

E102 General Series Inverter

High-performance
High Cost-effective

AC 1 PH $220 \pm 15\%V$, 0.4-2.2kW

AC 3 PH $220 \pm 15\%V$, 0.4-2.2kW

AC 3 PH $380 \pm 15\%V$, 0.75-630kW



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Product Introduction

The CDI-E102 series inverter is a classic-type low-power inverter with optimum SVC and V/F control, stable performance and simplified functions. It reserves the configuration most-frequently used by users, and is more cost-effective.

Technical Characteristics

◆ Simplified Functions and More Cost-effective:

Optimized configuration according to the functions most-frequently used by users, so as to reduce resource waste, improve cost performance and competitiveness.

◆ Compact Structure:

Optimum structure and elegant appearance; can be installed through both slides and holes; easy to use.

◆ Flexible Type Selection:

The 15kW or below types have standard internal brake units.
The 18.5-22kW types can have optional internal brake units.
The 11kW, 15 kW types have standard DC inductors.
The 18.5-22kW types can have optional DC inductors.

Accessories

External keyboard, extension cord,
E102-485 communication expansion card.

Data and Naming Rules of Nameplate

Taking Model CDI-E102G011/P015T4BL as example:

Model: CDI-E102G011/P015T4BL

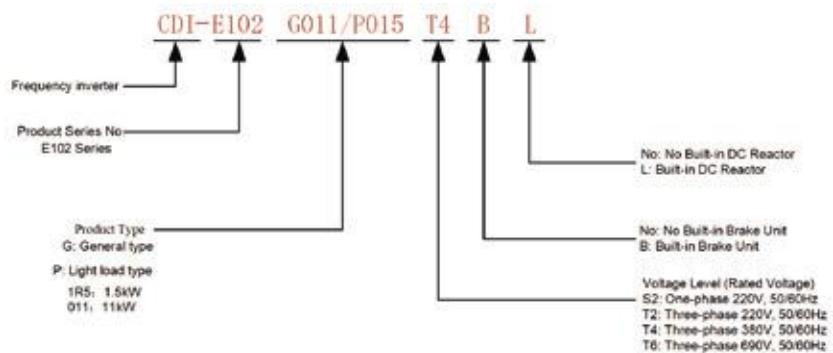
Input: AC 3PH 380±15% 50/60Hz

Output: AC 3PH 0~380V 0~3200Hz 25/32A

Hardware Version: 1.1.00 Software Version: 1.12



E102G011/P015T4BL13F000001



Product List

Inverter Model	Rated Capacity	Rated Input Current	Rated Output Current	Adaptive Motor
	(kVA)	(A)	(A)	(kW)
S2 (Single-phase 220V, 50/60Hz) (Built-in Brake Unit)				
CDI-E102G0R4S2B	0.8	5.0	2.3	0.4
CDI-E102G0R75S2B	1.5	9.0	4.0	0.75
CDI-E102G1R5S2B	2.7	15.7	7.0	1.5
CDI-E102G2R2S2B	3.8	27.0	10.0	2.2
T2 (Three-phase 220V, 50/60Hz) (Built-in Brake Unit)				
CDI-E102G0R4T2B	0.8	2.6	2.3	0.4
CDI-E102G0R75T2B	1.5	6.0	4.0	0.75
CDI-E102G1R5T2B	2.7	8.8	7.0	1.5
CDI-E102G2R2T2B	3.8	12.5	10.0	2.2
T4 (Three-phase 380V, 50/60Hz) (15kW and below the standard built-in brake unit)				
CDI-E102G0R75T4B	1.5	4.4	3.0	0.75
CDI-E102G1R5T4B	3.0	6.0	4.5	1.5
CDI-E102G2R2T4B	4.0	6.8	6.0	2.2
CDI-E102G3R7T4B	5.9	11.0	9.5	3.7
CDI-E102G5R5/P7R5T4B	8.5/11	15.5/20.5	0.8	5.5/7.5
CDI-E102G7R5/P011T4B	11/17	20.5/26	17/25	7.5/11
CDI-E102G011/P015T4BL	17/21	26/35	25/32	11/15
CDI-E102G015/P018.5T4BL	21/24	35/38.5	32/37	15/18.5
CDI-E102G018.5/P022T4	24/30	38.5/46.5	37/45	18.5/22
CDI-E102G022/P030T4	30/40	46.5/62	45/60	22/30
CDI-E102G030/P037T4	40/50	62/76	60/75	30/37
CDI-E102G037/P045T4	50/60	76/92	75/90	37/45
CDI-E102G045/P055T4	60/72	92/113	90/110	45/55
CDI-E102G055/P075T4	72/100	113/157	110/152	55/75
CDI-E102G075/P093T4	100/116	157/180	152/176	75/93
CDI-E102G093/P110T4	116/138	180/214	176/210	93/110
CDI-E102G110/P132T4	138/167	214/256	210/253	110/132
CDI-E102G132/P160T4	167/200	256/305	253/300	132/160
CDI-E102G160/P185T4	200/224	305/344	300/340	160/185
CDI-E102G185/P200T4	224/250	344/383	340/380	182/200
CDI-E102G200/P220T4L	250/276	383/425	380/420	200/220
CDI-E102G220T4L	276	425	420	220
CDI-E102P250T4L	316	484	480	250
CDI-E102G250/P280T4L	316/355	484/543	480/540	250/280
CDI-E102G280/P315T4L	355/395	543/605	540/600	280/315
CDI-E102G315/P355T4L	395/467	605/714	600/680	315/355
CDI-E102G355/P375T4L	447/467	683/714	680/710	355/375
CDI-E102G375T4L	467	714	710	375
CDI-E102P400T4L	494	753	750	400
CDI-E102G400T4L	494	753	750	400
CDI-E102P500T4L	612	934	930	500
CDI-E102G500T4L	612	934	930	500
CDI-E102G630T4L	790	1206	1200	630

