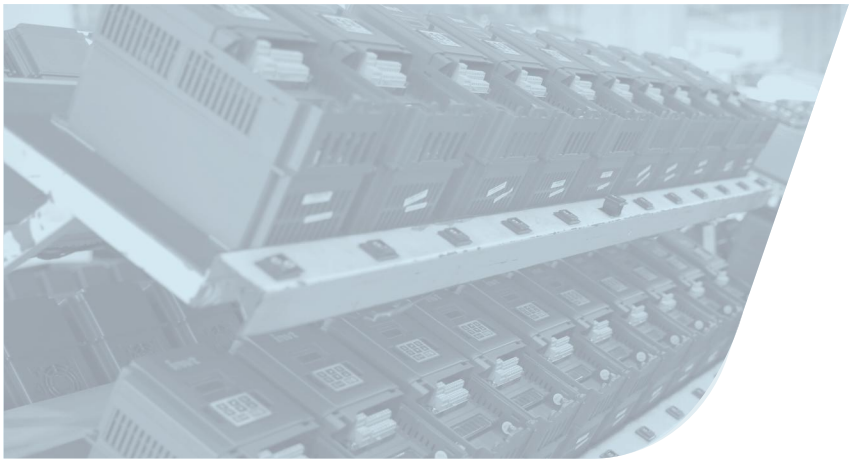
GD350A-S book-type general VFD

Management Service

CONTENTS

About us 01
Product features 02
Product application 12
Wiring diagram 13
Technical parameters 14
Model selection 16
Reactor and filter model selection 18
Expansion card model selection 20
Installation method 21
Ordering guide 25
Marketing service network 26



Book-type structure G/P integrated

GD350A-S series VFDs are single-drive systems oriented to engineering applications. The VFDs feature high reliability, usability, maintainability, environment adaptability, and wide power range, provide enriched functions, and support flexible configuration.

The VFD can be widely used in equipment driving with demanding reliability and performance requirements in the metallurgy, petroleum, chemical, building material, HVAC water supply, municipal engineering, paper making, electric power, power source industries.

- High power density, book-type structure
- Strong expandability, supporting various expansion cards to easily meet customer customization needs
- Supports multiple high-speed bus communications
- Supports combined G/P for more flexible selection
- Supports remote control and wireless debugging, facilitating easier application
- Comes standard with STO safety torque off function, ensuring greater safety and reliability
- Features a new speed and current regulator for smoother fast-starting currents and more stable high-speed control

ABOUT US

Company Introduction

INVT (Shenzhen INVT Electric Co., Ltd) has been concentrating on industry automation and energy power since its foundation in 2002 and is committed to "Providing the best product and service to allow customers more competitiveness". INVT goes public in 2010 and is the first A-share listed company (002334) in Shenzhen Stock Exchange in the industry. At present, INVT owns 15 subsidiaries and more than 4500 employees, over 40 branches, forming a sales network covering more than 100 overseas countries and regions.

INVT has been awarded as the Key High-tech Enterprise of National Torch Plan based on mastering of key technologies in power electronics, auto control and IT. With business covering industry automation, electric vehicle, network power and rail transit, INVT has established 10 R&D centers nationwide, boasts more than 1400 patents and owns the first lab in the industry awarded ACT qualification from TÜV SÜD, UL-WTDP and CNAS National Lab. The industrial parks in Shenzhen and Suzhou aim to provide customers with advanced integrated product development design management, comprehensive product R&D test and auto informational production. The worldwide INVT branches and warranty service centers are ready to offer customers all-around back-ups including professional solutions, technical trainings and service support.

In the next decade, INVT will continue to take " Sincere Virtuous, Professional Aspiring" as our business philosophy, enhance core business sectors including industrial automation, electric vehicle, network power and rail transit based on the three major technologies in industry automation and energy power fields, and strive to become a leading, responsible and harmonic international professional group armed with proper product structure, leading technologies, efficient management, robust profitability and superior competitiveness.


INVT Guangming Technology Building

INVT Shenzhen Production Industry Park


INVT Suzhou Industry Park


INVT Zhongshan New Energy Industry Base

Product Features

Performance Enhancement

Compared to the previous generation, there is a notable performance improvement.

Motor autotuning | DC braking | Speed tracking | Low-speed high torque | Control performance

Motor autotuning

- Mitigating the skin effect in asynchronous motors to enhance self-autotuning accuracy.

Speed tracking

- Under any control mode, speed tracking results in less current shock and significantly improved stability.

