

Low-voltage inverter selection table																		
Product series		Universal Product									Industry specific products							
Product features		Open loop series (Without PG card)					Close loop series (With PG card)				Open loop series (Without PG card)				Close loop series (With PG card)			
		GD10	CHF100A	GD200	GD100	GD300	CHV100	GD35	CHA100	GD200-11	GD200-13	CHV150	CHV160A	GD300(EPS)	CHV110	CHV180	CHV190	
Basic specifications	Introduction	Simple miniature products	Universal vector product	Universal Product	Small power vector products	High-performance vector	Universal vector	High-performance vector	Four quadrant vector	Open structure products	Protection enhanced type	Medium frequency	Special for water supply	Special for EPS	Special for injection molding machine	Special for elevator	Special for crane	
	Voltage and power (kW)*	4: 0.75-2.2 2: 0.2-2.2 S2: 0.2-2.2	4: 0.75-3000 2: 1.5-55 S2: 0.75-2.2	4: 1.5-500	4: 0.75-15	4: 1.5-500	4:1.5-3000 2:0.75-55 6:15-630	4:1.5-75	4:75-1200	4: 15-315	4: 75-200	4:1.5-75	4:5.5-350	4:4-500	4:7.5-15	4:4-315	4:4-500	
	Control mode (Asynchronous motor)	1,VF	1,VF 2,Open loop vector	1,VF	1,VF 2,Open loop vector	1,VF 2,Open loop vector	1,VF 2,Open loop vector 3,Close loop vector	1,VF 2,Open loop vector 3,Close loop vector	1,VF 2,Open loop vector 3,Close loop vector	1,VF	1,VF	1,VF 2,Open loop vector 3,Close loop vector	1,VF	1,VF 2,Open loop vector	1,VF 2,Open loop vector 3,Close loop vector	1,VF 2,Open loop vector 3,Close loop vector	1,VF 2,Open loop vector 3,Close loop vector	
	Control mode (Synchronous motor)	x	x	x	x	1,VF 2,Open loop vector	x	1,VF 2,Open loop vector 3,Close loop vector	x	x	x	x	x	1,Open loop vector	x	1,Open loop vector 2,Close loop vector	1,Open loop vector 2,Close loop vector	
	Overload capability	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	120% 60s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	150% 60s 180% 10S 200% 1s	
Structure characteristics	Installation	Hanging	Hanging, floor	Hanging, flange, floor	Hanging, flange	Hanging, flange, floor	Hanging, floor	Hanging, flange	Floor	Hanging, flange	Hanging	Hanging	Hanging, floor	Hanging, flange, floor	Floor	Hanging	Hanging, floor	
	Degrees of protection	IP20 Standard	IP20 Standard	IP20 Standard	IP20 Standard	IP20 Standard	IP20 Standard	IP20 Standard	IP20 Standard	IP00	IP20	IP20	IP20 Standard	IP20	IP20 Standard	IP20 Standard	IP20 Standard	
	Cooling method	0.2-0.75 natural cooling 1.5-2.2 air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	
	Appearance and volume	GD10	CHF100A	With GD300	GD100	GD300	With CHF100A	With GD300	CHA100	GD200-11	With GD300	With CHF100A	With CHF100A	With GD300	CHV110	With CHF100A	With CHF100A	
Hardware configuration characteristic	Analogue input	1	2	3	2	3	2	3	4	3	3	2	2	1	2	2	2	
	Digital input	5DI	7DI 1HDI	8DI 1HDI	4DI 1HDI	8DI 1HDI	5DI 1HDI	8DI 1HDI	8DI 1HDI	8DI 1HDI	8DI 1HDI	5DI 1HDI	8DI	6DI	5DI 1HDI	6DI	5DI 1HDI	
	Analogue output	1	2	2	2	2	1	2	4	2	2	1	2	1	1	1	1	
	Digital output	1DO	1DO	1DO 1HDO	0	1DO 1HDO	1DO 1HDO	1DO 1HDO	1DO 1HDO	1DO 1HDO	1DO 1HDO	1DO 1HDO	x	x	1DO 1HDO	1DO 1HDO	1DO 1HDO	
	Relay output	1	2	2	2	2	2	2	6	2	2	2	3	2	3	2	2	
	Motor temperature detection interface	x	x	x	x	x	x	x	PT1000, PT100, Standard	x	x	x	x	x	x	x	x	PT1000, PT100, Standard
	Communication	Standard MODBUS	Standard MODBUS	Standard MODBUS	Standard MODBUS	Standard MODBUS, Optional PROFIBUS, Ethernet	Optional MODBUS	Standard MODBUS, Optional PROFIBUS, Ethernet	MODBUS, PROFIBUS, Ethernet, CAN	Standard MODBUS	Standard MODBUS	Optional MODBUS	Optional MODBUS	MODBUS, Optional PROFIBUS, Ethernet	Optional MODBUS	Optional MODBUS	Optional MODBUS, PROFIBUS, Ethernet, Can	
