HIGH PERFORMANCE VARIABLE FREQUENCY DRIVES

Introducing High Performance Variable Frequncy Drives with advanced features - such as Vector control of induction motors, sensor less control for Synchronous motors and user-friendly programming. These general-purpose drives provide step-less speed control for all basic HVAC applications like Fans, Pumps and Compressors and provide customers a smart way to do energy efficient HVAC Control.

Honeywell

Table 1 - Technical Specifications

Item		Specifiation
Input	Input Voltage	1phase/3phase 220V：200V～240V 3 phase 380V-480V：380V～480V
	Allowed Voltage	-15%～10%
	fluctuation range	50Hz / 60Hz，fluctuation less than 5%
Output	Output Voltage	3phase：0～input voltage
	Overload capacity	General purpose application：60S for 150% of the rated current Light load application：60S for 120% of the rated current
	Control mode	V/f control Sensorless flux vector control without PG card（SVC） Sensor speed flux vector control with PG card (VC)
	Operating mode	Speed control、Torque control（SVC and VC）
	Speed range	1:100 (V/f) 1:200(SVC) 1:1000 (VC)
Control	Speed control accuracy	±0.5% (V/f) ±0.2% (SVC) ±0.02% (VC)
	Speed response	5Hz(V/f) 20Hz(SVC) 50Hz(VC)
	frequency range	0.00～600.00Hz(V/f) 0.00～200.00Hz(SVC) 0.00～400.00Hz(VC)
	Input frequency resolution	Digital setting: 0.01 Hz Analog setting: maximum frequency x 0.1%
	Startup torque	150%/0.5Hz(V/f) 180%/0.25Hz(SVC) 200%/0Hz(VC)
	Torque control accuracy	SVC：within 5Hz10%，above 5Hz5% VC:3.0%
	V/f curve	V / f curve type: straight line, multipoint, power function, V / f separation; Torque boost support: Automatic torque boost (factory setting), manual torque boost
	Frequency giving ramp	Support linear and S curve acceleration and deceleration; 4 groups of acceleration and deceleration time, setting range 0.00s ~ 60000s
	DC bus voltage control	VdcMax Control: Limit the amount of power generated by the motor by adjusting the output frequency to avoid over-voltage trip; VdcMin control: Control the power consumption of the motor by adjusting the output frequency, to avoid jump undervoltage fault
	Carrier frequency	1kHz～12kHz (Varies depending on the type)
	Startup method	Direct start (can be superimposed DC brake); speed tracking start

Item		Specifiation
	Stop method	Deceleration stop (can be superimposed DC braking); free to stop
	Maincontrol function	Jog control, droop control, up to 16-speed operation, dangerous speed avoidance, swing frequency operation, acceleration and deceleration time switching, VF separation, over excitation braking, process PID control, sleep and wake-up function, built-in simple PLC logic, virtual Input and output terminals, built-in delay unit, built-in comparison unit and logic unit, parameter backup and recovery, perfect fault record,fault reset, two groups of motor parameters free switching, software swap output wiring, terminals UP / DOWN
Function	Keypad	LED Digital keyboard and LCD keypad(option)
	communication	Standard: MODBUS communication Option: Profibus-DP and CAN OPEN
	PG card	Incremental Encoder Interface Card (Differential Output and Open Collector), Rotary transformer Card
	Input terminal	Standard: 5 digital input terminals, one of which supports high-speed pulse input up to 50kHz; 2 analog input terminals, support 0 ~ 10V voltage input or 0 ~ 20mA current input; Option card: 4 digital input terminals 2 analog input terminals support -10V -+10V voltage input
	Output terminal	Standard: 1 digital output terminal; 1 high-speed pulse output terminal (open collector type), support 0 ~ 50kHz square wave signal output; 1 relay output terminal (second relay is an option) 2 analog output terminals, support 0 ~ 20mA current output or 0 ~ 10V voltage output; Option card: 4 digital output terminals
Environment	Installation location	Indoor, no direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapor, drip or salt.
	Altitude	Lower than 1000m
	Ambient temperature	-10°C~ +40°C, maximum 50°C (derated if the ambient temperature is between 40° C and 50°C) Rated output current decrease by 1.5% if temperature increase by 1°C
	Humidity	Less than 95%RH, without condensing
	Vibration	Less than 5.9 m/s^2 (0.6 g)
	Storage temperature	-20°C ~ +60°C
Others	Installation	Wall-mounted, floor-controlled cabinet, transmural
	Protection level	IP20
	Cooling method	Forced air cooling
	EMC Filter	Built-in (Category – C3)
	AC Choke	Optional