Control performance

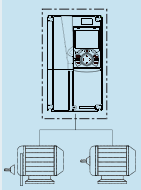
- New flux observer enhances the stability in high-speed control.
- New speed/current regulator improves current control during rapid startup, reducing speed overshoot.
- Adopting a new phase-locked loop to improve torque control stability.
- Compensation for output voltage phase and amplitude errors improves stability in high-speed, low-carrier-frequency scenarios.
- Introducing a new VF control method for synchronous motors based on reactive current control, which is insensitive to motor parameters and does not rely on back EMF coefficients for control performance. The output current automatically adapts to the load, and the oscillation suppression algorithm effectively controls current stability under any operating conditions, preventing oscillations.

DC braking

- The current transition from rotation to DC braking is smoother, with minimal current shock, and the DC braking current response is faster.

Low-speed high torque

- Unique I/F control with constant current source characteristics, ideal for applications requiring simultaneous driving of multiple motors with low-speed high-torque requirements.



Status	IO/IN(M)(%)	
	Multi-point V/F	I/F control
Before and after forward brake releasing	62.80%	133.40%
Before and after reverse brake releasing	62.50%	130.30%
Before and after forward brake closing	65.70%	136.10%
Before and after reverse brake closing	92.00%	136.30%

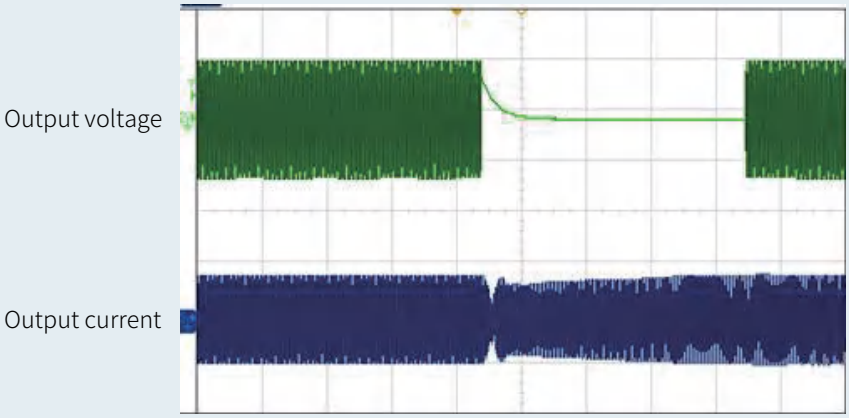
On-Site measured data for certain construction machinery

Flexible Selectiont

GD350A-S supports G/P integration, making inventory management more convenient and enhancing competitiveness in light-load application scenarios.

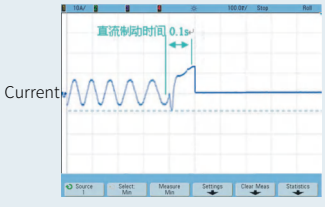
Instant Power Failure Ride-Through Function

In the event of a sudden drop in the power grid, the VFD can operate on its regenerated energy within an effective time window without stopping, making it particularly suitable for applications where high continuity of operation is required, such as chemical fiber and textile production lines.

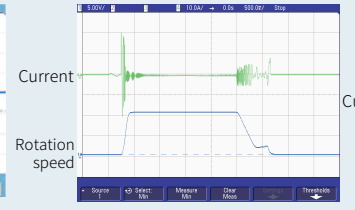


Multiple braking modes for quick stops

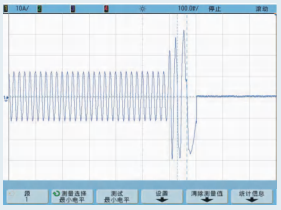
Dynamic braking	DC braking	Magnetic flux braking	Short-circuit braking
Large braking torque and fast braking speed.	No need to configure braking units and resistors.	No need to configure braking units and resistors, allowing for quick braking.	No need to configure braking units and resistors, allowing for quick braking.
Suitable for frequent braking of large inertia loads.	Suitable for scenarios where the motor is braked before restarting for free operation; applicable when maintaining torque output is required after braking to zero speed.	Suitable for quick stops of large inertia loads with infrequent braking.	Only suitable for rapid stops of permanent magnet synchronous motors (PMSMs) or for PMSMs that are braked before restarting in free operation.
Must be equipped with braking units and resistors.	Not suitable for frequent or rapid braking of large inertia loads; not suitable for braking during high-speed operation of the motor.	Not suitable for frequent braking of large inertia loads.(The energy is consumed on the stator, resulting in better motor cooling compared to DC braking.)	Not suitable for frequent braking of large inertia loads.