	Built-in braking unit	None (built-in optional)	4: 0.75-15 2: 1.5-7.5 S2: 0.75-2.2	4: 1.5-30	All series	4: 1.5-30	4:1.5-15 2:1.5-5.5	4: 1.5-30	x	4: 15-30	x	4:1.5-15	4:5.5-18.5	4:4-30	x	4:4-15	4:4-15	
	PG card compatible encoder type	x	x	x	x	x	(1)5V/12V/24V Incremental encoder (2)UVW encoder	(1)5V/Differential incremental encoder (2)12V Incremental encoder (3)24V Incremental encoder (4)Rotary transformer	Incremental encoder	x	x	12-15V Incremental encoder	x	x	(1)5/12/15/24V Incremental encoder (2)UVW encoder (3)UVW encoder (4)SIN/COS encoder (5)Rotary transformer	(1)5/12/15/24V Incremental encoder (2)5V Sin/Cos encoder (3)UVW encoder (4)5V Resolver	(1)5/12/15/24V Incremental encoder (2)5V Sin/Cos encoder (3)UVW encoder (4)5V Resolver	
	DC input	x	x	Support	Support	Support	x	Support	x	Support	Support	x	x	Support	x	x	x	
	LED keypad (standard)	Can external keypad, with potentiometer	All series without potentiometer, 4: 0.75-15 2: 1.5-7.5 S2: 0.75-2.2 Can't external keypad, other power segment can external keypad	Can external keypad, with potentiometer, can copy parameters	Can external keypad, with potentiometer	Can external keypad, with potentiometer, can copy parameters	All series without potentiometer, 4: 0.75-15 2: 1.5-7.5 Can't external keypad, other power segment can external keypad	Can external keypad, with potentiometer, can copy parameters	All series without potentiometer, can external keypad	Can only external keypad, with potentiometer, can copy parameters	Can external keypad, with potentiometer, can copy parameters	All series without potentiometer, 4: 1.5-15 Can't external keypad, other power segment can external keypad	All series without potentiometer, 4: 5.5-15 Can't external keypad, other power segment can external keypad	Can external keypad, with potentiometer, can copy parameters	All series without potentiometer, 4: 7.5-18 Can't external keypad, other power segment can external keypad	All series without potentiometer, 4: 4-15 Can't external keypad, other power segment can external keypad	All series without potentiometer, 4: 4-15 Can't external keypad, other power segment can external keypad	
LCD keypad	x	x	Optional	x	Optional	Optional	Optional	x	Optional	Optional	x	Optional	Optional	x	Optional	Optional		
EMC filter	Optional	Optional	Built-in C3, Standard	Built-in C3, Standard	Built-in C3, Standard	Optional	Built-in C3, Standard	Optional	Built-in C3	Optional	Built-in C3	x	Optional	Built-in C3	Optional	Optional		
Reactor	Optional	4: 1.5-18 Built-in DC reactor, 350-500 Built-in input reactor, Standard	4: 350-500 Built-in input reactor Standard	Optional	Standard 4: 1.5-30 Built-in DC reactor 4: 18.5-90 Built-in DC reactor 6: 350-500 Built-in input reactor	Optional	Standard 2: 11-18 Built-in DC reactor 4: 18.5-90 Built-in DC reactor 6: 350-500 Built-in input reactor	Optional	4:75-200 Built-in CL reactor, 400-1200 Built-in input LCL filter and output reactor Standard	4: 350-500 Built-in input reactor	x	4: 18.5-75 Built-in DC reactor	4: 22-110 Built-in input reactor	4: 350-500 Built-in input reactor	4: 7.5-15 Built-in DC reactor 4: 22-110 Built-in input reactor Standard	4: 18.5-30 Built-in DC reactor Standard	4: 18.5-90 Built-in DC reactor, 350-500 Built-in input reactor Standard	

	Output frequency Motor parameter number	0-600Hz	0-600Hz	0-600Hz	0-600Hz	0-600Hz	0-600Hz	0-600Hz	0-600Hz	0-600Hz	0-600Hz	0-1500Hz	0-600Hz	0-600Hz	0-600Hz	0-600Hz	0-600Hz	
		1 set	1 set	1 set	1 set	2 sets	1 set	2 sets	4 sets	1 set	1 set	1 set	1 set	2 sets	1 set	1 set	4 sets	
