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V1.8



HPMONT >>>



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# PRODUCT SELECTION GUIDE

Industrial Automation Solution Provider

Intellectual Product Impressed Customers

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## About us >>>>

Shenzhen Hpmont Technology Co., Ltd. is located in Nanshan District, Shenzhen, China. Hpmont is a national high-tech enterprise and software company in Shenzhen. It is certificated as the leading team of the national million plan in technology entrepreneurship and the leading team of the scientific and technological innovation and entrepreneurship from the Ministry and Technology.

Shenzhen Hpmont Technology Co., Ltd. insists on intelligent manufacturing and intellectual carrying. It has always been focusing on the innovation of intelligent manufacturing efficiency and quality, creating values for a great production, and has always been focusing on the innovation of intellectual carrying security, convenience and efficiency, creating values for a better life.

Hpmont has mastered core technologies in industrial control and elevator control and has independent intellectual property. The company has obtained more than 130 patents from the State Intellectual Property Office, including 100 invention patents and 13 PCT patents.

Hpmont actively responds to the state's policy of promoting the integration of enterprises with vocational schools and universities, and continues to carry out technical cooperation and joint training with international and domestic universities. It has become a joint training base for Xi'an Jiaotong University and Wuhan University of Technology and many technical experts of Hpmont are hired as graduate business tutors and off-campus tutors by Xi'an Jiaotong University and Shenzhen University.

Hpmont will guide and nurture the direction of extensive cooperation, lead and strengthen the industry with an open and global thinking, carry out multi-dimensional and multi-domain cooperation within different aspects of the industry, and strive for a high efficiency and collaborative development in the industry ecosystem.

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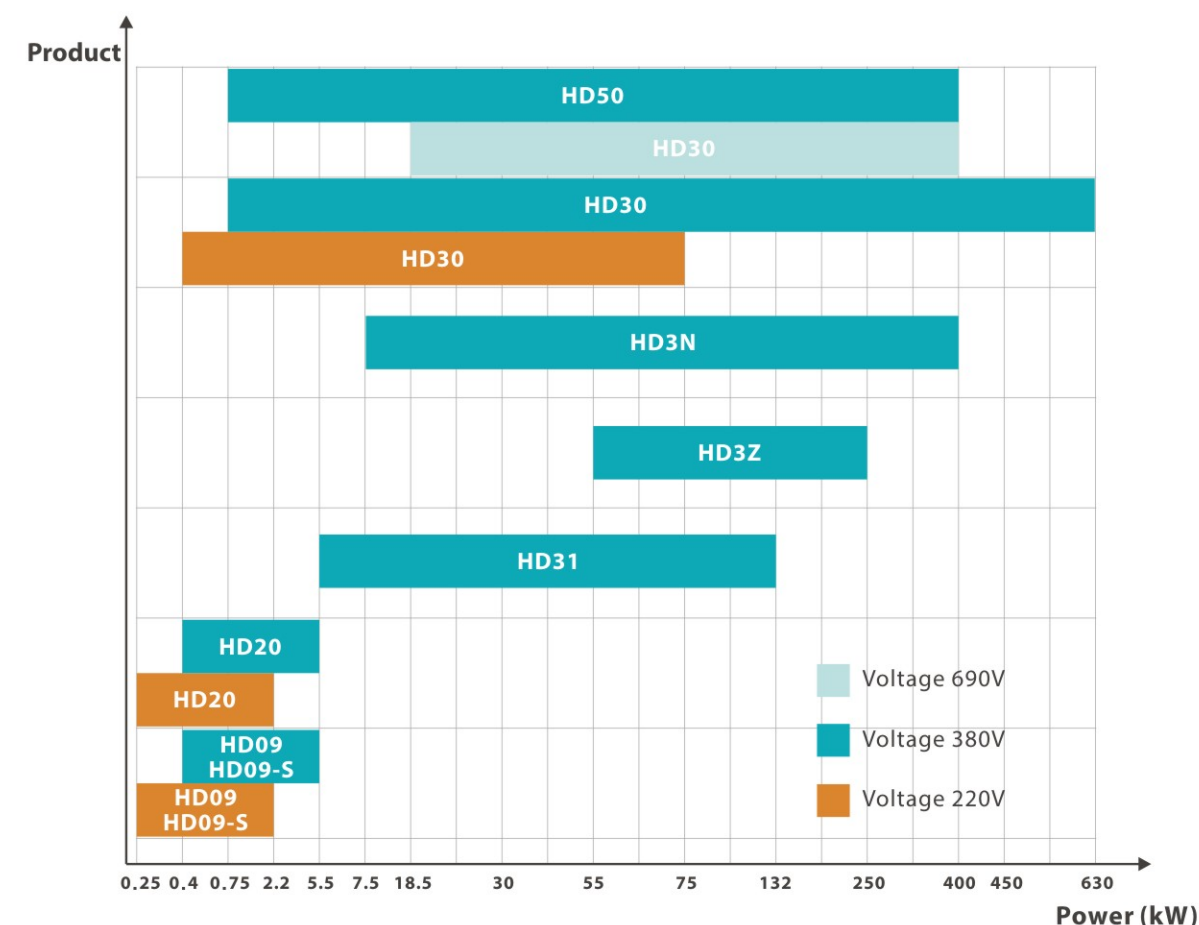
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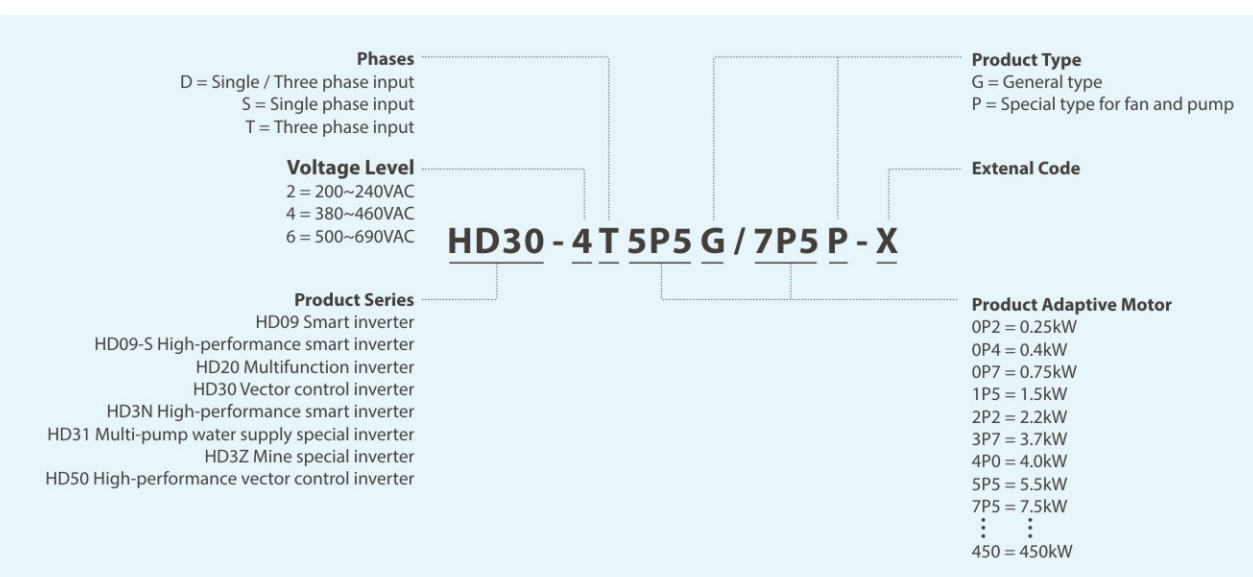
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## Product System



## Configuration Parameter



## HD09 / HD09-S

Smart Inverter / High-performance Smart Inverter

HD09 is a general mini-inverter for low power applications. HD09-S is a high performance mini-inverter for low power applications (SVC control)



Single phase 200 ~ 240V.....0.25 ~ 2.2kW Three phase 380 ~ 460V.....0.4 ~ 5.5kW

### Product Features

<b>Ultrathin structure</b>	Max. thickness only 145mm, can be installed side by side and save installation space
<b>Large size LCD display</b>	Blue background display, 5 segment, 5 status indicators, 5 units indication
<b>Personalized button remark</b>	Designed with IEC60417 and GB/T15192 standards
<b>Built-in EMI filter</b>	Meet the EMI requirements of the standard IEC61800-3; Easy to disconnect, can be used for low current leakage
<b>Intuitive product power label</b>	Can recognize product in convenience and fast speed
<b>Support built-in braking resistor</b>	Built-in 100W ultrathin brake resistor is selectable
<b>Insolated potentiometer</b>	Can set main and vice frequency pre-given
<b>Installation-wiring-operation</b>	3 simple steps, can be used as soon as being wired
<b>Sheet metal shell, plastic case</b>	Reliable installation, sealed top, good protection

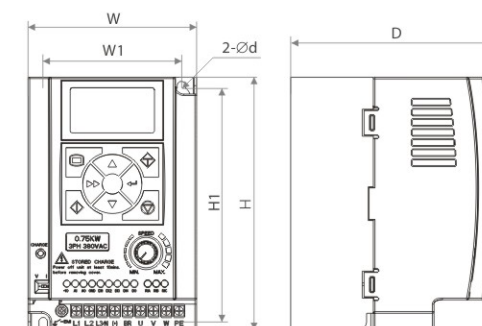
### Technical Data

<b>Electrical data</b>	<b>Input voltage</b>	Single phase 200~240V Three phase 380~460V; Fluctuation does not exceed $\pm 10\%$ , unbalanced rate $< 3\%$
	<b>Input frequency</b>	50/60Hz $\pm 5\%$
	<b>Output voltage</b>	0~Input voltage
	<b>Output frequency</b>	HD09: 0~1000.0Hz; HD09-S: 0~400.0Hz
<b>Performance</b>	<b>Control mode</b>	HD09: V/f control; HD09-S: V/f control, SVC control
	<b>Overload capability</b>	2minutes for 150% rated output current; 10 seconds for 180% rated output current
	<b>Velocity resolution</b>	Digital setting: 0.1Hz; Analogue setting: 0.1% $\times$ Max.frequency
<b>Input/ Output</b>	<b>Analog power supply</b>	+10V, Load capacity 100mA
	<b>Analog input</b>	AI: (Selectable voltage / current) 0 ~ 10V / 0 ~ 20mA; Keypad potentiometer: 0 ~ 5V
	<b>Analog output</b>	AO: Voltage 0~10V
	<b>Digital input</b>	DI1~DI4 Optical decoupler input; *DI4 can be selected as high speed pulse input
	<b>Digital output</b>	DO, optical decoupler output; *Can be used as high speed pulse output once again
<b>Environmental characteristic</b>	<b>Relay output</b>	R1A/R1B/R1C; Contactor capacity: 250VAC/3A or 30VDC/1A
	<b>Running temperature</b>	-10~+40°C no deduction; Output current should be 2% derated for each 1°C over 40~50°C
	<b>Storage temperature</b>	-40~+70°C
	<b>Application environment</b>	Indoor, not at the direct sunlight, dust, corrosive and flammable gases, oil, steamer, drops, salt, etc.
	<b>Altitude</b>	No derating under 1000 meters; Derating is required for above 1000 meters
	<b>Humidity</b>	Less than 95% RH, no water drops
<b>Vibration</b>	3.5m/s <sup>2</sup> at 2~9Hz and 10m/s <sup>2</sup> at 9~200Hz (IEC60721-3-3)	

### Configuration Parameter

HD09 Smart Inverter		Power Selection				Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range $\Omega$	Resistor Power kW	Brake Unit
F1	HD09-2S0P2G	0.25	0.6	4.3	1.7	-	-	-
F1	HD09-2S0P4G	0.4	1.0	5.8	2.5	-	-	-
F1	HD09-2S0P7G	0.75	1.5	10.5	4.0	-	-	-
F1	HD09-2S1P5G	1.5	2.8	18.5	7.5	-	-	-
F1	HD09-2S2P2G	2.2	3.8	24.1	10.0	-	-	-
F1	HD09-4T0P4G	0.4	1.0	1.8	1.4	300~400	0.08	Built-in
F1	HD09-4T0P7G	0.75	1.5	3.4	2.3	250~350	0.1	Built-in
F1	HD09-4T1P5G	1.5	2.5	5.2	3.8	200~300	0.2	Built-in
F1	HD09-4T2P2G	2.2	3.4	7.3	5.1	150~250	0.25	Built-in
F2	HD09-4T4P0G	4.0	5.9	11.9	9.0	100~150	0.3	Built-in
F2	HD09-4T5P5G	5.5	8.5	15.0	13.0	80~100	0.5	Built-in
HD09-S High-performance Smart Inverter		Power Selection				Braking Resistor (Recommendation)		
F1	HD09-2S0P2G-S	0.25	0.6	4.3	1.7	-	-	-
F1	HD09-2S0P4G-S	0.4	1.0	5.8	2.5	-	-	-
	HD09-2S0P4G-B-S					200~300	0.05	Built-in
F1	HD09-2S0P7G-S	0.75	1.5	10.5	4.0	-	-	-
	HD09-2S0P7G-B-S					150~250	0.1	Built-in
F1	HD09-2S1P5G-S	1.5	2.8	18.5	7.5	-	-	-
	HD09-2S1P5G-B-S					100~150	0.2	Built-in
F1	HD09-2S2P2G-S	2.2	3.8	24.1	10.0	-	-	-
	HD09-2S2P2G-B-S					80~100	0.25	Built-in
F1	HD09-4T0P4G-S	0.4	1.0	1.8	1.4	300~400	0.08	Built-in
F1	HD09-4T0P7G-S	0.75	1.5	3.4	2.3	250~350	0.1	Built-in
F1	HD09-4T1P5G-S	1.5	2.5	5.2	3.8	200~300	0.2	Built-in
F1	HD09-4T2P2G-S	2.2	3.4	7.3	5.1	150~250	0.25	Built-in
F2	HD09-4T4P0G-S	4.0	5.9	11.9	9.0	100~150	0.3	Built-in
F2	HD09-4T5P5G-S	5.5	8.5	15.0	13.0	80~100	0.5	Built-in

### Production and Installation Size



Size	Production Size (mm)			Installation Size(mm)			GW kg
	W	H	D	W1	H1	d	
F1	100	150	125	82	140	5	1.5
F2	116	185	145	98	174	6.5	2.7

## HD20

Multifunction Inverter

HD20 is a general mini inverter whose power is small and its sales market is on OEM. It can realize customers miniaturization and high reliability applications.