■ Type configuration

Inverter Model	Brake unit	D.C. reactor	LCD keyboard
T4 (Three-phase 380V, 50/60Hz)			
CDI-E102G0R75T4B	Built-in as standard configuration	N/A	N/A
CDI-E102G1R5T4B			
CDI-E102G2R2T4B			
CDI-E102G3R7T4B			
CDI-E102G5R5/P7R5T4B			
CDI-E102G7R5/P011T4B			
CDI-E102G011/P015T4BL			
CDI-E102G015/P018.5T4BL			
CDI-E102G018.5/P022T4	Built-in as option configuration	Built-in as option configuration	N/A
CDI-E102G022/P030T4			
CDI-E102G030/P037T4			
CDI-E102G037/P045T4			
CDI-E102G045/P055T4			
CDI-E102G055/P075T4			
CDI-E102G075/P093T4			
CDI-E102G093/P110T4			
CDI-E102G110/P132T4	External connection as option configuration	External connection as option configuration	Option configuration
CDI-E102G132/P160T4			
CDI-E102G160/P185T4			
CDI-E102G185/P200T4			
CDI-E102G200/P220T4L			
CDI-E102G220T4L			
CDI-E102P250T4L			
CDI-E102G250/P280T4L			
CDI-E102G280/P315T4L	External connection as option configuration	Built-in as standard configuration	Option configuration
CDI-E102G315/P355T4L			
CDI-E102G355/P375T4L			
CDI-E102G375T4L			
CDI-E102P400T4L			
CDI-E102G400T4L			
CDI-E102P500T4L			
CDI-E102G500T4L			
CDI-E102G630T4L			

Ordering Instructions:

please mark the product model and specification when placing an order. It is recommended to supplement other data, such as motor parameters and load. For any special requirements, please contact our Technology Department.