Software configuration characteristic	Braking modes	Resistor braking, DC braking	Resistor braking, DC braking	Resistor braking, DC braking, magnetic flux braking	Resistor braking, DC braking, magnetic flux braking	Resistor braking, DC braking, magnetic flux braking	Resistor braking, DC braking	Resistor braking, DC braking, magnetic flux braking	Regenerative braking, DC braking	Resistor braking, DC braking, magnetic flux braking	Resistor braking, DC braking, magnetic flux braking	Resistor braking, DC braking	Resistor braking, DC braking	Resistor braking, DC braking, magnetic flux braking	DC braking	Resistor braking, DC braking	Resistor braking, DC braking	
	Torque limit	x	x	√	√	√	√	√	x	√	√	√	x	√	√	√	√	
	Vf separation	x	x	√	√	√	√	√	x	√	√	√	x	√	√	√	√	
	Virtual terminal	x	x	√	√	√	√	√	x	√	√	√	√	√	√	√	√	
	I/O delay time	x	x	√	√	√	√	√	x	√	√	√	√	√	x	x	x	
	Pump control	x	Simple pump control	Simple pump control	x	x	x	x	x	Simple pump control	Simple pump control	x	Special for water supply	x	x	x	x	
	Characteristics and application	With a simple frequency control function can be applied to the textile, food packaging, washing equipment and so on.	Application of speed accuracy, low frequency characteristic requirements of the occasion, such as HVAC water supply, air compressor, oil and other fan pump load.	Application of speed accuracy, low frequency characteristic requirements of the occasion, such as HVAC water supply, air compressor, oil and other fan pump load.	Application of speed accuracy, low frequency characteristic requirements of the occasion, such as machine tools, textile machinery, ceramic machinery, plastic machinery, and so on light industry machinery.	Can be used in asynchronous motor or synchronous motor speed control high performance, such as machine tools, textile machinery, rubber machinery, cranes, oil and so on.	Through closed-loop control to achieve high control accuracy and good low-frequency characteristics, used in metal processing, rubber and plastic machinery, building materials, machinery, chemical fiber extrusion equipment.	Can achieve high-performance closed-loop, high-precision positioning and simple servo drive control used in CNC machine tools, textile and other industries.	Through the PWM control high frequency IGBT rectifier, realize the rectifier and energy feedback two-way control, applied to the potential energy load, high inertia loads require energy feedback, harmonics, power factor, the higher requirements of the occasion.	Open structure design, effectively reducing the thickness of the product can be applied to the air compressor or system supporting customers.	Enhance the protective effect of three anti-paint, screws and sheet metal with high anti-corrosion, long life fan, and improving the design of air duct can be applied to the ceramics, printing and dyeing, chemical, water treatment and other industries.	The highest 1500Hz output, and can be used for engraving and milling machine, grinder and so on.	Integration of external PLC, transmitter, PID controller function, a professional water supply control can be applied to industrial and domestic drainage systems, municipal water supply, farmland irrigation and drainage system.	Can realize the output voltage and power phase-locked control, which can be used for emergency power supply, shore power supply, frequency conversion power supply.	With power energy saving mode switching function, and has a higher level of protection can be applied to the injection molding machinery, air compressor, central air conditioning, constant pressure water supply, energy-saving.	Humanized intelligent control, comprehensively enhance the elevator comfort, reliability and security. It can be used for a passenger elevator, warehouse, automated warehouse.	With reliable brake, a contactor control timing, integration of special lifting and hoisting machine function, which can be used in port, mining machinery, construction and other occasions of hoisting equipment.	