Single phase 200 ~ 240V.....0.25 ~ 0.4kW Three phase 380 ~ 460V.....0.4 ~ 5.5kW  
Single / Three phase 200 ~ 240V.....0.75 ~ 2.2kW

### Product Features

<b>Tight structure</b>	Structure is designed in tight and can be installed side by side
<b>Abundant industry applications</b>	Process PID regulatory function; Simple PLC function; Textile pendulum frequency function; Fixed length control function; Multi-speed control
<b>Intellectual control mode</b>	High-performance SVC control mode; Linear, squared V/f curve; Customizable V/f curve and Ace/Dec curve; Current and voltage amplitude auto-limiting
<b>Ultra-smooth rpm tracking</b>	Auto-tracking motor rpm and direction, realize motor smooth start without impact
<b>Adapt to complex grid environments</b>	Self-start function when power on; Instantaneous power failure non-stop function; Input voltage self-adjustment function
<b>Special features</b>	Electric energy meter and running time meter; Bipolar analog input; Remote/local one-button switching; Multiple modes of Spot start
<b>Energy brake unit</b>	Built-in

### Technical Data

<b>Electrical data</b>	<b>Input voltage</b>	Single phase 200~240V, Single / Three phase 200~240V, Three phase 380~460V; Fluctuation does not exceed ±10%, unbalanced rate <3%
	<b>Input frequency</b>	50/60Hz ± 5%
	<b>Output voltage</b>	0~Input voltage
	<b>Output frequency</b>	0~400.0Hz
<b>Performance</b>	<b>Control mode</b>	V/f control, SVC control
	<b>Overload capability</b>	2minutes for 150% rated output current ; 10 seconds for 180% rated output current
	<b>Velocity resolution</b>	Digital setting: 0.1Hz; Analogue setting: 0.1% × Max. frequency
<b>Input/ Output</b>	<b>Analog power supply</b>	+10V, Load capacity 100mA
	<b>Digital power supply</b>	+24V, Load capacity 200mA
	<b>Analog input</b>	AI: (Selectable voltage / current) 0 ~ 10V / 0 ~ 20mA; Keypad potentiometer: 0 ~ 5V
	<b>Analog output</b>	AO1~AO2: (Selectable voltage current) 0~10V/0~20mA
	<b>Digital input</b>	DI1~DI6, optical decoupler input; *DI6 can be selected as high speed pulse input
	<b>Digital output</b>	DO1~DO2, optical decoupler output ; *DO2 can be used as high speed pulse output once again
	<b>Relay output</b>	R1A/R1 / R1C; Contactor capacity: 250VAC/3A or 30VDC/1A

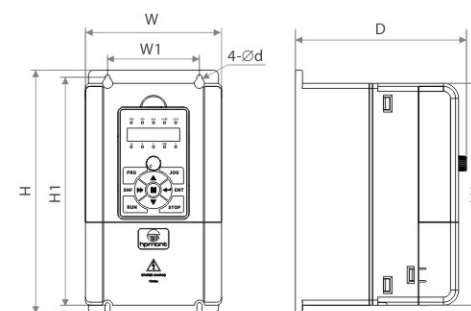
### Technical Data

<b>Environmental characteristic</b>	<b>Running temperature</b>	-10~+40 °C no deduction; Output current should be 2% derated for each 1 °C over 40~50°C
	<b>Storage temperature</b>	-40~+70°C
	<b>Application environment</b>	Indoor, not at the direct sunlight, dust, corrosive and flammable gases, oil, steamer, drops, salt, etc.
	<b>Altitude</b>	No derating under 1000 meters; Derating is required for above 1000 meters
	<b>Humidity</b>	Less than 95% RH, no water drops
	<b>Vibration</b>	3.5m/s <sup>2</sup> at 2~9Hz and 10m/s <sup>2</sup> at 9~200Hz (IEC60721-3-3)

### Configuration Parameter

HD20 Multifunction Inverter		Power Selection				Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range Ω	Resistor Power kW	Brake Unit
F1	HD20-2S0P2G	0.25	0.6	4.3	1.7	250~350	0.05	Built-in
F1	HD20-2S0P4G	0.4	1.0	5.8	2.5	200~300	0.05	Built-in
F2	HD20-2D0P7G	0.75	1.5	10.5	4.0	150~250	0.08	Built-in
F2	HD20-2D1P5G	1.5	2.8	18.5	7.5	100~150	0.1	Built-in
F3	HD20-2D2P2G	2.2	3.8	24.1	10.0	60~100	0.2	Built-in
F2	HD20-4T0P4G	0.4	1.0	1.8	1.4	300~400	0.08	Built-in
F2	HD20-4T0P7G	0.75	1.5	3.4	2.3	250~350	0.1	Built-in
F2	HD20-4T1P5G	1.5	2.5	5.2	3.8	200~300	0.2	Built-in
F3	HD20-4T2P2G	2.2	3.4	7.3	5.1	150~250	0.25	Built-in
F3	HD20-4T3P0G	3.0	4.8	9.5	7.2	100~150	0.3	Built-in
F3	HD20-4T4P0G	4.0	5.9	11.9	9.0	100~150	0.3	Built-in
F3	HD20-4T5P5G	5.5	8.5	15.0	13.0	80~100	0.5	Built-in

### Production and Installation Size



Size	Production Size (mm)			Installation Size (mm)				GW
	W	H	D	W1	H1	H2	d	
F1	100	183	140	70	171	160	5	1.3
F2	115	221	170	87	206	200	5	2.0
F3	135	241	170	91	226	220	5	2.4

# HD30

Vector Control Inverter

HD30 is vector control inverter with high performance and reliability and its market is on general industry



Single / Three phase 200 ~ 240V.....0.4 ~ 15kW      Three phase 200 ~ 240V.....18.5 ~ 75kW  
 Three phase 380 ~ 460V.....0.75 ~ 630kW      Three phase 500 ~ 690V.....18.5 ~ 400kW

## Product Features

<b>High performance SVC control mode</b>	Speed control accuracy: $\pm 0.5\%$ ; Speed control range: 1:100; Torque control response: <200ms Starting torque: 180% rated torque / 0.5Hz; Encoderless open loop torque control
<b>Abundant external card</b>	Expansion I/O card, function process card, IOT card
<b>Abundant industry application</b>	Process PID modulation function; Simple PLC function; Textile pendulum frequency function; Fixed length control function
<b>Excellent fast rpm tracking start mode</b>	Not depend on hardware resources. Can take to the track rpm and direction of the rotating motor in 0 second and realize smooth start without impact
<b>Excitation function</b>	No external braking resistor is required for fast braking and shutdown
<b>Good grid adaptability</b>	AVR function, PWM modulation function, instantaneous power failure without stop function
<b>Higher product power rank</b>	Product power rank reach 630kW

## Technical Data

<b>Electrical data</b>	<b>Input voltage</b>	Single / Three phase 200~240V, Three phase 380~460V, Three phase 500~690V; Fluctuation does not exceed $\pm 10\%$ , unbalanced rate <3%
	<b>Input frequency</b>	50/60Hz $\pm 5\%$
	<b>Output voltage</b>	0~input voltage
	<b>Output frequency</b>	0~400.0Hz
<b>Performance</b>	<b>Control mode</b>	V/f control, SVC control
	<b>Overload capability</b>	2 minutes for 150% rated output current; 10 seconds for 180% rated output current
	<b>Velocity resolution</b>	Digital setting: 0.01Hz, Analogue setting: 0.1% $\times$ Max. frequency
	<b>SVC control</b>	Speed control accuracy: $\pm 0.5\%$ ; Speed control range: 1:100; Torque control response: <200ms; Starting torque: 180% rated torque / 0.5Hz
<b>Input/ Output</b>	<b>Analog power supply</b>	+10V, Load capacity 100mA
	<b>Digital power supply</b>	+24V, Load capacity 200mA
	<b>Analog input</b>	AI1: Voltage 0~10V; AI2: (Selectable voltage/current) -10~+10V/0~20mA; *Select HD30-EIO to extend to 4 No.s
	<b>Analog output</b>	AO1~AO2: (Selectable voltage/current) 0~10V/0~20mA
	<b>Digital input</b>	DI1~DI6, optical decoupler input; *DI6 can be selected as high speed pulse input; *Select HD30-EIO to extend to 9 No.s
	<b>Digital output</b>	DO1~DO2, optical decoupler output; *DO2 can be used as high speed pulse output once again
	<b>Relay output</b>	R1A/R1B/R1C Contactor capacity: 250VAC/3A or 30VDC/1A; *Select HD30-EIO to extend to 4 No.s

## Technical Data

<b>Environmental characteristic</b>	<b>Running temperature</b>	-10~ +40 °C no deduction; Output current should be 2% derated for each 1 °C over 40~50°C
	<b>Storage temperature</b>	-40~+70°C
	<b>Application environment</b>	Indoor, not at the direct sunlight, dust, corrosive and flammable gases, oil, steamer, drops, salt, etc.
	<b>Altitude</b>	No derating under 1000 meters; Derating is required for above 1000 meters
	<b>Humidity</b>	Less than 95% RH, no water drops
	<b>Vibration</b>	3.5m/s <sup>2</sup> at 2~9Hz and 10m/s <sup>2</sup> at 9~200Hz (IEC60721-3-3)

## Configuration Parameter

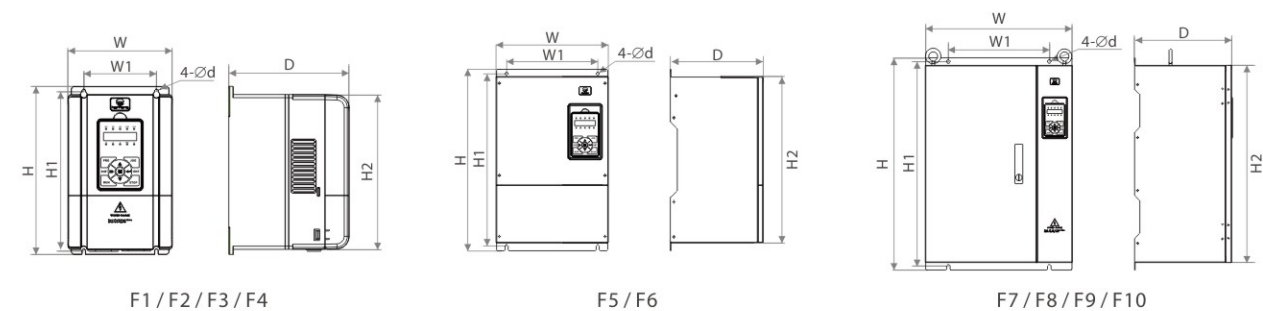
HD30 Vector Control Inverter			Power Selection			Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range $\Omega$	Resistor Power kW	Brake Unit
F1	HD30-2D0P4G	0.4	1.0	5.8/2.7 <sup>(1)</sup>	2.5	200~300	0.05	Built-in
F1	HD30-2D0P7G	0.75	1.5	10.5/4.2 <sup>(1)</sup>	4.0	150~250	0.08	Built-in
F1	HD30-2D1P5G	1.5	2.8	18.5/7.7 <sup>(1)</sup>	7.5	100~150	0.1	Built-in
F1	HD30-2D2P2G	2.2	3.8	24.1/12 <sup>(1)</sup>	10	80~100	0.2	Built-in
F2	HD30-2D3P7G	3.7	5.9	40/19 <sup>(1)</sup>	17	60~80	0.3	Built-in
F3	HD30-2D5P5G	5.5	8.5	60/28 <sup>(1)</sup>	25	40~50	0.5	Built-in
F3	HD30-2D7P5G	7.5	11	75/35 <sup>(1)</sup>	32	30~40	0.7	Built-in
F4	HD30-2D011G	11	16	100/47 <sup>(1)</sup>	45	20~25	1.0	Built-in
F5A	HD30-2D015G	15	21	130/62 <sup>(1)</sup>	55	15~20	1.5	Built-in (selectable)
F5	HD30-2T018G	18.5	24	77	70	10~15	2.0	Built-in (selectable)
F6	HD30-2T022G	22	30	92	80	10~15	2.5	Built-in (selectable)
F6	HD30-2T030G	30	39	113	110	8~10	3.2	Built-in (selectable)
F6	HD30-2T037G	37	49	156	130	6~8	3.5	Built-in (selectable)
F7	HD30-2T045G	45	59	180	160	4~6	4.5	Equipped with HDBU-4T150
F7	HD30-2T055G	55	72	214	200	4~6	4.5	Equipped with HDBU-4T150
F7	HD30-2T075G	75	100	256	253	4~6*2 <sup>(2)</sup>	4.5*2 <sup>(2)</sup>	Equipped with HDBU-4T250
F1	HD30-4T0P7G	0.75	1.5	3.4	2.3	250~350	0.1	Built-in
F1	HD30-4T1P5G	1.5	2.5	5.2	3.8	200~300	0.2	Built-in
F1	HD30-4T2P2G	2.2	3.4	7.3	5.1	150~250	0.25	Built-in
F2	HD30-4T3P7G/5P5P	3.7/5.5	5.9/8.5	11.9/15	9.0/13	100~150	0.3	Built-in
F2	HD30-4T5P5G/7P5P	5.5/7.5	8.5/11	15/19	13/17	80~100	0.5	Built-in