Technical Specification

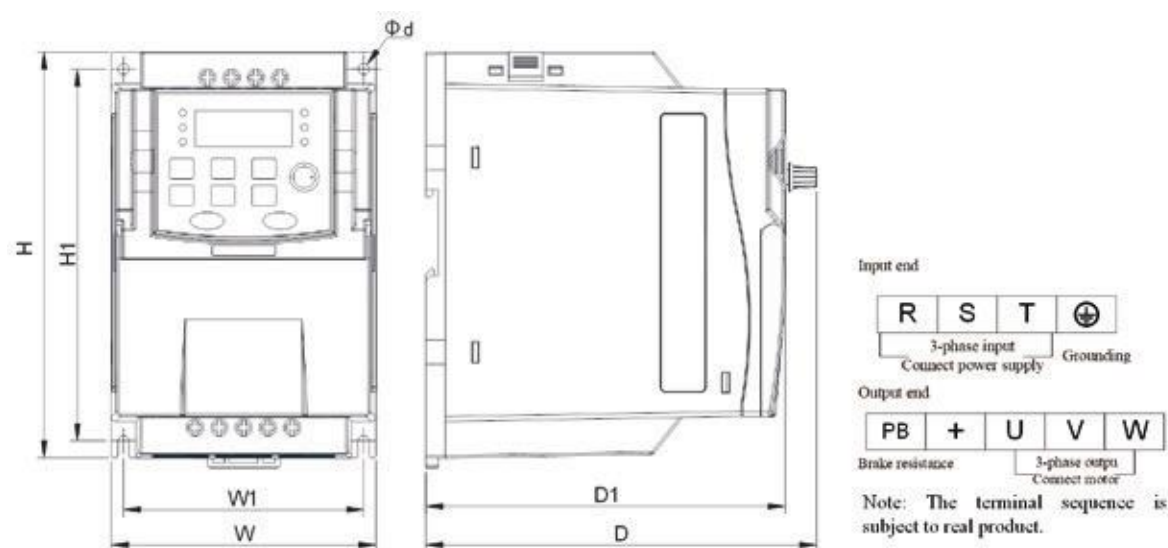
Item		Specification
Control	Control mode	V/F Control Open-loop Vector Control (SVC)
	Frequency Resolution	Digital quantity: 0.02% Analog quantity: 0.1%
	V/F curve	Linear, square root, random V/F
	Overload capability	G Model: 150% rated current: 60s; 180% rated current: 3s
		P Model: 120% rated current: 60s; 150% rated current: 3s
	Starting torque	G Model: 0.5Hz/150% (SVC); 0Hz/180% (VC)
		P Model: 0.5Hz/100%
	Speed regulation range	1:100 (SVC) 1:1000 (VC)
	Stable speed accuracy	±0.5% (SVC) ±0.02% (VC)
	Torque control accuracy	±5% (VC)
Configuration	Torque compensation	Manual torque compensation (0.1%~30.0%), auto torque compensation
	Control power supply +24V	Max. Output Current 300mA without current-limiting protection
	Input terminal	5-way Digital Input Terminal (DI1~DI6), in which DI6 can access to high-speed Impulse Input (only internal power supply is available) 2-way Analog Input Terminal (VF1, VF2), which can be used as voltage (0V~10V) or current (0/4mA~20mA) input. It can be used as Digital Input Terminal through reference.
Running	Output terminal	1-way Analog Input Terminal FM1, which can not only be used as output voltage (0V~10V), but output current (0mA~20mA). 1-way Relay Output T1, DC 30V/3A below and AC 250V/3A below
	Running mode	Keyboard, terminal, RS485 communication
	Frequency source	14 kinds of main frequency sources and 14 kinds of auxiliary sources. Adopt various combination modes to switch. Diversification to Each Frequency Source Input Mode: keyboard potentiometer, external analog, digital reference, impulse reference, Multiplex Directive, simple PLC, communication, arithmetic results, etc.
	Torque source	14 kinds of Torque Sources, including digital reference, external analog, impulse reference, Multiplex Directive, communication, arithmetic results, etc.
	Acceleration/deceleration time	Four groups of straight lines (select the terminal to switch through acceleration and deceleration time), S Curve 1 and S Curve 2
	Emergency stop	Interrupt output of frequency inverter.
	Multiplex Speed	16 speed is allowable to set at most and use various combination of multiplex directive terminal to switch
	Simplified PLC function	Continuously run 16-phase speed and independently set acceleration and deceleration time and running time
	Jogging Control	Independently set Jogging frequency and jogging acceleration and deceleration time, additionally, set the unit under running state and confirm whether the jogging is preferential
	Rotating Speed Tracking	Frequency inverter starts operation by tracking the load speed
	Fixed-length and Fixed-distance Control	Realize fixed-length and fixed-distance control function through Impulse Input

Technical Specification

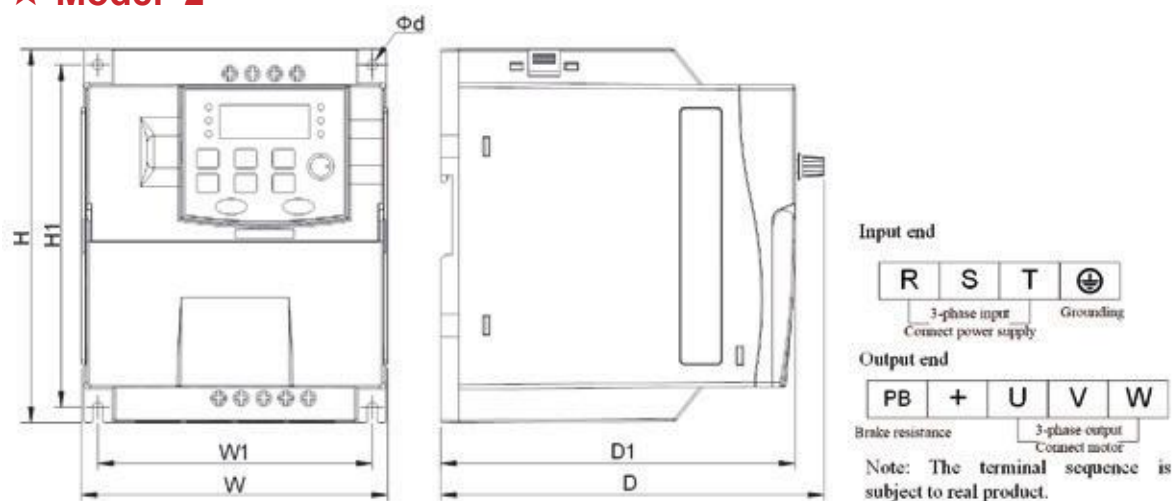
Item		Specification
Running	Control mode	Realize counting function through Impulse Input
	Wobblulating Function	Apply for textile winding equipment
	Built-in PID	Realize process control closed loop system
	AVR Function	When the grid voltage fluctuates, ensure constant output
	DC Braking	Realize fast and stable shut-down
	Slip Compensation	Compensate the speed deviation caused by the increase of load
	Hopping Frequency	Prevent resonance from occurring with load
	Sagged Function	Balance the load of multiple motors with same load
	Timing Control	Be able to realize automatic shutdown of the frequency inverter when reaching given time
	Built-in Virtual Delay Relay	Realize simple logic Programming to multi-functional output terminal function and digital input terminal signal, the logic results can not only be equivalent to digital input terminal function, but can be output through multi-functional terminal output
	Built-in Timer	Build in 2 timers and acquire the timing input signal to realize timing signal output. Use alone or in combination
	Operation Module	One built-in 4-way Operation Module to realize simple addition, subtraction, multiplication and division, size judgment and integral operation
Communication		The control panel is not equipped with built-in RS485 Communication Interface, so external communication expansion card is required. It supports Standard MODBUS Protocol (External Connection of E102-485 Expansion Card)
Encoder		Only connect to 1-way pulse signal of encoder (DI6)
Motor type		It is fitted with either asynchronous motor or synchronous motor which needs customizing (UV600).
Display	Running information	Given frequency, output current, output voltage, Bus line voltage, input signal, feedback value, module temperature, output frequency, motor synchronous speed, etc. Through >> Key, display 32 loops at most
	Error information	Save the historical information of 3 faults under running state of fault protection. Every piece of fault information includes frequency, current, Bus line voltage and input/output terminal status when fault happens.
Protection	Frequency inverter protection	Overcurrent, overvoltage, module fault protection, undervoltage, overload, external fault protection, EEPROM fault protection, ground protection, default phase, etc.
	Frequency inverter alarm	Locked protection, overload alarm
	Instantaneous power-off	Lower than 15 ms: Continuous operation
Environment	Ambient temperature	-10°C~40°C
	Storage temperature	-20°C~65°C
	Ambient humidity	90 % RH in max. (no dewing)
	Height/Vibration	Below 1,000 m, below 5.9m/sec ² (=0.6g)
	Application position	No corrosive gas, inflammable gas, oil mist, dust and others
Cooling mode		Air-blast cooling

