 690V, and the power grade varies from 0.4kW to 3000kW, which can 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 strengthen the product reliability and environment adaptability to suit harsh and extreme environments. Customized products and industrialized designs 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

- V9 Series Universal Variable Speed AC Drives (Voltage: 3AC200V, 3AC400V, 3AC690V. Power range: 0.4kW to 710kW)
- VTS30 Series Universal Variable Speed AC Drives (Voltage: 3AC400V. Power range: 0.75kW to 500kW)
- VTS400 Series High Performance Multi-functional AC Drives (Voltage: 3AC400V. Power range: 5.5kW to 500kW)
- DTS800 Series DTC Control Type Multi-drives / AFE (Voltage: DC540V, DC980V. Power range: 75kW to 560kW, up to 4 drives can be connected in parallel for higher power.)
- VTS800 Series Vector Control Type Multi-drives (Voltage: DC540V, DC980V. Power range: 75kW to 560kW)
- VA Series Drives for Machine Tool Spindle (Voltage: 3AC400V. Power range: 3.7kW to 160kW)
- VTF Series Regenerative Braking Unit (Power grid: 3AC400V. Power range: 11kW to 110kW, up to 10 RBUs can be connected in parallel for higher power)
- V6/V5/E5 Series Universal Inverter (Voltage: 3AC200V, 3AC400V. 3AC690V. Power range: 0.4kW to 710kW)
- FV20 Mini Series Inverter (Voltage: 3AC200V, 3AC400V. Power range: 0.75kW to 2.2kW)

Dedicated Drive

- V9-T Series VFD for Tension Control
- V9-H-P0 Series VFD for Water Supply
- Electric vehicle motor controller
- V9-GH/GA Series VFD for Crane
- V9-H-H3 Series High Frequency Inverter
- Integrated Elevator Controller
- V9-H-HCF High Switching Frequency Inverter
- V9-H-C9 Series VFD for VF Independent Control
- Integrated Control Cabinet for Energy Saving



V9 Series Product Features

Multiple Functions

- Advanced motor control algorithm, unified asynchronous motor and synchronous motor control.
- Motor control mode: synchronous motor sensor vector control, synchronous motor sensor less vector control, asynchronous motor sensor vector control, asynchronous motor V/F control, asynchronous motor sensor less vector control 1, asynchronous motor sensor less vector control 2
- Support multiple system control modes; position control, speed control and torque control.
- Applicable to drive a variety of motors: asynchronous motor, permanent magnet synchronous motor, direct-drive motor, machine tool spindle, servo motor, conical motor, in-wheel-motor, magnetic suspension motor, air suspension motor, etc.



Direct-drive motor Variable frequency motor Machine tool spindle

Wide Voltage Range and Product Range

- 2AC220V. Power range 0.4kW to 2.2kW
- 3AC220V. Power range 0.4kW to 132kW
- 3AC380V. Power range 0.75kW to 710kW
- 3AC690V. Power range 15kW to 710kW
- Higher power and other voltage products can be customized

Various Encoder Interface Cards Available

- Open collector, voltage and push-pull (complementary) type HTL incremental encoder
- TTL differential type encoder
- Resolver
- Sin/Cos encoder (VA series)



Multiple Communication Cards Available

- Modbus-RTU as standard
- EX-CA04 CANOpen adapter card
- EX-CA06 Profibus-DP adapter card
- EX-CA13 ProfiNet adapter card
- EtherCAT (VA series)













Servo motor

Permanent magnet synchronous moto

Asynchronous motor Air suspension moto















V&T

Multi-functional Keypad

• The V9-DP01 LED Keypad and the V9-DP02 LCD Keypad are available.

- The Keypad and control board can be connected by standard network cable.
- The Keypad can be used to upload and download parameters, convenient for commissioning.
- The keypad can be set a password and/or the keypad keys can be locked.





V9-DP02

Description of LCD Keypad Display Functions

V9-DP01

0: Synchronous motor sensor control (P0-003): (P0 1: Synchronous motor sensor-less control 1: Position control 0: 1 2: Asynchronous motor sensor control 2: Speed control 1: 1 3: Asynchronous motor V/F control 3: Torque control 2: 1	n Command Selection I-004) : Modbus communication Keypad External digital input 5: Please refer to the user's manual	Speed Reference Selection (P0-005) : 0: Modbus communication 1: Keypad 2: AII 3~13: Please refer to the user's manual
V&T Data Display Area. Three parameters set on the first page are displayed by default: Output Frequency		
Output Current Output Voltage Each page displays 3 parameters. Total 5 pages. The displayed page can be cyclically switched by pressing the Shift Left or Shift Right key Output Volt	50.00Hz	Reference frequency / Reference speed
General menu [Gene] Tun 53	7V [Menu]	Menu DC bus Voltage
Tun Auto-tuning LOC Local control REM Remote control		DC bus vonage
Exit key/ Shortcut menu key	PRG	Confirmation key / Main menu key
GREEN: Run RED: Fault OFF: Stop		Multi-functional key
Run key RUN	STOP	Stop/Reset key
Incremental/Decremental key		Left/Right shift key

Product Specifications

	Control mode	Sensor-less control	Sensor control
	Control mode		
	Applicable motor type	Synchronous motor Asynchronous motor	Synchronous motor Asynchronous motor
	Starting torque	 Asynchronous motor: 200% of rated torque at 0.25Hz Synchronous motor: 150% of rated torque at 1.5% of rated speed 	200% of rated torque at 0 speed
	Speed regulation range	1:200	1:5000
Control	Steady speed precision	± 0.5%	± 0.02%
characteristics	Maximum speed	VF control: 600Hz Vector control: 600 Hz Note: Higher frequency products can be customized	600Hz Note: Higher frequency products can be customized
	Torque control	Y	Y
	Torque control precision	±5%	±3%
	Torque response time	<20ms	<10ms
	Positioning control	N	Y
	Positioning precision	N	±1 pulse
	Key function	Torque limit, speed control, positioning control, motor auto tune, de control, under-voltage control, motor speed tracing function, droop of auto-tune, etc.	eep flux-weakening control, current limit control, over -voltage
	Speed reference source	Modbus communication, keypad, external digital input, analog AI PROFIBUS DP, PROFINET, etc.	I/AI2/AI3, high speed pulse input, simple PLC, PID, CAN,
Product function	Dynamic brake	 Brake chopper action voltage: 650 ~ 750V (400V series product) The brake chopper can be built-in for 110kW and below equipment 0.75~15kW: brake chopper is built-in as standard. 18.5~110kW: brake chopper is built-in as option. 	t
	Communication	Built-in Modbus-RTU communication and the maximum distance u	up to 500 meters.
	Keypad	LED Keypad and LCD Keypad are optional The Keypad can beused as remote-control box via straight-through	wired cable.
	Common DC bus	Support common DC bus directly	
	Independent air duct	All series product adopts independent duct design	
Protection function	overload protection, motor	ge, over-current protection, over-voltage protection, auto-tune fault, overload protection, peripheral protection, current abnormal detection pling disconnection, encoder disconnection, analog input abnormal d	n, output short-circuit to ground protection, EEPROM abnormal
Efficiency	At rating condition: ● 0.75kW to 7.5kW: ≥ ● 11kW to 45kW: ≥95 ● 55kW and higher po	5%	
	Operating site	 Install vertically in a well-ventilated electrical cabinet. Horizontal The cooling medium is air. Installed in an environment free from direct sunlight, dust, corros 	
	Ambient temperature	 -10~+40°C Derate use when the temperature between 40 to 50°C and the rate 	d output current is reduced by 1% for every 1°C increasing.
Environment	Humidity	$5\sim$ 95%, no condensation is allowed.	
Littionineik	Altitude	 0~2000 meters Derate use when the altitude over 1000 meters and the rated output 	ut current is reduced by 1% for every 100-meters rising.
	Vibration	 3.5 m/s², 2~9Hz 10 m/s², 9~200Hz 15 m/s², 200~500Hz 	
	Storage temperature	-40~+70℃.	