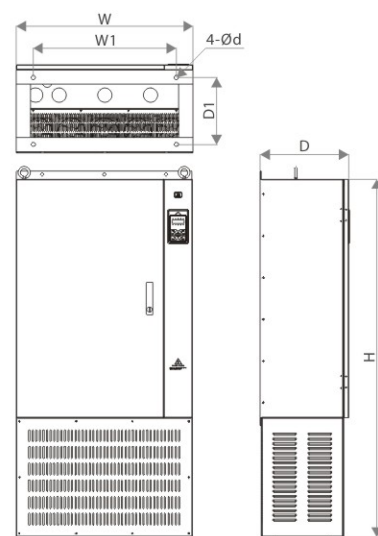
HD30 Vector Control Inverter			Power Selection			Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range Ω	Resistor Power kW	Brake Unit
F3	HD30-4T7P5G/011P	7.5/11	11/16	19/28	17/25	60~80	0.7	Built-in
F3	HD30-4T011G/015P	11/15	16/21	28/35	25/32	40~50	1.0	Built-in
F4	HD30-4T015G/018P	15/18.5	21/24	35/39	32/37	30~40	1.5	Built-in
F4	HD30-4T018G/022P	18.5/22	24/30	39/47	37/45	25~30	2.0	Built-in
F5	HD30-4T022G/030P	22/30	30/39	47/62	45/60	20~25	2.5	Built-in (selectable)
F5	HD30-4T030G/037P	30/37	39/49	62/77	60/75	15~20	3.0	Built-in (selectable)
F6	HD30-4T037G/045P	37/45	49/59	77/92	75/90	15~20	3.5	Built-in (selectable)
F6	HD30-4T045G/055P	45/55	59/72	92/113	90/110	10~15	4.5	Built-in (selectable)
F6	HD30-4T055G/075P	55/75	72/100	113/156	110/152	10~15	5.5	Built-in (selectable)
F7	HD30-4T075G/090P	75/90	100/116	156/180	152/176	8~10	7.5	Equipped with HDBU-4T150
F7	HD30-4T090G/110P	90/110	116/138	180/214	176/210	8~10	9.0	Equipped with HDBU-4T150
F7	HD30-4T110G/132P	110/132	138/167	214/256	210/253	6~8	11.0	Equipped with HDBU-4T150
F8	HD30-4T132G/160P	132/160	167/200	256/307	253/304	6~8	13.2	Equipped with HDBU-4T250
F8	HD30-4T132G/160P-C							
F8	HD30-4T160G/200P	160/200	200/250	307/385	304/380	4~6	16.0	Equipped with HDBU-4T250
F8	HD30-4T160G/200P-C							
F8	HD30-4T200G/220P	200/220	250/280	385/430	380/426	4~6	20.0	Equipped with HDBU-4T250
F8	HD30-4T200G/220P-C							
F9	HD30-4T220G/250P	220/250	280/309	430/475	426/470	6~8 *2 <sup>(2)</sup>	11.0 *2 <sup>(2)</sup>	Equipped with HDBU-4T250*2 <sup>(2)</sup>
F9	HD30-4T220G/250P-C							
F9	HD30-4T250G/280P	250/280	309/349	475/535	470/530	6~8 *2 <sup>(2)</sup>	12.5 *2 <sup>(2)</sup>	Equipped with HDBU-4T250*2 <sup>(2)</sup>
F9	HD30-4T250G/280P-C							
F9	HD30-4T280G/315P	280/315	349/398	535/609	530/600	4~6 *2 <sup>(2)</sup>	14.0 *2 <sup>(2)</sup>	Equipped with HDBU-4T250*2 <sup>(2)</sup>
F9	HD30-4T280G/315P-C							
F10	HD30-4T315G/355P	315/355	398/434	609/664	600/660	4~6 *2 <sup>(2)</sup>	16.0 *2 <sup>(2)</sup>	Equipped with HDBU-4T250*2 <sup>(2)</sup>
F10	HD30-4T315G/355P-C							
F10	HD30-4T355G/400P	355/400	434/494	664/754	660/750	4~6 *3 <sup>(2)</sup>	11.0 *3 <sup>(2)</sup>	Equipped with HDBU-4T250*3 <sup>(2)</sup>
F10	HD30-4T355G/400P-C							
F10	HD30-4T400G/450P	400/450	494/560	754/852	750/830	4~6 *3 <sup>(2)</sup>	14.0 *3 <sup>(2)</sup>	Equipped with HDBU-4T250*3 <sup>(2)</sup>
F10	HD30-4T400G/450P-C							
F11	HD30-4T500G	500	592	930	900	4-6Ω*4 <sup>(1)</sup>	12.5*4 <sup>(1)</sup>	Equipped with HDBU-4T250*4 <sup>(1)</sup>
F11	HD30-4T560G	560	658	1030	1000	4-6Ω*4 <sup>(1)</sup>	14*4 <sup>(1)</sup>	Equipped with HDBU-4T250*4 <sup>(1)</sup>
F11	HD30-4T630G	630	724	1130	1100	4-6Ω*5 <sup>(1)</sup>	12.5*5 <sup>(1)</sup>	Equipped with HDBU-4T250*5 <sup>(1)</sup>

HD30 Vector Control Inverter			Power Selection			Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range Ω	Resistor Power kW	Brake Unit
F12	HD30-6T018G	18.5	24	26	22	80~100	1.5	Equipped with HDBU-6T150
F12	HD30-6T022G	22	30	33	27	70~80	2.0	Equipped with HDBU-6T150
F12	HD30-6T030G	30	39	39	36	50~60	3.0	Equipped with HDBU-6T150
F12	HD30-6T037G	37	49	46	43	40~50	3.5	Equipped with HDBU-6T150
F12	HD30-6T045G	45	59	55	52	35~40	4.5	Equipped with HDBU-6T150
F12	HD30-6T055G	55	72	75	63	30~35	5.5	Equipped with HDBU-6T150
F13	HD30-6T075G	75	100	89	85	20~25	7.5	Equipped with HDBU-6T150
F13	HD30-6T090G	90	116	128	100	15~20	9.0	Equipped with HDBU-6T150
F13	HD30-6T110G	110	138	144	125	15~20	11.0	Equipped with HDBU-6T150
F14	HD30-6T132G	132	167	170	144	10~15	13.0	Equipped with HDBU-6T250
F14	HD30-6T160G	160	200	200	175	8~10	16.0	Equipped with HDBU-6T250
F14	HD30-6T200G	200	250	235	215	8~10	20.0	Equipped with HDBU-6T250
F15	HD30-6T220G	220	280	247	245	8~10	22.0	Equipped with HDBU-6T250
F15	HD30-6T250G	250	309	265	260	10~15*2 <sup>(1)</sup>	13.0*2 <sup>(1)</sup>	Equipped with HDBU-6T250*2 <sup>(1)</sup>
F15	HD30-6T280G	280	349	305	299	10~15*2 <sup>(1)</sup>	13.0*2 <sup>(1)</sup>	Equipped with HDBU-6T250*2 <sup>(1)</sup>
F15	HD30-6T315G	315	398	350	330	8~10*2 <sup>(1)</sup>	16.0*2 <sup>(1)</sup>	Equipped with HDBU-6T250*2 <sup>(1)</sup>
F16	HD30-6T355G	355	434	382	374	8~10*2 <sup>(1)</sup>	20.0*2 <sup>(1)</sup>	Equipped with HDBU-6T250*2 <sup>(1)</sup>
F16	HD30-6T400G	400	494	435	410	8~10*2 <sup>(1)</sup>	20.0*2 <sup>(1)</sup>	Equipped with HDBU-6T250*2 <sup>(1)</sup>

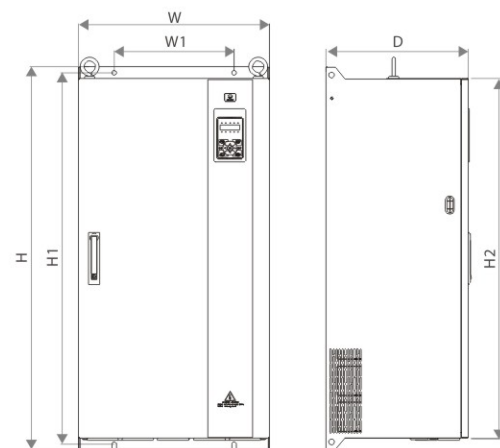
(1): The selection of the single/three phase type (HD30-2D) has 2 pieces of data: separated by "/", the front is the single-phase power input, and the later is the three-phase power input.  
 (2): \*2, \*3, \*4, \*5 means 2, 3, 4, 5 braking resistors or braking unit in parallel.

### Production and Installation Size

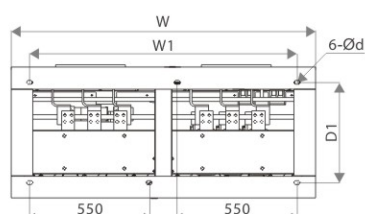




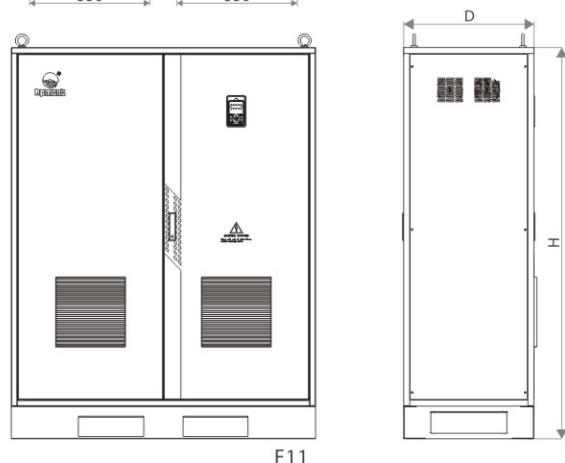
F8 / F9 / F10 With-C



F15 / F16



F12 / F13 / F14



F11

Size	Production Size (mm)			Installation Size (mm)				GW kg	
	W	H	D	W1	H1	H2	d		
F1	135	241	162	91	226	220	5	2.4	
F2	165	266	190	115	253	245	5	4.4	
F3	200	299	210	146	286	280	5	5.8	
F4	235	353	222	167	337	330	7	8.2	
F5	290	469	240	235	448	430	8	20.4	
F5A	295	448	205	235	432	418	7	19.5	
F6	380	598	290	260	576	550	10	48	
F7	500	721	330	343	696	670	12	80	
F8	620	917	360	450	890	850	12	115	
F9	740	1067	370	520	1040	1000	14	150	
F10	970	1316	380	620	1286	1250	14	190	
With-C	W	H	D	W1	D1	-	d	kg	
F8	620	1250	360	500	270	-	18	165	
F9	740	1500	370	600	280	-	18	200	
F10	970	1650	380	700	280	-	18	240	
	W	H	D	W1	D1	H1	H2	d	kg
F11	1400	1800	600	1230	460	-	-	18	630
F12	345	520	290	200	-	500	480	8	30
F13	415	650	360	320	-	626	600	10	55
F14	415	710	380	320	-	686	660	12	75
F15	510	1020	380	320	-	992	960	12	120
F16	620	1050	395	520	-	1020	977	14	150

## HD50

High-performance Vector Control Drive

HD50 is high-performance vector control drive of complex and high-accuracy transmission application, facing to many fields such as crane machine, printing machine, high-end machine tool.

### Product Features



Single phase 380 ~ 460V.....0.75 ~ 400kW

<b>Can drive asyn. and syn. Motor</b>	Asyn. and syn. motor drive can be switched by setting parameters
<b>VC control mode with higher performance</b>	Speed control accuracy: $\pm 0.05\%$ ; Speed control range: 1:1000; Torque control response: $<50\text{ms}$ ; Starting torque: 180% rated torque / 0Hz
<b>No trip running</b>	Excellent current and voltage control, advanced over-current suppression. Under any Acc. and Dec. time and shock load conditions, no over-current and trip can be realized
<b>Torque control</b>	Torque control / speed control can be switched over flexibly; Multiple torque setting methods A variety of tension control options; Built-in automatic computing module roll diameter; Advanced inertia compensation algorithm; Flexible adjustment of tension taper; Automatic detection of fracturing material
<b>Simple servo</b>	Servo location mode, principal axis orientation mode; Synchronous control, distance control
<b>Abundant encoder cards</b>	Adapt to multiple encoders with FD output

### Technical Data

Electrical data	<b>Input voltage</b>	Three-phase 380~460V; Fluctuations not exceed $\pm 10\%$ , unbalanced rate $<3\%$
	<b>Input frequency</b>	50/60Hz $\pm 5\%$
	<b>Output voltage</b>	0~input voltage
Performance	<b>Output frequency</b>	0~400.0Hz
	<b>Control mode</b>	V/f control, SVC control, VC control
	<b>Overload capability</b>	2 minutes for 150% rated output current; 10 seconds for 180% rated output current
	<b>Velocity resolution</b>	Digital setting: 0.1Hz; Analogue setting: $0.1\% \times \text{Max. frequency}$
	<b>SVC control</b>	Speed control accuracy: $\pm 0.5\%$ ; Speed control range: 1:100; Torque control response: $<200\text{ms}$ ; Starting torque: 180% rated torque / 0.5Hz
Input/Output	<b>VC control</b>	Speed control accuracy: $\pm 0.5\%$ ; Speed control range: 1:1000; Torque control response: $<50\text{ms}$ ; Starting torque: 180% rated torque / 0Hz
	<b>Analog power supply</b>	+10V, load capacity 100mA; -10V, load capacity 10mA
	<b>Digital power supply</b>	+24V, load capacity 200mA
	<b>Analog input</b>	AI1: Voltage 0~10V; AI2~AI3: (Selectable voltage/current) -10~+10V/0~20mA; *Select HD50-EIO to extend to 4 Nos.
	<b>Analog output</b>	AO1~AO2: (Selectable voltage/current) 0~10V/0~20mA
	<b>Digital input</b>	DI1~DI6, optical decoupler input; *DI6 can be selected as high speed pulse input; *Select HD50-EIO to extend to 12 Nos.
	<b>Digital output</b>	DO1~DO2, optical decoupler output; *DO2 can be used as high speed pulse output once again
Environmental characteristic	<b>Relay output</b>	R1A/R1B/R1C contactor capacity: 250VAC/3A or 30VDC/1A; *Select HD50-EIO to extend to 4 Nos.
	<b>Running temperature</b>	-10~+40°C no deduction; Output current should be 2% derated for each 1°C over 40~50°C
	<b>Storage temperature</b>	-40~+70°C
	<b>Application environment</b>	Indoor, not at the direct sunlight, dust, corrosive and flammable gases, oil, steamer, drops, salt, etc.
	<b>Altitude</b>	No derating under 1000 meters; Derating is required for above 1000 meters
	<b>Humidity</b>	Less than 95% RH, no water drops
	<b>Vibration</b>	3.5m/s <sup>2</sup> at 2~9Hz and 10m/s <sup>2</sup> at 9~200Hz (IEC60721-3-3)

