3.5 Type designation key

The type designation contains information on the inverter. The user can find the type designation on the type designation label attached to the inverter or the simple name plate.

Fig 3-4 Product type

Key	Instructions	
A	GD200L : abbreviation of Goodrive200L	
B, D	3-digit code: output power. “R” means the decimal point; ”011”:11kW; “015”:15kW	
C, E	C	G:Constant torque load
	E	P:Variable torque load
F	Input voltage degree: 2: AC 3PH 220V(-15%)~240V(+10%) 4: AC 3PH 380V(-15%)~ 440V(+10%) 6: AC 3PH 520V(-15%)~690V(+10%)	

3.6 Rated specifications

Model	Constant torque			Variable torque		
	Output power (kW)	Input current (A)	Output current (A)	Output power (kW)	Input current (A)	Output current (A)
GD200L-0R7G-4	0.75	3.4	2.5			
GD200L -1R5G-4	1.5	5.0	3.7			
GD200L -2R2G-4	2.2	5.8	5			
GD200L -004G/5R5P-4	4	13.5	9.5	5.5	19.5	14
GD200L-5R5G/7R5P-4	5.5	19.5	14	7.5	25	18.5
GD200L -7R5G/011P-4	7.5	25	18.5	11	32	25
GD200L -011G/015P-4	11	32	25	15	40	32
GD200L -015G/018P-4	15	40	32	18.5	47	38
GD200L -018G/022P-4	18.5	47	38	22	56	45
GD200L -022G/030P-4	22	56	45	30	70	60
GD200L -030G/037P-4	30	70	60	37	80	75
GD200L -037G/045P-4	37	80	75	45	94	92
GD200L -045G/055P-4	45	94	92	55	128	115
GD200L -055G/075P-4	55	128	115	75	160	150
GD200L -075G/090P-4	75	160	150	90	190	180
GD200L -090G/110P-4	90	190	180	110	225	215
GD200L -110G/132P-4	110	225	215	132	265	260

Model	Constant torque			Variable torque		
	Output power (kW)	Input current (A)	Output current (A)	Output power (kW)	Input current (A)	Output current (A)
GD200L -132G/160P-4	132	265	260	160	310	305
GD200L -160G/185P-4	160	310	305	185	345	340
GD200L -185G/200P-4	185	345	340	200	385	380
GD200L -200G/220P-4	200	385	380	220	430	425
GD200L -220G/250P-4	220	430	425	250	485	480
GD200L -250G/280P-4	250	485	480	280	545	530
GD200L -280G/315P-4	280	545	530	315	610	600
GD200L -315G/350P-4	315	610	600	350	625	650
GD200L -350G/400P-4	350	625	650	400	715	720
GD200L -400G-4	400	715	720			
GD200L -500G-4	500	890	860			

Note:

1. The input current of 1.5~315kW inverters is measured when the input voltage is 380V and no DC reactor and input/output reactor.
2. The input current of 350~500kW inverters is measured when the input voltage is 380V and the circuit is with input reactor.
3. The rated output current is defined as the output current when the output voltage is 380V.
4. In the allowable voltage range, the output power and current can not exceed the rated output power and current in any situation.

3.7 Structure diagram

Below is the layout figure of the inverter (take the inverter of 30kW as the example).

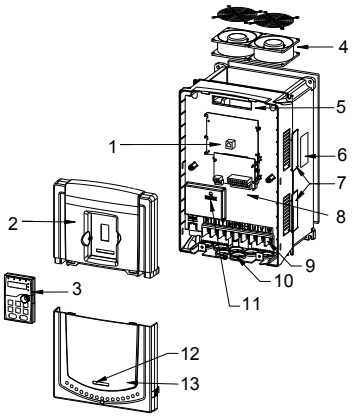


Fig 3-5 Product structure diagram

Serial No.	Name	Illustration
1	Keypad port	Connect the keypad
2	Upper cover	Protect the internal parts and components
3	Keypad	See ***Keypad Operation Procedure*** for detailed information
4	Cooling fan	See ***Maintenance and Hardware Fault Diagnose*** for detailed information
5	Wires port	Connect to the control board and the drive board
6	Name plate	See ***Product Overview*** for detailed information
7	Side cover	Optional part. The side cover will increase the protective degree of the inverter. The internal temperature of the inverter will increase, too, so it is necessary to derate the inverter at the same time
8	Control terminals	See ***Electric Installation*** for detailed information
9	Main circuit terminals	See ***Electric Installation*** for detailed information
10	Main circuit cable entry	Fix the main circuit cable
11	POWER light	Power indicator
12	Simple name plate	See ***Product Overview*** for detailed information
13	Lower cover	Protect the internal parts and components

