

Product description

HV450 series frequency inverter is standard inverter for global application with wide voltage input. It can support 220V single phase, 220V 3 phase, 380V 3 phase and 460V 3 phase input voltage. Using advanced current vector control algorithm and better hardware platform HV450 can be widely used in plenty of applications with V/f control or sensorless vector control. With the advanced design, high quality and reliability, HV450 series inverter will bring the users a whole new experience for all kinds of industrial applications. New design concept for expansion keyboard makes customers more options to meet separate installation from cabinet to machine.

At a glance

- Advanced motor control technology support both V/f and sensorless vector control
- V/f control with different input voltage(220V single phase/220V 3 phase/380V 3 phase/460V 3 phase)
- High starting torque characteristics and precise speed control
- Rich and flexible I/O accesses and field bus options

Customer benefits

- Suitable for all regions which have different grid and voltage
- Upgrade IO can meet more application requirement without controller(PLC) like elevator, textile etc.
- Programmable DI/DO/AI/AO as well as RS485 Modbus RTU make easy communication with other devices



Additional information

Product description.....	L-01
At a glance.....	L-01
Customer benefits.....	L-01
Specificaiton.....	L-02
Specificaiton.....	L-03
Model Definition.....	L-03
Model Definition.....	L-04
Model Definition.....	L-05
Dimensional Drawing.....	L-06
Dimensional Drawing.....	L-07
Dimensional Drawing.....	L-08
Connection Diagram.....	L-08

www.hncelectric.com/HV450

For more information, please enter the link or scan the code via mobile devices and get direct access to technical date,manual,application examples and much more.