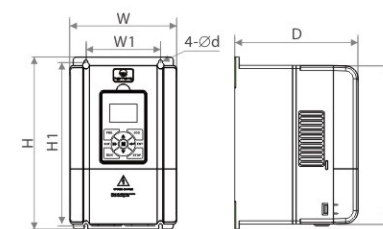


## Configuration Parameter

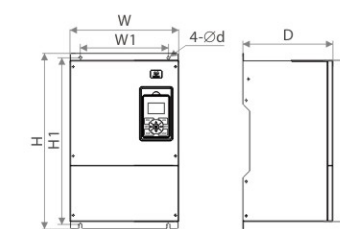
HD50 High-performance Vector Control Drive			Power Selection			Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range $\Omega$	Resistor Power kW	Brake Unit
F1	HD50-4T0P7G	0.75	1.5	3.4	2.3	250~350	0.1	Built-in
F1	HD50-4T1P5G	1.5	2.5	5.2	3.8	200~300	0.2	Built-in
F1	HD50-4T2P2G	2.2	3.4	7.3	5.1	150~250	0.25	Built-in
F2	HD50-4T3P7G	3.7	5.9	11.9	9	100~150	0.3	Built-in
F2	HD50-4T5P5G	5.5	8.5	15	13	80~100	0.5	Built-in
F3	HD50-4T7P5G	7.5	11	19	17	60~80	0.7	Built-in
F3	HD50-4T011G	11	16	28	25	40~50	1.0	Built-in
F4	HD50-4T015G	15	21	35	32	30~40	1.5	Built-in
F4	HD50-4T018G	18.5	24	39	37	25~30	2.0	Built-in
F5	HD50-4T022G	22	30	47	45	20~25	2.5	Built-in (selectable)
F5	HD50-4T030G	30	39	62	60	15~20	3.0	Built-in (selectable)
F6	HD50-4T037G	37	49	77	75	15~20	3.5	Built-in (selectable)
F6	HD50-4T045G	45	59	92	90	10~15	4.5	Built-in (selectable)
F6	HD50-4T055G	55	72	113	110	10~15	5.5	Built-in (selectable)
F7	HD50-4T075G	75	100	156	152	8~10	7.5	Equipped with HDBU-4T150
F7	HD50-4T090G	90	116	180	176	8~10	9.0	Equipped with HDBU-4T150
F7	HD50-4T110G	110	138	214	210	6~8	11.0	Equipped with HDBU-4T150
F8	HD50-4T132G	132	167	256	253	6~8	13.2	Equipped with HDBU-4T250
	HD50-4T132G-C							
F8	HD50-4T160G	160	200	307	304	4~6	16.0	Equipped with HDBU-4T250
	HD50-4T160G-C							
F8	HD50-4T200G	200	250	385	380	4~6	20.0	Equipped with HDBU-4T250
	HD50-4T200G-C							
F9	HD50-4T220G	220	280	430	426	6~8*2 <sup>(1)</sup>	11.0*2 <sup>(1)</sup>	Equipped with HDBU-4T250*2 <sup>(1)</sup>
	HD50-4T220G-C							
F9	HD50-4T250G	250	309	475	470	6~8*2 <sup>(1)</sup>	12.5*2 <sup>(1)</sup>	Equipped with HDBU-4T250*2 <sup>(1)</sup>
	HD50-4T250G-C							
F9	HD50-4T280G	280	349	535	530	4~6*2 <sup>(1)</sup>	14.0*2 <sup>(1)</sup>	Equipped with HDBU-4T250*2 <sup>(1)</sup>
	HD50-4T280G-C							
F10	HD50-4T315G	315	398	609	600	4~6*2 <sup>(1)</sup>	16.0*2 <sup>(1)</sup>	Equipped with HDBU-4T250*2 <sup>(1)</sup>
	HD50-4T315G-C							
F10	HD50-4T355G	355	434	664	660	4~6*3 <sup>(1)</sup>	11.0*3 <sup>(1)</sup>	Equipped with HDBU-4T250*3 <sup>(1)</sup>
	HD50-4T355G-C							
F10	HD50-4T400G	400	494	754	750	4~6*3 <sup>(1)</sup>	14.0*3 <sup>(1)</sup>	Equipped with HDBU-4T250*3 <sup>(1)</sup>
	HD50-4T400G-C							

(1): \*2, \*3 means 2 or 3 braking resistors or braking units in parallel.

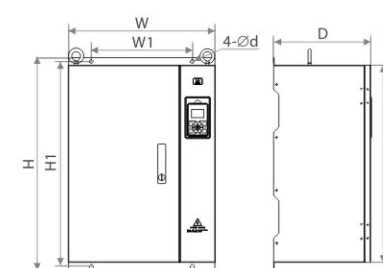
## Production and Installation Size



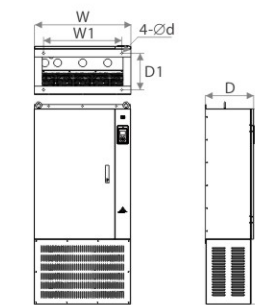
F1 / F2 / F3 / F4



F5 / F6



F7 / F8 / F9 / F10



F8 / F9 / F10 With-C

Size	Production Size (mm)			Installation Size (mm)				GW kg
	W	H	D	W1	H1	H2	d	
F1	135	241	162	91	226	220	5	2.4
F2	165	266	190	115	253	245	5	4.4
F3	200	299	210	146	286	280	5	5.8
F4	235	353	222	167	337	330	7	8.2
F5	290	469	240	235	445	430	8	20.4
F6	380	598	290	260	576	550	10	48
F7	500	721	330	343	696	670	12	80
F8	620	917	360	450	890	850	12	115
F9	740	1067	370	520	1040	1000	14	150
F10	970	1316	380	620	1286	1250	14	190
With-C	W	H	D	W1	D1	-	d	kg
F8	620	1250	360	500	270	-	18	165
F9	740	1500	370	600	280	-	18	200
F10	970	1650	380	700	280	-	18	240

# HD3N

High-performance Smart Inverter

HD3N is small-sized inverter with high performance which facing to general industry



Three phase 380 ~ 460V .....7.5 ~ 400kW

## Product Features

<b>High performance, small size</b>	High-performance SVC control with high accuracy; Small size, about 70% of general inverter, saving installation space
<b>Abundant in industry application</b>	Process PID regulatory function; Simple PLC function; Textile pendulum frequency function; Fixed length control function; Multi-speed control
<b>Energy brake unit</b>	Can be built into machine for 75kW and below

## Technical Data

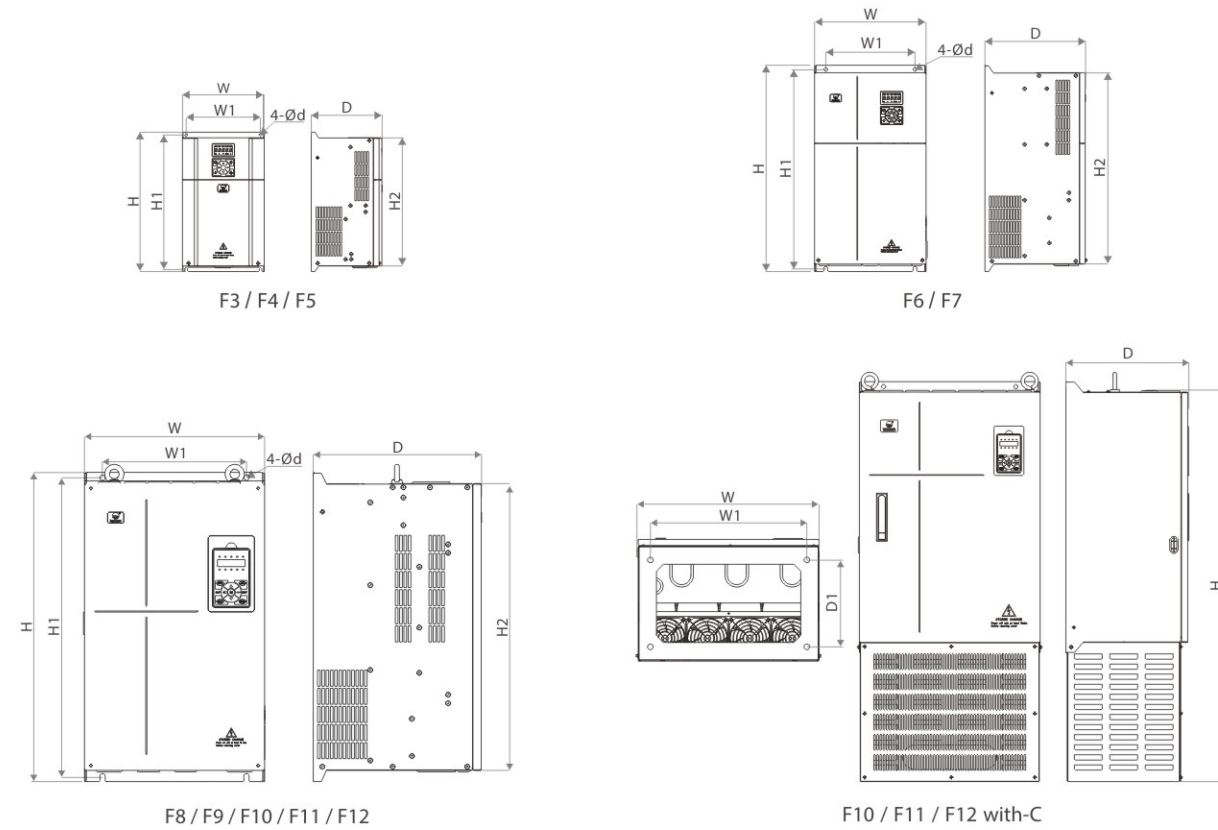
Electrical data	Input voltage	Three-phase 380~460V; Fluctuations not exceed $\pm 10\%$ , unbalanced rate $< 3\%$
	Input frequency	50/60Hz $\pm 5\%$
	Output voltage	0~input voltage
	Output frequency	0~400.0Hz
Performance	Control mode	V/f control, SVC control
	Overload capability	2 minutes for 150% rated output current; 10 seconds for 180% rated output current
	Velocity resolution	Digital setting: 0.1Hz; Analogue setting: 0.1% $\times$ Max.frequency
	SVC control	Speed control accuracy: $\pm 0.5\%$ ; speed control range: 1:100; Torque control response: $< 200\text{ms}$ ; Starting torque: 180% rated torque / 0.5Hz
Input/Output	Analog power supply	+10V, load capacity 100mA
	Digital power supply	+24V, load capacity 200mA
	Analog input	AI1: Voltage 0~10V; AI2: (Selectable voltage/current) $\sim 10\text{V}/0\sim 20\text{mA}$
	Analog output	AO1~AO2: (Selectable voltage/current) 0~10V/0~20mA
	Digital input	DI1~DI6, optical decoupler input; *DI6 can be selected as high speed pulse input
	Digital output	DO1~DO2, optical decoupler output; *DO2 can be used as high speed pulse output once again
	Relay output	R1A/R1B/R1C Contactor capacity: 250VAC/3A or 30VDC/1A
Environmental characteristic	Running temperature	-10~+40 $^{\circ}\text{C}$ no deduction; Output current should be 2% derated for each 1 $^{\circ}\text{C}$ over 40~50 $^{\circ}\text{C}$
	Storage temperature	-40~+70 $^{\circ}\text{C}$
	Application environment	Indoor, not at the direct sunlight, dust, corrosive and flammable gases, oil, steamer, drops, salt, etc.
	Altitude	No derating under 1000 meters; Derating is required for above 1000 meters
	Humidity	Less than 95% RH, no water drops
	Vibration	3.5m/s <sup>2</sup> at 2~9Hz and 10m/s <sup>2</sup> at 9~200Hz (IEC60721-3-3)

## Configuration Parameter

HD3N High-performance Smart Inverter			Power Selection			Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range $\Omega$	Resistor Power kW	Brake Unit
F3	HD3N-4T7P5G	7.5	11	19	17	60~80	0.8	Built-in
F3	HD3N-4T011G	11	16	28	25	40~50	1.2	Built-in
F4	HD3N-4T015G	15	21	35	32	30~40	1.5	Built-in
F4	HD3N-4T018G	18.5	24	39	37	25~30	2	Built-in
F5	HD3N-4T022G	22	30	47	45	20~25	2.5	Built-in
F5	HD3N-4T030G	30	39	62	60	15~20	3.0	Built-in
F6	HD3N-4T037G	37	49	77	75	15~20	4.0	Built-in (selectable)
F6	HD3N-4T045G	45	59	92	90	10~15	4.5	Built-in (selectable)
F7	HD3N-4T055G	55	72	113	110	10~15	5.5	Built-in (selectable)
F7	HD3N-4T075G	75	100	156	152	8~10	7.5	Built-in (selectable)
F8	HD3N-4T090G	90	116	180	176	8~10	9	Equipped with HDBU-4T150
F8	HD3N-4T110G	110	138	214	210	6~8	11	Equipped with HDBU-4T150
F9	HD3N-4T132G	132	167	256	253	6~8	13.2	Equipped with HDBU-4T250
F9	HD3N-4T160G	160	200	307	304	4~6	16	Equipped with HDBU-4T250
F10	HD3N-4T200G	200	250	385	380	4~6	20.0	Equipped with HDBU-4T250
	HD3N-4T200G-C							
F10	HD3N-4T220G	220	280	430	426	6~8*2 <sup>(1)</sup>	11.0*2 <sup>(1)</sup>	Equipped with HDBU-4T250*2 <sup>(1)</sup>
	HD3N-4T220G-C							
F11	HD3N-4T250G	250	309	475	470	6~8*2 <sup>(1)</sup>	12.5*2 <sup>(1)</sup>	Equipped with HDBU-4T250*2 <sup>(1)</sup>
	HD3N-4T250G-C							
F11	HD3N-4T280G	280	349	535	530	4~6*2 <sup>(1)</sup>	14.0*2 <sup>(1)</sup>	Equipped with HDBU-4T250*2 <sup>(1)</sup>
	HD3N-4T280G-C							
F12	HD3N-4T315G	315	398	609	600	4~6*2 <sup>(1)</sup>	16.0*2 <sup>(1)</sup>	Equipped with HDBU-4T250*2 <sup>(1)</sup>
	HD3N-4T315G-C							
F12	HD3N-4T355G	355	434	664	660	4~6*3 <sup>(1)</sup>	11.0*3 <sup>(1)</sup>	Equipped with HDBU-4T250*3 <sup>(1)</sup>
	HD3N-4T355G-C							
F12	HD3N-4T400G	400	494	754	750	4~6*3 <sup>(1)</sup>	14.0*3 <sup>(1)</sup>	Equipped with HDBU-4T250*3 <sup>(1)</sup>
	HD3N-4T400G-C							

(1): \*2, \*3 means 2 or 3 braking resistors or braking units in parallel.