Description of the Product Model



Product Series

\blacksquare V9-H-2T $\square\square\squareG$ Three-phase 200V constant torque / heavy load application

	Rated 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	75	90	110	132
	Applicable motor (kW)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	- 90	110	132
0	Voltage (V)								Three-	phase () to rate	d input	voltage							
Output	Rated current (A)	3	5	7.5	10	16.5	24	30	45	60	73	96	112	144	176	210	288	350	432	520
ut	Overload capability				150%	6 for 60	s, 180%	for 10	s, 200%	for 0.5	s, interv	val: 10 1	ninutes	(Invers	e time o	characteri	stic)			
	Rated voltage / frequency								Three-	phase 2	00V-24	0V; 50I	Iz/60Hz	Z						
Input	Allowable voltage		180V ~ 260V; voltage imbalance ≤3%; allowable frequency fluctuation: ±5%																	
1	Rated current (A)	3.8	5.5	8.3	12	18	26	33	50	66	80	106	123	158	194	231	232	326	385	491
	DC reactor		Wi	thout b	uilt—in I	DC read	ctor				Built-	in as op	otion			Built–in as standard	Ex		OC react ndard	tor as
	Brake unit			Built-	in as st	andard					Built-	in as op	otion				I	External	1	
	Protection level								·		IP20									
	Cooling mode		Natural Force air cooling																	

■ V9-H-4T□□□G Three phase 400V constant torque / heavy load application

	Rated 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	110
	Applicable motor (kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
0	Voltage (V)							Three	-phase	0 to rate	d 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	210
It	Overload capability				150% fc	or 60s, 18	80% for 1	0s, 200	% for 0.5	s, inter	val: 10 n	ninutes (I	nverse ti	me chara	cteristic	;)		
	Rated voltage / frequency							Three	-phase 3	80V/48	0V; 50F	Iz/60Hz						
Input	Allowable voltage					323V ~ 5	528V; vo	ltage im	balance	≤3%; al	lowable	frequenc	y fluctua	tion: ±5%	6			
Ť	Rated current (A)	2.8	4.2	6.1	10	15	19	26	33	43	50	66	83	100	123	165	194	231
	DC reactor			With	out built	t-in DC 1	reactor					Bı	uilt-in DO	c reactor	as optio	n		
	Brake chopper			E	Built–in a	as standa	ard						Built-	-in as op	tion			
	Protection level									IP20								
	Cooling mode	Natı	ural coo	ling							Force a	ir cooling	3					
	Rated Power (kW)	132	160) 1	85	200	220	250	28	0	315	355	400	450	50	00	560	630
	Applicable motor (kW)	132	132 160 185 200 220 250 280 315 355 400 450 500 560 630								630							
0	Voltage (V)							Three	-phase	0 to rate	ed input	voltage						
Output	Rated current (A)	253	304	3	50	380	426	470	52	0	600	650	690	775	80	50	950	1100
It	Overload capability				150% fc	or 60s, 18	80% for 1	0s, 200	% for 0.5	is, inter	val: 10 n	ninutes (I	nverse ti	me chara	cteristic	;)		
	Rated voltage / frequency							Three	-phase 3	80V/48	0V; 50F	Iz/60Hz						
Input	Allowable voltage					323V ~ 5	528V; vo	ltage im	balance	≤3%; al	lowable	frequenc	y fluctua	tion: ±5%	0			
	Rated current (A)	232	282	3	26	352	385	437	49	1	580	624	670	755	84	40	920	1050
	DC reactor	Built reactor a	t-in DC as stand:	ard				Ext	ternal D	C reacto	or as stan	dard					Built-i reactor as	
	Brake chopper									Externa	ıl					1-		
	Protection level									IP20								
	Cooling mode								For	ce air co	oling							
		1									0							

Product Series

■ V9-H-4T \Box \Box L Three phase 400V variable torque

	Rated Power (kW)	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132
	Applicable motor (kW)	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132
	Voltage (V)	'						Three	-phase () to rate	d input v	voltage				1	-	
Output	Rated current (A)	3.3	5.0	7.5	11	17	22	29	35	45	57	70	91	110	144	180	216	242
Lt.	Overload capability	· · · ·			150% fo	r 60s, 18	30% for 1	0s, 2009	% for 0.5	s, interv	al: 10 n	ninutes (I	iverse tii	me chara	cteristic)		
	Rated voltage / frequency							Three	-phase 3	80V/48	0V; 50H	Iz/60Hz						
Input	Allowable voltage				3	323V ~ 5	528V; vo	ltage iml	oalance ≤	≤3%; all	owable	frequency	fluctuat	tion: ±5%	6			
Ē	Rated current (A)	3.6	5.5	8.3	12	19	25	32	39	50	61	77	100	121	158	198	238	266
	DC reactor		W	ithout b	uilt-in D	C reacto	ſ					Built-in	DC reac	tor as op	otion			
	Brake chopper			Built-	in as star	ndard						Вι	ilt—in as	option				
	Protection level									IP20								
	Cooling mode	Natu	ural cool	ing							Force a	ir cooling						
	Rated Power (kW)	160	185	5 2	00	220	250	280	31	5	355	400	450	500	56	50	630	710
	Applicable motor (kW)	160	185	2	00	220	250	280	31	5	355	400	450	500	56	50	630	710
0	Voltage (V)							Three	-phase () to rate	d input v	voltage						
Output	Rated current (A)	325	365	4	05	440	495	547	61	0	695	770	866	950	11	00	1200	1300
It	Overload capability				150% fo	r 60s, 18	30% for 1	0s, 2009	% for 0.5	s, interv	al: 10 n	ninutes (I	iverse tii	me chara	cteristic)		
	Rated voltage / frequency							Three	-phase 3	80V/48	0V; 50H	[z/60Hz						
Input	Allowable voltage				3	323V ~ 5	528V; vo	ltage iml	oalance ≤	≤3%; all	owable	frequency	fluctuat	tion: ±5%	6			
	Rated current (A)	282	326	3	52	385	437	491	58	0	670	755	840	920	10	50	1150	1250
	DC reactor	Built reactor a	t-in DC as standa	ard				Ext	ternal DO	C reacto	r as stan	dard				r	Built-i eactor as	
	Brake chopper									Externa	1							
	Protection level									IP20								
	Cooling mode								Forc	e air co	oling							

\blacksquare V9-H-6T $\square\square\squareG$ Three phase 690V constant torque / heavy load application

	Rated Power (kW)	15	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220
	Applicable motor (kW)	15	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220
	Voltage (V)						Thr	ee-phase	0 to rated	input vol	tage					
Output	Rated current (A)	20	25	28	35	45	52	65	86	98	120	150	176	204	220	245
1.Et	Overload capability			150	% for 60s	, 180% fo	or 10s, 20	0% for 0.:	5s, interva	ıl: 10 min	utes (Inve	erse time (characteri	stic)		
	Rated voltage / frequency						Thre	e-phase (60V/690	V; 50Hz/	50Hz					
Input	Allowable voltage				587V	~ 793V;	voltage ii	mbalance	≤3%; allo	wable fre	equency f	luctuation	n: ±5%			
	Rated current (A)	25	30	35	40	47	52	65	85	96	116	145	168	196	210	230
	Brake chopper			Built-ir	n as option	1						Ext	ernal			
	Protection level								IP20							
Cooling mode Force air cooling																
	Rated Power (kW)	250	50 280 315 355 400 450 500 560 630 710 800													
	Applicable motor (kW)	250	280	315	355	400	450	500	560	630	710	800				
	Voltage (V)						Thr	ee-phase	0 to rated	input vo	tage					
Output	Rated current (A)	275	325	350	395	435	490	545	600	680	770	860				
÷	Overload capability			150	% for 60s	, 180% fo	or 10s, 20	0% for 0.:	ōs, interva	ıl: 10 min	utes (Inve	erse time (characteri	stic)		
	Rated voltage / frequency						Thre	e-phase (60V/690	V; 50Hz/	50Hz					
Input	Allowable voltage				587V	~ 793V;	voltage ii	nbalance	≤3%; allo	wable fre	equency f	luctuation	n: ±5%			
	Rated current (A)	255	290	335	378	415	466	520	580	655	750	840				
	Brake chopper								Extern	al						
	Protection level								IP20							
	Cooling mode							For	ce air coo	ling						

