

# Goodrive20-09 Series VFD for Hoisting



## / Product Profile

High power density,  
small volume design



### Goodrive20-09 Series VFD for Hoisting

Goodrive20-09 is a special lifting inverter developed by the INVT for load characteristics and control requirements of electric hoist, European type crane, small tonnage portal crane or bridge crane. It integrates the logic of hoisting brake and the control logic of conical motor, and has the special functions of torque verification, brake feedback, zero detection, travel limit, overload protection, light load lifting speed, motor over-temperature protection, and so on.



Compact structure



Safety protection



Hoisting special control logic



Excellent performance



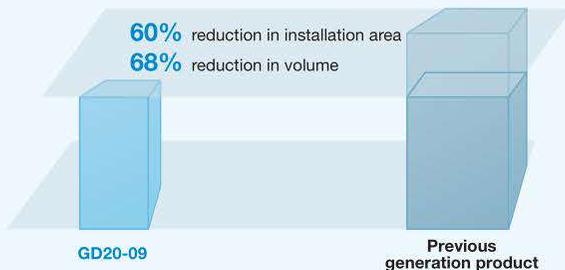
Lifting application macro



Comply with hoisting industry standards

## / Product Features

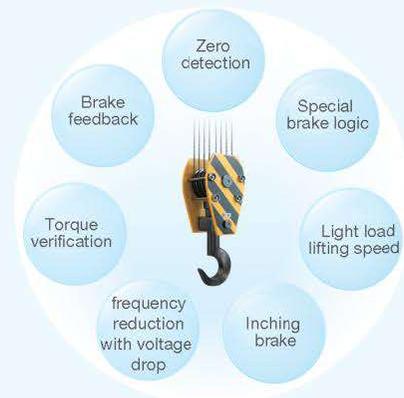
### Compact structure



- Standard built-in DC reactor for 18.5kW and higher VFD models
- All series VFDs have built-in brake units

### Special function of hoisting

Safe and reliable, high work efficiency



### Special terminal design

More reliable, multiple choice



8 digital input

- Support external power supply: (-20%)24~48VDC(+10%)、(-10%)24~48VAC(+10%) input
- Support NPN and PNP terminal input
- S7 and S8 terminals support PTC input protection function

3 relay output

- RO2 relay with gold plated contact, capacity: 7A/AC250V, 1A/DC30V

## Safety protection

### Fault protection function

Supply more than 30 kinds of protection function, such as overcurrent, overvoltage, overheat, phase lose, underload.

### Low voltage protection

When the bus voltage is reduced or power is cut off, the converter will stop quickly to ensure no hook, and automatically reset when the bus voltage is restored.

### Low speed running protection

Low speed operation protection function can avoid damage of motor due to long time low speed operation. When the frequency of converter operation is lower than or equal to the set protection frequency and time out, the fault of low speed operation protection will be reported.

## Excellent performance

### Conical motor control

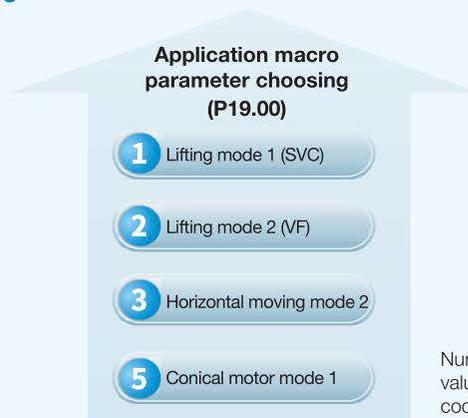
Integrated conical motor control algorithm increase the magnetic flux to release the brake when starting, and reduce the magnetic flux to close the brake when stopping.

### Braking capacity

100% for long time, 120% for 1 minute, and 170% for 10 seconds

## Hoisting application macro

### Simple commissioning



Number 1, 2, 3, 5 are the parameter setting values of different application macro in function code P19.00.