## Production and Installation Size



Size	Production Size (mm)			Installation Size (mm)				GW kg
	W	H	D	W1	H1	H2	d	
F3	140	260	155	122	248	235	6	5.4
F4	180	298	175	160	284	270	6	8.3
F5	220	375	190	200	360	345	7	13
F6	260	440	230	220	420	403	8	21
F7	300	555	270	240	535	515	10	36
F8	338	580	315	270	560	538	10	41.5
F9	400	840	340	320	816	792	10	73
F10	520	852	350	380	824	792	12	95
F11	620	880	360	480	848	823	14	120
F12	780	1350	394	620	1320	1281	14	260
With-C	W	H	D	W1	D1	-	d	kg
F10	520	1192	350	450	250	-	16	104
F11	620	1223	360	550	260	-	16	131
F12	780	1681	394	620	290	-	18	274

## HD31

Multi-pump Water Supply Special inverter

HD31 is vector control inverter that dedicated to multi-pump water supply industry and developed based on HD30



Three phase 380 ~ 460V.....5.5 ~ 132kW

## Product Features

<b>Multiple pumps can be driven by one inverter</b>	Max.7 water pump can be driven by one inverter
<b>Constant pressure water supply in timing periods</b>	Max.12 timing periods can be set to adjust pipe net pressure
<b>Power frequency/varying frequency pump timing rotation control</b>	Timing rotation of power frequency pump or varying frequency pump can be realized
<b>Smooth water pump switching function</b>	Ensure stable pipe net pressure
<b>Various energy-saving sleep modes</b>	More energy saving options
<b>Perfect detection function</b>	Water level testing, pipe network pressure testing
<b>Automatic exclusion for fault pump</b>	Can automatically eliminate the faulty inverter pump in the system and start the next pump at the same time

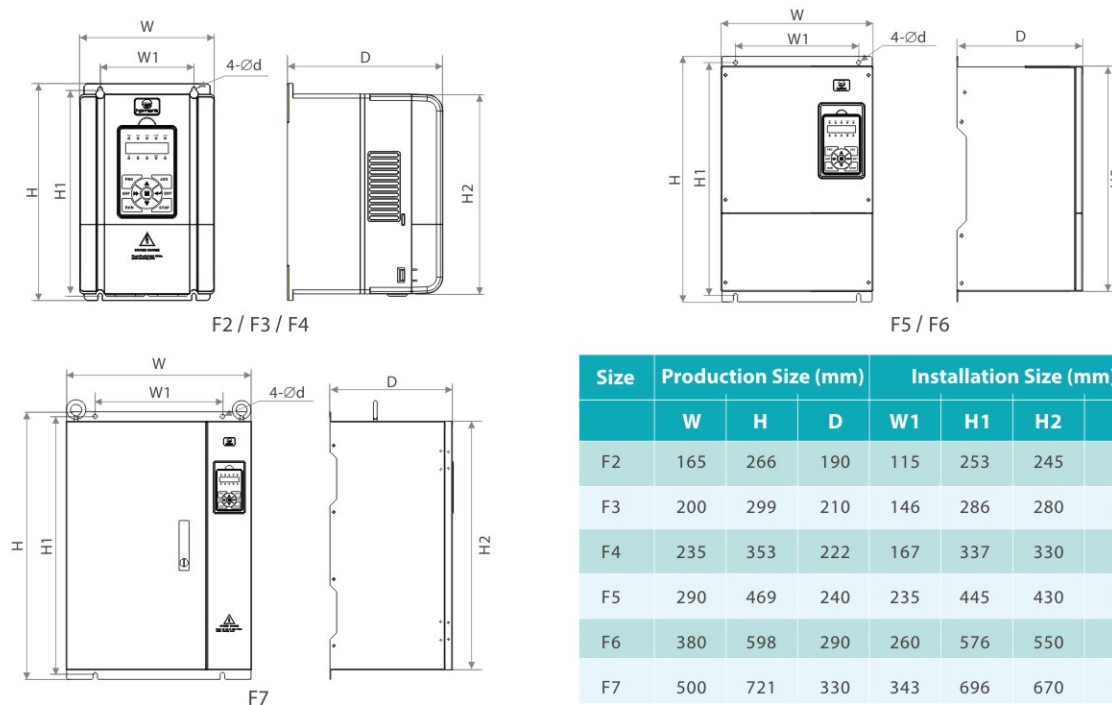
## Technical Data

Electrical data	<b>Input voltage</b>	Three-phase 380~460V; Fluctuations not exceed $\pm 10\%$ , unbalanced rate $<3\%$
	<b>Input frequency</b>	50/60Hz $\pm 5\%$
	<b>Output voltage</b>	0~input voltage
Performance	<b>Output frequency</b>	0~400.00Hz
	<b>Control mode</b>	V/f control
	<b>Overload capability</b>	5 minutes for 120% rated output current; 35 seconds for 135% rated output current
Input/Output	<b>Velocity resolution</b>	Digital setting: 0.1Hz; Analogue setting: 0.1% $\times$ Max.frequency
	<b>Analog power supply</b>	+10V, load capacity 100mA
	<b>Digital power supply</b>	+24V, load capacity 200mA
	<b>Analog input</b>	AI1: Voltage 0~10V; AI2~AI4: (Selectable voltage/current) -10~+10V/0~20mA
	<b>Analog output</b>	AO1~AO2: (Selectable voltage/current) 0~10V/0~20mA
	<b>Digital input</b>	DI1~DI9, optical decoupler input; *DI6 can be selected as high speed pulse input
	<b>Digital output</b>	DO1~DO2, optical decoupler output; *DO2 can be used as high speed pulse output once again
Environmental characteristic	<b>Relay output</b>	R1A/R1B/R1C R2A/R2C~R10A/R10C Contactor capacity: 250VAC/3A or 30VDC/1A
	<b>Running temperature</b>	-10~+40 $^{\circ}$ C no deduction; Output current should be 2% derated for each 1 $^{\circ}$ C over 40~50 $^{\circ}$ C
	<b>Storage temperature</b>	-40~+70 $^{\circ}$ C
	<b>Application environment</b>	Indoor, not at the direct sunlight, dust, corrosive and flammable gases, oil, steamer, drops, salt, etc.
	<b>Altitude</b>	No derating under 1000 meters; Derating is required for above 1000 meters
	<b>Humidity</b>	Less than 95% RH, no water drops
	<b>Vibration</b>	3.5m/s <sup>2</sup> at 2~9Hz and 10m/s <sup>2</sup> at 9~200Hz (IEC60721-3-3)

## Configuration Parameter

HD31 Multi-pump Water Supply Special Inverter			Power Selection			Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range Ω	Resistor Power kW	Brake Unit
F2	HD31-4T5P5P	5.5	8.5	15	13	100~150	0.3	Built-in
F2	HD31-4T7P5P	7.5	11	19	17	80~100	0.5	Built-in
F3	HD31-4T011P	11	16	28	25	60~80	0.7	Built-in
F3	HD31-4T015P	15	21	35	32	40~50	1.0	Built-in
F4	HD31-4T018P	18.5	24	39	37	30~40	1.5	Built-in
F4	HD31-4T022P	22	30	47	45	25~30	2.0	Built-in
F5	HD31-4T030P	30	39	62	60	20~25	2.5	Built-in (selectable)
F5	HD31-4T037P	37	49	77	75	15~20	3.0	Built-in (selectable)
F6	HD31-4T045P	45	59	92	90	15~20	3.5	Built-in (selectable)
F6	HD31-4T055P	55	72	113	110	10~15	4.5	Built-in (selectable)
F6	HD31-4T075P	75	100	156	152	10~15	5.5	Built-in (selectable)
F7	HD31-4T090P	90	116	180	176	8~10	7.5	Equipped with HDBU-4T150
F7	HD31-4T110P	110	138	214	210	8~10	9.0	Equipped with HDBU-4T150
F7	HD31-4T132P	132	167	256	253	6~8	11.0	Equipped with HDBU-4T150

## Production and Installation Size



## HD3Z

Mine Special Inverter

HD3Z is high protection rank inverter used in serious environment of mines, metallurgy, chemicals



Three phase 280 ~ 460V.....55 ~ 250kW

## Product Features

<b>High protection rank</b>	Double structure protection, IP54 protection for the whole machine and IP56 protection for the heart section
<b>Built-in temperature and humidity sensor</b>	Real-time detection for inverter using environment in temperature and humidity and displayed in keypad
<b>Built-in motor dehumidification</b>	Before running, the inverter will make dehumidification according to the working environment to save cost
<b>Timing control function design</b>	Built-in timer, programmable time setting, inverter timing control, frequency setting switch and automatic start and stop
<b>Built-in OBT</b>	OBT, MODBUS protocol, suitable for ultra long-distance communication
<b>Built-in brake unit and resistor</b>	Saving system cost and convenient for maintenance
<b>LCD keypad design</b>	Convenient for using with english display

## Technical Data

<b>Electrical data</b>	<b>Input voltage</b>	Rated work: Three-phase 380V; Max. range: Three-phase 280~460V; Unbalanced rate < 3%
	<b>Input frequency</b>	50/60Hz ± 5%
	<b>Output voltage</b>	0~input voltage
	<b>Output frequency</b>	0~400.0Hz
<b>Performance</b>	<b>Control mode</b>	V/f control
	<b>Overload capability</b>	2 minutes for 150% rated output current; 10 seconds for 180% rated output current
	<b>Velocity resolution</b>	Digital setting: 0.01Hz; Analogue setting: 0.1% × Max.frequency
<b>Input/Output</b>	<b>Analog power supply</b>	+10V, load capacity 100mA
	<b>Digital power supply</b>	+24V, load capacity 200mA
	<b>Analog input</b>	AI1: Voltage 0~10V; AI2: Current 0~20mA
	<b>Analog output</b>	AO1: Voltage 0~10V; AO2: Current 0~20mA
	<b>Digital input</b>	DI1~DI6, optical decoupler input; *DI6 can be selected as high speed pulse input
	<b>Digital output</b>	DO1
	<b>Relay output</b>	R1A/R1B/R1C R2A/R2C~R7A/R7C Contactor capacity: 250VAC/3A or 30VDC/1A
	<b>Communication</b>	Optical, TX, RX, MODBUS protocol; HD3Z built-in optical end machine is the single mode ST interface and user optical flange interface is ST

## Technical Data

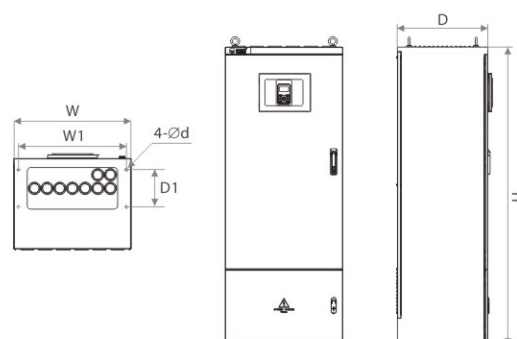
Environmental characteristic	Running temperature	-10~+55°C
	Storage temperature	-40~+70°C
	Application environment	High temperature and humidity places with conductive dust, such as factory, mine etc.
	Humidity	0~100%RH, there may be water droplets condensation
	Vibration	3.5m/s <sup>2</sup> at 2~9Hz and 10m/s <sup>2</sup> at 9~200Hz (IEC60721-3-3)
	Protection level	IP54
Pollution level	Third level (conductive pollution)	

## Configuration Parameter

HD3Z Mine Special Inverter			Power Selection			Braking Resistor (Recommendation)		
Size	Model	Motor Power kW	Rated Capacity kVA	Rated Input Current A	Rated Output Current A	Resistor Range Ω	Resistor Power kW	Brake Unit
FA	HD3Z-4T055	55	72	113	110	Built-in	Built-in	Built-in
FA	HD3Z-4T075	75	100	156	152	Built-in	Built-in	Built-in
FA	HD3Z-4T090	90	116	180	176	Built-in	Built-in	Built-in
FB	HD3Z-4T110	110	138	214	210	Built-in	Built-in	Built-in
FB	HD3Z-4T132	132	167	256	253	Built-in	Built-in	Built-in
FB	HD3Z-4T160	160	200	307	304	Built-in	Built-in	Built-in
FC	HD3Z-4T200	200	250	385	380	Built-in	Built-in	Built-in
FC	HD3Z-4T220	220	280	430	426	Built-in	Built-in	Built-in
FC	HD3Z-4T250	250	309	475	470	Built-in	Built-in	Built-in

HD3Z with built-in brake unit and resistor is only used in situation that brake frequency is less than 10%.

## Production and Installation Size



Size	Production Size (mm)			Installation Size (mm)				GW
	W	H	D	W1	D1	d	kg	
FA	550	1650	500	497	206	14	205	
FB	650	1650	500	597	206	14	240	
FC	850	1650	500	797	206	14	310	

## HDRU

Power Regenerative Unit

HDRU series can feedback the regenerative power to power network so as to reduce the power consumption, and achieve energy saving and environmental protection.