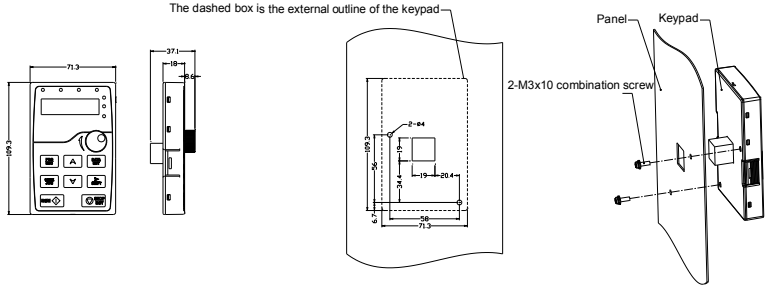
Dimension Drawings Appendix B

B.1 What this chapter contains

Dimension drawings of the Goodrive200L are shown below. The dimensions are reference in millimeters and inches.

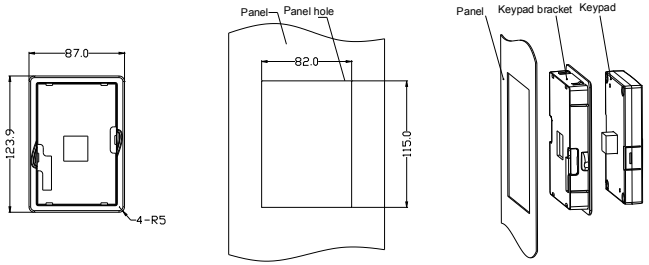
B.2 Keypad structure

B.2.1 Structure chart



B.2.2 Installation chart

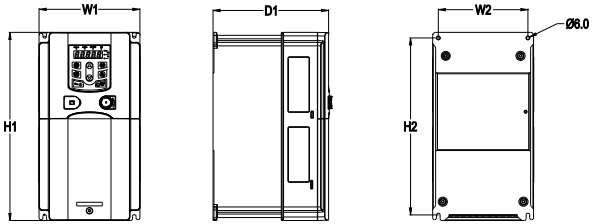
Note: The external keypad can be fix by M3 screws directly or the installation bracket. The installation bracket for inverters of 0.75~30kW is optional and the installtaion bracket for inverters of 37~500kW is optional or substitutive by the external standard one.



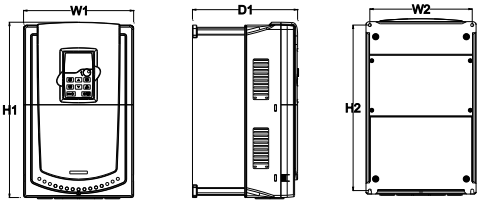
Installation bracket of the key (0.75~500kW)(optional)

B.3 Inverter chart

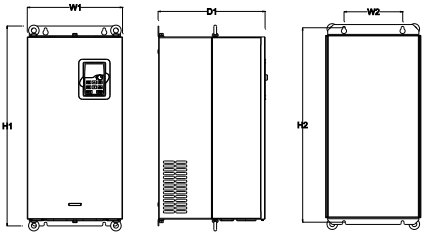
B.3.1 Wall mounting



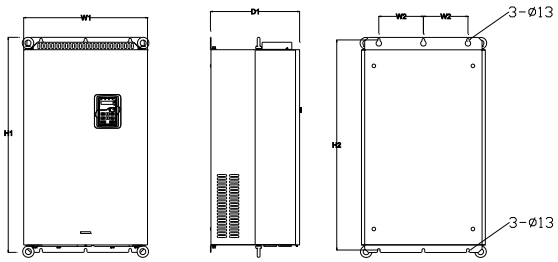
0.75-15kW wall mounting



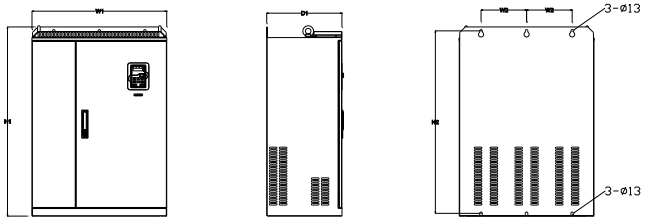
18.5-30kW wall mounting



37-110kW wall mounting



132-200kW wall mounting

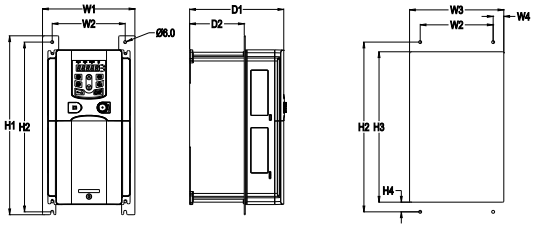


220-315kW wall mounting

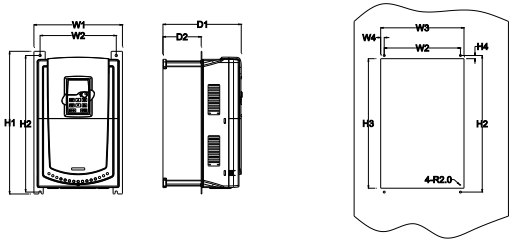
Installation dimension (unit: mm)