Current waveform for asynchronous motor under space voltage vector control mode: braking current 100%, DC braking start frequency 10 Hz, braking time 0.1 s.



Current waveform for PMSM during short-circuit braking: acceleration time 0.1 s (rated deceleration time 0.4 s, frequency 100 Hz, short-circuit braking frequency 20 Hz, braking time 0.5 s).



Flux braking current waveform for asynchronous motor under space voltage vector control mode: operating frequency 50 Hz, deceleration time with 100% rated load 0.1 s.

Strong Expansion Capability

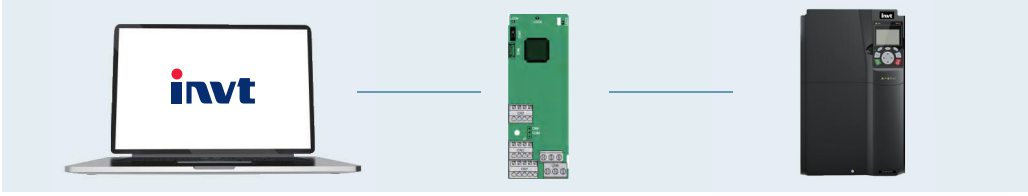
Enhanced expansion capabilities to meet various application needs

(1) Optional PLC cards, I/O cards, communication cards, PG cards, and power supply cards are available, supporting the simultaneous use of various types of expansion cards.
(2) Expansion cards have a consistent size, allowing for easy installation in any card slot.
(3) Expansion cards feature spring-type terminal connections for easy wiring.

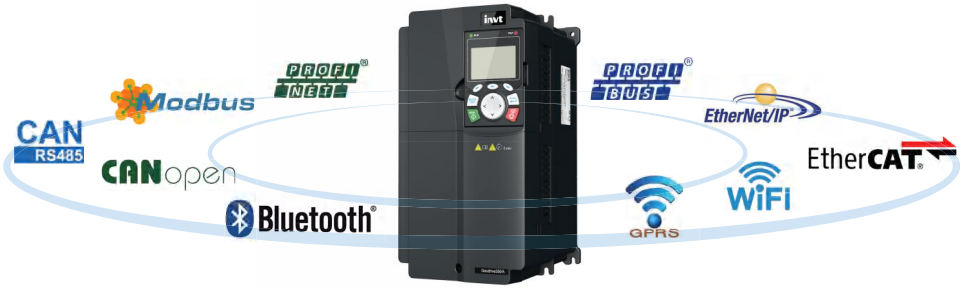
7.5 kW and above　　5.5 kW and below

Supports customer secondary development

Optional built-in PLC card, utilizing an internationally recognized PLC card development environment.
It supports various programming languages, including instruction language, ladder diagram, and sequential function chart.

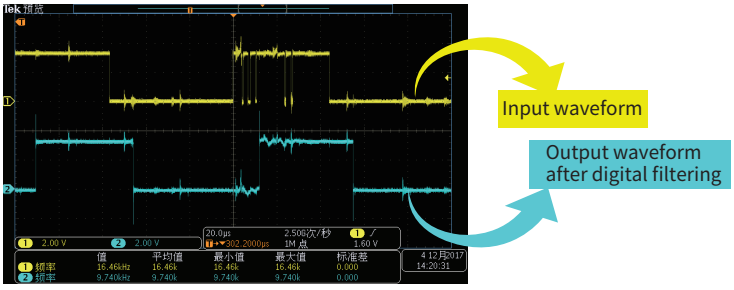


Supports multiple mainstream communication protocols



Supports multiple types of encoders. The PG card utilizes digital filtering technology to enhance electromagnetic compatibility and achieve stable long-distance reception of encoder signals

(1) Supports optional configuration of sine/cosine PG cards, incremental PG cards, resolver PG cards, and absolute PG cards.
(2) Supports pulse input and frequency division output.
(3) Features fast detection of encoder disconnection to prevent system fault escalation.



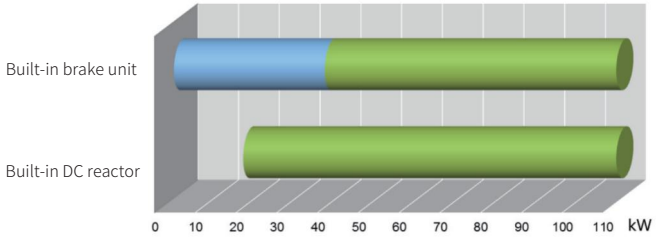
Encoder signal input waveform during near-field coupling of a 100m motor cable

Supports simple closed-loop operation

Standard configuration includes two HDI channels, which can be used for speed setting and support quadrature encoder input, forming a simple closed-loop application, providing customers with a cost-effective closed-loop application solution.