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Product Outline, Mounting Dimensions, and Weight





V9-H-4T7.5G/11L and below power class V9-H-2T3.7G and below power class

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V9–H–4T11G/15L and above power class V9–H–2T5.5G and above power class V9–H–6T15G and above power class(Without Base)







V9-H-6T110G~V9-H-6T630G (With Base)





V9-H-4T315G-GS~V9-H-4710G-GS V9-H-6T280G-GS~V9-H-6T710G-GS

Note: This cabinet-type drive can be added power distribution cabinet with 500mm width. The switch components can be specified by customers.

Dimensions of 220V/400V Products

V H D V1 HI T Were the the the the the the the the the th					Outline :	and mountin	g dimension	s (mm)		Approximate
Non-H=210.460 Vp-H=211.36 Non-H=210.360 Vp-H=211.36 Non-H=210 Vp-H=211.36 Non-H=210 Vp-H=211.36 Non-H=210 Vp-H=211.36 Non-H=210 Vp-H=213.36 Non-H=210.36 Non-H=210.36 Non-H=210.36 Non-H=210.36 Non-H=210.36 Non-H=210.36 Non-H=210.36 Non-H=210.36 Non-H=210.36	Voltage	Model	W	Н	D	W1	H1	Tl	Mounting hole d	weight (kg)
V9-H-2T13G 118 119 155 105 173 3 15 25 V9-H-2T13G 155 240 185 136 232 8 5.5 3 V9-H-2T13G 198 299 100 160 283 1.2 6 3 V9-H-2T13G 223 488 288 198 3.35 1.5 6 10 V9-H-2T13G 223 488 288 198 3.35 1.5 6 10 V9-H-2T13G 240 450 270 245 523 1.5 1.6 10 V9-H-2T3G 338 80 325 700 855 4.0 14 85 V9-H-2T3G 700 1010 385 520 977 4.0 14 85 V9-H-4T3G/LSL 118 109 155 160 165 165 160 165 V9-H-4T3G/LSL 118 109 165 165		V9-H-2T0.4G			155			3		1.5
Non-perturbation Normal and perturbation 158 Normal and perturbation 138 Normal and perturbation 138 Normal and perturbation Normal and perturbation <t< td=""><td></td><td>V9-H-2T0.75G</td><td>-</td><td></td><td>175</td><td></td><td></td><td>4</td><td>1</td><td></td></t<>		V9-H-2T0.75G	-		175			4	1	
V9-II-213.7615524918513623285.53V9-II-213.661982991901002831.268V9-II-217.652214482081953351.5610V9-II-21162234482081953351.5718V9-II-213612644302352304181.5718V9-II-213663055452702455231.51035V9-II-213663385408803353708554.01485V9-II-217364009172233208903.01275V9-II-2173670010103555209774.01485V9-II-21736700101035510517335.51.5V9-II-41736/1.5L11819015510517335.53V9-II-41756/1.5L11819015516517335.53V9-II-41756/1.5L1982991901002831.268V9-II-41756/7.5L1982991901002831.51035V9-II-41756/7.5L1982991901002831.51035V9-II-41756/7.5L1982992004163.01.51035V9-II-41756/7.5L305<		V9-H-2T1.5G	118	190	155	105	173	3	5.5	1.5
V9-H-215.5G V9-H-217.5G1982991901602831.268V9-H-217.5G V9-H-2116G2233482081953.351.5610V9-H-217.5G V9-H-2123G2444302352.304181.5718V9-H-217.5G V9-H-2173G305452.702.455231.51.035V9-H-217.5G V9-H-2175G4009175353308503.01.275V9-H-217.5G V9-H-2175G4009175353308503.01.275V9-H-217.5G V9-H-217.5G11810015510517335.51.5V9-H-217.5G V9-H-217.5G11810015510517335.51.5V9-H-417.5G/1.5L V9-H-417.5G/1.5L11810015510517335.52.6V9-H-417.5G/1.5L V9-H-417.5G/1.5L11810015510517335.52.6V9-H-417.5G/1.5L V9-H-417.5G/1.5L11810012516517335.52.6V9-H-417.5G/1.5L V9-H-417.5G/1.5L11810012516517335.52.6V9-H-417.5G/1.5L V9-H-417.5G/1.5L1181002252304181.57.718V9-H-417.5G/1.5L V9-H-4173.5G/1.5L1055202301.51.61002352.61.51.61.6		V9-H-2T2.2G	-		175			4	-	
V9-H-2T7.5G1082091001602331.268V9-H-2T1.1G2234482081053351.56.610V9-H-2T1.SG2644302352304181.5718V9-H-2T3.2G3055452702455231.51.035V9-H-2T3.2G3085452702455231.51.025V9-H-2T3.2G3385803102708603.03.052V9-H-2T3.2G3009701003355209774.01485V9-H-2T3.2G7001003555209774.01415V9-H-4T0.5C/3.1511819015510517335.51.5V9-H-4T1.5C/3.1511819017510517335.51.5V9-H-4T1.5C/3.1511819017510517335.51.5V9-H-4T1.5C/3.15192991001602831.56.03.0V9-H-4T1.5C/3.151929918513623285.53.5V9-H-4T1.5C/3.15192991851.61.57.01.63.5V9-H-4T1.5C/3.1519291.62331.56.01.0V9-H-4T1.5C/3.151929291.62351.51.51.5V9-H-4T1.5C/3.15		V9-H-2T3.7G	155	249	185	136	232	8	5.5	3
V9-II-217.5G I <thi< th=""> I I <th< td=""><td></td><td>V9-H-2T5.5G</td><td>100</td><td></td><td>100</td><td></td><td></td><td></td><td></td><td></td></th<></thi<>		V9-H-2T5.5G	100		100					
199-11-2113G V9-11-2113G V9-11-2133G2644502352304181.5718V9-11-2133G V9-11-2133G3055602702455601.51055V9-11-2133G V9-11-2133G3085803102705601.51052V9-11-2133G V9-11-2133G4009175233208903.01275V9-11-2133G V9-11-2113G70010103853208903.01275V9-11-2113G V9-11-4113G/1.5L70010103855209774.01485V9-11-4113G/1.5L V9-11-4113G/1.5L11819015516517335.51.5V9-11-4113G/1.5L V9-11-4113G/1.5L15524918513623285.53V9-11-4113G/1.5L V9-11-4113G/1.5L1982991901602831.56.6100V9-11-4113G/1.5L V9-11-4113G/1.5L1282991901602831.56.6100V9-11-4113G/1.5L V9-11-4113G/1.5L2055462702455231.51.035V9-11-4113G/1.5L V9-11-4113G/1.5L4009173233208003.01.275V9-11-4113G/1.5L V9-11-4113G/1.5L4009173233208154.01.435V9-11-4113G/1.5L V9-11-4113G/1.5L70010103855209774.01.4 <td></td> <td>V9-H-2T7.5G</td> <td>198</td> <td>299</td> <td>190</td> <td>160</td> <td>283</td> <td>1.2</td> <td>6</td> <td>8</td>		V9-H-2T7.5G	198	299	190	160	283	1.2	6	8
200V V9-II-3T18.3G V9-H-21320 V9-H-21320 204 4.30 2.35 2.00 418 1.3 7 18 V9-H-21320 V9-H-2135G 305 545 270 245 523 1.5 10 35 V9-H-2135G 338 580 310 270 560 1.5 10 52 V9-H-2175G 400 917 523 320 880 3.0 12 75 V9-H-2175G 400 917 523 700 855 4.0 14 85 V9-H-21713G 118 190 155 105 173 3 5.5 1.5 V9-H-417.5G/.5L 118 190 175 105 173 4 5.5 2.6 V9-H-417.5G/.5L 118 190 175 105 173 4 5.5 3.0 V9-H-417.5G/.5L 198 299 190 160 283 1.2 6 8 V9-H-4118.5G/22L <t< td=""><td></td><td>V9-H-2T11G</td><td>223</td><td>348</td><td>208</td><td>195</td><td>335</td><td>1.5</td><td>6</td><td>10</td></t<>		V9-H-2T11G	223	348	208	195	335	1.5	6	10
100 100 <td></td> <td>V9-H-2T15G</td> <td>264</td> <td>420</td> <td>225</td> <td>220</td> <td>410</td> <td>1.5</td> <td>7</td> <td>1.0</td>		V9-H-2T15G	264	420	225	220	410	1.5	7	1.0
V9-H-2T30C V9-H-2T	200V	V9-H-2T18.5G	204	430	255	230	410	1.5	/	10