## Product Features

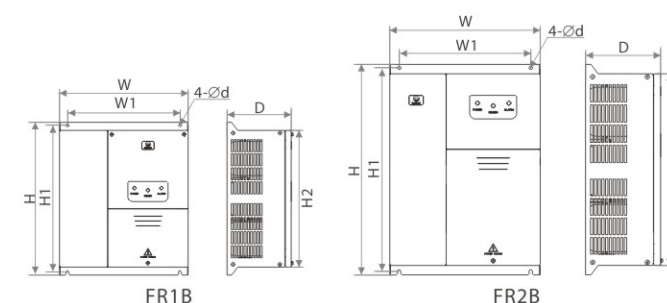
<b>Feedback function</b>	Can replace brake unit and resistor
<b>Energy saving</b>	Digital control, low harmonic pollution, high power factor
<b>Safety and reliability</b>	Built-in three-phase feedback inductance, positive / negative bus's fuses
<b>Protection function</b>	With perfect over-current, over-voltage, over-temperature, overload protection and other protections
<b>Easy to operate</b>	Simply connecting three power supply cables and two busses to run automatically
<b>Status display</b>	There are three indicators of power-on, regenerative and fault
<b>Parameter setting</b>	Can set the parameters and check the status by the optional display panel
<b>Communication function</b>	Built-in Modbus communication interface can constitute a remote monitoring system and timely monitor the HDRU operating status
<b>Power saving indication</b>	Record and check the total power

## Configuration Parameter



HDRU Power Regenerative Unit				Adaptive Inverter	
Size	Model	Rated Feedback Current (A)	Max. Feedback Current (A)	Voltage (VAC)	Power (kW)
FR1B	HDRU-4T025-B	25	50	380	7.5~18
FR2B	HDRU-4T050-B	50	100	380	22~37
FR2B	HDRU-4T075-B	75	150	380	45~75

## Production and Installation Size



Size	Production Size (mm)			Installation Size (mm)				GW
	W	H	D	W1	H1	H2	d	
FR1B	320	380	160	280	365	340	7	26
FR2B	320	555	200	280	535	510	10	34

## HDBU

Energy Brake Unit

HDBU series are used to consume energy feedback to inverter during motor deceleration and realize quick energy brake control for motor



### Product Features

<b>Energy brake</b>	Should be equipped with brake resistor
<b>Adaptive voltage range</b>	Various brake resistor can be selected: 380/690/750/1190VDC
<b>External</b>	Support main and slave machine parallel to increase brake efficiency

### Configuration Parameter

Adaptive inverter voltage class  
4T = 200~460VAC  
6T = 500~690VAC

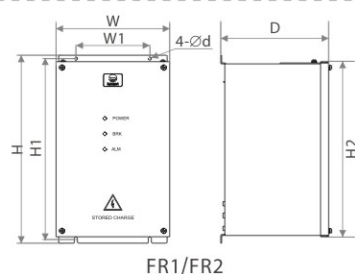
**HDBU - 4T 050**

Product series

Max. continuous brake current

HDBU Energy Brake Unit				Adaptive inverter
Size	Model	DC Input Voltage (VDC)	Max. Continuous Brake Current (A)	Voltage (VAC)
FR1	HDBU-4T050	250~800	50	200~460
FR1	HDBU-4T075	250~800	75	200~460
FR1	HDBU-4T100	250~800	100	200~460
FR2	HDBU-4T150	250~800	150	200~460
FR2	HDBU-4T250	250~800	250	200~460
FR2	HDBU-6T150	850~1200	150	500~690
FR2	HDBU-6T250	850~1200	250	500~690

### Production and Installation Size

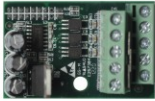








FR1/FR2

Size	Production Size (mm)			Installation Size (mm)				GW kg
	W	H	D	W1	H1	H2	d	
FR1	138	190	140	120	180	176	4.5	3
FR2	185	305	180	120	292	284	5	8

## Accessories

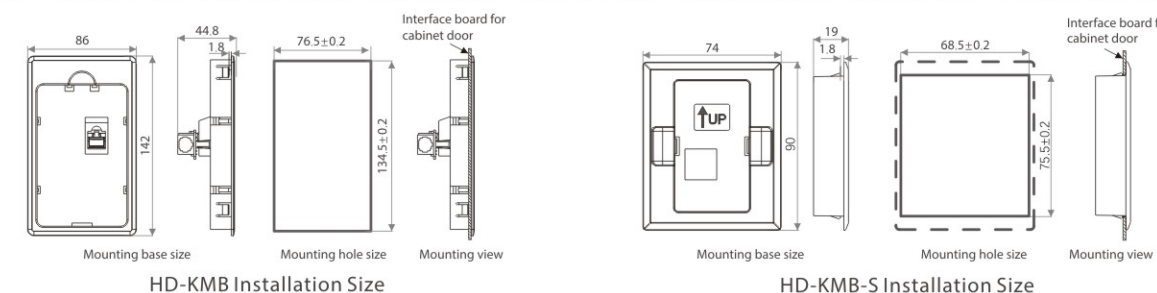
Model	Photo	Specification	HD09 HD09-S	HD20	HD30	HD31	HD3N	HD50
<b>Expansion card</b>								
HD30-EIO Expansion IO card		1 analog input, selectable voltage / current -10~10V/0~20mA. 1 analog differential input, selectable voltage / current -10~10V/0~20mA. 3 programmable bipolar selectable digital inputs, voltage 0~30VDC. 3 programmable relay output, contactor capacity 250VAC/3A or 30VDC/1A. 1 24VDC external power supply, max. output current 200mA			●			
HD50-EIO Expansion IO card		1 analog differential input, selectable voltage / current -10~10V/0~20mA. 6 programmable bipolar selectable digital inputs, voltage 0~30VDC. 3 programmable relay output, contactor capacity 250VAC/3A or 30VDC/1A. 1 24VDC external power supply, max. output current 200mA						●
HD-PFT-A Pro-drive Expansion Card		4 analog inputs, selectable voltage / current -10V~10V/0~20mA. 8 programmable bipolar selectable digital inputs, voltage 0~30VDC. 2 analog outputs, selectable voltage / current -10V~10V/0~20mA. 8 programmable relay output, contactor capacity 250VAC/3A or 30VDC/1A. 2 PT100 temperature control inputs. 2 high-speed pulse outputs, 0~50kHz. 2 modbus communication ports, 1 CAN communication port			●			●
<b>Communication card</b>								
HDFB- PROFIBUS-DP Communication card		PROFIBUS-DP Communication card	▲	▲	▲	▲	▲	▲
HDFB-CAN Communication card		CAN Communication card			●			●
HD-RJ45-IO		Modbus communication pinboard can transfer Modbus communication signals from standard RJ45 terminal to 3PIN terminal	▲	▲	▲	▲	▲	▲

Model	Photo	Specification	HD09 HD09-S	HD20	HD30	HD31	HD3N	HD50
<b>Encoder card</b>								
HD-PG1-OC OC Encoder card		Adaptive to asynchronous motors. Support differential, OC, push-pull input; Support ABZ signal. Provide 12V power supply						●
HD-PG2-OC-FD OC encoder card with FD output		Adaptive to asynchronous motors. Support for differential, OC, push-pull inputs. Provide 12V power supply; With FD output						●
HD-PG5-SINCOS-FD sincos encoder card with FD output		Adaptive to synchronous motors. Support for SINCOS signal inputs. Provide 5V power supply; With FD output						●
HD-PG6-UVW-FD long line drive encoder card with FD output		Adaptive to synchronous motors. Support long-line input. Support ABZ, UVW signal. Provide 5V power supply; With FD output						●
HD-PG8-ABZ long line drive encoder card		Adaptive to asynchronous motors. Support long-line drive input; Support ABZ signal. Provide 5V power supply; With FD output						●
HD-PG10-RES-FD rotation transformer encoder card		Adaptive to synchronous motors. Support feedback input signal SIN+/-, COS+/-. Support excitation output signal EXC+/-						●
HD-PG11-SC-FD series communication encoder card		Adaptive to synchronous motors. Support serial communication; Support Endat protocol. Provide 5V power supply						●

Model	Photo	Specification	HD09 HD09-S	HD20	HD30	HD31	HD3N	HD50
<b>Keypad and mounting accessories</b>								
HD-LCD keypad		LCD large screen English display	▲	●	●	●	▲	Built-in
HD-LED keypad		5 LED digital display	▲	●	Built-in	Built-in	▲	●
HD-LED-P keypad with potentiometer		5 LED digital display and with 1 potentiometer analog input, 9 buttons	▲	Built-in	●	●	▲	●
HD-LED-P-S small-sized keypad with potentiometer		Small 5 LED digital display with 1 potentiometer analog input	▲	▲	▲	▲	▲	▲
HD-KMB external mounting base of keypad		Adaptive to keypad: HD-LCD; HD-LED; HD-LED-P; HD-LED-L (The hole size is shown below)	▲	▲	▲	▲	▲	▲
HD-KMB-S small external mounting base of keypad		Adaptive to keypad: HD-LED-P-S (The hole size is shown below)	▲	▲	▲	▲	▲	▲
HD-CAB-1M HD-CAB-2M HD-CAB-3M HD-CAB-6M		External cable 1 meter / 2 meter / 3 meter / 6 meter	▲	▲	▲	▲	▲	▲

Note: "●" is built-in selection; "▲" is built-out selection.

### Mounting Hole Size (mm)



## IPLC

Intelligent Controller

Flexible networking-support bus expansion, abundant communication interface, program hardware encryption protection



### Main module product features

<b>Flexible networking-support bus expansion</b>	Support 4 I/O expansion modules and pro-drive to expand
<b>Abundant communication interface</b>	2 RS485 communication interfaces, 1 CAN bus interface, 1 RS422 communication interface
<b>Program hardware encryption protection</b>	Safer Hardware encryption can prevent programs from being cracked and leaked
<b>Abundant configuration</b>	Support analog input and output, analog modules can be saved
<b>Support high speed pulse</b>	2 100kHz high speed pulse inputs, 2 100kHz high speed pulse outputs

### Technical Data

#### General Data

<b>Ambient temperature</b>	Running: -10~55°C; Storage: -40~70°C		
<b>Humidity</b>	Less than 95% RH, no water drops.		
<b>Altitude</b>	Running: <2000m; Storage: 0-3000m (not less than 70kPa)		
<b>Pollution level</b>	Pollution level 2		
<b>Vibration</b>	Frequency	Requirement	
		Sin	Random
	5Hz ≤ f < 8.4Hz	1.75mm displacement, constant amplitude	3.5mm displacement, constant amplitude
	5Hz ≤ f < 8.4Hz	0.5g acceleration, constant amplitude	1.0g acceleration, constant amplitude
<b>Impact</b>	The amplitude is 15g, the action time is 11ms, and three times in the X, Y, and Z directions under a sine half-wave pulse		
<b>Breakdown voltage</b>	1,500VAC ( (P1)-ALL), 1,500VAC (P2)-ALL), 500VDC (ELV-ALL)		
<b>Electromagnetic Compatibility</b>	ESD: 8kV air discharge; EFT: Power line (2kV), I/O (1kV), analog (1kV),		
<b>Ground</b>	The third type of grounding (not grounded with the high-voltage system)		
<b>Application environment</b>	Non-corrosive, flammable gas, less conductive dust		

#### Main Module Data

<b>Power data</b>	<b>Power voltage</b>	100~240VAC (-10~10%), 50/60Hz		
	<b>Action data</b>	When the power supply rises to 90~100VAC, the intelligent controller starts to operate. When the power supply drops to 88VAC, the intelligent controller stops		
	<b>Allow instantaneous power-off time</b>	Continue to run when the power supply instantaneous failure is within 10ms		
	<b>Power fuse capacity</b>	3.15A/250VAC		
	<b>Impulse current</b>	≤ 12A		
	<b>Power consumption</b>	30W		
	<b>DC24V current output</b>	250mA		
<b>Digital input data</b>	<b>Power protection</b>	DC24V output with short circuit protection		
	<b>Input connection method</b>	Barrier terminal (distance: 7.62mm)		
	<b>Input signal form</b>	Contact input or source (drain) mode		
	<b>Circuit insulation</b>	Optical coupler insulation		
	<b>Input action display</b>	LED is on when input ON, LED is off when input OFF		
	<b>Input voltage range</b>	15~30VDC		
	<b>Common terminal</b>	One common terminal S/S		
	<b>Input points</b>	16		
	<b>Input No.</b>	X0, X1	X2~X7, X10~X17	
	<b>Input type</b>	High speed pulse input	Ordinary digital input	
	<b>ON: input current</b>	Greater than 7.5mA (>15V)	Greater than 3.5mA (>15V)	
	<b>OFF: input current</b>	Less than 2.5mA (<5V)	Less than 1.2mA (<5V)	
	<b>Input resistance</b>	3.3kΩ	4.7kΩ	
	<b>Hardware filtering time</b>	/	X2~X3 is about 20us, X4~X17 is about 200us	
	<b>Support pulse</b>	≤ 100kHz	/	
	<b>Digital output data</b>	<b>Output connection method</b>	Barrier terminal (distance: 7.62mm)	
<b>Output action display</b>		LED is on when output ON, LED is off when input OFF		
<b>Output common terminal</b>		One common terminal for each four groups, and the groups isolated from each other		
<b>Circuit insulation</b>		Optical coupler insulation	Mechanical insulation	
<b>Output points</b>		16		
<b>Output No.(hybrid type)</b>		Y0, Y1	Y2, Y3 / Y4~Y7	Y10~Y17
<b>Output No.(relay type)</b>		/	/	Y0~Y3, Y4~Y7, Y10~Y17
<b>Output type</b>		High speed pulse output	Ordinary transistor output	Relay output
<b>Response time</b>		/	ON-OFF response time <0.2ms	ON-OFF response time <5ms
<b>Support frequency</b>		≤ 100kHz	≤ 1kHz	/
<b>External voltage data</b>		5-30VDC		
<b>Max. load</b>	<b>Resistive</b>	50mA/1 point		
	<b>Inductive</b>	1.2W ( 24VDC )		
	<b>Bulb</b>	0.2W ( 24VDC )		
		250VAC, below 30VDC		
		3A/1 point (5A/COM)		
		80W (AC)		
		20W (DC)/100W (AC)		

Note: 1. Use a wire of 2mm or more for the power cord to prevent voltage drop. 2. Avoid access to power or cable with high voltage and high current. 3. Do not exceed the power supply voltage and make sure the polarity is correct.