■ Appearance & Installation Dimensions

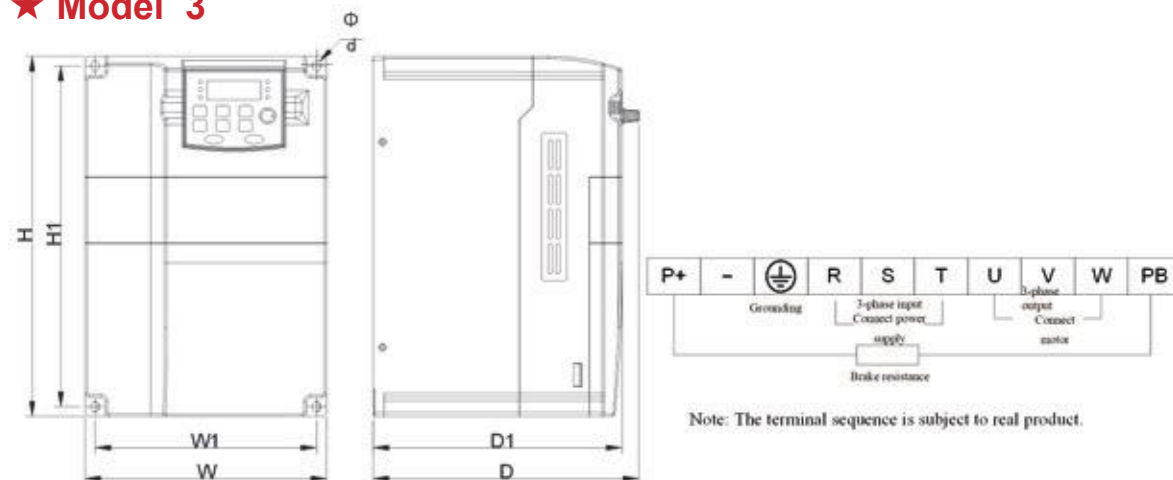
★ Model 1



★ Model 2

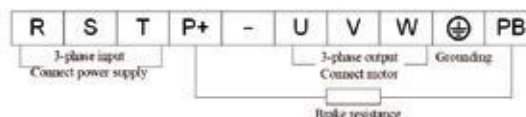
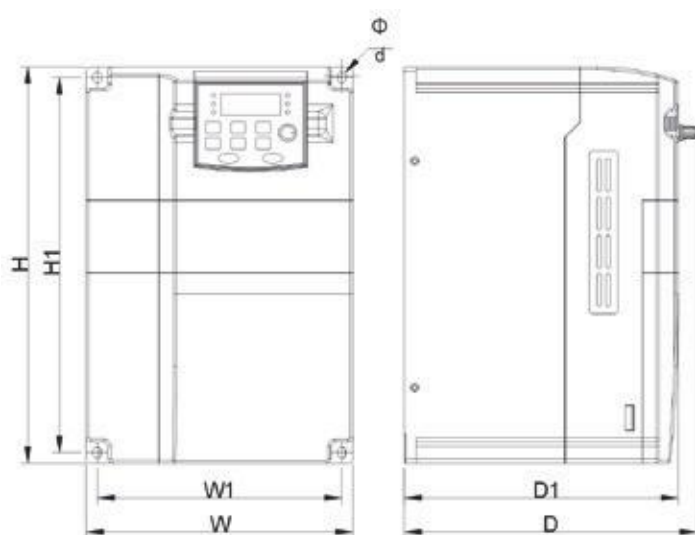