V9-II-2TI300 V9-II-2TI300 V9-II-2TI300 V9-II-2TI300 V9-II-2TI300 V9-II-2TI300 V9-II-2TI300 V9-II-2TI300 S00 917 923 320 880 3.0 12 75 V9-II-2TI300 540 890 355 370 855 4.0 14 85 V9-II-2TI300 540 890 355 520 977 4.0 14 85 V9-II-471030/151 118 190 155 105 173 4 5.5 2.6 V9-II-471.50/12.1 118 190 175 105 173 4 5.5 2.6 V9-II-471.50/15.1 118 190 175 105 173 4 5.5 2.6 V9-II-471.50/15.1 198 299 190 160 2.83 1.2 6 8 V9-II-47126/31.1 198 299 190 160 2.83 1.5 10 35 V9-II-47126/31.1 264 430		V9-H-2T22G	205	5.4.5	270	2.45	500	1.5	1.0	2.5
V9-II-2745G V9-R-2775G 338 580 310 270 560 1.5 10 52 V9-R-2775G 400 917 323 320 890 3.0 12 75 V9-II-2710G 540 890 385 370 855 4.0 14 85 V9-II-2710G 700 1010 385 520 977 4.0 14 155 V9-II-4713G(7.1 118 190 155 105 173 3 5.5 3.0 V9-II-4715G(7.51 118 190 175 105 173 3 5.5 3.3 V9-II-4715G(7.51 118 190 175 105 136 2.32 8 5.5 3.3 V9-II-4715G(7.51 198 2.49 185 166 2.33 1.2 6 8 V9-II-4715G(7.51 198 2.99 190 160 2.83 1.5 10 35 V9-II-4715G/7.51 2.6		V9-H-2T30G	305	545	270	245	523	1.5	10	35
V9-H-2755G V0 I <thi< th=""> I <thi< td=""><td></td><td>V9-H-2T37G</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thi<></thi<>		V9-H-2T37G								
V9-H-2175G 400 917 323 320 890 3.0 12 75 V9-H-2710G 540 890 385 370 855 4.0 14 85 V9-H-27110G 700 1010 385 520 977 4.0 14 125 V9-H-470.75G/L3L 118 190 155 105 173 3 5.5 2.6 V9-H-471.5G/2L 118 190 175 105 173 4 5.5 2.6 V9-H-471.5G/1L 118 190 175 105 173 4 5.5 2.6 V9-H-471.5G/1L 198 299 190 160 283 1.2 6 8 V9-H-4713G/3L 198 299 190 160 283 1.5 6 10 V9-H-4713G/3L 264 430 235 230 418 1.5 7 18 V9-H-4713G/3L 305 545 270		V9-H-2T45G	338	580	310	270	560	1.5	10	52
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		V9-H-2T55G								
V9-H-2T110G V9-H-2T132G 700 1010 385 520 977 4.0 14 125 V9-H-4T0.75G/1.5L 118 190 155 105 173 3 5.5 1.5 V9-H-4T1.5G/2.2L V9-H-4T2.2G/3.7L 118 190 175 105 173 3 5.5 2.6 V9-H-4T2.2G/3.7L 118 190 175 106 173 4 5.5 2.6 V9-H-4T3.5G/7.5L 135 249 185 136 232 8 5.5 3 V9-H-4T16/15.L 198 299 190 160 2.83 1.2 6 8 V9-H-4T16/15.L 198 299 190 160 2.83 1.5 6 10 V9-H-4T326/30L 223 348 208 195 335 1.5 10 35 V9-H-4T326/30L 305 545 270 245 523 1.5 10 55 V9-H-4T356/35L		V9-H-2T75G	400	917	323	320	890	3.0	12	75
V9-H-2T132G 700 1010 385 520 977 4.0 14 125 V9-H-4T0.5G(1.5L 118 190 155 105 173 3 5.5 1.5 V9-H-4T1.5G(2.1. 118 190 175 105 173 4 5.5 2.6 V9-H-4T3.5G(7.5L 118 190 175 105 173 4 5.5 2.6 V9-H-4T3.5G(7.5L 198 249 185 136 2.32 8 5.5 3 V9-H-4T15.6G(7.1L 155 249 185 136 2.32 8 5.5 3 V9-H-4T16.0(18.5L 198 299 190 160 2.83 1.2 6 8 V9-H-4T360(37L 264 430 2.35 2.30 418 1.5 7 18 V9-H-4T360(75L 305 545 2.70 245 523 1.5 10 35 V9-H-4T350(75L 305 540 </td <td></td> <td>V9-H-2T90G</td> <td>540</td> <td>890</td> <td>385</td> <td>370</td> <td>855</td> <td>4.0</td> <td>14</td> <td>85</td>		V9-H-2T90G	540	890	385	370	855	4.0	14	85
V9-H-2113G V9-H-410,750/L5L 118 190 155 105 173 3 5.5 1.5 V9-H-417,5G/L5L 118 190 155 105 173 3 5.5 2.6 V9-H-417,5G/L 118 190 175 105 173 4 5.5 2.6 V9-H-417,5G/L 118 190 175 105 173 4 5.5 2.6 V9-H-417,5G/L 155 249 185 136 232 8 5.5 3 V9-H-4175G/1L 198 299 190 160 283 1.2 6 8 V9-H-4173G/3L 223 348 208 195 335 1.5 6 10 V9-H-4173G/3L 264 430 235 230 418 1.5 10 35 V9-H-4173G/3L 305 545 270 245 523 1.5 10 52 V9-H-4173G/3L 400 <t< td=""><td></td><td>V9-H-2T110G</td><td>700</td><td>1010</td><td>205</td><td>520</td><td>077</td><td>4.0</td><td>1.4</td><td>125</td></t<>		V9-H-2T110G	700	1010	205	520	077	4.0	1.4	125
V9-H-4T1:SG/2.2L V9-H-4T2:ZG/5.7L 118 190 175 105 173 4 5.5 2.6 V9-H-4T2:ZG/5.7L 118 190 175 105 173 4 5.5 2.6 V9-H-4T3:G/7.5L 155 249 185 136 232 8 5.5 3 V9-H-4T15:G/18.5L 198 299 190 160 283 1.2 6 8 V9-H-4T15:G/7.5L 223 348 208 195 335 1.5 6 10 V9-H-4T35G/37L 264 430 235 230 418 1.5 7 18 V9-H-4T35G/37L 264 430 235 230 418 1.5 10 35 V9-H-4T35G/37L 305 545 270 245 523 1.5 10 35 V9-H-4T10G/132L 400 917 323 320 890 3.0 12 75 V9-H-4T135G/160L 400		V9-H-2T132G	/00	1010	202	520	977	4.0	14	123
V9-H-4T2.2G/3.7L 118 190 175 105 173 4 5.5 2.6 V9-H-4T7.5G/7L 155 249 185 136 232 8 5.5 3 V9-H-4T7.5G/7L 155 249 185 136 232 8 5.5 3 V9-H-4T15G/7L 198 299 190 160 283 1.2 6 8 V9-H-4T15G/7L 223 348 208 195 335 1.5 6 10 V9-H-4T15G/7L 264 430 235 230 418 1.5 7 18 V9-H-4T5G/7L 264 430 235 230 418 1.5 7 18 V9-H-4T5G/7L 305 545 270 245 523 1.5 10 35 V9-H-4T35G/7L 305 540 270 260 1.5 10 52 V9-H-4T35G/20L 400 917 323 320		V9-H-4T0.75G/1.5L	118	190	155	105	173	3	5.5	1.5
V9-H-4T3.7G/5.5L V9		V9-H-4T1.5G/2.2L								
V9-HI-4T5.5G/7.5L 155 249 185 136 232 8 5.5 3 V9-HI-4T15(J1L 198 299 190 160 283 1.2 6 8 V9-HI-4T15(J18.5L 198 299 190 160 283 1.2 6 8 V9-HI-4T185G/22L 223 348 208 195 335 1.5 6 10 V9-HI-4T30G/37L 264 430 235 230 418 1.5 7 18 V9-HI-4T35G/75L 264 430 235 230 418 1.5 7 18 V9-HI-4T35G/75L 305 545 270 245 523 1.5 10 35 V9-HI-4T35G/9L 305 545 270 260 1.5 10 52 V9-H-4T35G/9L 338 580 310 270 560 1.5 10 52 V9-H-4T32G/20L 540 890 385		V9-H-4T2.2G/3.7L	118	190	175	105	173	4	5.5	2.6
V9-HI-4T7.5G/11L 155 249 185 136 232 8 5.5 3 V9-HI-4T11G/18.5L 198 299 190 160 283 1.2 6 8 V9-HI-4T136/18.5L 198 299 190 160 283 1.2 6 8 V9-HI-4T366/30L 223 348 208 195 335 1.5 6 10 V9-HI-4T366/5L 264 430 235 230 418 1.5 7 18 V9-HI-4T36/5L 305 545 270 245 523 1.5 10 35 V9-HI-4T36/5L 305 545 270 245 523 1.5 10 52 V9-HI-4T136/5L 305 540 890 310 270 560 1.5 10 52 V9-HI-4T136/132L 400 917 323 320 890 3.0 12 75 V9-HI-4T136/35L 00		V9-H-4T3.7G/5.5L								
V9-H-477.56/11L V9		V9-H-4T5.5G/7.5L	155	240	185	136	232	8	5.5	3
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		V9-H-4T7.5G/11L	155	249	105	150	232	0	5.5	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		V9-H-4T11G/15L	198	200	190	160	283	1.2	6	8