Model	W1	W2	H1	H2	D1	Installation hole
0.75kW ~2.2kW	126	115	186	175	174.5	5
4kW~5.5kW	146	131	256	243.5	181	6
7.5kW~15kW	170	151	320	303.5	216	6
18.5kW	230	210	342	311	216	6
22kW~30kW	255	237	407	384	245	7
37kW~55kW	270	130	555	540	325	7
75kW~110kW	325	200	680	661	365	9.5
132kW~200kW	500	180	870	850	360	11
220kW~315kW	680	230	960	926	379.5	13

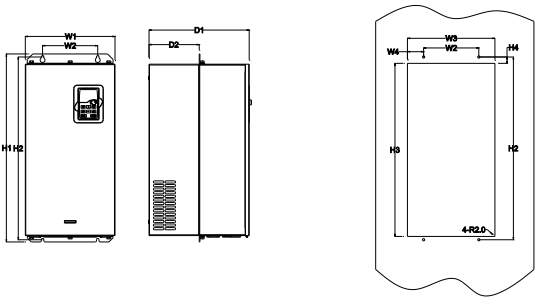
B.3.2 Flange mounting



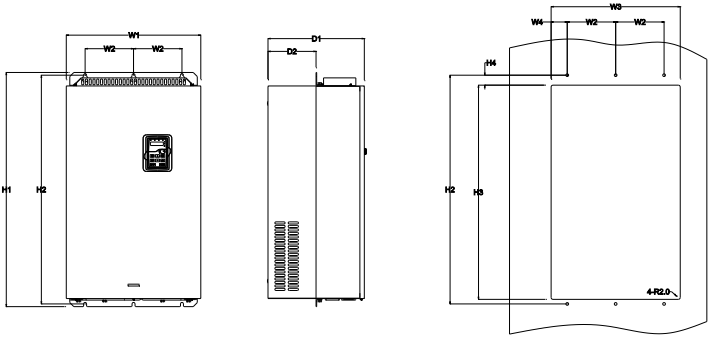
0.75-15kW flange mounting



18.5-30kW flange mounting



37-110kW flange mounting

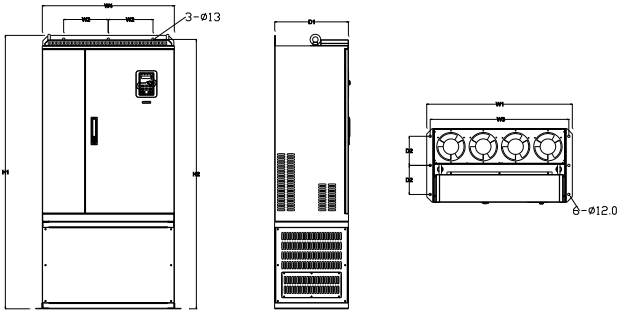


132-200kW flange mounting

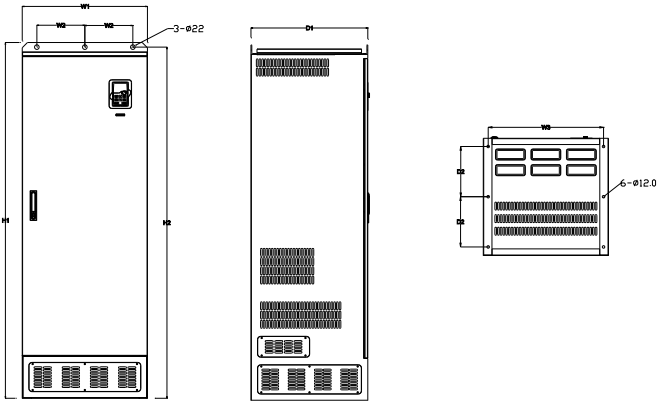
Installation dimension (unit: mm)

Model	W1	W2	W3	W4	H1	H2	H3	H4	D1	D2	Installation hole
0.75kW~2.2kW	150.2	115	130	7.5	234	220	190	13.5	155	65.5	5
4kW~5.5kW	170.2	131	150	9.5	292	276	260	6	167	84.5	6
7.5kW~15kW	191.2	151	174	11.5	370	351	324	12	196.3	113	6
18.5kW	250	210	234	12	375	356	334	10	216	108	6
22kW~30kW	275	237	259	11	445	426	404	10	245	119	7
37kW~55kW	270	130	261	65.5	555	540	516	17	325	167	7
75kW~110kW	325	200	317	58.5	680	661	626	23	363	182	9.5
132kW~200kW	500	180	480	60	870	850	796	37	358	178.5	11