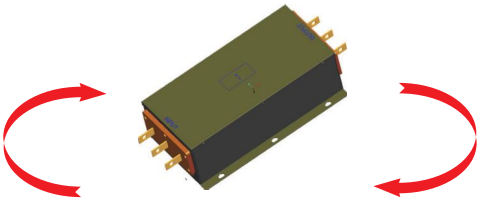
Rich configuration

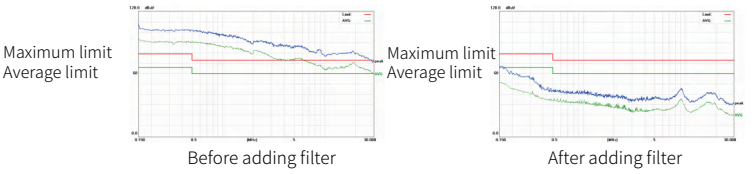
- Models of 037G/045P and lower include a built-in braking unit. Models from 045G/055P to 110G/132P can optionally include a built-in braking unit. Models from 132G/160P and above can optionally include an external braking unit.
- Models from 018G/022P to 450G/500P come standard with a built-in DC reactor, while models from 185G/200P and above support a built-in output reactor (customization required).



Standard configuration includes a built-in C3 input filter, with an optional C2 filter

To meet the diverse application requirements of various locations, the 380V standard configuration comes with a built-in input filter that is assembled before leaving the factory, saving external installation space and avoiding electromagnetic interference caused by improper selection or installation of external C3 filters.





Before adding filter　　After adding filter

Power terminal conducted disturbance test

Improved energy-saving effects

- Both VF and vector control support new energy-saving algorithms, reducing light load current by 30%.
- Supports DPWM modulation, reducing switching losses by 30%.

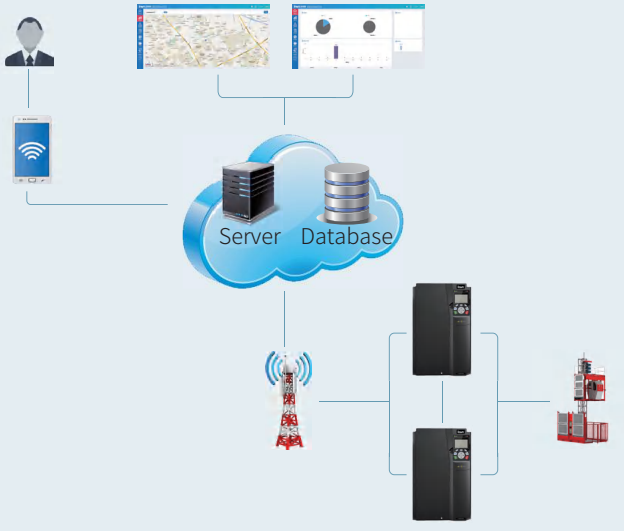
Ease of Use

Wireless debugging

The optional Bluetooth/Wi-Fi expansion card enables parameter settings and status monitoring via a mobile app, allowing control without opening the electrical cabinet for a more convenient application.

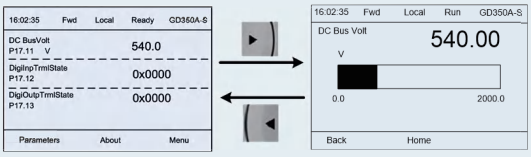
IoT connectivity and remote monitoring

Wireless access with optional expansion cards for easy IoT integration, allowing operation of inverters via mobile or computer, and real-time monitoring of operational status.



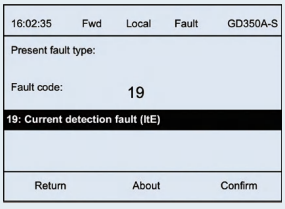
Optional multi-functional LCD control panel with a user-friendly design that emphasizes user experience

The aesthetically pleasing and simple visual interface allows customers to switch between different display styles based on their preferences.



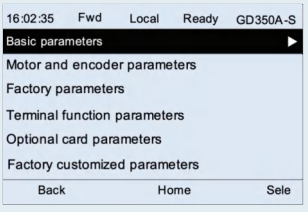
Simple and flexible interaction is achieved with silicone buttons, making the debugging process easier.