	Other features	PC software	MODBUS communication	MODBUS communication	MODBUS communication	MODBUS communication	MODBUS, PROFIBUS, Ethernet communications	MODBUS communication	MODBUS, PROFIBUS, Ethernet communications	MODBUS, PROFIBUS, Ethernet, CAN communications	MODBUS communication	MODBUS communication	MODBUS communication	MODBUS communication	MODBUS communication	MODBUS communication	MODBUS communication	MODBUS, PROFIBUS, Ethernet communications
		Certificate	x	CE	CE	CE	CE	CE	CE	x	x	CE	CE	x	CE	CE	CE	
	Technical features	Features	1. Small volume, convenient installation 2. Automatic current limiting function, protect the motor 3. With DC brake function 4. Fault type records, convenient maintenance	1. without PG vector (SVC), V/F control, and torque control; 2. Starting torque: without PG vector control 0.5Hz/150%; 3. 16-steps simple PLC multi-speed control, and PID control; 4. The input and output terminals may be freely programmed 5. Rotation speed tracking re-start function	1. Product can achieve more accurate motor autotuning and provide excellent motor drive performance; 2. Product's design strictly follows IEC national standards; 3. Built-in C3 filter (standard); 4. Supports wall mounting, flange mounting, floor mounting.	1. Excellent motor drive performance with autotuning of rotation or static; 2. Independent duct design capable of supporting wall mounting and (through wall) flange mounting; 3. Built-in C3 filter (standard). 4. Product design strictly complies with IEC international standards.	1. Compatible with various motors: asynchronous motors, traditional permanent magnet synchronous motors, variable frequency motors and direct drive motors; 2. Accurate parametric autotuning of motor; 3. Advanced open-loop vector control: 0.25Hz/150% starting torque, 1:200 speed ratio; 4. Communication methods: MODBUS, PROFIBUS, CAN and Ethernet, powerful PC software; 5. Product design strictly adheres to the IEC standards.	1. Without PG vector control (SVC), with PG vector control (VC), and V/F control method; 2. With PG vector control, it provides a torque control mode and offers a specialized resolution plan for tension control; 3. With PG vector control, the speed precision reaches ± 0.1%, offering a 1:1000 speed control range; 4. Rich expansion cards give rise to industrial resolution program: injection molding card, water card, IO expansion card, communication card, and PG card.	1. Can drive variety of motors: high-speed motor, electric spindle, variable frequency motor, AC servo motor, various synchronous motor and ordinary asynchronous motor; 2. More accurate motor autotuning; 3. More accurate and powerful torque control, speed control and position control; 4. Excellent weak magnetic control capacity to meet the requirements on rapid acceleration and deceleration.	1. The rectifier/feedback units use a sine wave pattern to automatically return regenerated electric energy to the electrical network; 2. The grid side electric current harmonics are small, and the fundamental wave power factor is close to 1 (full capacity); 3. Capable of achieving zero-speed 200% torque output; 4. Supporting Profibus-DP, Modbus, and Ethernet communication protocols simultaneously 5. The master-slave control function satisfies the electric power equilibrium and speed synchronization requirements of multi-motor drives.				1. CHV160A Series Inverter = PLC +PID regulator + inverter; 2. Supporting multiple water supply modes, including fixed variable frequency pumps (can define up to one fixed variable pump + nine general pumps) and circulating variable frequency pumps (can define up to four circulating variable pumps + two general pumps); 3. Built-in inlet and sewage pool water-level detection and logic control functions; 4.	1. Three control methods: Sensorless vector control (SVC), PG vector control (VC), and V/F control; 2. Frequency setting method: Comparative input of pressure and flow signals; 3. Automatic reset and power failure reset ensure production continuity	1. Compatible with asynchronous and synchronous motors; 2. With function of load sensor torque compensation without load sensor; Accurately control synchronous motor hoists for a smooth start; 4. Identify initial pole angle when the synchronous motor is static; 5. Brake and contact control; Controlling braking and contact according to the hoist's operation logic so as to ensure safety.	1. The time sequence of brake logic control and monitor function; 2. Light load acceleration; 3. Master-slave control of power balance and speed synchronization; 4. Crane operation mode; 5. Professional communication function: (Profibus, Modbus, Ethernet); 6. Slack rope detection; 7. Dangerous speed monitor, quick stop, and over-speed protection;	
Note: 1. Voltage and power parts, 6 represents 3-phase 660V, 4 represents 3-phase 400V, 2 represents 3-phase 220V, S2 represents single phase 220V. 2. Flange for through-wall installation installed namely, the air duct of independent duct.																		