B.3.3 Floor mounting



220-315kW floor mounting



50-500kW floor mounting

Model	W1	W2	W3	W4	H1	H2	D1	D2	Installation hole
220kW~315kW	750	230	714	680	1410	1390	380	150	13\12
350kW~500kW	620	230	573	\	1700	1678	560	240	22\12

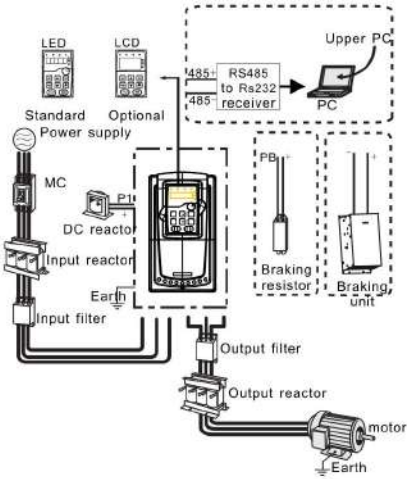
Peripheral Options and Parts Appendix C

C.1 What this chapter contains

This chapter describes how to select the options and parts of Goodrive200L series.

C.2 Peripheral wiring

Below is the peripheral wiring of Goodrive200L series inverters.



Note:

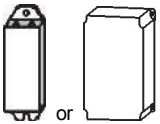
1. The inverters (≤15kW) have standard film keypad and the inverters (≥18.5kW) have standard LED keypad.

2. The inverter below 30kW (including 30kW) are embedded with braking unit.

3. Only the inverter above 37kW (including 37kW) have P1 terminal and are connected with DC reactors.

4. The braking units apply standard braking unit DBU series in. Refer to the instruction of DBU for detailed information.

Pictures	Name	Descriptions
	Cables	Device to transfer the electronic signals
	Breaker	Prevent from electric shock and protect the power supply and the cables system from overcurrent when short circuits occur. (Please select the breaker with the function of reducing high order harmonic and the rated sensitive current to 1 inverter should be above 30mA).

Pictures	Name	Descriptions
	Input reactor	This device is used to improve the power factor of the input side of the inverter and control the higher harmonic current. The inverter above 37kW (including 37kW) can be connected with DC reactor.
	DC reactor	
	Input filter	Control the electromagnetic interference generated from the inverter, please install close to the input terminal side of the inverter.
 or	Braking unit or resistors	Shorten the DEC time The inverters below 30kW(including 30kW) only need braking resistors and the inverters above 37kW(including 37 kW) need braking units
	Output filter	Control the interference from the output side of the inverter and please install close to the output terminals of the inverter.
	Output reactor	Prolong the effective transmitting distance of the inverter to control the sudden high voltage when switching on/off the IGBT of the inverter.

C.3 Power supply

Please refer to ***Electronical Installation***.

	✧**Check that the voltage degree of the inverter complies with the voltage of the supply power voltage.**

C.4 Cables

C.4.1 Power cables

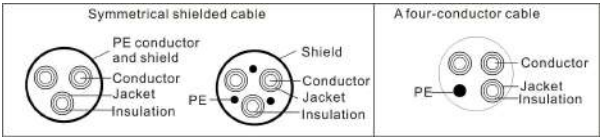
Dimension the input power and motor cables according to local regulations.

- The input power and the motor cables must be able to carry the corresponding load currents.
- The cable must be rated for at least 70 °C maximum permissible temperature of the conductor in continuous use.
- The conductivity of the PE conductor must be equal to that of the phase conductor (same cross-sectional area).
- Refer to chapter ***Technical Data*** for the EMC requirements.

A symmetrical shielded motor cable (see the figure below) must be used to meet the EMC requirements of the CE.

A four-conductor system is allowed for input cabling, but a shielded symmetrical cable is

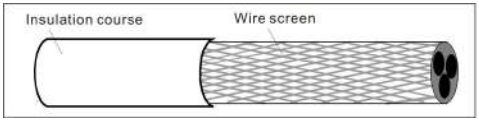
recommended. Compared to a four-conductor system, the use of a symmetrical shielded cable reduces electromagnetic emission of the whole drive system as well as motor bearing currents and wear.



Note: A separate PE conductor is required if the conductivity of the cable shield is not sufficient for the purpose.

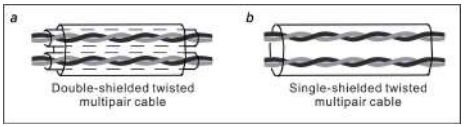
To function as a protective conductor, the shield must have the same cross-sectional area as the phase conductors when they are made of the same metal.

To effectively suppress radiated and conducted radio-frequency emissions, the shield conductivity must be at least 1/10 of the phase conductor conductivity. The requirements are easily met with a copper or aluminum shield. The minimum requirement of the motor cable shield of the drive is shown below. It consists of a concentric layer of copper wires. The better and tighter the shield, the lower the emission level and bearing currents.