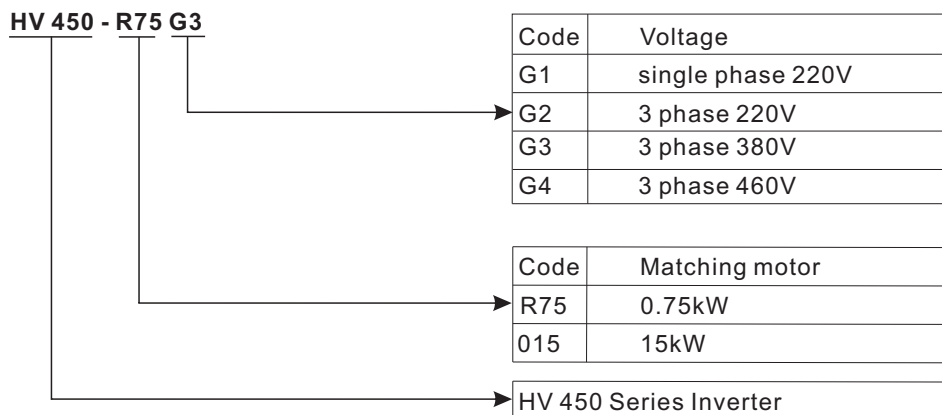
Specificaion

Items	Specifications	
Output	Rated Output Voltage	Three phase 380V(Max output voltage is equal to input voltage)
	Max continuous current	100% rated output current
	Overload ability	150% rated current for 1minutes, 180% rated current for 2 seconds.
	Output frequency	0Hz~400Hz
Input	Rated input voltage	Three phase: 380V±20%, 50~60Hz±5%
Control performance	AVR Function	When AVR function is enable, output voltage is stable under input voltage fluctuation
	Modulation modes	Optimized space voltage vector PWM modulation
	Control mode	Sensorless Vector control; V/F control.
	Running command input modes	Panel control, external terminal control, control by serial port of host computer
	Speed setting mode	Ten kinds of main frequencysetting modes, seven kinds of Auxiliary frequencysetting modes. Several combination kinds of main frequencysetting modes and Auxiliary frequencysetting modes.
	Speed setup resolution	Digital setting: 0.01Hz. Analog setting: highest frequency×0.1%
	Voltage/Frequency characteristic	Rated voltage: 50-100%,adjustable, Base frequency 50Hz, adjustable, five type V/F curves
	Speed control accuracy	Sensorless vector control: ±0.05% rated speed(25°C ±10°C)
	Speed control range	vector control: 1:100
	Starting torque	vector control: 150% rated torque at 0.5Hz.
	Acc/dec characteristic	0.1seconds~3600 seconds
	Braking torque	22 kW below: >20% rated torque, 30 kW above: >15% rated torque
Control I/O signal	Reference voltage output	1 channel, +10V, 50mA
	Control voltage output	24V,200mA
	Analog input	1 channel, 0~10V/0~20mA DC, 10 bit; 1 channel, 0~10 V DC, 10 bit
	Programmable terminal input	7 programmable channels, 27 kinds of functions can be selected, such as Run forward/reverse, Jog forward/reverse, multi-step speed selection, multi-step Acc/Dec time, free run to stop, voltage/current switch, etc.
	Open collector output	1 channel, 20 optional running states, the maximum output current is 50mA
	Programmable relay output	1 channel, 20optional running states, contact capacity: 250V AC /3A or 30V DC /1A
	Serial port	RS-485 port
Standard function		current limit, torque boost, speed trace, DC braking, restart after power failure, slip compensation, auto fault reset, high/low limit frequency, starting frequency, jump frequency, frequency gain, Carrier frequency adjustment, Acc/Dec mode selection, voltage meter output, current meter output, multi-frequency operation, programming operation, traverse operation, PI close loop operation, proportional control, remote control, FWD/REV dead time, etc.



Items		Specifications
Protection function		Over voltage, low voltage, over current, current limit, overload, over heat, electronic thermal overload relay, over voltage stall, data protection, etc.
Display	4-digit display (LED)	15 kinds of parameters, such as frequency setting, output frequency, output voltage, output current, motor speed, output torque, digital value terminals, program menu parameters and 33kinds of Fault codes
	Indicator (LED)	Parameter unit, RUN/STOP state, etc.
Operating environment	Environment	Inside, low than 1000m, free from dust, corrosive gas and direct sunlight
	Ambient temperature	-10℃~+40℃ (bare machine: -10℃~+50℃), 20%~90%RH, no condensing
	Vibration	Lower than 0.5g
	Storage temperature	-25℃~+65℃
	Installation	Wall mounted or surface mounted inside a cabinet
Protection class		Ip20
Cooling		0.75 kW and below: enclosed self-cooling Others: forced cooling.

Model Definition



Frequency Inverter Model	Input Voltage	Rated Output Power(kW)	Rated Input Current (A)	Rated Output Current (A)	Motor power (kW)
HV450-R40G1	single-phase220V ±15%	0.4	5.5	2.6	0.4
HV450-R75G1		0.75	9.2	4.5	0.75
HV450-1R5G1		1.5	14.5	7.5	1.5
HV450-2R2G1		2.2	23	10	2.2
HV450-004G1		4.0	35.0	16.0	4.0
HV450-R40G2	three-phase220V ±15%	0.4	2.9	2.6	0.4
HV450-R75G2		0.75	5	4.5	0.75
HV450-1R5G2		1.5	8	7.5	1.5
HV450-2R2G2		2.2	11	10	2.2
HV450-004G2		4.0	17.0	16.0	4.0