Table 2 – VFD Control Circuit Terminal

Type	Terminal Symbol	Terminal Name	Terminal function description
Analog input voltage	+10V	Input voltage	10.10V±1%
			Maximum output current:10mA，it provides power supply to external potentiometer with resistance range of：1KΩ~51KΩ
	GND	Ananog ground	Internal isolation from COM
	AI1	Analog input1	Input voltage:0~10V：Impedance 22KΩ，Maximum input voltage
			Input current:0~20mA：Impedance 500Ω，Maximum input current
			Through the jumper switch AI1 0 ~ 10V and 0 ~ 20mA analog input switch, the factory default voltage input.
	AI2	Analog input 2	Input voltage:0~10V：Impedance 22KΩ，Maximum input voltage
			Input current:0~20mA：Impedance 500Ω，Maximum input current
			Through the jumper switch AI1 0 ~ 10V and 0 ~ 20mA analog input switch, the factory default voltage input.
Analog input	AO1	Analog output 1	Output voltage:0~10V：Impedance ﹤10KΩ
			Output current:0~20mA：Impedance 200Ω~500Ω
			Through the jumper switch AO1 0 ~ 10V and 0 ~ 20mA analog output switching, the factory default voltage output.
	AO2	Analog output 2	Output voltage:0~10V：Impedance ﹤10KΩ
			Output current:0~20mA：Impedance 200Ω~500Ω
			Through the jumper switch AO1 0 ~ 10V and 0 ~ 20mA analog output switching, the factory default voltage output.
	GND	Ananog ground	Internal isolation from COM
Switch input	+24V	+24V current	24V±10%，Internal isolation from GND
			Maximum output current：200mA
			To provide 24V power supply, generally used as a digital input and output terminal power supply and external sensor power
	PLC	Digital input terminal common	The factory default setting is connected PLC with +24V Terminal for on-off input high and low level switch
			When using the external signal to drive DI1~DI5, it will disconnect the connector slip of PLC with the +24V
	COM	+24V ground	Internal isolation from GND
	DI1~DI4	Digital input terminal 1~4	Optocoupler isolation, compatible with bipolar input
			Frequency range：0~200Hz
			Voltage range：10V~30V
	HDI	Digital input terminal /High-speed pulse input	Digital input terminal：same as DI1~DI4
			Pulse input frequency input：0~50KHz
			Voltage range：10V~30V

Type	Terminal Symbol	Terminal Name	Terminal function description
Switch output	DO1	Open collector output	Optocoupler isolation
			Voltage range：0V~24V
			Current range：0mA ~50mA
	HDO	Open collector output /High-speed pulse output	Open collector output：same as DO1
			High-speed pulse output：0~50KHz
Relay output 1	TA/TB/TC	Relay output	T1A-T1B：nomal open
			T1A-T1C：nomal close
			Contact rating：AC 250V，3A；DC 30V，1A
Relay output2 (optional)	T2A/T2BT2C	Relay output	T2A-T2B：nomal open
			T2A-T2C：nomal close
			Contact rating：AC 250V，3A；DC 30V，1A
485 port	485+	485 Positive differential signal	Baud rate： 1200/2400/4800/9600/19200/38400/57600/115200bps
	485-	485 Negative differential signal	