★ Model 3



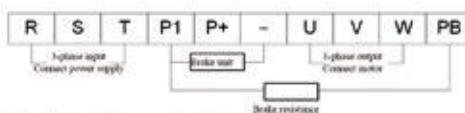
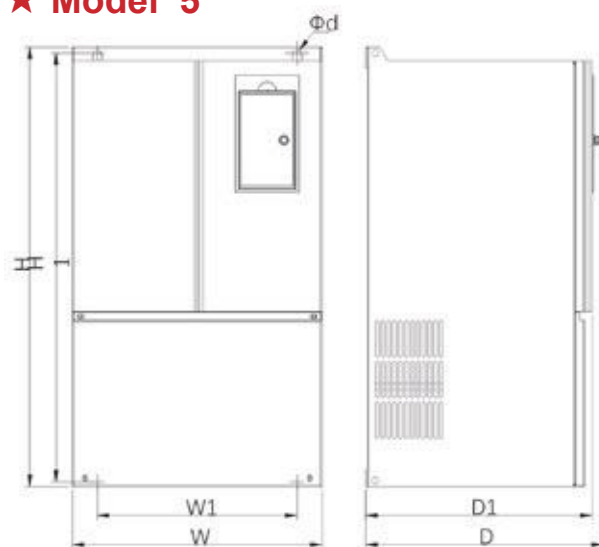
■ Appearance & Installation Dimensions

★ Model 4



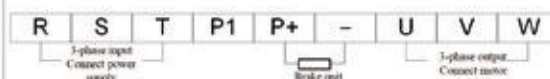
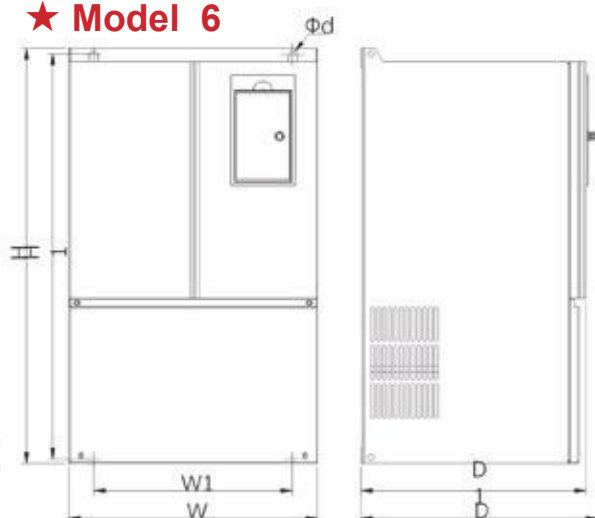
Note: The terminal sequence is subject to real product.

★ Model 5



Note: The terminal sequence is subject to real product.

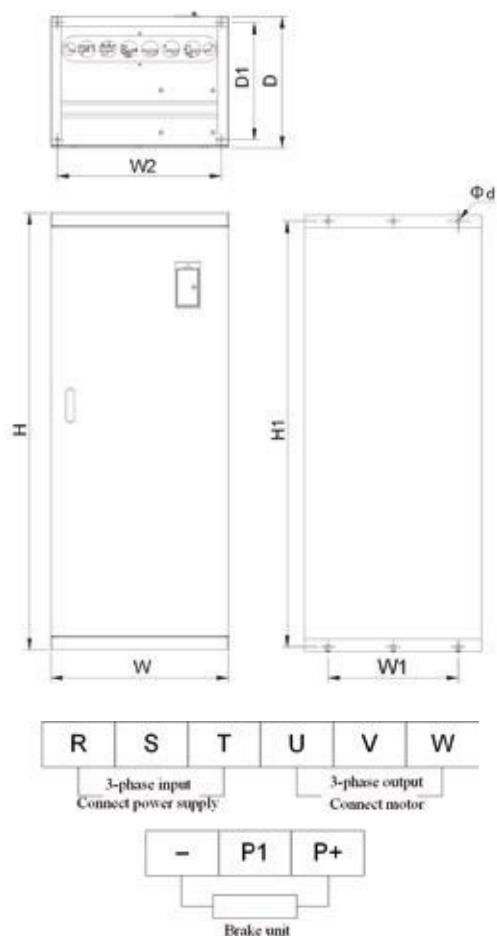
★ Model 6



Note: The terminal sequence is subject to real product.