### Main Module Data

Analog input data	Input points	2	
	Input No.	VI1	VI2
	Input common terminal	V-	
	Input connection method	Barrier terminal (distance: 7.62mm)	
	Input form	Selectable voltage / current	
	Input range	Voltage: 0~10V	Current: 0~20mA
	Input resistance	Voltage: 31kΩ	Current: 500Ω
	Resolution	10mV	10uA
	Array input	0~1000	0~2000
	Comprehensive precision	± 3% full range	
	Analog output data	Output points	2
Output No.		VO1	VO2
Output common terminal		V-	
Output connection method		Barrier terminal (distance: 7.62mm)	
Output form		Selectable voltage / current	
Output range		Voltage: 0~10V	Current: 0~20mA
Output load		Voltage: 2kΩ~1MΩ	Current: 0~500Ω
Resolution		10mV	10uA
Communication interface	RS485 communication interface	MOD1+ (485+), MOD1- (485-); MOD2+ (485+), MOD2- (485-)	
	RS422 communication interface	1: RXD- 2: RXD+ 3: GND 4: TXD- 5: VCC 7: TXD+	
	CAN communication interface	CAN+, CAN-	

### I/O Expansion Module

Input data	Input points	8	
	Input No.	X0~X7	
	Input connection method	Barrier terminal (distance: 7.62mm)	
	Input signal form	Contact input or source (drain) mode	
	Circuit insulation	Optical coupler insulation	
	Input action display	LED is on when input ON	
	Input voltage range	15~30VDC	
	Common terminal	One common terminal S/S	
	ON: Input current	Greater than 3.5mA (>15V)	
	OFF: Input current	Less than 1.2mA (<5V)	
	Input resistance	4.7kΩ	
	Hardware filtering time	About 200us	

### I/O Expansion Module

Output data	Input points	8		
	Input No.	Y0~Y7		
	Input connection method	Barrier terminal (distance: 7.62mm)		
	Input action display	LED is on when input ON		
	Output common terminal	One common terminal for each four groups, and the groups isolated from each other		
	Output type	Transistor	Relay output	
	Circuit insulation	Optical coupler insulation	Mechanical insulation	
	Response time	ON-OFF response time <0.2ms	/	
	External voltage data	5~30VDC	250VAC, below 30VDC	
	Maximum load	Resistive	50mA/1point (0.2A/COM)	3A/1point (5A/COM)
		Inductive	1.2W (24VDC)	80W (AC)
Bulb		0.2W (24VDC)	2W (DC) / 100W (AC)	

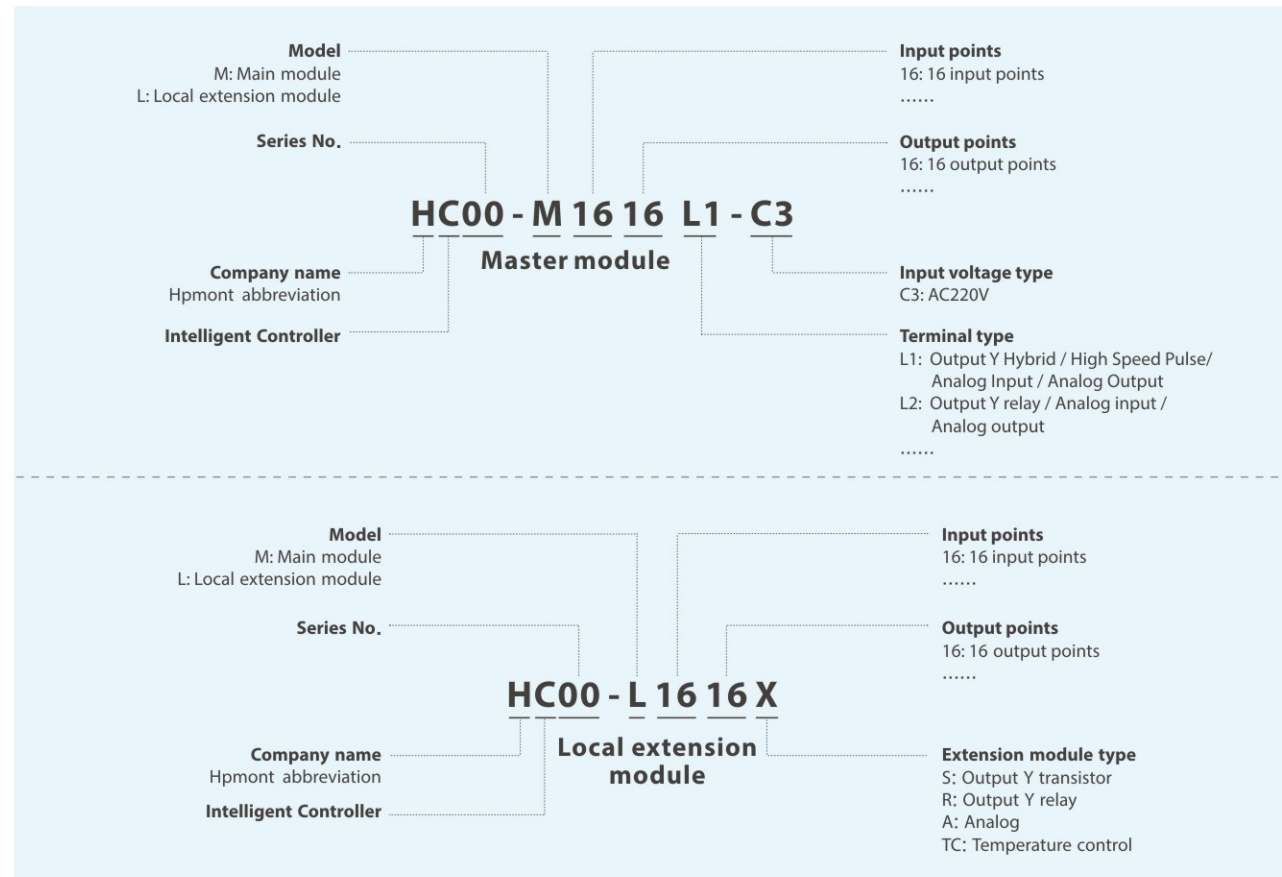
### Analog Expansion Module

Input data	Input connection method	Barrier terminal (distance: 7.62mm)	
	Input negative common terminal	GND	
	Input function specification	Voltage input	Current input
	Input No.	VI1, VI2, VI3	AI1, AI2, AI3
	Input range	Voltage: 0~10V	Current: 0~20mA
	Input resistance	Voltage: 31kΩ	Current: 500Ω
	Resolution	10mV	10uA
	Array input	0~1000	0~2000
	Precision	± 1% full range	
	Output data	Output connection method	Barrier terminal (distance: 7.62mm)
Output negative common terminal		GND	
Output function data		Voltage output	Current output
Output No.		VO1, VO2, VO3	AO1, AO2, AO3
Output range		Voltage: 0~10V	Current: 0~20mA
Output load		Voltage: 2kΩ~1MΩ	Current: 0~500Ω
Resolution		10mV	10uA
Array output		0~1000	0~2000
Precision	± 1% full range		

### Temperature Control Expansion Module

Temperature control module	HC00L0400TC1		HC00L0400TC2 ( high precision )
Output connection method	Barrier terminal (distance: 7.62mm)		Barrier terminal (distance: 7.62mm)
Output function data	PT100 thermistor input	PT100 thermistor input	PT100 thermistor input
Output No.	L1+, L2+	L3+, L4+	L1+, L2+, L3+, L4+
Temperature sampling range	-100~250℃	-100~550℃	-100~600℃
Resolution	0.1℃		0.01℃
Precision	± 2% full range		± 0.5% full range

## Configuration Parameter



HC00 and Expansion Modules		Model
Main control module	Master module	HC00-M1616L1-C3 / HC00-M1616L2-C3
	IO expansion module	HC00-L0808S / HC00-L0808R
Local extension module	Analog expansion module	HC00-L0303A
	Ordinary temperature control expansion module	HC00-L0400TC1
	High precision temperature control expansion module	HC00-L0400TC2
Local expansion card	Communication expansion card	HC00-C00S1*
	Ethernet expansion card	HC00-C00ET*
	GPRS expansion card	HC00-C00G*
	Bluetooth expansion card	HC00-C00B*
	Profibus-DP card expansion card	HC00-C00DP*
	SD card expansion card	HC00C00SD*
	Weighing card expansion card	HC00-C00W*
Remote expansion module	Remote IO expansion module	HC00-R0808XD1*

\*: In research and development.

## Configuration Data

Product	Model	Digital		Analog		High speed pulse*		Communication port		
		Input	Output	Input	Output	Input	Output	RS485	RS422	CAN bus
Main control module (hybrid type)	HC00-M1616L1-C3	16	8/8	2	2	2 (100kHz)	2 (100kHz)	2	1	1
Main module (relay type)	HC00-M1616L2-C3	16	16	2	2	2 (100kHz)	/	2	1	1
IO expansion module (transistor type)	HC00-L0808S	8	8	/	/	/	/	/	/	/
IO expansion module (relay type)	HC00-L0808R	8	8	/	/	/	/	/	/	/
Analog expansion module (selectable voltage / current)	HC00-L0303A	/	/	3	3	/	/	/	/	/

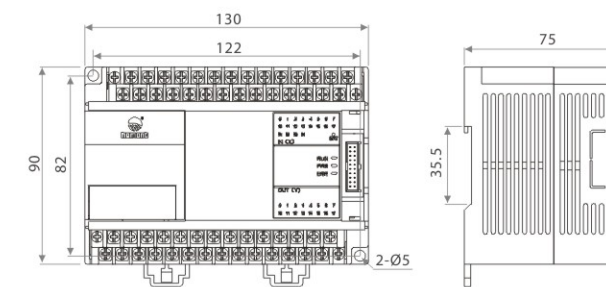
  

Product	Model	PT100		PT1000		Resolution	Precision
		Resource	Temperature range	Resource	Temperature range		
Temperature control expansion module	HC00-L0400TC1	2	-100~250℃	2	-100~550℃	0.1℃	±2% full range
Temperature control expansion module (high precision)	HC00-L0400TC2	4	-100~600℃	/	/	0.01℃	±0.5% full range

\* The number of high-speed pulse I/O in the table is included in the 32-point I/O count of the main module.

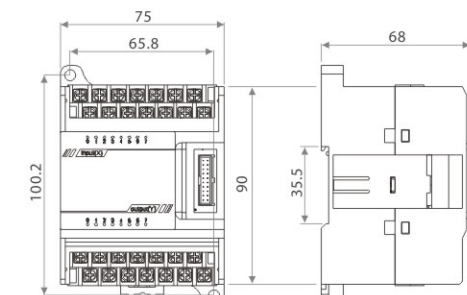
## Production and Installation Size

### Main control module



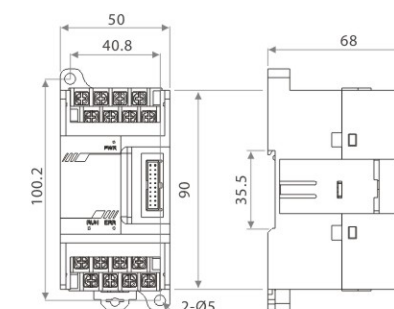
HC00-M1616L1-C3 / HC00-M1616L2-C3 (GW: 1kg)

### I/O Expansion module



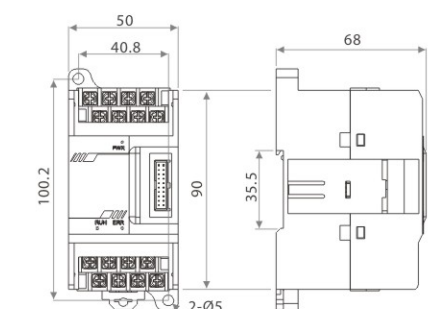
HC00-L0808S / HC00-L0808R (GW: 0.3kg)

### Analog expansion module



HC00-L0303A (GW: 0.3kg)

### Temperature control expansion module



HC00-L0400TC1 / HC00-L0400TC2 (GW: 0.25kg)

# HMI

HV series touch screen

Fast processing speed; TFT HD LCD display, exquisite display quality; User-friendly design



DC24V.....8W or less

## Product Features

<b>User-friendly Programming software</b>	Complete function performance of HVStudio programming software
<b>High screen resolution</b>	TFT LCD display with the latest LED backlight technology, exquisite and clear displayed picture with the resolution up to 400*800
<b>Fast processing speed</b>	High-performance 32-bit RISC CPU to ensure high response speed of system
<b>Convenient program download method</b>	Convenient to use the U disk instead of the PC to download the program to the HMI

## Technical Data

<b>Electrical data</b>	<b>Electrical voltage</b>	DC24V
	<b>Power supply voltage range</b>	DC12V~DC28V
	<b>Allowable instantaneous stop time</b>	5ms
<b>Environmental characteristic</b>	<b>Power</b>	8W or less
	<b>Ambient temperature</b>	-20°C ~ -60°C
	<b>Preservation temperature</b>	-20°C ~ -70°C
	<b>Ambient humidity</b>	10% ~ 80%RH (no water drops)
	<b>Preservation humidity</b>	10% ~ 80%RH (no water drops)
	<b>Insulation resistance</b>	Greater than DC500V 20MΩ (between power terminal and FG terminal)
	<b>Breakdown voltage</b>	Less than 1 minute at AC500V 20mA (between power terminal and FG terminal)
	<b>Corrosion</b>	Away from corrosive gases
	<b>Anti-interference</b>	Interference voltage: AC 1000VP-P; Pulse period: 11us; Duration: 11us
	<b>Vibration</b>	Well meet IEC61131-2 standard Vibration occasions: 10Hz~57Hz 0.035mm; 10Hz~57Hz 0.075mm; 57Hz~150Hz 4.9m/s <sup>2</sup> ; 57Hz~150Hz 9.8m/s <sup>2</sup> ; 10 times for each direction of X, Y, Z (80 minutes)
	<b>Electrostatic resistance</b>	Well meet IEC61000-4-2 standard, contact discharge: 4KV; Air discharge: 8KV
	<b>Protection level</b>	IP65 (surface)
	<b>Cooling method</b>	Natural cooling
<b>Fuse rating</b>	1.6A/250V	

## External Firmware Data

**HV700LK**

1 LCD and touch screen	2 Indicator light	3 Fixed buckle	5 Power slot	7 COM1 port
8 USB-B	9 USB-A			

**HV102EL**

1 LCD and touch screen	2 Indicator light	3 Fixed buckle	4 SD card slot	5 Power slot
6 Ethernet port (optional)	7 COM port	8 USB-B	9 USB-A	10 Audio and video port (optional)