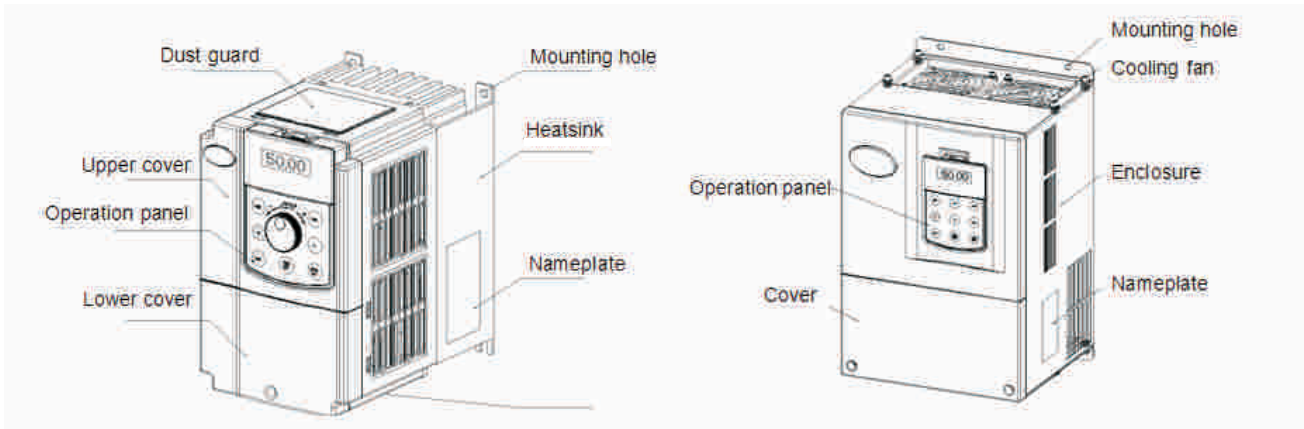
Frequency Inverter Model	Input Voltage	Rated Output Power(kW)	Rated Input Current (A)	Rated Output Current (A)	Motor power (kW)
HV450-5R5G2	three-phase220V ± 15%	5.5	21.0	20.0	5.5
HV450-7R5G2		7.5	31.0	30.0	7.5
HV450-011G2		11	43.0	42.0	11
HV450-015G2		15	56.0	55.0	15
HV450-018G2		18.5	71.0	70.0	18.5
HV450-022G2		22	81.0	80.0	22
HV450-030G2		30	112.0	110.0	30
HV450-R75G3	three-phase380V ± 15%	0.75	3.5	2.5	0.75
HV450-1R5G3		1.5	6.2	3.8	1.5
HV450-2R2G3		2.2	9.2	5.5	2.2
HV450-004G3		4	14.9	9	4
HV450-5R5G3		5.5	21.5	13	5.5
HV450-7R5G3		7.5	27.9	17	7.5
HV450-011G3		11	39	24	11
HV450-015G3		15	50.3	30	15
HV450-018G3		18.5	60	39	18.5
HV450-022G3		22	69.3	45	22
HV450-030G3		30	86	60	30
HV450-037G3		37	104	75	37
HV450-045G3		45	124	91	45
HV450-055G3		55	150	112	55
HV450-075G3		75	201	150	75
HV450-090G3		90	160	176	90
HV450-110G3		110	196	210	110
HV450-132G3		132	232	253	132
HV450-160G3		160	282	304	160
HV450-185G3		185	330	340	185
HV450-200G3		200	352	380	200
HV450-220G3		220	385	426	220
HV450-250G3		250	460	470	250
HV450-280G3		280	491	520	280
HV450-315G3		315	552	585	315
HV450-355G3		355	624	650	355
HV450-400G3		400	704	730	400
HV450-450G3	450	792	830	450	
HV450-500G3	500	835	860	500	
HV450-560G3	560	920	950	560	
HV450-630G3	630	1050	1100	630	
HV450-R75G4	three-phase460V ± 15%	0.75	2.9	2.1	0.75
HV450-1R5G4		1.5	5.1	3.2	1.5
HV450-2R2G4		2.2	7.6	4.6	2.2
HV450-004G4		4	12.4	7.5	4

Frequency Inverter Model	Input Voltage	Rated Output Power(kW)	Rated Input Current (A)	Rated Output Current (A)	Motor power (kW)
HV450-5R5G4	three-phase460V ± 15%	5.5	18	11	5.5
HV450-7R5G4		7.5	23	14	11
HV450-011G4		11	32	20	11
HV450-015G4		15	42	25	15
HV450-018G4		18.5	50	32	18.5
HV450-022G4		22	58	37	22
HV450-030G4		30	71	50	30
HV450-037G4		37	86	62	37
HV450-045G4		45	103	76	45
HV450-055G4		55	125	93	55
HV450-075G4		75	167	125	75
HV450-090G4		90	133	146	90
HV450-110G4		110	163	174	110
HV450-132G4		132	193	210	132
HV450-160G4		160	234	252	160
HV450-185G4		185	274	282	185
HV450-200G4		200	292	315	200
HV450-220G4		220	320	354	220
HV450-250G4		250	382	390	250
HV450-280G4		280	408	432	280
HV450-315G4		315	458	486	315
HV450-355G4		355	518	540	355
HV450-400G4		400	584	606	400
HV450-450G4		450	657	689	450
HV450-500G4		500	693	714	500
HV450-560G4		560	764	789	560
HV450-630G4	630	872	913	630	