The powerful real-time monitoring and alarm functions allow for customizable monitoring and debugging parameters.
The real-time clock feature records faults as they occur, with the ability to query up to 6 historical faults for easy maintenance.

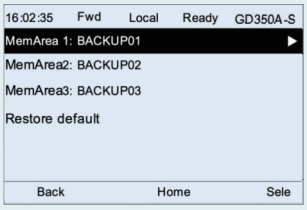


Present fault display interface

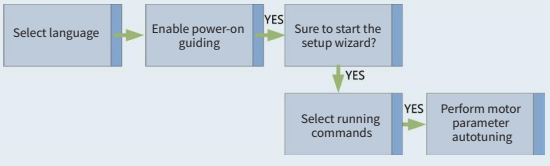
The quick editing and debugging feature allows for rapid parameter settings and grouped channel configurations, catering to the diverse needs of different customers.



It supports uploading and downloading parameters for 3 sets of VFDs, with the ability to rename the operation storage area for easy parameter backup by users.



The user-friendly guided editing feature includes language switching between Chinese and English, catering to the needs of a broad user base.

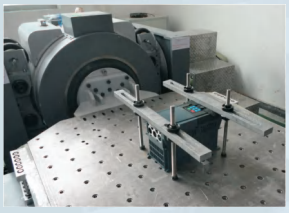


Safe and Reliable

Comprehensive reliability testing system ensures that the product meets the demands of various complex application environments

Test category	Test name	Detailed categories
Mechanical reliability testing	Packaging test	Packaging compression test
		Packaging resonance scanning and dwell test
		Packaging random vibration test
		Packaging drop test
		Packaging rolling test
		Packaging tilt drop test
		Packaging inclined impact test
	Shock test	Half-sine wave shock test (product operating/non-operating state)
		Trapezoidal wave shock test (product non-operating state)
	Vibration test	Sine vibration test (product operating state)
		Random vibration test (product operating/non-operating state)
Climate-related environmental reliability testing	Temperature test	Low temperature storage test
		High temperature storage test
		Low temperature operating test
		High temperature operating test
		Temperature gradient test
		Temperature shock test
	Damp heat test	Constant damp heat test
		Cyclic damp heat test
	Salt spray test	Continuous salt spray test
		Cyclic salt spray test
	Low pressure test	Low temperature and low pressure combined test
		High temperature and low pressure combined test

Note: INVT has been certified as an ACT (Acceptance of Client's Testing) manufacturer by TÜV SÜD. This certification signifies that TÜV SÜD officially recognizes the technical proficiency of INVT's laboratory, accepts the test data produced by this laboratory, and acknowledges the validity of the test reports issued by it.



Electric vibration system

Low-pressure test chamber (left)

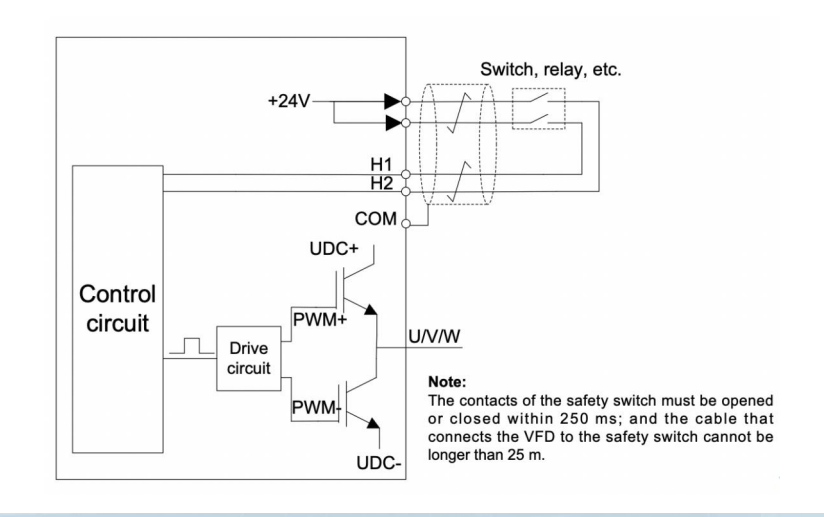
Constant temperature and humidity test chamber (right)

Natural convection test chamber (left)

Thermal shock test chamber (right)

Built-in Safe Torque Off (STO) function aligns with international standards, making applications safer and more reliable

(1) SIL2 level
(2) Capable of establishing an economical safety system



Supports motor temperature detection function for effective motor protection

AI/AO interfaces support direct connection to PT100, PT1000, KTY84, and PTC sensors for monitoring motor temperature and implementing protection measures.