V9-H-4T22G/30L 223 348 208 195 335 1.5 6 10 V9-H-4T30G/37L 264 430 235 230 418 1.5 7 18 V9-H-4T35G/75L 305 545 270 245 523 1.5 10 35 V9-H-4T55G/75L 305 545 270 245 523 1.5 10 35 V9-H-4T56J/5L 305 545 270 245 523 1.5 10 52 V9-H-4T10G/132L 338 580 310 270 560 1.5 10 52 V9-H-4T120G/160L 400 917 323 320 890 3.0 12 75 V9-H-4T206G/18L 400 917 323 320 890 3.0 12 75 V9-H-4T206G/280L 540 890 385 370 855 4.0 14 90 V9-H-4T250G/280L 700 1010		V9-H-4T15G/18.5L	170	277	170	100	205	1.2	0	0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		V9-H-4T18.5G/22L	223	348	208	195	335	1.5	6	10
V9-H-4T37G/45L 264 430 235 230 418 1.5 7 18 V9-H-4T35G/55L 305 545 270 245 523 1.5 10 35 V9-H-4T55G/75L 305 545 270 245 523 1.5 10 35 V9-H-4T56G/50L 338 580 310 270 560 1.5 10 52 V9-H-4T10G/132L 338 580 310 270 560 1.5 10 52 V9-H-4T132G/160L 400 917 323 320 890 3.0 12 75 V9-H-4T132G/200L 540 890 385 370 855 4.0 14 85 V9-H-4T220G/250L 540 890 416 370 855 4.0 14 125 V9-H-4T250G/280L 700 1010 385 520 977 4.0 14 125 V9-H-4T315G/355L 700 1010		V9-H-4T22G/30L		510	200	175	555	1.5		10
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		V9-H-4T30G/37L	264	430	235	230	418	1.5	7	18
V9-H-4T55G/75L 305 545 270 245 523 1.5 10 35 400V V9-H-4T75G/90L 338 580 310 270 560 1.5 10 52 V9-H-4T10G/132L V9-H-4T10G/132L 400 917 323 320 890 3.0 12 75 V9-H-4T185G/200L 400 917 323 320 890 3.0 12 75 V9-H-4T185G/200L 540 890 385 370 855 4.0 14 85 V9-H-4T220G/2250L 540 890 416 370 855 4.0 14 90 V9-H-4T220G/250L 540 890 416 370 855 4.0 14 125 V9-H-4T220G/250L 540 890 416 370 855 4.0 14 125 V9-H-4T350G/500L 700 1010 418.5 520 977 4.0 14 125		,	201		200	200			, 	10
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$			305	545	270	245	523	1.5	10	35
400V V9-H-4T90G/110L V9-H-4T110G/132L 338 580 310 270 560 1.5 10 52 V9-H-4T110G/132L 400 917 323 320 890 3.0 12 75 V9-H-4T132G/160L 400 917 323 320 890 3.0 12 75 V9-H-4T185G/200L 540 890 385 370 855 4.0 14 85 V9-H-4T220G/250L 540 890 416 370 855 4.0 14 90 V9-H-4T220G/250L 540 890 416 370 855 4.0 14 90 V9-H-4T220G/250L 700 1010 385 520 977 4.0 14 125 V9-H-4T350G/500L 700 1010 418.5 520 977 4.0 14 135 V9-H-4T350G/500L 810 1358 425 520 1300 4.0 14 215 V9-H-					_ / *					
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$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	400V	,	338	580	310	270	560	1.5	10	52
V9-H-4T160G/185L 400 917 323 320 890 3.0 12 75 V9-H-4T185G/200L 540 890 385 370 855 4.0 14 85 V9-H-4T220G/220L 540 890 416 370 855 4.0 14 85 V9-H-4T220G/250L 540 890 416 370 855 4.0 14 90 V9-H-4T250G/280L 700 1010 385 520 977 4.0 14 125 V9-H-4T355G/400L 700 1010 418.5 520 977 4.0 14 135 V9-H-4T355G/400L 810 1358 425 520 1300 4.0 14 215 V9-H-4T450G/500L 810 1358 425 520 1300 4.0 14 215 V9-H-4T356G/400L-GS 810 1358 600 - - - - 430 V9-H-4T356G/500L-GS 1000<										
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			400	917	323	320	890	3.0	12	75
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$										
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$,	540	890	385	370	855	4.0	14	85
$ \begin{array}{ c c c c c c c } \hline V9-H-4T250G/280L & 700 & 1010 & 385 & 520 & 977 & 4.0 & 14 & 125 \\ \hline V9-H-4T280G/315L & 700 & 1010 & 418.5 & 520 & 977 & 4.0 & 14 & 135 \\ \hline V9-H-4T35G/400L & & & & \\ \hline V9-H-4T355G/400L & & & & \\ \hline V9-H-4T400G/450L & & & & \\ \hline V9-H-4T500G/500L & & & & \\ \hline V9-H-4T500G/500L & & & & \\ \hline V9-H-4T315G/355L-GS & & & & & \\ \hline V9-H-4T355G/400L-GS & & & & & \\ \hline V9-H-4T355G/400L-GS & & & & & & \\ \hline V9-H-4T500G/500L-GS & & & & & & \\ \hline V9-H-4T500G/500L-GS & & & & & & \\ \hline V9-H-4T500G/500L-GS & & & & & & & \\ \hline V9-H-4T500G/500L-GS & & & & & & & & \\ \hline V9-H-4T500G/500L-GS & & & & & & & & & & & \\ \hline V9-H-4T500G/500L-GS & & & & & & & & & & & & & & \\ \hline V9-H-4T500G/500L-GS & & & & & & & & & & & & & & & & & & &$			540	000	11.6	2.50	0.5.5	4.0	1.4	0.0
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			540	890	416	370	855	4.0	14	90
$ \begin{array}{ c c c c c c c c } \hline V9-H-4T315G/355L & 700 & 1010 & 418.5 & 520 & 977 & 4.0 & 14 & 135 \\ \hline V9-H-4T355G/400L & & & \\ \hline V9-H-4T400G/450L & & & \\ \hline V9-H-4T450G/500L & & & \\ \hline V9-H-4T500G/560L & & & \\ \hline V9-H-4T355G/400L-GS & & & \\ \hline V9-H-4T355G/400L-GS & & & \\ \hline V9-H-4T500G/560L-GS & & \\ \hline V9-H-4T500G/5$			700	1010	385	520	977	4.0	14	125
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			700	1010	410.5	500	0.55	4.0	1.4	105
V9-H-4T400G/450L 810 1358 425 520 1300 4.0 14 215 V9-H-4T450G/500L V9-H-4T500G/560L V9-H-4T315G/355L-GS 425 520 1300 4.0 14 215 V9-H-4T315G/355L-GS V9-H-4T355G/400L-GS 430 440 440 440 V9-H-4T355G/400L-GS V9-H-4T450G/500L-GS 450 450 450 480 V9-H-4T500G/500L-GS 1000 2351.5 600 - - - 480 V9-H-4T560G/630L-GS 1000 2351.5 600 - - - 480 V9-H-4T560G/630L-GS 1000 2351.5 600 - - - 480 V9-H-4T560G/630L-GS 1000 2351.5 600 - - - - 480 V9-H-4T560G/630L-GS 1000 2351.5 600 - - - - - V9-H-4T560G/630L-GS 1000 2351.5 600 - - -			700	1010	418.5	520	977	4.0	14	135
V9-H-4T450G/500L 810 1358 425 520 1300 4.0 14 215 V9-H-4T500G/560L V9-H-4T500G/560L V9-H-4T315G/355L-GS 430 440 V9-H-4T355G/400L-GS V9-H-4T355G/400L-GS 440 440 V9-H-4T450G/500L-GS 1000 2351.5 600 - - - 480 V9-H-4T560G/630L-GS 1000 2351.5 600 - - - - V9-H-4T560G/630L-GS 1000 2351.5 600 - - - - 480 V9-H-4T560G/630L-GS 1000 2351.5 600 - - - - - - V9-H-4T560G/630L-GS 1000 1000 1000 1000 1000 1000 1000 1000			_							
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $			-							
V9-H-4T355G/400L-GS 440 V9-H-4T400G/450L-GS 450 V9-H-4T450G/500L-GS 480 V9-H-4T500G/560L-GS 480 V9-H-4T560G/630L-GS 500										/30
V9-H-4T400G/450L-GS 1000 2351.5 600 - - 450 V9-H-4T500G/500L-GS 1000 2351.5 600 - - 480 V9-H-4T500G/500L-GS 1000 2351.5 600 - - 480 V9-H-4T560G/630L-GS 500 - - - - 500			-							
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V9-H-4T500G/560L-GS 480 V9-H-4T560G/630L-GS 500			1000	2351.5	600					
V9-H-4T560G/630L-GS 500			1000	2331.3	000			-		
			-							
V9-H-4T630G/710L-GS 520		V9-H-4T630G/710L-GS	-							