C.4.2 Control cables

All analog control cables and the cable used for the frequency input must be shielded. Use a double-shielded twisted pair cable (Figure a) for analog signals. Employ one individually shielded pair for each signal. Do not use common return for different analog signals.



A double-shielded cable is the best alternative for low-voltage digital signals, but a single-shielded or unshielded twisted multi-pair cable (Figure b) is also usable. However, for frequency input, always use a shielded cable.

The relay cable needs the cable type with braided metallic screen.

The keypad needs to connect with cables. It is recommended to use the screen cable on complex electrical magnetic condition.

Note: Run analog and digital signals in separate cables.

Do not make any voltage tolerance or insulation resistance tests (for example hi-pot or megger) on any part of the drive as testing can damage the drive. Every drive has been tested for insulation between the main circuit and the chassis at the factory. Also, there are voltage-limiting circuits inside the drive which cut down the testing voltage automatically.

Check the insulation of the input power cable according to local regulations before

connecting to the drive.

Note: Check the insulation of the input power cables according to local regulations before connecting the cables.

The inverter	Recommended cable size(mm^2)				Screw	
	R,S,T U,V,W	PE	P1(+)	PB(+)(-)	Terminal screw size	Tightening torque (Nm)
GD200L -0R7G-4	2.5	2.5	2.5	2.5	M4	1.2~1.5
GD200L -1R5G-4	2.5	2.5	2.5	2.5	M4	1.2~1.5
GD200L -2R2G-4	2.5	2.5	2.5	2.5	M4	1.2~1.5
GD200L -004G/5R5P-4	2.5	2.5	2.5	2.5	M4	1.2~1.5
GD200L -5R5G/7R5P-4	4	4	2.5	2.5	M5	2~2.5
GD200L -7R5G/011P-4	6	6	4	2.5	M5	2~2.5
GD200L -011G/015P-4	10	10	6	4	M5	2~2.5
GD200L -015G/018P-4	10	10	10	4	M5	2~2.5
GD200L -018G/022P-4	16	16	10	6	M6	4~6
GD200L -022G/030P-4	25	16	16	10	M6	4~6
GD200L -030G/037P-4	25	16	16	10	M8	9~11
GD200L -037G/045P-4	35	16	25	16	M8	9~11
GD200L -045G/055P-4	50	25	35	25	M8	9~11
GD200L -055G/075P-4	70	35	50	25	M10	18~23
GD200L -075G/090P-4	95	50	70	35	M10	18~23
GD200L -090G/110P-4	120	70	95	35	M10	18~23
GD200L -110G/132P-4	150	70	120	70	M12	31~40
GD200L -132G/160P-4	185	95	150	95	M12	31~40
GD200L -160G/185P-4	240	95	185	50	M12	31~40
GD200L -185G/200P-4	120*2P	150	95*2P	50	M12	31~40
GD200L -200G/220P-4	120*2P	150	95*2P	50	M12	31~40
GD200L -220G/250P-4	150*2P	150	95*2P	50	M12	31~40
GD200L -250G/280P-4	150*2P	150	120*2P	95	M12	31~40
GD200L -280G/315P-4	185*2P	185	120*2P	95	M12	31~40
GD200L -315G/350P-4	185*2P	185	120*2P	95	M12	31~40
GD200L -350G/400P-4	95*4P	95*2P	150*2P	120	M12	31~40
GD200L -400G-4	95*4P	95*2P	150*2P	120	M12	31~40
GD200L -500G-4	120*4P	95*2P	95*4P	120	M12	31~40

Note:

1. It is appropriate to use the recommended cable size under 40℃ and rated current. The wiring distance should be no more than 100m.
2. Terminals P1, (+), PB and (-) connects the DC reactor options and parts.

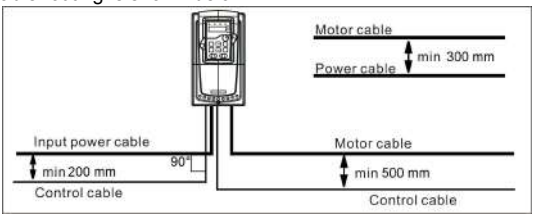
C.4.3 Routing the cables

Route the motor cable away from other cable routes. Motor cables of several drives can be run in parallel installed next to each other. It is recommended that the motor cable, input power cable and control cables are installed on separate trays. Avoid long parallel runs of motor cables with other cables to decrease electromagnetic interference caused by the rapid changes in the drive output voltage.

Where control cables must cross power cables make sure that they are arranged at an angle as near to 90 degrees as possible.

The cable trays must have good electrical bonding to each other and to the grounding electrodes. Aluminum tray systems can be used to improve local equalizing of potential.

A figure of the cable routing is shown below.



C.4.4 Checking the insulation

Check the insulation of the motor and motor cable as follows:

1. Check that the motor cable is connected to the motor and disconnected from the drive output terminals U, V and W.
2. Measure the insulation resistance between each phase conductor and the Protective Earth conductor using a measuring voltage of 500 V DC. For the insulation resistance of other motors, please consult the manufacturer's instructions.