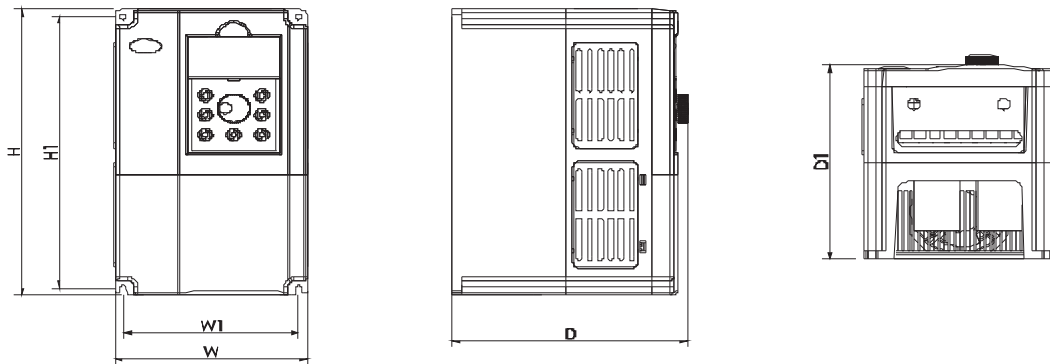
L



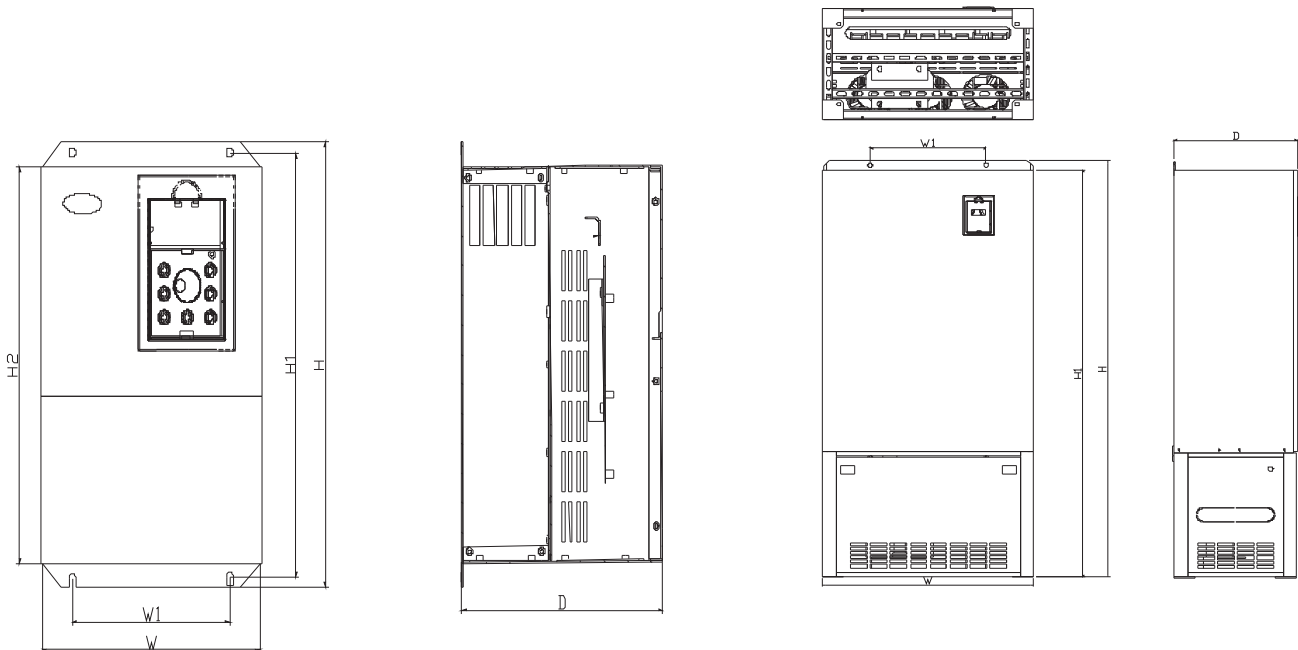
Dimensional Drawing



Product component name



HV450-R40G1~HV450-2R2G1、HV450-R75G3~HV450-7R5G3 and below power class

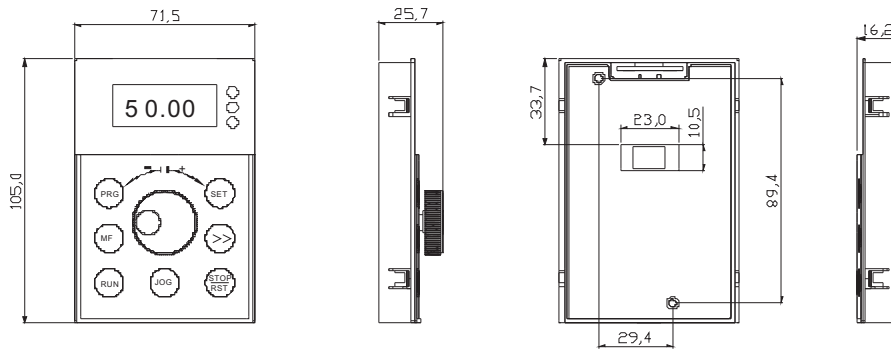


HV450-011G3~HV450-022G3 power class

HV450-185G3~HV450-400G3

Voltage class	Inverter model	Outline and mounting dimension (mm)							Mounting hole diameter	Approximate weight
		W	H	D	H1	W1	D1	H2		
220V	HV450-R40G1/R75G1									
	HV450-1R5G1 HV450-2R2G1	118.5	185	159	106.5	174.5	150		5.5	2.0
	HV450-004G1	150	258	183.8	136.8	245	175.3		5.5	4.5
400V	HV450-R75G3									
	HV450-1R5G3 HV450-2R2G3	118.5	185	159	106.5	174.5	150		5.5	2.0
	HV450-004G3	118.5	195	169	106.5	184.5	160		5.5	3.0
	HV450-5R5G3 HV450-7R5G3	150	258	183.8	136.8	245	175.3		5.5	4.5
	HV450-011P3 HV450-011G3 HV450-015G3	210	337	191	150	322.5		298	7	8.5
	HV450-018G3 HV450-022G3 HV450-030G3	285	501	230.2	200	482		460	7	17
	HV450-037G3 HV450-045G3 HV450-055G3	352	585	274.2	220	559		538	10	25
	HV450-075P3 HV450-075G3	404	680	302.7	300	658		633	10	35
	HV450-090G3 HV450-110G3	485	760	319	325	739		713	12	55
	HV450-132G3 HV450-160G3	533	830	371.7	325	809		780	12	85
	Wall Mounted HV450-185G3 HV450-200G3 HV450-220G3	638	1010	374	350	985		950	14	125
	Cabinet HV450-185G3 HV450-200G3 HV450-220G3	638	1402	374	350	1372		950	14	140
	Wall Mounted HV450-250G3 HV450-280G3 HV450-315G3	700	1240	460	520	1207.5		1168	14	150
	Cabinet HV450-250G3 HV450-280G3 HV450-315G3	700	1627	460	520	1592			14	180
	HV450-355P3 HV450-355G3 HV450-400G3	800	1772	460	520	1737			14	215





Operation panel outline and mounting dimension

Connection Diagram