O7-08 **D**

Dimensions of 690V Products

		Power Range				Outline	and Mour	ting Dime	nsion (mm))		Approximate
Voltage	Model	(kW)	Base	W	Н	D	W1	H1	D1	T1	d	Weight (kg)
	V9−H−6T15G ~ V9−H−6T30G	15~30	No	285	440	220	200	425	107.5	2.5	7	17
	V9−H−6T75G ~ V9−H−6T55G	37~55	No	315	575	227	220	553	123.5	2.5	10	25
	V9-H-6T75G ~ V9-H-6T90G	75~90	No	400	615	265	270	590	123.5	3.0	10	35
	V9−H−6T110G	110~132	Yes	465	1042	325	382	339	238	_	14	_
	V9-H-6T132G	110, ~132	No	465	745	325	343	715	156	3.0	12	55
690V	V9-H-6T160G	160~220	Yes	540	1206	385	459	365	300	_	14	_
	V9-H-6T220G	160~220	No	540	890	385	370	855	205.5	4.0	14	85
	V9−H−6T250G	250~355	Yes	700	1380	385	614	412	294	_	15	_
	~ V9-H-6Т355G	250~355	No	700	1010	385	520	977	210	4.0	14	125
	V9-H-6T400G	400 600	Yes	810	1698	425	728	418	339	_	15	_
	~ V9-H-6T630G	400~630	No	810	1358	425	520	1300	210	4.0	14	215
	V9-H-6T280G-GS ~ V9-H-6T450G-GS	280~450		800	2352	600	684	2000	516	_	30	530
	V9-H-6T500G-GS ~~ V9-H-6T710G-GS	500~710	_	1000	2352	600	884	2000	516	_	20	600