# / Type Selection

## Model instruction

**GD20-09-2R2G-4-B**

①

②

③

④

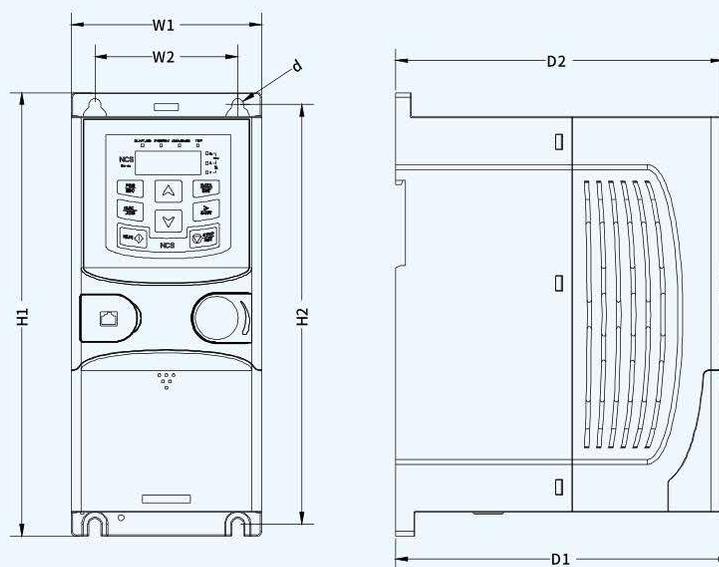
Field	Identifier	Description	Example
Product category	①	Product series abbreviation	GD20-09 series VFD for hoisting
Rated power	②	Power range + load type	2R2: 2.2kW      G: Constant torque load
Voltage class	③	Voltage class	4: 380V(-15%)~440V(+10%)
Lot No.	④	Brake unit	B: Built-in brake unit Default/None: No built-in brake unit

## Power Ratings

Model	Voltage class	Output power (kW)	Input current (A)	Output current (A)
GD20-09-0R7G-4-B	3PH 380V	0.75	3.4	2.5
GD20-09-1R5G-4-B		1.5	5.0	4.2
GD20-09-2R2G-4-B		2.2	5.8	5.5
GD20-09-004G-4-B		4	13.5	9.5
GD20-09-5R5G-4-B		5.5	19.5	14
GD20-09-7R5G-4-B		7.5	25	18.5
GD20-09-011G-4-B		11	32	25
GD20-09-015G-4-B		15	40	32
GD20-09-018G-4-B		18.5	47	38
GD20-09-022G-4-B		22	51	45
GD20-09-030G-4-B		30	70	60
GD20-09-037G-4-B		37	80	75

## Installation Dimension

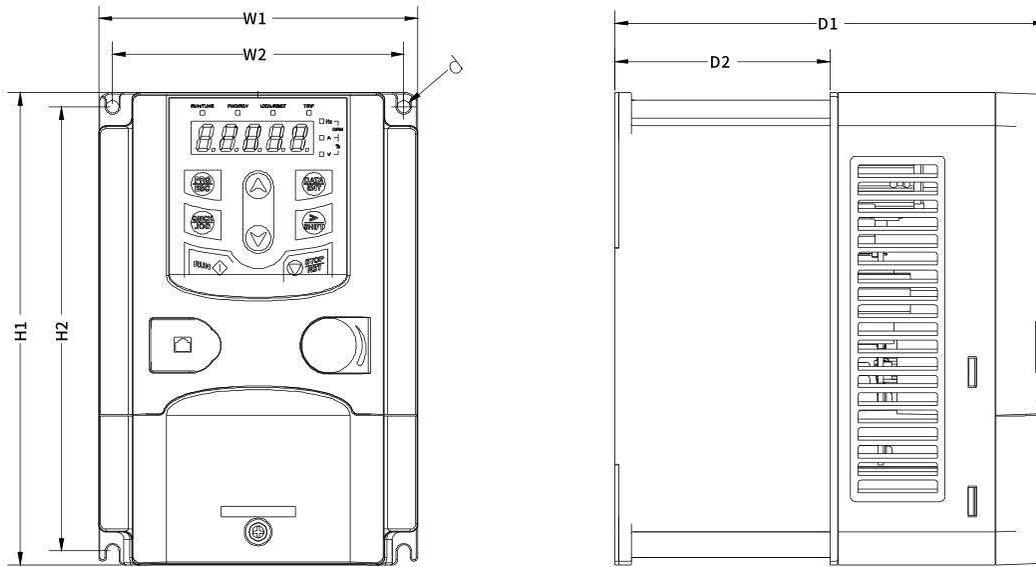
### Wall mounting Installation dimension