Product Application

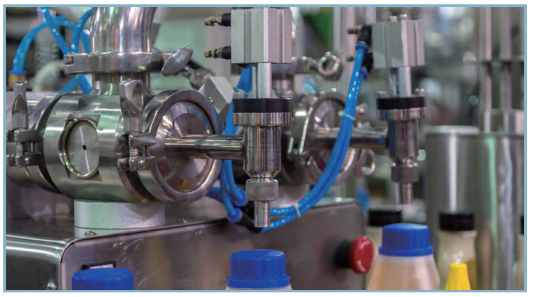
HVAC

Centrifugal machine

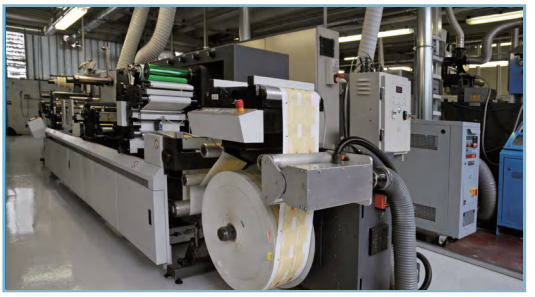
Chemical industry

Extrusion molding

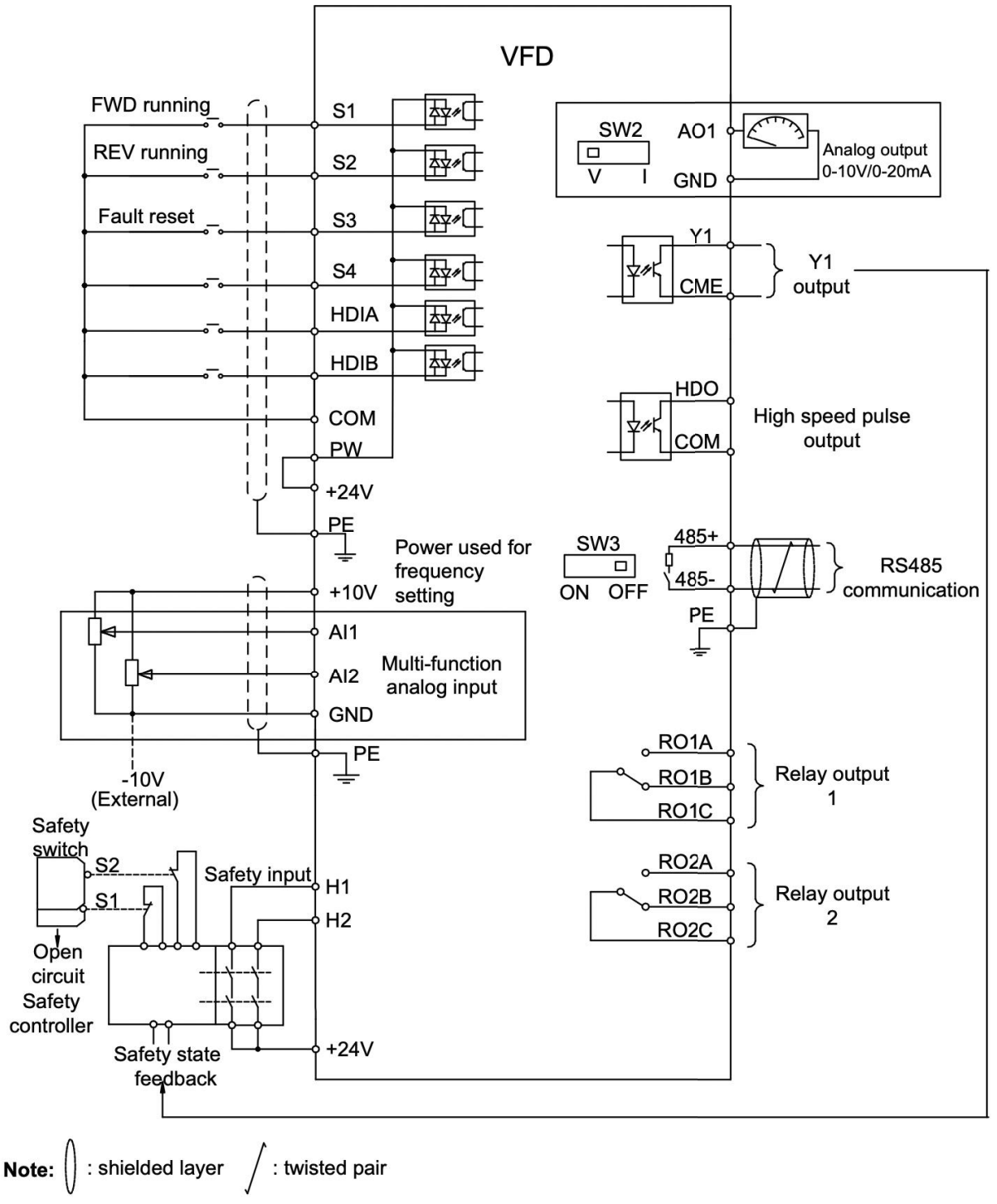
Compressors



Printing and packaging



Wiring Diagram



Technical Parameters

Items		Specifications
Power input	Input voltage (V)	AC 3PH 380V(-15%) – 440V(+10%) Rated voltage: 380V
	Input current (A)	See the product ratings table
	Input frequency (Hz)	50Hz or 60Hz; Allowed range: 47–63Hz
Power output	Output voltage (V)	0–Input voltage (V)
	Output current (A)	See the product ratings table
	Output power (kW)	See the product ratings table
	Output frequency (Hz)	0–590Hz
Technical control performance	Control mode	Space voltage vector control, sensorless vector control (SVC), and feedback vector control (FVC) mode
	Motor type	Asynchronous motor (AM) **Note: GD350A-S series VFD does not support synchronous motors.**
	Speed ratio	For asynchronous motor (AM): 1:200 (SVC)
	Speed control accuracy	±0.2% (SVC); ±0.02% (FVC)
	Speed fluctuation	±0.3%（SVC）
	Torque response	<20ms（SVC）；<10ms（FVC）
	Torque control accuracy	10%（SVC）；5%（FVC）
	Starting torque	For AMs: 0.25Hz/150% (SVC)
	Overload capacity	150% for 1 minute (for the G type)　110% for 1 minute (for the P type)
Running control performance	Frequency setting method	Settings can be implemented through digital, analog, pulse frequency, multi-step speed running, simple PLC, PID, Modbus communication, PROFIBUS communication and so on. Settings can be combined and the setting channels can be switched.
	Automatic voltage regulation	The output voltage can be kept constant although the grid voltage changes.
	Fault protection	More than 30 protection functions, such as protection against overcurrent, overvoltage, undervoltage, overtemperature, phase loss, and overload.