Note: Moisture inside the motor casing will reduce the insulation resistance. If moisture is suspected, dry the motor and repeat the measurement.

C.5 Breaker, electromagnetic contactor and leakage protection switch

Due to the inverter output high frequency PWM voltage waveform, and the existance of distributed capacitance between IGBT and heatsink in internal inverter and the distributed capacitance between motor stator and rotor will cause the inverter inevitably generate high-frequency leakage current to ground. The high-frequency leakage current will back flow to grid through the earth to interference the leakage protection switch, thus causing the leakage protection switch malfunction. This is due to the inverter output voltage characteristics inherent in the decision.

To ensure the stability of the system, it is recommended to use the inverter dedicated leakage protection switch which rated residual operation current 30mA or more(for example, corresponds to IEC60755 Type B). If you are not using the inverter dedicated leakage protection switch caused by malfunction, try to reduce the carrier frequency, or replace the electromagnetic leakage protection switch which rated residual operating current of 200mA

or more.

It is necessary to add fuse for the avoidance of overload.

It is appropriate to use a breaker (MCCB) which complies with the inverter power in the 3-phase AC power and input power and terminals (R, S and T). The capacity of the inverter should be 1.5-2 times of the rated current.

✧**Due to the inherent operating principle and construction of circuit breakers, independent of the manufacturer, hot ionized gases may escape from the breaker enclosure in case of a short-circuit. To ensure safe use, special attention must be paid to the installation and placement of the breakers. Follow the manufacturer's instructions.**

Inverter	Breaker (A)	Fuse (A)	Rated current of the reactor (A)
GD200-0R7G-4	10	16	12
GD200-1R5G-4	10	16	12
GD200-2R2G-4	16	16	12
GD200-004G/5R5P-4	16	25	12
GD200-5R5G/7R5P-4	25	32	25
GD200-7R5G/011P-4	40	40	25
GD200-011G/015P-4	50	50	40
GD200-015G/018P-4	63	63	40
GD200-018G/022P-4	63	80	50
GD200-022G/030P-4	80	100	65
GD200-030G/037P-4	100	125	80
GD200-037G/045P-4	125	160	95
GD200-045G/055P-4	160	160	115
GD200-055G/075P-4	160	200	150
GD200-075G/090P-4	250	250	185
GD200-090G/110P-4	250	315	225
GD200-110G/132P-4	315	315	265
GD200-132G/160P-4	350	400	330
GD200-160G/185P-4	400	500	400
GD200-185G/200P-4	500	630	500
GD200-200G/220P-4	500	630	500
GD200-220G/250P-4	630	630	500
GD200-250G/280P-4	630	800	630
GD200-280G/315P-4	700	800	630
GD200-315G/350P-4	800	1000	780
GD200-350G/400P-4	800	1000	780
GD200-400G-4	1000	1250	780
GD200-500G-4	1200	1250	980

C.6 Reactors

If the distance between the inverter and the motor is longer than 50m, frequent overcurrent protection may occur to the inverter because of high leakage current caused by parasitic capacitance effects from the long cables to the ground. In order to avoid the damage of the motor insulation, it is necessary to add reactor compensation.

The power of the inverter	Input reactor	DC reactor	Output reactor
GD200L -0R7G-4	ACL2-1R5-4	/	OCL2-1R5-4
GD200L -1R5G-4	ACL2-1R5-4	/	OCL2-1R5-4
GD200L -2R2G-4	ACL2-2R2-4	/	OCL2-2R2-4
GD200L -004G/5R5P-4	ACL2-004-4	/	OCL2-004-4
GD200L -5R5G/7R5P-4	ACL2-5R5-4	/	OCL2-5R5-4
GD200L -7R5G/011P-4	ACL2-7R5-4	/	OCL2-7R5-4
GD200L -011G/015P-4	ACL2-011-4	/	OCL2-011-4
GD200L -015G/018P-4	ACL2-015-4	/	OCL2-015-4
GD200L -018G/022P-4	ACL2-018-4	/	OCL2-018-4
GD200L -022G/030P-4	ACL2-022-4	/	OCL2-022-4
GD200L -030G/037P-4	ACL2-030-4	/	OCL2-030-4
GD200L -037G/045P-4	ACL2-037-4	DCL2-037-4	OCL2-037-4
GD200L -045G/055P-4	ACL2-045-4	DCL2-045-4	OCL2-045-4
GD200L -055G/075P-4	ACL2-055-4	DCL2-055-4	OCL2-055-4
GD200L -075G/090P-4	ACL2-075-4	DCL2-075-4	OCL2-075-4
GD200L -090G/110P-4	ACL2-090-4	DCL2-090-4	OCL2-090-4
GD200L -110G/132P-4	ACL2-110-4	DCL2-110-4	OCL2-110-4
GD200L -132G/160P-4	ACL2-132-4	DCL2-132-4	OCL2-132-4
GD200L -160G/185P-4	ACL2-160-4	DCL2-160-4	OCL2-160-4
GD200L -185G/200P-4	ACL2-200-4	DCL2-200-4	OCL2-200-4
GD200L -200G/220P-4	ACL2-200-4	DCL2-200-4	OCL2-200-4
GD200L -220G/250P-4	ACL2-250-4	DCL2-250-4	OCL2-250-4
GD200L -250G/280P-4	ACL2-250-4	DCL2-250-4	OCL2-250-4
GD200L -280G/315P-4	ACL2-280-4	DCL2-280-4	OCL2-280-4
GD200L -315G/350P-4	ACL2-315-4	DCL2-315-4	OCL2-315-4
GD200L -350G/400P-4	Standard	DCL2-350-4	OCL2-350-4
GD200L -400G-4	Standard	DCL2-400-4	OCL2-400-4
GD200L -500G-4	Standard	DCL2-500-4	OCL2-500-4