Wall mounting diagram of 0.75~4kW VFDs

Model	W1	W2	H1	H2	D1	D2	Hole diameterd
GD20-09-0R7G-4-B	80	60	185	175	140.5	137.3	5
GD20-09-1R5G-4-B	80	60	185	175	140.5	137.3	5
GD20-09-2R2G-4-B	80	60	185	175	140.5	137.3	5
GD20-09-004G-4-B	80	60	185	175	140.5	137.3	5

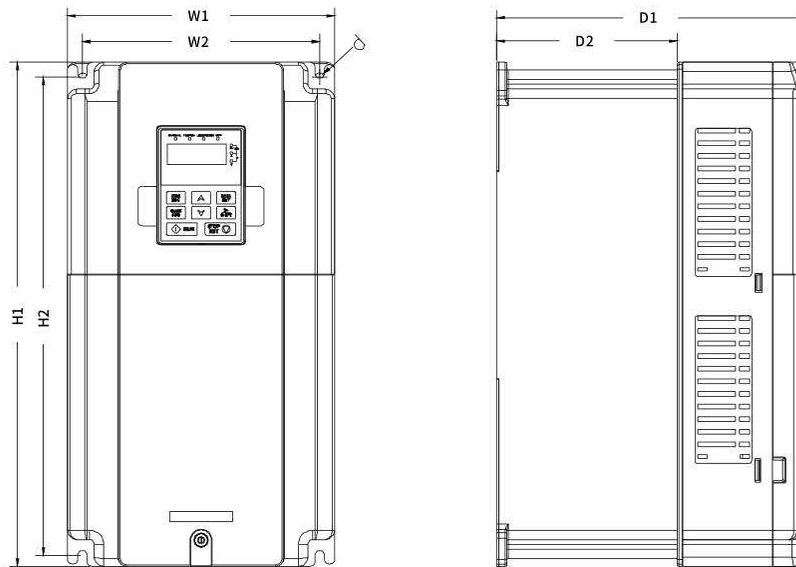
unit:mm



Wall mounting diagram of 5.5kW

Model	W1	W2	H1	H2	D1	D2	Hole diameter <sub>d</sub>
GD20-09-5R5G-4-B	126	115	186	175	170	84.8	5

unit:mm

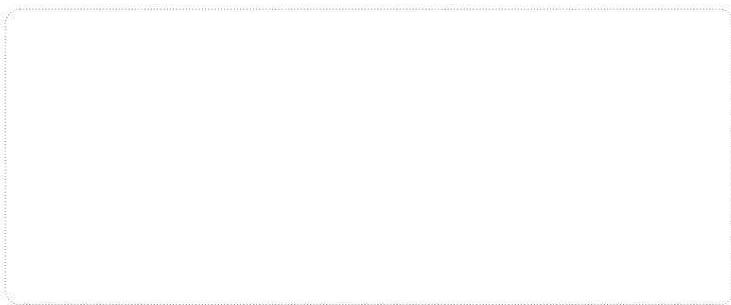


Wall mounting diagram of 7.5~37kW

Model	W1	W2	H1	H2	D1	D2	Hole diameter <sub>d</sub>
GD20-09-7R5G-4-B	146.0	131.0	256.0	243.5	167.0	86	6
GD20-09-011G-4-B	170.0	151.0	320.0	303.5	196.3	115	6
GD20-09-015G-4-B	170.0	151.0	320.0	303.5	196.3	115	6
GD20-09-018G-4-B	200.0	185.0	340.6	328.6	184.6	104.5	6
GD20-09-022G-4-B	200.0	185.0	340.6	328.6	184.6	104.5	6
GD20-09-030G-4-B	250.0	230.0	400.0	380.0	202.0	123.5	6
GD20-09-037G-4-B	250.0	230.0	400.0	380.0	202.0	123.5	6

unit:mm

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|-------------------------------|--|---------------------------------------|----------------------------|-----------------------------------|
| <b>Industrial Automation:</b> | • Frequency AC Drive                         | • Servo & Motion Control              | • Motor & Electric Spindle | • PLC                             |
|                               | • HMI  | • Intelligent Elevator Control System | • Traction Drive           |                                   |
| <b>Electric Power:</b>        | • SVG  | • Solar Pump Controller               | • UPS                      | • Online Energy Management System |
|                               | • New Energy Vehicle Electric Control System |                                       |                            |                                   |

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