

WIN-VB series Sensorless Vector Control Inverter

1. Features:

- ◆ Adopting SPWM, sensorless vector control, this series are suitable for general machine's open-loop operation in the field of medium or high end area.
- ◆ Automatic torque boost function provides high start torque, automatic slip compensation, parameter self-learning and other advanced function enables the machine to operate with high precision.
- ◆ Supersilent table operation.
- ◆ Multiple control modes fulfills online monitoring and adjustment on variable parameters. Dialogue-type LCD keypad; two parameters can be monitored at the same time; Chinese and English language are optional.
- ◆ Parameter copy function can substantially save the debugging time.
- ◆ Built-in PID regulator provides convenient automatic control.
- ◆ Impulse input can achieve closed-loop control with higher precision and faster response speed.
- ◆ Built-in energy saving operating function can maximumly increase the motor's power factor and efficiency.
- ◆ Simple PLC timing function, pulse input, multi-functional terminal input provide abundant options.
- ◆ Built-in RS-485(MODBUS) and optional PROFIBUS maximumly cater to the user's demands.
- ◆ Suitable for large inertia, high accuracy, potential energy load, fast response and other high-end occasion.



2. VB series Models:

Model No.	Input Voltage	Output Current: A	Suitable Motor: KW
WIN-VB-0R7T2	Single-phase 220V 50Hz (T2 series)	4.8	0.75
WIN-VB-1R5T2		6.4	1.5
WIN-VB-2R2T2		9.6	2.2
WIN-VB-R75T4	3 Φ 380V 50Hz (T4 series)	2.6	0.75
WIN-VB-1R5T4		4	1.5
WIN-VB-2R2T4		4.8	2.2
WIN-VB-3R7T4		8.7	3.7
WIN-VB-5R5T4		12	5.5
WIN-VB-7R5T4		15	7.5
WIN-VB-011T4		24	11
WIN-VB-015T4		32	15
WIN-VB-018T4		40	18
WIN-VB-022T4		48	22
WIN-VB-030T4		64	30
WIN-VB-037T4		80	37
WIN-VB-045T4		96	45
WIN-VB-055T4		128	55

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3.Common specifications:

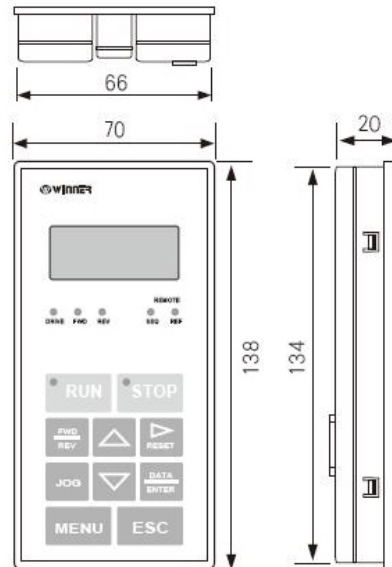
Item		Specification
Input	Voltage / Frequency	3-phase 380/415V 50/60Hz
	Allowed Volt. Fluctuation	-15% ~ +10%
Output	Frequency Range	0.1~400Hz
	Over Load Range	150% 1minute, 180% 6 seconds
Control	Control Method	SPWM control、V/F+PG control、sensorless vector control.
	Operation Mode	LCD keypad, parameters copy function
	Frequency Precision	Digital setting: $\pm 0.01\%$ (-10℃ ~ +40℃); Analog setting: $\pm 0.1\%$ (25℃ $\pm 10^\circ\text{C}$)
	Speed Control Precision	$\pm 0.1\%$ (V/F+PG feedback); $\pm 0.5\%$ (sensorless vector control)
	Frequency Setting Resolution	Digital setting: 0.01Hz; analog setting: 0.05Hz / 50Hz
	Output Resolution	0.01Hz
	Overload Capacity	Rated output current 150% 1 minute
	Frequency Setting Source	0~+10V(20K Ω); 4~20mA (250 Ω); pulse
	Accelerate/Decelerate Time	0.0-6000.0s (acceleration or deceleration time can be set separately).
	V/F Characteristic	15 fixed V/F characteristics available and anyone can be preset.
	Braking Torque	About 20%; additional braking resistor reaches to 125%
	Main Control Function	Restart in the event of power failure; PID control; automatic compensation of torque; slip compensation; RS-485 function; speed feedback control; simple PLC function; 2 group of analog output
	Other Function	Accumulative record for power-on time; four groups of fault records and running state record; Energy-saving function setting; up/down operation; MODBUS mode; multiple pulse output; local/remote switch; sink/source output interface optional.
Protect Function	Motor's Overload	Electric thermorelay.
	Instant Overload Current	Above 200% of the rated output current
	Inverter's Overload	150% of the rated output. 1 minute of power failure
	Voltage Overload	Main loop DC voltage is $\geq 400\text{V}$ (220V level) or $\geq 790\text{V}$ (440V level), the motor will stop work.
	Undervoltage	Main loop DC voltage is $\leq 200\text{V}$ (220V level) or $\leq 400\text{V}$ (440V level), the motor will stop operation.
	Auto restart in the event of instantaneous power failure	Power failure for 15ms or above
	Overheat Protection	Checked by temperature sensor
	Anti-stall	Operation current can be set, available/unavailable can be set during acceleration or deceleration or operation.
	Grounding Protection	Protected By current sensor
Protection of Default Phase of Input		The motor will stop freely in the event of phase default of input.
Protection of Default Phase of Output		The motor will stop freely in the event of phase default of output.
Ambient Temperature		-10℃ ~ +40℃
Humidity		20% ~ 90% RH (no condensation)
Storage Temperature		-20℃ ~ +60℃
Application Area		indoor (no dust, no corrosive odor, no direct sunlight)