Optional Accessories

Item	Name	Model	Description
	LED keypad	V9-DP01	From 0.75kW to 7.5kW: LED keypad as standard.
Keypad	LCD Keypad	V9-DP02	 11kW and above power products with LCD keypad as standard. The products 0.75kW to 7.5kW with V9-DP01 LED keypad as standard. If V9-DP02 keypad is selected to replace the default V9-DP01 keypad, please add -14 hardware non-standard suffix to the model.
	Keypad pallet	V9-DP05	The mounting accessories is used to help the keypad be installed on the external control cabinet.
	Keypad extension cable	CB1-150	1.5-meters keypad extension cable.
	Keypad extension cable	CB1-300	3-meters keypad extension cable.
	Resolver	_	 0.75kW to 3.7kW: not support. 5.5 to 7.5kW: optional. Please add -63 hardware non-standard suffix to the model. 11kW to 710kW: standard.
		EX-PG01	Power supply +12~24V, open collector, push-pull type encoder feedback card. If selected, please add -02 suffix to the model, and separate ordering is also supported.
	Open collector, push pull incremental encoder	EX-PG03	Power supply +12~24V, open collector, push-pull type encoder feedback card. If selected, please add -16 suffix to the model, and separate ordering is also supported.
PG Card		EX-PG20	Power supply +12-24V, open collector, push-pull type encoder feedback card, with two relay outputs. Separate ordering is supported.
		EX-PG02	Power supply +5V, differential type encoder feedback card If selected, please add -09 suffix to the model, and separate ordering is also supported.
		EX-PG04	Power supply +5V, differential type encoder feedback card, with TTL type encoder signal output. If selected, please add -20 suffix to the model, and separate ordering is also supported.
	TTL incremental encoder	EX-PG15	Power supply +5V, differential type encoder feedback card, with open collector type encoder signal output. Separate ordering is supported.
		EX-PG21	Power supply +5V, differential type encoder feedback card, with two relay outputs. Separate ordering is supported.
Relay	Relay extension card	EX-PG22	Two relay outputs. Separate ordering is supported.
	Modbus-RTU	_	The standard product V9-H has RS485 terminal whose the communication protocol is Modbus-RTU.
	CANopen	EX-CA04	Support CANopen DS301,DS303,DS305. Installation method: external or internal. If selected, please add -48 suffix to the model, and separate ordering is also supported.
Communication Card	Prifibus-DP	EX-CA06	Support Profibus-DP DPV0. Installation method: external or internal. If selected, please add -59 suffix to the model, and separate ordering is also supported.
	ProfiNET	EX-CA13	Support profiNet industrial Ethernet communication, with TTL encoder interface and encoder signal output Installation method: internal. If selected, please add -PRT suffix to the model and separate ordering is not supported.
Brake Chopper	Built-in brake chopper	-06	Built-in brake chopper. Applicable to: 18.5 to 110 kW. If selected, please add -06 suffix to the model.
DC Reactor	Built-in DC reactor	-64	Built-in DC reactor. Applicable to: 18.5 to 110 kW. If selected, please add -64 suffix to the model.
Base	Inverter base	-GS	90kW and above power products are optional. If selected, please add -GS suffix to the model.

Terminal Wirings



The black part is a standard function of V9-H-4T7.5G/11L and below, and comes standard with LED keyboard The blue part is the V9-H-4T11G/15L and above power level increase function, standard LCD keyboard

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V9 Series Universal Variable Speed AC Drives

High performance · Reliability · Flexibility · Convenience

<complex-block>

Typical Application Selection List

Application Field	Application Device	Mode	Application Characteristics
Standard series product	2AC220V: V9-H-2S**G (from 0.4kW t 3AC220V: V9-H-2T**G (from 0.4kW t 3AC380V: V9-H-4T**G/**L(from 0.7: 3AC690V: V9-H-6T**G (from 15kW t Note: for higher power products, please conta	to 132kW) 5kW to 710k to 710kW)	
	Machine tool spindle	V9-H	Position loop control, orientation control, EtherCAT communication (VA series) and 2nd encoder interface can be matched with a variety of host computers.
Machine	CNC engraving and milling machine	V9-H	Excellent deep field weakening control algorithm can ensure speed stability at high speed.
tool	NC drilling rig	V9-H-H3	Maximum speed is up to 250,000rpm.
	Grinder	V9-H	High-speed operation, stability, reliability and non-fault.
	Speed control without encoder	V9-Н	Even when running in open loop, it still has great cutting force and high speed stability accuracy.
	Injection molding machine (Asynchronous motor)	V9-I	Standard VFD with injection molding machine interface card.
	Injection molding machine (Asynchronous motor)	V9-J	Integrated energy-saving control cabinet, with power frequency and variable frequency conversion switching.
Plastic and metal	Injection molding machine (Synchronous motor)	V9-I	Pressure control, flow control, high energy saving effect and higher efficiency. Applicable to electrohydraulic mixing injection molding machine.
processing	Extruder	V9-H	Large extrusion force, no tripping and uniform rate of flow.
	Die-casting machine	V9-H	Fast speed, large torque and good multi pump cascade synchronization performance.
	Blow molding machine	V9-I	high energy saving effect, with power frequency and variable frequency conversion switching.
	Fan	V9-H	With speed sensor-less flying start function.
	Pump (water supply)	V9-H-P0	Multiple sleep and wake-up functions can meet different requirements. With Modbus-RTU convenient to communicate with various controllers. With address conversion function, it is convenient to communicate with various controllers without changing the controllers' program.
	Central air-conditioning / cold storage	V9-H-P0	Realize constant temperature control and high energy saving rate.
Fan and pump	Air compressor	V9-H	Supports PM motor and induction motor and has the functions of large torque and fast pressure response. With Modbus-RTU it is convenient to communicate with various controllers. With address conversion function, it is convenient to communicate with various controllers without changing the controllers' program.
	Maglev Centrifugal Blower	V9-Н	Supports PM motor and induction motor and high switching frequency setting to meet the high-speed motor.
	Turbo Blower	V9-Н	Smooth, fast and stable starting, small bearing friction. Support PM motor, induction motor and high switching frequency setting to meet the high-speed motor.
	Centrifuge	V9-H	Large torque, fast acceleration and deceleration, strong environmental adaptability and flying start function.
	Hoist mechanism	V9-GH	Mechanical brake control logic, large torque, quickly current limit function and conical motor control function.
	Traveling mechanism	V9-GA	Anti swing function, smooth acceleration and deceleration and stepless speed regulation function.
Crane /	Tower crane	V9-GH	Wide voltage range adaptability, the hook controlled stably and without shaking.
lifting	Construction elevator	V9-SY	Integrated control cabinet and inverter are optional.
machine	Elevator	AICE	Integrated elevator controller, integrated elevator control cabinet and electrical package.
	Escalator	V9-H	Through infrared sensor, the speed automatically switches to low speed or high speed operation, and the acceleration and deceleration process is smooth without impact.

Application Field	Application Device	Mode	
Tield	Walking-beam pumping unit	V9-U	Support synchronous mo
Oil field	Tower pumping unit	V9-U	High energy saving rate
	Oil transfer pump	V9-Н	Auto start and stop acco
	Spinning frame	V9-B	Through hole installatio
	Spinning frame	V9-Н	Universal installation m
Textile		V9-H	breakage caused by acci Process PID realizes hig
industry	Terylene Spring Machine		
	Winder	V9-H	With multi-step PLC fu
	Circular machine	V9-H	Large starting torque an
	Dual inverter steel wire drawing machine	V9-T	The drawing motor and Smooth control with pe
	Straight line wire drawing machine	V9-T	requirements.
	Fine wire drawing machine	V9-T	Minimum 0.001mm fin
Metal processing	Power pay-off frame	V9-T	Synchronous operation,
processing	Replace torque motor	V9-Н	Open-loop torque contro
	Steel bar cutting machine	V9-Н	Fixed length cutting and
	Cold rolling mill	V9-T	Good synchronization p
	Slitting machine /		
	Compounding machine	V9-T	Accurate roll diameter of
	Reeling waste side machine / Re-reeling machine	V9-T	With wire break warnin
Printing	Blow molding machine	V9-H	Excellent acceleration a
and	Coating machine/ Creasing machine	V9-T	Toque control with enco
packaging	Leather winding machine	V9-Н	Torque control without
industry	Fishing net machine / Netting machine	V9-H	Torque control without
	Paper making machine	V9-Н	Common DC bus and m
	Rotary knife	V9-Н	Fast response and cuttin
	Material receiving machine	V9-Н	In torque control, it can
	Wire saw machine	V9-Н	Torque control, uniform
Stone,	Brick machine	V9-Н	High energy saving rate
brick, and wood	Wood veneer lathe	V9-Н	
industry	Wood guillotine machine	V9-Н	Quickly start, quickl
	Wood planning machine	V9-Н	working efficiency and
	Electromagnetic stirring drive	V9-H-EMS	Special functions for ele voltage can be adjusted
Industrial	Variable frequency power supply	V9-H-C9	Frequency and voltage
power supply	Resonant power supply	V9-H-C9.01	Frequency scan, voltage test, voltage monitoring
	Middle frequency power supply	V9-H-C9.02	Frequency and voltage
	Industrial washing machine	V9-Н	High environmental ada
	Musical fountain	V9-Н	Strong anti-interference
	Ceramic machinery	V9-Н	Strong protection ability
	Mechanical vibrator	V9-Н	Excellent current limit f
			Multi stan speed munnin
	Tubular pile machine / Pile driver / Ramming machine	V9-H	Multi-step speed fullilli
	Tubular pile machine / Pile driver / Ramming machine Electric door	V9-Н V9-Н	
Other	Ramming machine		In place self-check func
	Ramming machine Electric door	V9-H	In place self-check func Automatic load balancin
	Ramming machine Electric door Belt conveyor	V9-Н V9-Н-6Т	In place self-check func Automatic load balancin Multi-step speed operat
	Ramming machine Electric door Belt conveyor Ball mill/ Grinder/ Crusher	V9-Н V9-Н-6Т V9-Н	In place self-check func Automatic load balancin Multi-step speed operat Large torque at each spe
Other Application	Ramming machine Electric door Belt conveyor Ball mill/ Grinder/ Crusher Mixer	V9-H V9-H-6T V9-H V9-H	In place self-check func Automatic load balancii Multi-step speed operat Large torque at each spe High speed stability acc Vector control technolog
	Ramming machine Electric door Belt conveyor Ball mill/ Grinder/ Crusher Mixer Treadmill / Running machine	V9-H V9-H-6T V9-H V9-H V9-H2T	Multi-step speed runnin In place self-check func Automatic load balancir Multi-step speed operati Large torque at each spe High speed stability acc Vector control technolog adaptation reduce the pl Speed upper limitation,