Table 3 – VFD models and technical data

Model Nos. (Order Code)	Power capacity (KVA)	Input current (A)	Heavy load	Light load	Adaptable Motor (KW)	SIZE	Brake Unit
Three phase: 380-480V，50/60Hz							
HONVFD0P75K	1.5	3.4	2.5	4.2	0.75	SIZE A	Internal
HONVFD01P5K	3	5	4.2	5.6	1.5		
HONVFD02P2K	4	5.8	5.6	9.4	2.2		
HONVFD004PK	5.9	10.5	9.4	13.0	3.7		
HONVFD05P5K	8.9	14.6	13.0	17.0	5.5	SIZE B	
HONVFD07P5K	11	20.5	17.0	23.0	7.5		
HONVFD011PK	17	26.0	25.0	31.0	11	SIZE C	Internal
HONVFD015PK	21	35.0	32.0	37.0	15		
HONVFD18P5K	24	38.5	37.0	45.0	18.5	SIZE D	

PRODUCT APPEARANCE

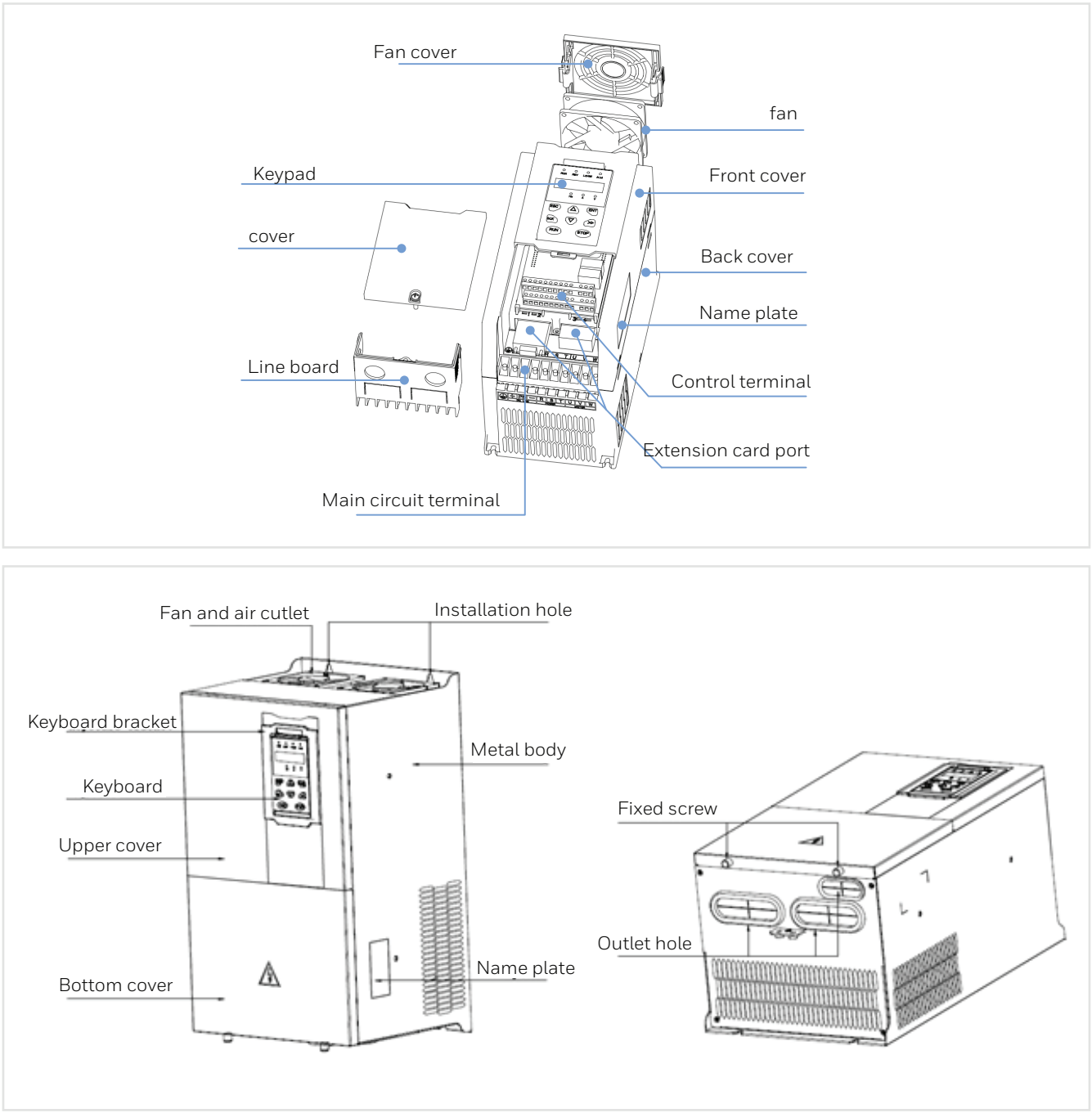

Fig. 1 - VFD series appearance

Appearance and Mounting Hole Dimension

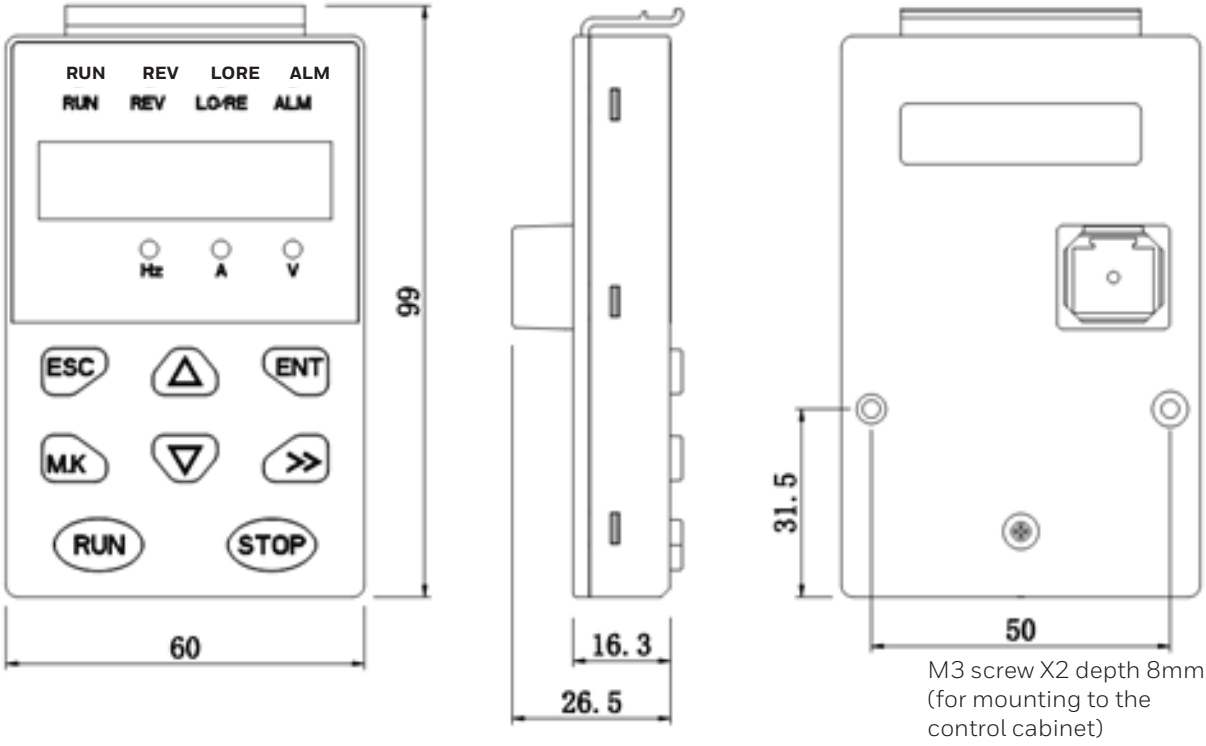

Fig. 2 - Keypad dimension (Unit: mm)

If you want to install the keypad on the inside of the control cabinet (to prevent the keypad from protruding toward the outside of the control cabinet), use a keypad Bracket. The dimensions of the keypadbracket are shown in Figure. The dimensions of the installation diagram and control cabinet are shown in Figure 3-3.