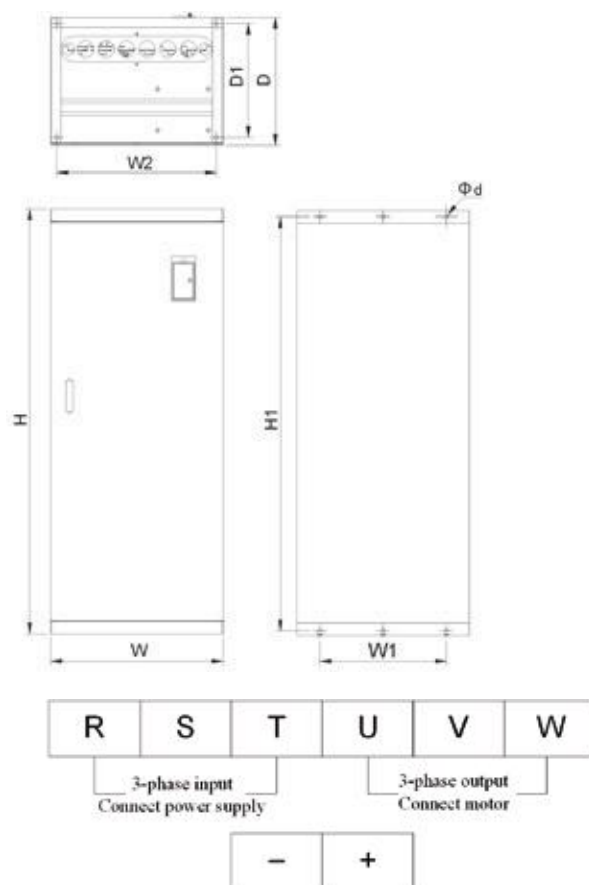
■ Appearance & Installation Dimensions

★ Model 7



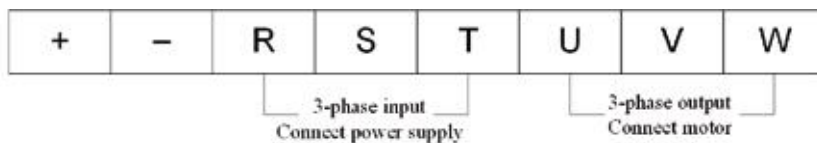
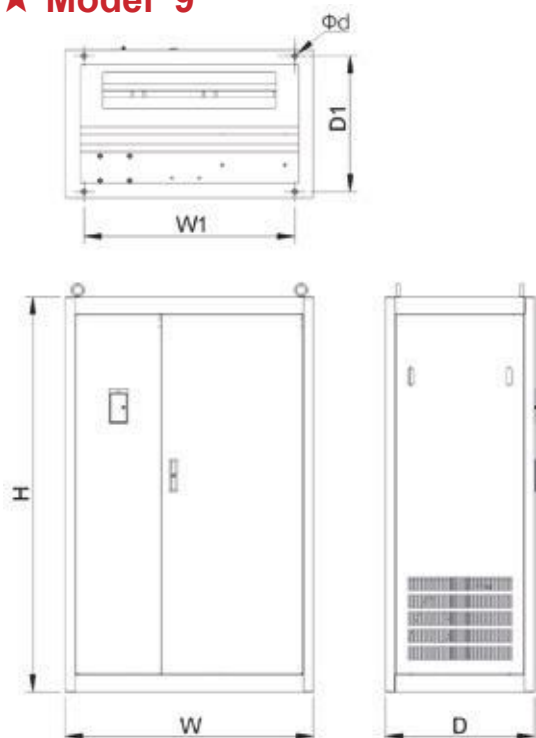
Note: The terminal sequence is subject to real product.

★ Model 8



Note: The terminal sequence is subject to real product.

★ Model 9



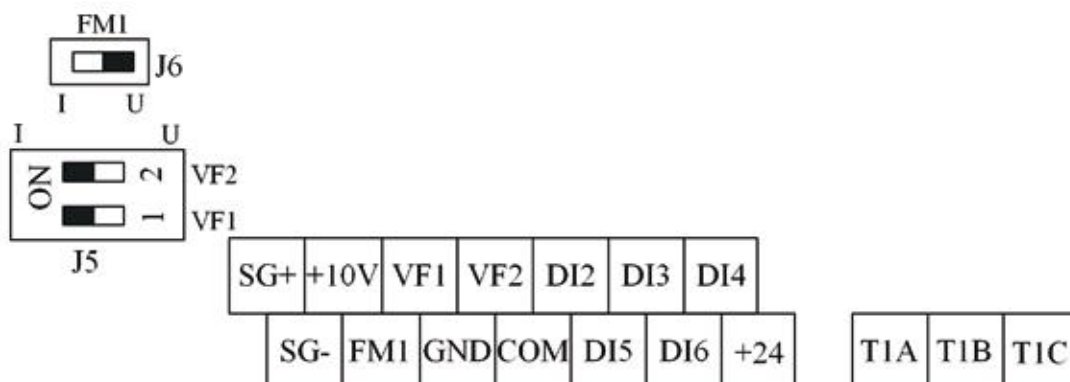
Note: The terminal sequence is subject to real product.