Application Characteristics

notor and asynchronous motor, with resolver interface configured by default. e, and current limit function to meet the actual oil well conditions.

ording to the actual pressure.

on mode, the heat sink is exposed at the back of the control cabinet for easy cleaning. node, multi-step PLC function and under voltage control function avoiding wire

cidental power failure.

gh precision synchronization.

nction, it has operation process curve according to actual requirements.

nd strong adaptability to voltage fluctuation.

l take-up motor working together.

endulum or without pendulum control mode can be selected according to the actual

ne wire.

good speed following performance

rol, high reliability and low maintenance cost.

l high precision.

performance, fast speed following and fast torque response.

calculation ensures stable tension of winding and unwinding.

ng, automatic stop, pendulum and floating roll in place at one time.

and deceleration performance ensure product consistency.

oder can be used to draw 30g ultra-thin paper.

encoder, torque control and speed control can switch smoothly.

encoder.

nulti-drive series products are also available.

ng speed with high cutting accuracy. Master-follower synchronization is available.

n operate stably under high torque reference.

cutting force and large torque at low speed.

, large torque and fast lifting and lowering

stop, strong resistance to voltage fluctuation, large torque, speed stable running, high high yield rate.

ectromagnetic stirring and multiple mixing modes are available. Frequency and lindependently, frequency and current can be adjusted independently.

can be adjusted independently, it also has voltage acceleration and deceleration time. e rise, voltage keeping functions, manual test, semi automatic test, full automatic g, current monitoring and flash-over protection, etc.

can be adjusted independently. Maximum frequency is up to 3000Hz.

aptability, large washing capacity and stable operation even under high speed.

ability will not interfere with audio signal. Current limit is stable to avoid tripping.

y, corrosion resistance of PCB board, stable operation and fault-free.

function ensures stable operation of forward and reverse switching.

ng and bulldozer characteristics ensure stable current control without tripping.

ction and the limit failure automatic stop function.

ing function and master-slave following function.

tion and timed shutdown.

eed and good mixing effect.

curacy, strong load capacity and feet no numbness.

by, excellent dynamic performance, accurate torque control and automatic speed hysical consumption of maintenance personnel and improve work efficiency.

, torque control and the output torque reaching torque reference.

control and stabilization and torque control with fast response and high accuracy.

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Applications of Typical Industries



Electric Vehicle Controller

- Simple and convenient wiring and prominent structure design of high protection level.
- · Accurate torque control perfectly matches with engine working.
- · Energy saving mode and super battery endurance.
- Built-in CAN-BUS communication with high stability, reliability and strong anti-interference capability.



Ceramics Machinery

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

Oil Field



- Special inverter for pumping unit, stable control even without RBU(s) or DBU(s). • Higher power saving effect, less harmonic and reactive current. • High quality Outdoor Control Cabinet is available, with constant temperature control, it can work reliably in low temperature environment for a long time. • It is applicable to control synchronous motor and asynchronous motor.
- AFE(s) and RBU(s) are available for higher energy saving effect and higher power factor requirements.



Elevator Industry

- Elevator integrated controller and electrical package are available, it can be selected according to customers' requirements.
- With cptimized CAN and Modbus communication technology, it has quickly nication speed and strong anti-interference ability.
- · With a variety of safety protection functions, it can meet the latest standards. • Application of Internet of Things technology to achieve remote monitoring, commissioning and upgrade firmware.



Mine Winch

- · With abundant experience in the renovation of winch, we can provide different types of winch renovation solutions.
- · Vector technology platform provides excellent control performance for the winch
- A variety of protection functions to ensure more secure and reliable system.
- Intelligent fault diagnosis to reduce the cost of maintenance and workloads.



Variable Frequency Power

- Voltage and frequency can be controlled separately, so do current and frequency
- Special function for electromagnetic stirring, with multiple operation modes.
- · Acceleration and deceleration function of voltage and frequency.
- SPWM and SVPWM modulation mode.
- Over-modulation function

Injection Molding Industry

- Both products are available: Integrated Energy-Saving Control Cabinet and dedicated drive for Injection Molding Machine.
- Unified asynchronous servo motor and synchronous servo motor control with pressure and flow control.
- Without 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 convenient to disassemble and easy to maintain; it also has strong environmental adaptability and high protection level

Air Compressor Industry

- Large torque, stable running speed and stable pressure control.
- High reliability and long service life.
- Synchronous motor drive, asynchrono drive, magnetic suspension motor drive, air suspension motor drive, etc.
- With intelligent sleep and low pressure wake up function, energy saving rate can reach to 20%~50%;.
- Standard Modbus-RTU communication can be compatible with various air compressor controllers

- Excellent vector control and field weakening algorithm ensure large torque at low speed and strong high-speed cutting force. Support multiple encoder types: sine /cos encoder, increme encoder and resolver, with functions of encoder frequency division output and second encoder input.
- Special function for machine tool spindles: EtherCAT
- communication, second encoder input, position reference, etc • Successfully drive 250000 RPM drilling machine.

Printing and Packaging Industry

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

Municipal Engineering

- 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
- 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 and maximum power up to 800kW.
- · Professional crane control functions: speed monitoring, torque monitoring, torque verification, power optimization, position counting, anti-swing function for gantry, trolley and slew, etc.

Stone Processing

- Simple and convenient operation, and less connection cable.
- Smooth running curve to reduce the stone damage rate, and smooth starting to reduce mechanical damage and maintenance costs. · Providing the constant tension control with anti-breakage rope, main and auxili
- functions for frequency reference safe stopping function, and alarm prompt function

Wood Processing

- · Built-in technology algorithm of rotary cutting machine, rolling machine, and 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 high-quality green power.







Textile industry

- Reduce the rate of breakage and improve the efficiency of production.
- Specially external heat sink and easy to clean the cotton in the heat sink
- Unique voltage control function ensures normal
- deceleration in case of instantaneous power failure.
- · With multi-step PLC function, users can set it according to actual application.





Crane

- Extensively applied to: port, shipping, ocean engineering, mine,

Machine Tool Industry

• Central air conditioning/refrigeration house: Constant temperature control,

- Excellent torque control and reliable brake control sequence.
- architecture, metallurgy, factory and various kinds of industries' lifting machines.





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