Note:

1. The rated derate voltage of the input reactor is 2%±15%.

2. The power factor of the input side is above 90% after adding DC reactor.

3. The rated derate voltage of the output reactor is 1%±15%.

4. Above options are external, the customer should indicate when purchasing.

C.7 Filters

The inverter	Input filter	Output filter
GD200L -0R7G-4	FLT-P04006L-B	FLT-L04006L-B
GD200L -1R5G-4		
GD200L -2R2G-4		
GD200L -004G/5R5P-4	FLT-P04016L-B	FLT-L04016L-B
GD200L -5R5G/7R5P-4		
GD200L -7R5G/011P-4	FLT-P04032L-B	FLT-L04032L-B
GD200L -011G/015P-4		
GD200L -015G/018P-4	FLT-P04045L-B	FLT-L04045L-B
GD200L -018G/022P-4		
GD200L -022G/030P-4	FLT-P04065L-B	FLT-L04065L-B
GD200L -030G/037P-4		
GD200L -037G/045P-4	FLT-P04100L-B	FLT-L04100L-B
GD200L -045G/055P-4		
GD200L -055G/075P-4	FLT-P04150L-B	FLT-L04150L-B
GD200L -075G/090P-4		
GD200L -090G/110P-4	FLT-P04240L-B	FLT-L04240L-B
GD200L -110G/132P-4		
GD200L -132G/160P-4		
GD200L -160G/185P-4	FLT-P04400L-B	FLT-L04400L-B
GD200L -185G/200P-4		
GD200L -200G/220P-4		

The inverter	Input filter	Output filter
GD200L -220G/250P-4	FLT-P04600L-B	FLT-L04600L-B
GD200L -250G/280P-4		
GD200L -280G/315P-4		
GD200L -315G/350P-4	FLT-P04800L-B	FLT-L04800L-B
GD200L -350G/400P-4		
GD200L -400G-4		
GD200L -500G-4	FLT-P041000L-B	FLT-L041000L-B

Note: The input EMI meet the requirement of C2 after adding input filters.

C.8 Braking system

C.8.1 Select the braking components

It is appropriate to use braking resistor or braking unit when the motor brakes sharply or the motor is driven by a high inertia load. The motor will become a generator if its actual rotating speed is higher than the corresponding speed of the reference frequency. As a result, the inertial energy of the motor and load return to the inverter to charge the capacitors in the main DC circuit. When the voltage increases to the limit, damage may occur to the inverter. It is necessary to apply braking unit/resistor to avoid this accident happens.

	**✧Only qualified electricians are allowed to design, install, commission and operate on the inverter.** **✧Follow the instructions in "warning" during working. Physical injury or death or serious property may occur.** **✧Only qualified electricians are allowed to wire. Damage to the inverter or braking options and part may occur. Read carefully the instructions of braking resistors or units before connecting them with the inverter.** **✧Do not connect the braking resistor with other terminals except for PB and (-). Do not connect the braking unit with other terminals except for (+) and (-). Damage to the inverter or braking circuit or fire may occur.**
	**✧Connect the braking resistor or braking unit with the inverter according to the diagram. Incorrect wiring may cause damage to the inverter or other devices.**

Goodrive200L series inverters below 30kW (including 30kW) need internal braking units and the inverters above 37kW need external braking unit. Please select the resistance and power of the braking resistors according to actual utilization.

Note:

Select the resistor and power according to the provided data.

The braking torque may increase because of the raising of braking resistor. The below table

is calculated at 100% of the braking torque, 10%, 50% and 80%of the braking usage ratio. The user can select according to the actual working.

Refer to the operation instructions of braking units when using external units for right setting of voltage degree. Otherwise normal operation of the inverter may be impacted.