	Speed tracking restart	Used to implement impact-free smooth startup for rotating motors.
Peripheral interface	Terminal analog input resolution	⩽ 20mV
	Terminal digital input resolution	⩽ 2ms
	Analog input	2 channels. AI1：0~10V/0~20mA；AI2：-10~10V
	Analog output	1 channels. AO1：0~10V/0~20mA
	Digital input	Four regular inputs Max. frequency: 1kHz; internal impedance: 3.3kΩ Two high-speed inputs Max. frequency: 50kHz; supporting quadrature encoder input; with speed measurement function.
	Digital output	One high-speed pulse output; max. frequency: 50kHz. One Y terminal open collector output.
	Relay output	Two programmable relay outputs RO1A: NO; RO1B: NC; RO1C: common RO2A: NO; RO2B: NC; RO2C: common Contact capacity: 3A/AC250V, 1A/DC30V
	Extended interfaces	Three extended interfaces: SLOT1, SLOT2, and SLOT3 (only on control boards of 7.5kW and higher VFD models) Supporting PG cards, programmable cards, communication cards, I/O cards, etc. Only one card of the same type can be inserted at a time.

Other	Installation method	Supports wall-mounting, floor-mounting and flange-mounting.
	Temperature of running environment	-10° C – 50° C. Derating is required when the ambient temperature exceeds 40° C.
	IP rating	For models of 380V 185G/200P and lower: IP20 For models of 380V 200G/220P and higher: IP00
	Pollution degree	Degree 2
	Cooling method	Forced air cooling
	Braking unit	The braking unit has been built in the 380V 037G/045P and lower models. It is optional for the 380V 045G/055P–110G/132P (inclusive) models and can be built in the VFD.
	EMC filter	All series of 380V meet the IEC61800-3 C3 requirements. Optional external filters can be used to meet the IEC61800-3 C2 requirements.