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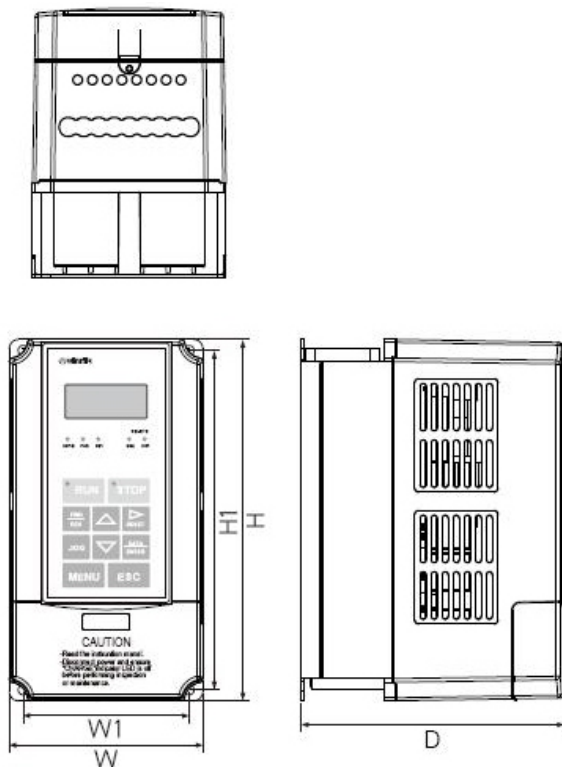
Item	Specification
Altitude	less than 1000m
Vibration	20Hz, less than 0.2g
Protection Level	IP20 for 7.5KW and less; IP10 for 11KW and above
Cooling Mode	Forced air cooling
Optional Part	PROFIBUS communication card

4. Dimension:

a). Keypad:



b). 220V 0.75KW, 380V 0.75~1.5KW:



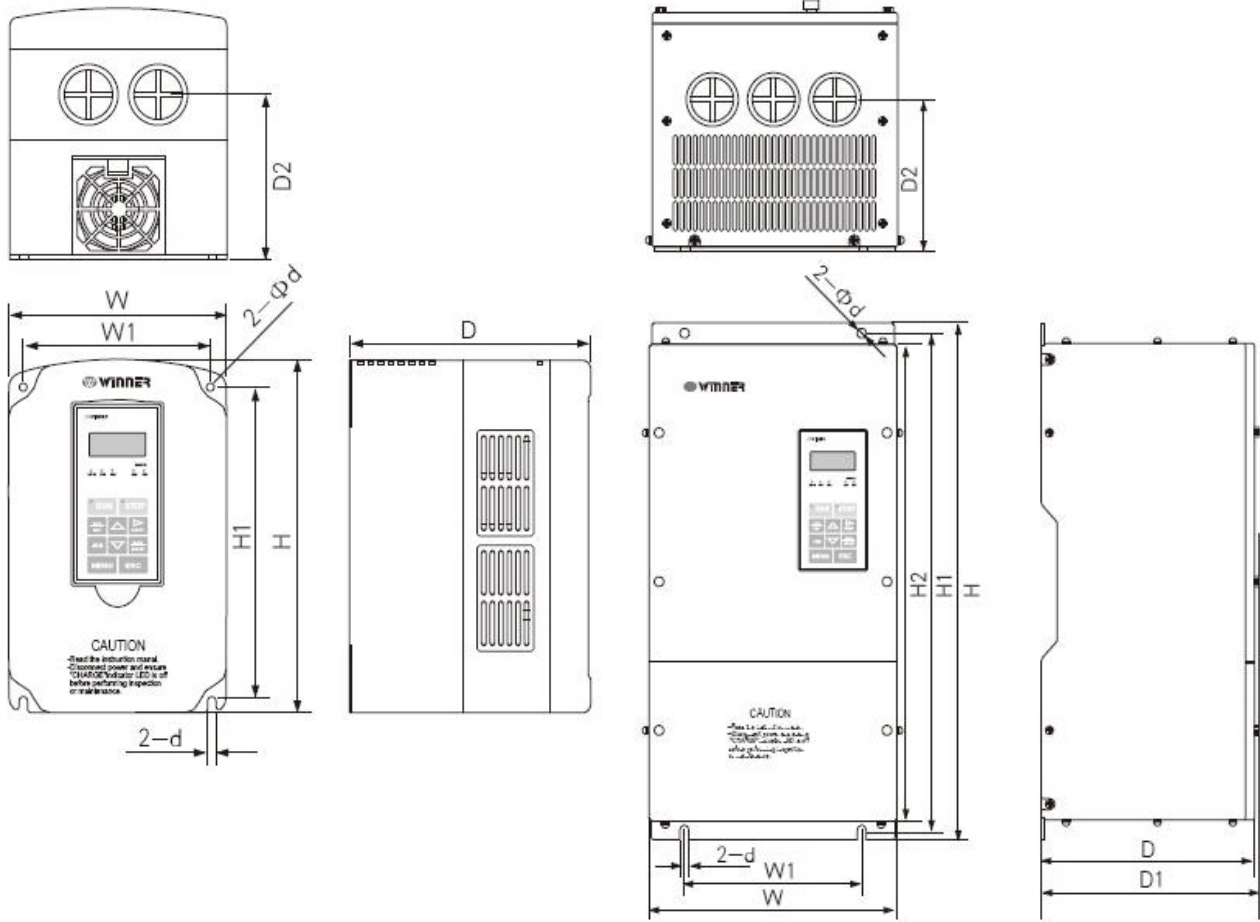
Unit: mm

Model	WIN-VB-0R7T2
	WIN-VB-R75T4
	WIN-VB-1R5T4
W	105
W1	90
H	192
H1	180
D	143

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c). 220V 1.5~2.2KW, 380V 2.2~7.5KW:

d). 380V 11KW and above:



Unit: mm

Picture	Model	W	W1	H	H1	D	D1	D2
c).	WIN-VB- 1R5~2R2T2	150	130	252	205	167	175	109
	WIN-VB- 2R2~3R7T4							
	WIN-VB- 5R5~7R5T4	190	170	290	260	187	195	105
d).	WIN-VB- 011~018T4	245	200	410	390	367	240	245
	WIN-VB- 022~030T4	278	200	550	530	490	250	260
	WIN-VB-037T4	348	200	550	530	490	250	260
	WIN-VB- 045~055T4	348	240	700	680	640	335	345