The inverter	Braking unit type	100% of braking rate (Ω)	The consumed power of the braking resistor			Mini Braking Resistor (Ω)
			10% braking	50% braking	80% braking	
GD200L -0R7G-4	Internal braking unit	653	0.1	0.6	0.9	240
GD200L -1R5G-4		326	0.23	1.1	1.8	170
GD200L -2R2G-4		222	0.33	1.7	2.6	130
GD200L-004G/5R5P-4		122	0.6	3	4.8	80
GD200L-5R5G/7R5P-4		89	0.75	4.1	6.6	60
GD200L -7R5G/011P-4		65	1.1	5.6	9	47
GD200L -011G/015P-4		44	1.7	8.3	13.2	31
GD200L -015G/018P-4		32	2	11	18	23
GD200L -018G/022P-4		27	3	14	22	19
GD200L -022G/030P-4		22	3	17	26	17
GD200L -030G/037P-4		16	5	23	36	17
GD200L -037G/045P-4	DBU100H-060-4	13	6	28	44	11.7
GD200L -045G/055P-4	DBU100H-110-4	10	7	34	54	6.4
GD200L -055G/075P-4		8	8	41	66	
GD200L -075G/090P-4		6.5	11	56	90	
GD200L -090G/110P-4	DBU100H-160-4	5.4	14	68	108	4.4
GD200L -110G/132P-4		4.5	17	83	132	
GD200L -132G/160P-4	DBU100H-220-4	3.7	20	99	158	3.2
GD200L -160G/185P-4	DBU100H-320-4	3.1	24	120	192	2.2
GD200L -185G/200P-4		2.8	28	139	222	
GD200L -200G/220P-4		2.5	30	150	240	
GD200L -220G/250P-4	DBU100H-400-4	2.2	33	165	264	1.8
GD200L -250G/280P-4		2.0	38	188	300	
GD200L -280G/315P-4	Two DBU100H-320-4	3.6*2	21*2	105*2	168*2	2.2*2
GD200L -315G/350P-4		3.2*2	24*2	118*2	189*2	
GD200L -350G/400P-4		2.8*2	27*2	132*2	210*2	
GD200L -400G-4		2.4*2	30*2	150*2	240*2	
GD200L -500G-4	Two DBU100H-400-4	2*2	38*2	186*2	300*2	1.8*2

✧Never use a brake resistor with a resistance below the minimum value specified for the particular drive. The drive and the internal chopper are not able to handle the overcurrent caused by the low resistance.

	✧**Increase the power of the braking resistor properly in the frequent braking situation (the frequency usage ratio is more than 10%).**

C.8.2 Select the brake resistor cables

Use a shielded cable to the resistor cable.

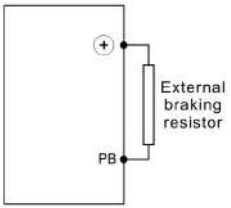
C.8.3 Place the brake resistor

Install all resistors in a place where they will cool.

	✧**The materials near the brake resistor must be non-flammable. The surface temperature of the resistor is high. Air flowing from the resistor is of hundreds of degrees Celsius. Protect the resistor against contact.**

Installation of the braking resistor:

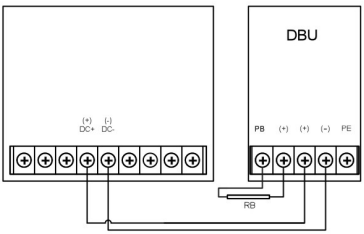
	✧**The inverters below30kW (including 30kW) only needs external braking resistors.** ✧**PB and (+) are the wiring terminals of the braking resistors.**



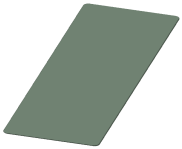
Installation of braking units:

	✧**The inverters above 37kW (including 370kW) only needs external braking units.** ✧**(+), (-) are the wiring terminals of the braking units.** ✧**The wiring length between the (+),(-) terminals of the inverter and the (+),(-) terminals of the braking units should be no more than 5m,and the distributing length among BR1 and BR2 and the braking resistor terminals should be no more than 10m.**

Signal installation is as below:



C.9 Other optional parts

No.	Optional part	Instruction	Picture
1	Flange installation bracket	Needed for the flange installation of 1.5~30kW inverters Not needed for the flange installation of 37~200kW inverters	
2	Installation base	Optimal for 220~315kW inverters An input AC/DC reactor and output AC reactor can be put in the base.	
3	Installation bracket	Use the screw or installation bracket to fix the external keypad. Optimal for 1.5~30kW inverters ands standard for 37~500kW inverters	
4	Side cover	Protect the internal circuit in serious environment. Derate when selecting the cover. Please contact INVT for detailed information.	
5	LCD Keypad	Support several languages, parameters copy, high-definition display and the installation dimension is compatible with the LED keypad.	
6	LED keypad	0.75~15kW inverter optional.