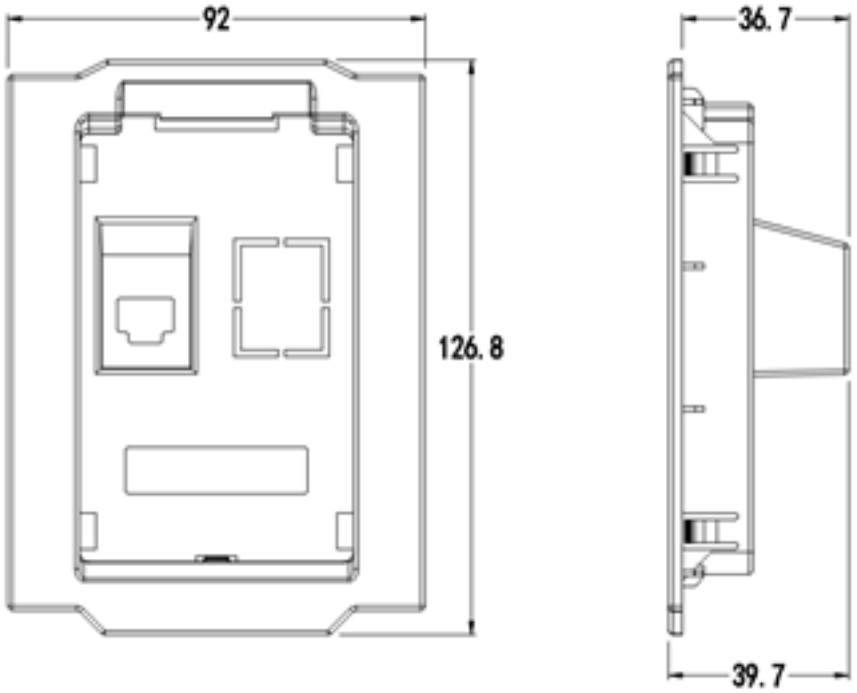

Fig. 3 – Keypad Holder Size (Unit: mm)

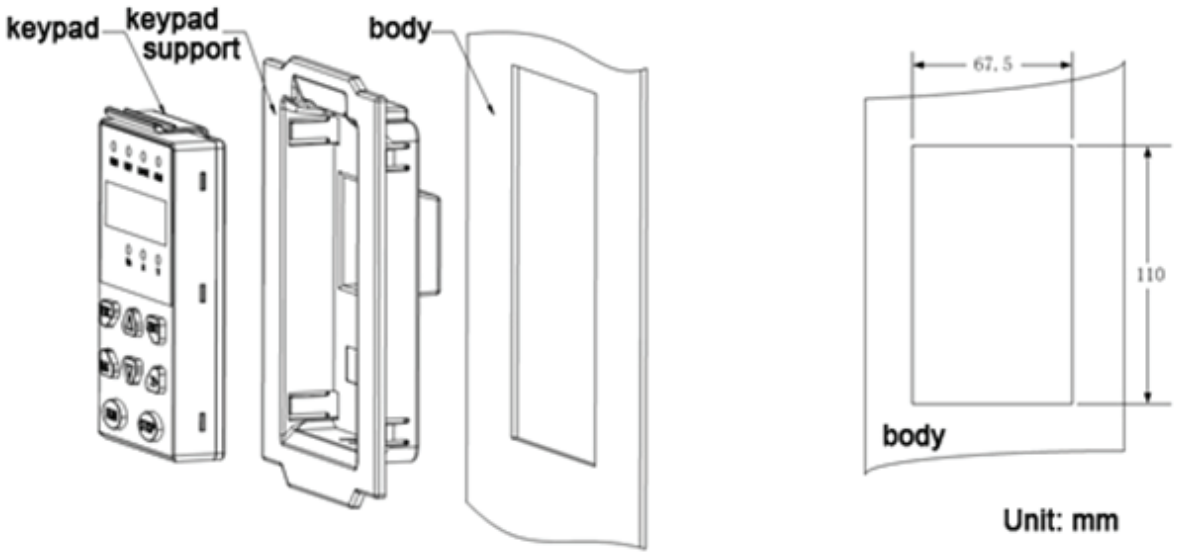

Fig. 4 – Keypad support installation diagram and control cabinet processing dimensions