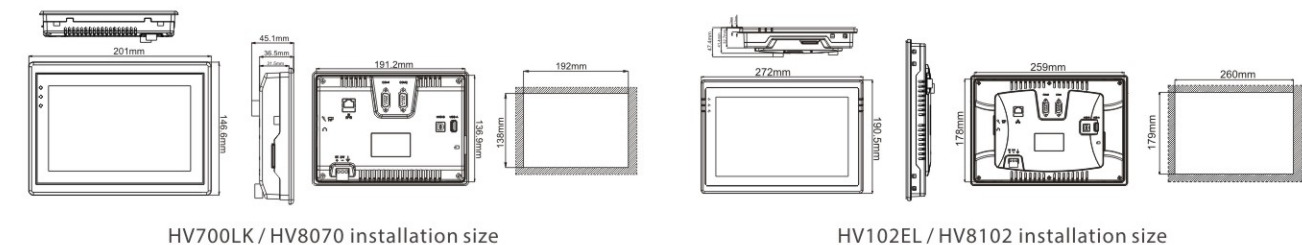
**HV8070**

1 LCD and touch screen	2 Indicator light	3 Fixed buckle	4 SD card slot	5 Power slot
6 Ethernet port (optional)	7 COM port	8 USB-B	9 USB-A	

**HV8102**

1 LCD and touch screen	2 Indicator light	3 Fixed buckle	4 SD card slot	5 Power slot
6 Ethernet port (optional)	7 COM port	8 USB-B	9 USB-A	

## Production and Installation Size



## Configuration Data

Model	Screen size	Communication port	USB interface	Ethernet	SD card Storage	Memory	CAN bus	Mobile App Function	Mounting hole Size (mm)
HV700LK	7 inches	COM1: RS232/RS422/RS485	2 USB Host+ USB Client	Not support	Not support	128M Flash+ 64M DDRAM	Not support	Not support	192.0W*138.0H
HV102EL	10.2 inches	COM1: RS232/RS422/RS485	2 USB Host+ USB Client	Not support	Not support	128M Flash+ 64M DDRAM	Not support	Not support	260.0W*179.0H
HV8070	7 inches	COM1: RS232, RS422/RS485 COM2: RS232, RS485 COM3: RS485	2 USB Host+ USB Client	Support	Support	4GB Flash+ 512M DDRIII	Support	Support	192.0W*138.0H
HV8102	10.2 inches	COM1: RS232, RS422/RS485 COM2: RS232, RS485 COM3: RS485	2 USB Host+ USB Client	Support	Support	4GB Flash+ 512M DDRIII	Support	Support	260.0W*179.0H

## HS30

Servo Driver

HS30 is a low power servo driver developed for the servo application market. It has three control modes: Speed control, position control and torque control



Single phase 200 ~ 240V.....0.2 ~ 0.75kW  
Three phase 200 ~ 240V.....1.0 ~ 1.5kW

## Configuration Parameter

2S: Single phase 220V  
2T: Three-phase 220V

### HS30 - 2S 0P4 - I25

HS30: Servo driver

0P2: 0.2KW  
0P4: 0.4KW  
0P7: 0.75KW  
1P0: 1.0KW  
1P5: 1.5KW

I25: Incremental encoder 2500 pulse  
S25: Provincial line encoder 2500 pulse\*  
A17: 17 Bit absolute value\*  
A20: 20 Bit absolute value\*

\*: In research and development

Size	F1		F2	F3	
Drive model HS30-	2S0P2	2S0P4	2S0P7	2T1P0	2T1P5
Continuous output current (A rms)	1.6	3.1	5.1	6.3	8.4
Max. output current (A rms)	4.8	9.3	15.3	18.9	25.2
Main circuit power supply	Single / Three phase AC200V~240V, ±10%, 50/60Hz				
Control circuit power supply	Single phase AC200V~240V, ±10%, 50/60Hz				

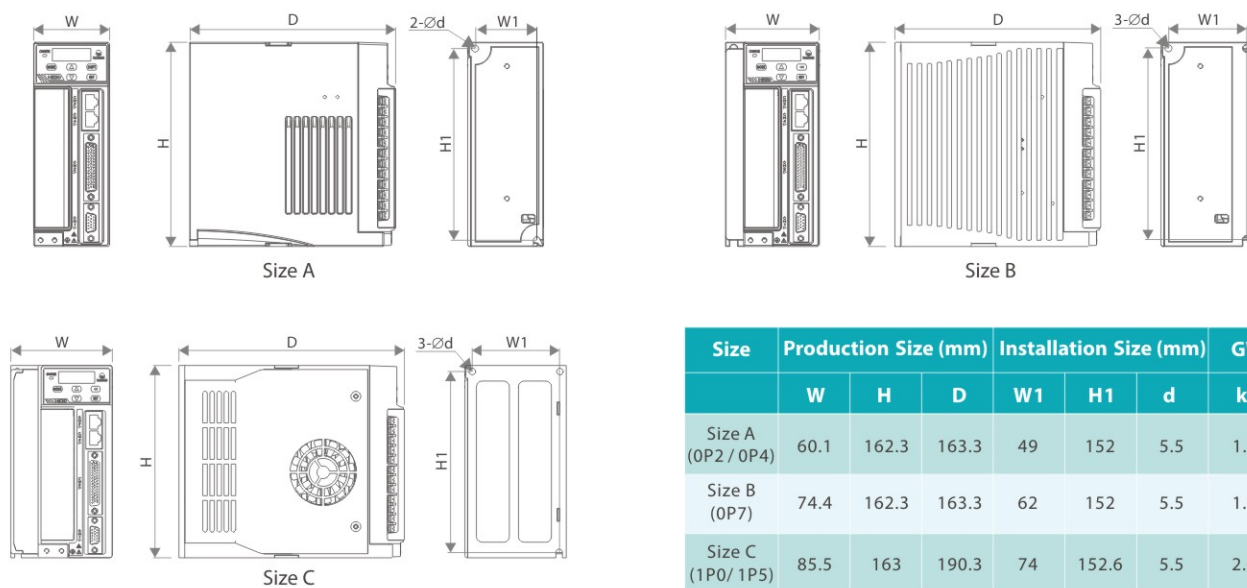
## Technical Data

Input	Input voltage	Single / Three phase 200~240Vac, fluctuation range: ±10%	
	Input frequency	50Hz/60Hz, fluctuation range: ± 5%	
Output	Output voltage	0~input voltage, less than 5% error	
	Output speed	0~4000r/min	
Basic data	Control method	IGBT SVPWM space voltage vector control, sine wave current drive, 220V, single or three phase full wave rectification	
	Control mode	Speed control, position control, torque control	
	Encoder feedback	2500 pulse Incremental encoder; 2500 pulse Provincial line encoder; 17Bit serial communication encoder; 20Bit serial communication encoder	
	Cooling method	Natural cooling for 750W and below	
	Energy consumption braking capability	Built-in braking resistor, external resistor can be used when braking capacity is insufficient	
Speed control mode	Speed change rate	Load change rate	0~100% load change, less than ± 0.1% (at rated speed)
		Voltage change rate	Rated voltage ± 10%: less than ± 0.01% (at rated speed)
		Temperature change rate	0~50°C: Less than ± 0.01% (at rated speed)
	Speed control range	1:4000	
	Band width	800Hz max.	
	Command control method	External analog command control / internal register control	
	Instruction smoothing method	Low pass and S curve smoothing filter	
Torque limit	Parameter setting mode or analog input		
Torque control mode	Command control method	External analog command control / internal register control	
	Instruction smoothing method	Low pass smoothing filter	
	Speed limit	Parameter setting mode or analog input	
	Torque control precision	± 2%	
Position control mode	Max. input pulse frequency	Differential input: 500Kpps; Collector input: 200Kpps	
	Pulse command mode	Pulse + symbol; Phase A + phase B; CCW pulse + CW pulse	
	Feedforward compensation	Parameter setting	
	Position width setting	Parameter setting	
	Command control method	External pulse control / internal register control	
Instruction smoothing method	Low-pass inertial filtering and low-pass smoothing filtering		
Electronic gear ratio	1/2^20~A/B~2^20		

## Technical Data

Control input and output signals	Pulse signal	Pulse input	Support differential signal input and open collector input
		Pulse output	Phase A, Phase B, Z Phase Differential Output, PGZ Collector Output
	Digital input	7 digital inputs, optical decoupler input	
	Digital output	6 digital inputs, optical decoupler output	
	Analog input	2 analog inputs, voltage input	
Operation display	LED display function	Power light POWER, 5 LED display	
	Button	5 buttons	
Communication	MODBUS communication	2 parallel RJ45 terminals; Support 232/485/CAN	
	CAN communication		

## Production and Installation Size

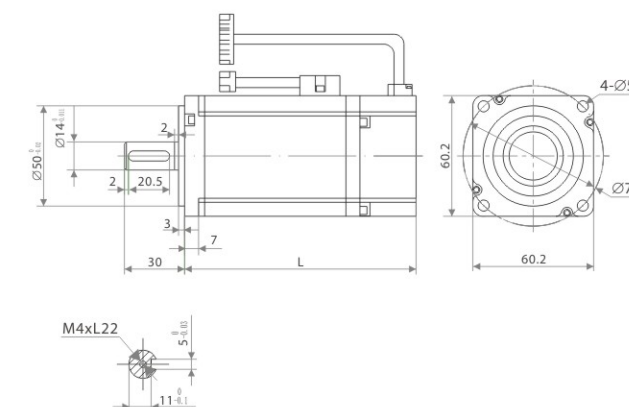


## Servo Motor



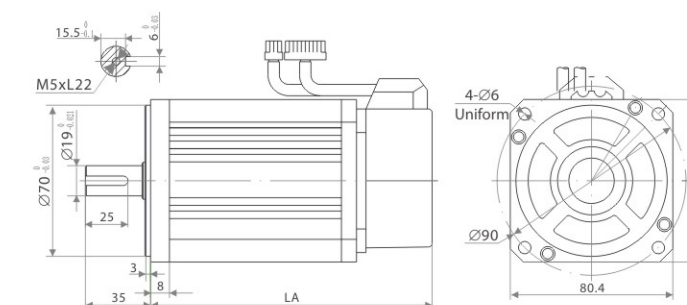
## Production and Installation Size

### N060



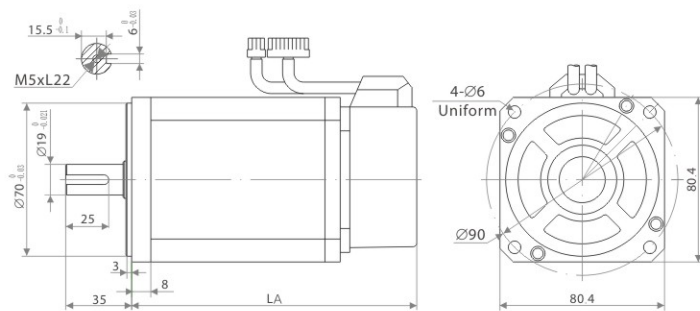
Model (rated torque)	0.64N.m	1.27N.m	1.91N.m
L without brake (mm)	111	135	156
L with permanent magnet brake (mm)	159	183	204

### N080



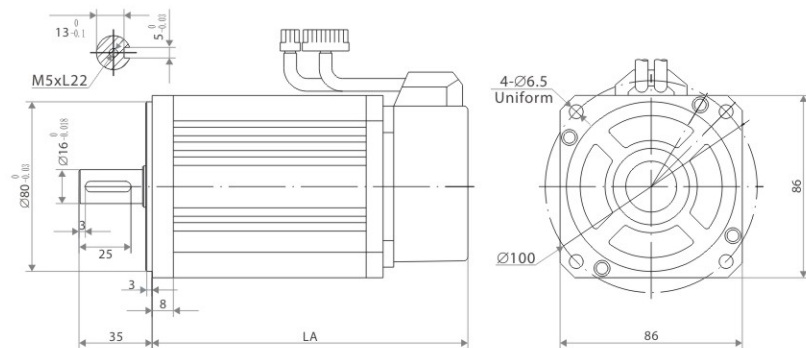
Model (rated torque)	1.3N.m	2.4N.m	3.5N.m	4.0N.m
LA without brake (mm)	124	151	179	101
LA with electromagnetic brake (mm)	170	197	225	237

■ B080



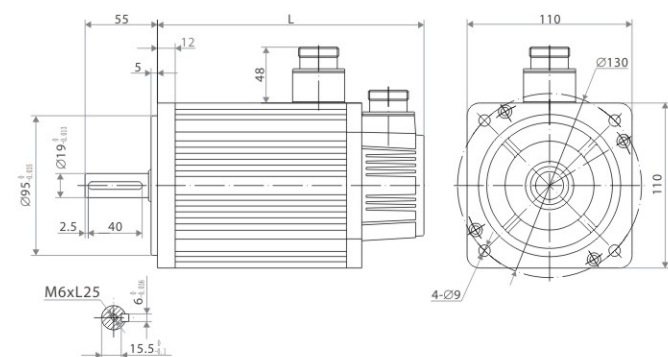
Model (rated torque)	1.3N.m	2.4N.m	3.2N.m
LA without brake (mm)	117	114	172
LA with electromagnetic brake (mm)	163	190	218

■ N090



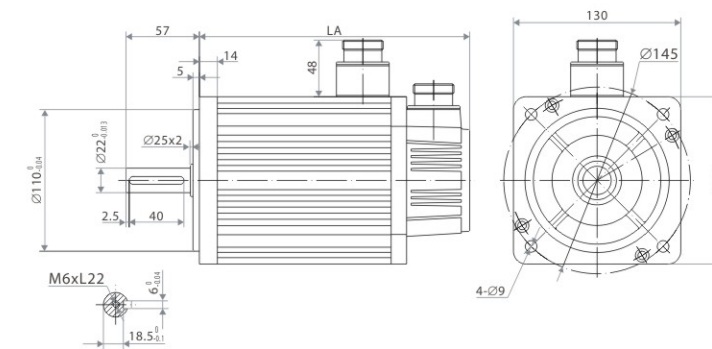
Model (rated torque)	2.4N.m	3.5N.m	4.0N.m
LA (mm)	150	172	182

■ N110



Model (rated torque)	2N.m	4N.m	5N.m	6N.m
L without brake (mm)	159	189	204	219
L with electromagnetic brake (mm)	233	263	278	293

■ N130



Model (rated torque) (N.m)	4	5	6	7.7	10			15	
					1000 rpm	1500 rpm	2500 rpm	1500 rpm	2500 rpm
LA without brake (mm)	166	171	179	192	213	209	241	231	
LA with electromagnetic brake (mm)	223	228	236	249	294	290	322	312	

Configuration Parameter