■ Appearance & Installation Dimensions

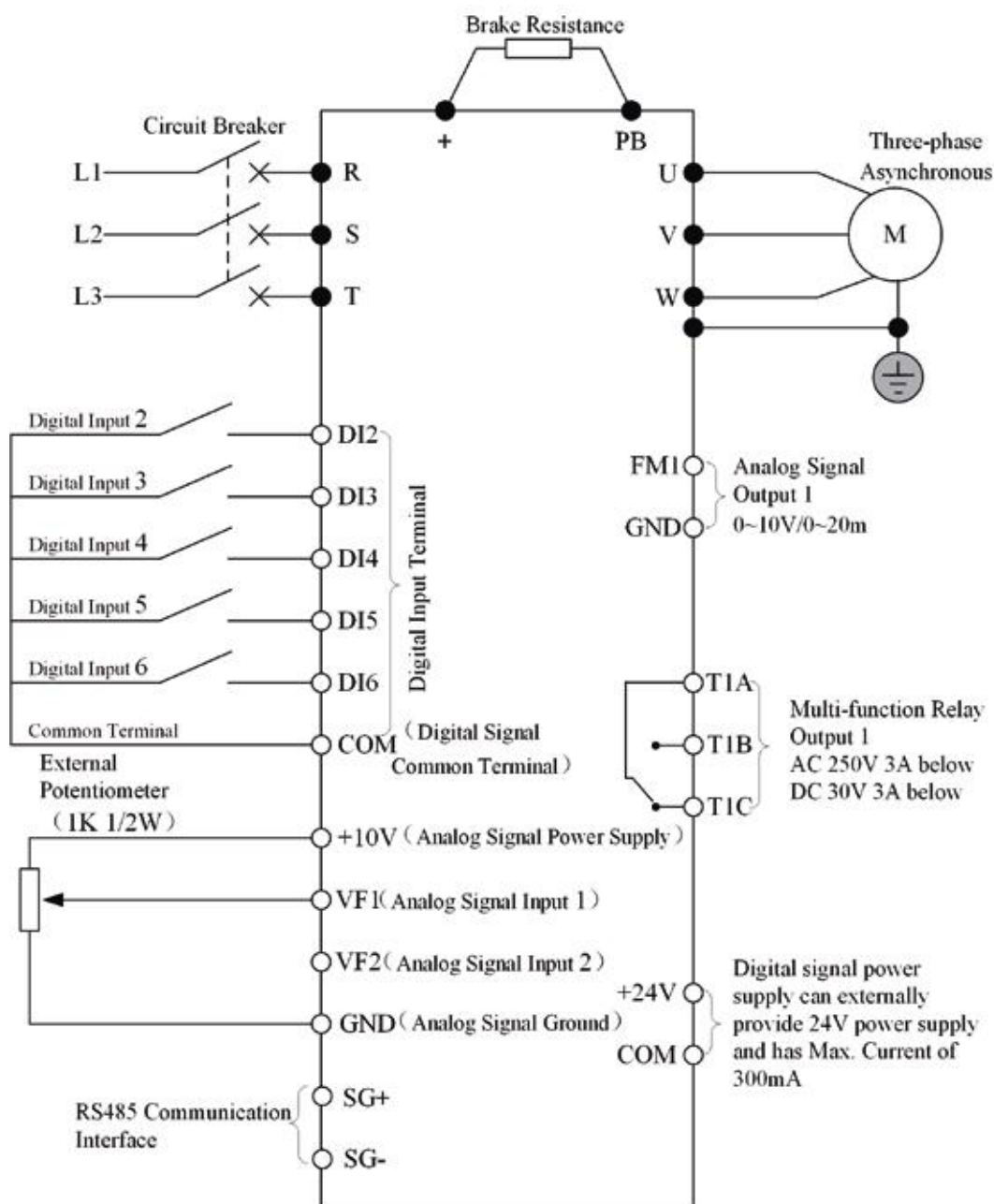
Inverter model	Overall installation dimensions(mm)								Dimension diagram
	W	W1	W2	H	H1	D	D1	Φd	
CDI-E102G0R4S2B	109	99		167	153	161	148	5	Model 1
CDI-E102G0R7S2B	109	99		167	153	161	148	5	Model 1
CDI-E102G1R5S2B	109	99		167	153	161	148	5	Model 1
CDI-E102G2R2S2B	135	122		167	153	171	158	5	Model 2
CDI-E102G0R4T2B	109	99		167	153	161	148	5	Model 1
CDI-E102G0R75T2B	109	99		167	153	161	148	5	Model 1
CDI-E102G1R5T2B	109	99		167	153	161	148	5	Model 1
CDI-E102G2R2T2B	135	122		167	153	171	158	5	Model 2
CDI-E102G0R75T4B	109	99		167	153	161	148	5	Model 1
CDI-E102G1R5T4B	109	99		167	153	161	148	5	Model 1
CDI-E102G2R2T4B	109	99		167	153	161	148	5	Model 1
CDI-E102G3R7T4B	135	122		167	153	171	158	5	Model 2
CDI-E102G5R5/P7R5T4B	180	165		280	265	197.5	185	5.5	Model 3
CDI-E102G7R5/P011T4B	180	165		280	265	197.5	185	5.5	Model 3
CDI-E102G011/P015T4BL	230	215		310	295	206	193.5	5.5	Model 3
CDI-E102G015/P018.5T4BL	230	215		310	295	206	193.5	5.5	Model 3
CDI-E102G018.5/P022T4	260	245		340	325	223	210.5	5.5	Model 4
CDI-E102G022/P030T4	260	245		340	325	223	210.5	5.5	Model 4
CDI-E102G030/P037T4	250	160		430	415	220	235.5	7	Model 5
CDI-E102G037/P045T4	250	160		430	415	220	235.5	7	Model 5
CDI-E102G045/P055T4	300	240		530	515	270	285.5	9	Model 6
CDI-E102G055/P075T4	300	240		530	515	270	285.5	9	Model 6
CDI-E102G075/P093T4	340	260		580	565	313	328.5	9	Model 6
CDI-E102G093/P110T4	340	260		580	565	313	328.5	9	Model 6
CDI-E102G110/P132T4	340	260		580	565	313	328.5	9	Model 6
CDI-E102G132/P160T4	400	300	365	940	910	367	336	13	Model 7
CDI-E102G160/P185T4	400	300	365	940	910	367	336	13	Model 7
CDI-E102G185/P200T4	400	300	365	940	910	367	336	13	Model 7
CDI-E102G200/P220T4L	514	400	504	1235	1200	400	360	14	Model 8
CDI-E102G220T4L	514	400	504	1235	1200	400	360	14	Model 8
CDI-E102P250T4L	514	400	504	1235	1200	400	360	14	Model 8
CDI-E102G250/P280T4L	545	400	504	1345	1310	400	360	14	Model 8
CDI-E102G280/P315T4L	545	400	504	1345	1310	400	360	14	Model 8
CDI-E102G315/P355T4L	545	400	504	1345	1310	400	360	14	Model 8
CDI-E102G355/P375T4L	545	400	504	1450	1415	400	360	14	Model 8
CDI-E102G375T4L	545	400	504	1450	1415	400	360	14	Model 8
CDI-E102P400T4L	545	400	504	1450	1415	400	360	14	Model 8
CDI-E102G400T4L	545	400	504	1450	1415	400	360	14	Model 8
CDI-E102P500T4L	1000	850		1600		600	550	M16	Model 9
CDI-E102G500T4L	1000	850		1600		600	550	M16	Model 9
CDI-E102G630T4L	1000	850		1600		600	550	M16	Model 9