Inverter dimensions and installation dimensions

Size	A	B	H	W	D	Φd	Mounting Screws
SIZE A	87	206.5	215	100	170	ø5.0	M4X16
SIZE B	114	239.5	250	130	180	ø5.0	M4X16
SIZE C	159	298	310	180	193	Ø6.0	M5X20
SIZE D	165	350	365	210	205	Ø6.0	M5X20

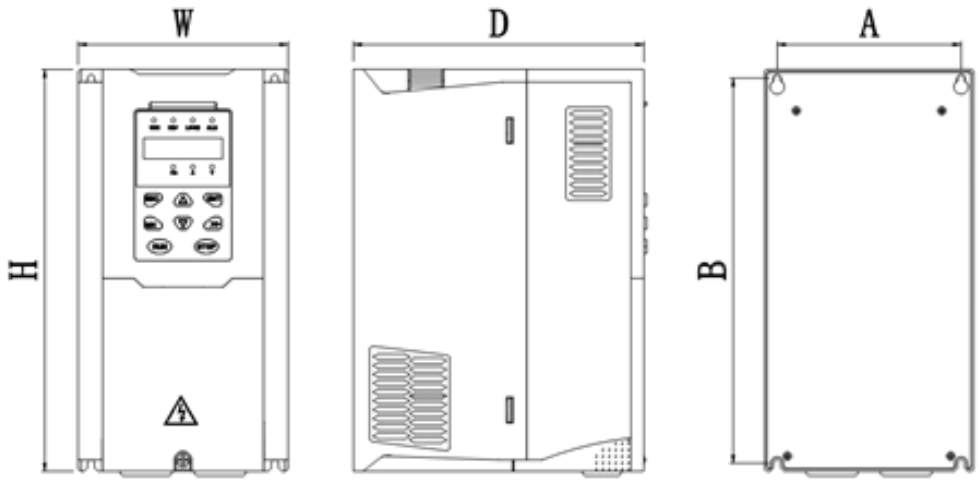

Fig. 5 - SIZE A to SIZE C Dimensions

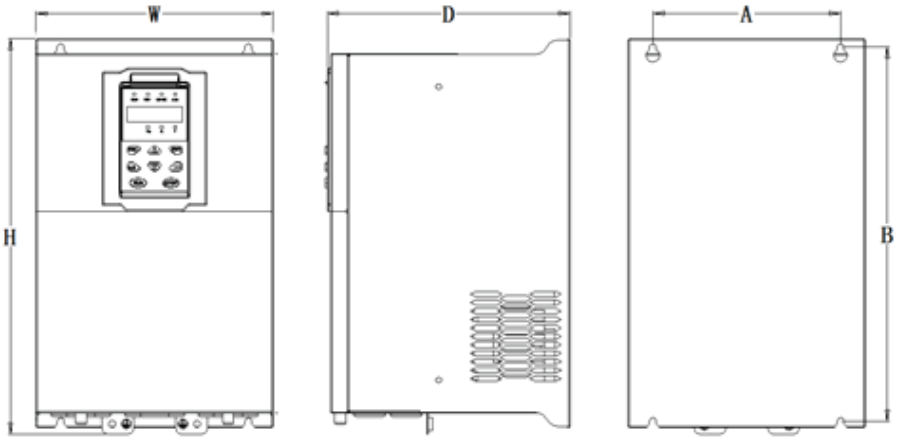

Fig. 6 - SIZE D Dimensions

LED Instruction of operation and display

LED keyboard consists of 5 digital tubes, 7 lights, 8 keys and a potentiometer; can be used to set the parameters, status monitoring and operation control, LED keyboard shape as shown in Figure 4-1：

Fig. 7 - Operating panel

For more information,
https://honeywellbuildings.in
Call: 1-800-103-0339
Email: HBT-Indiabuildings@honeywell.com

Honeywell HBT India Buildings
Unitech Trade Center, 5th Floor, Sector-43,
Block C, Sushant Lok Phase - I,
Gurgaon - 122 002

www.honeywell.com