Wiring of Control Circuit

Terminal Arrangement

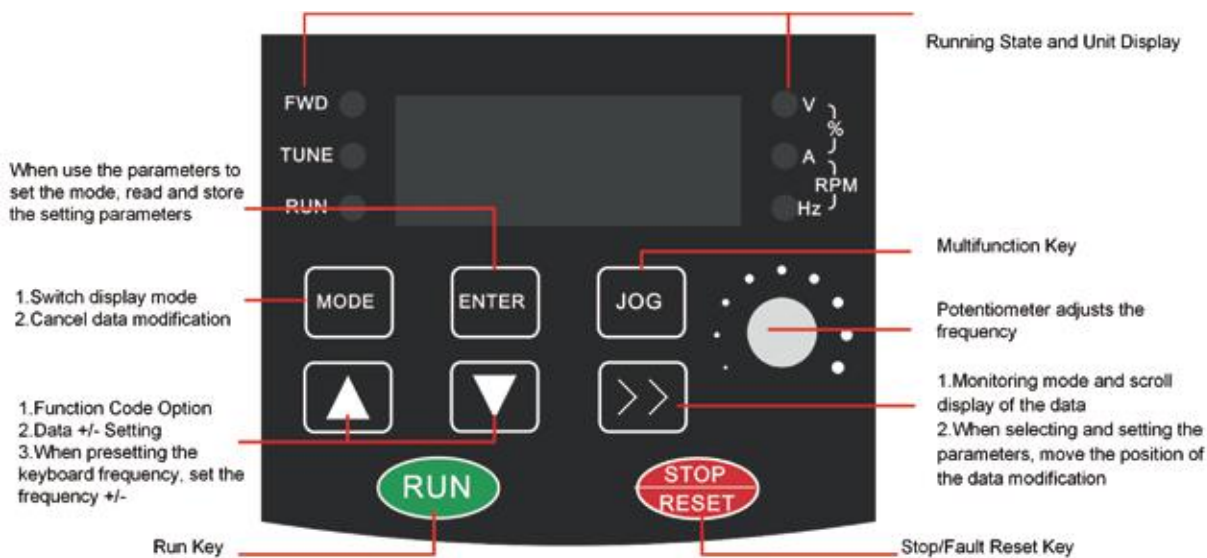


Wiring Diagram of Control Circuit



Keyboard keys & functions

Keyboard keys & functions



Keyboard indication functions

NO	Name	Description of Function
1	FWD	When rotating in the forward direction, the indicator lights up, but when rotating in the backward direction, the indicator doesn't work,
2	TUNE	When the parameter identification function operates, the light flickers. The light is normally on at torque control mode
3	RUN	The frequency inverter lights up under running state
4	V	Indicate voltage value
5	A	Indicate current value
6	Hz	Indicate frequency
7	V-%-A	Indicate percentage
8	A-RPM-Hz	Indicate rotating speed

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