Model Description

Model designation code

GD 3 5 0 A – 011G/015P – 4 – B – L3 – S

① ② ③ ④ ⑤ ⑥

Field	Symbol	Name	Example
Product series abbreviation	①	Product series abbreviation	GD350A: Goodrive350A series VFD
Rated power	②	Power range + load type	015: 15kW G: Constant torque load P: Variable torque load
Voltage class	③	Voltage class	4： AC 3PH 380V（-15%）~440V（+10%） Rated voltage：380V
Braking unit	④	Braking unit configuration	B: Built-in braking unit Note: • The braking unit has been built in the 037G/045P and lower VFD models as a standard configuration. Therefore, this field is omitted. • The built-in braking unit is optional for 045G/055P–110G/132P models. "-B" is added for the models with built-in braking unit.
Reactor	⑤	Reactor configuration	Empty: Without output reactors L3: With built-in output reactor (Customized)
Product version	⑥	Product version	Default: Standard version S: Book-type design

Note:

• The 037G/045P and lower models carry built-in braking units, the 045G/055P–110G/132P (inclusive) models can be configured with optional built-in braking units, and the 132G/160P and higher models can be configured with external braking units.

• The 018G/022P–450G/500P (inclusive) models carry built-in DC reactors, and the 185G/200P and higher models supports built-in output reactors (customization required).

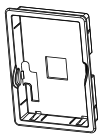
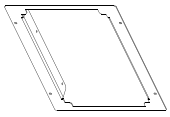
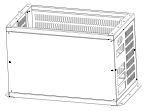
Model Selection

VFD model	Heavy overload application			Light overload application			Full load power dissipation (W)	Air volume (m^3/h)	Weight (kg)
	Output power (kW)	Input current (A)	Output current (A)	Output power (kW)	Input current (A)	Output current (A)			
GD350A-7R5G/011P-4-S	7.5	25	18.5	11	30	23	338	56.29	3
GD350A-011G/015P-4-S	11	32	25	15	40	32	511	149.14	6
GD350A-015G/018P-4-S	15	40	32	18.5	45	38	525		
GD350A-018G/022P-4-S	18.5	45	38	22	51	45	589	170.36	8.5
GD350A-022G/030P-4-S	22	51	45	30	64	60	745		
GD350A-030G/037P-4-S	30	64	60	37	80	75	959	340.79	16
GD350A-037G/045P-4-S	37	80	75	45	98	92	1126		
GD350A-045G/055P-4-S	45	98	92	55	128	115	1189	752.32	25
GD350A-055G/075P-4-S	55	128	115	75	139	150	1473		
GD350A-075G/090P-4-S	75	139	150	90	168	170	1879		
GD350A-090G/110P-4-S	90	168	180	110	201	215	2016	849.5	41
GD350A-110G/132P-4-S	110	201	215	132	265	260	2587		
GD350A-132G/160P-4-S	132	265	260	160	310	305	2780	1443	78
GD350A-160G/185P-4-S	160	310	305	185	345	340	3004		
GD350A-185G/200P-4-S	185	345	340	200	385	380	3177	1798	122
GD350A-200G/220P-4-S	200	385	380	220	430	425	3609		
GD350A-220G/250P-4-S	220	430	425	250	460	480	3927		
GD350A-250G/280P-4-S	250	460	480	280	500	530	5598	2697	124
GD350A-280G/315P-4-S	280	500	530	315	580	600	6121		
GD350A-315G/355P-4-S	315	580	600	355	625	650	6608		
GD350A-355G/400P-4-S	355	625	650	400	715	720	6976		175
GD350A-400G/450P-4-S	400	715	720	450	840	820	7658		
GD350A-450G/500P-4-S	450	840	820	500	890	860	8000		

Note:

- The VFD input current is measured in cases where the input voltage is 380V.
- The rated output current is the output current when the output voltage is 380V.
- Within the allowable input voltage range, the output current/power cannot exceed the rated output current/power.

Accessories

Optional parts name	Illustration	Applicable models
Cover plate of heat emission hole		37kW and lower models
External keypad support bracket		All models
Flange mounting bracket		It must be used for flange mounting on the following modes: 380V 160G/185P and lower models. Select the bracket based on the power rating.
Installation base		The base can hold an input AC reactor (or DC reactor) and an output AC reactor. It is used for floor mounting on the following models: 380V 185G/200P–450G/500P.

Applicable models	Ordering code of flange mounting bracket	Ordering code of cover plate of heat emission hole	Ordering code of keypad mounting bracket	Ordering code of installation base
7R5G/011P	19005-00013	61006-00109	19005-00149	/
011G/015P-015G/018P	19005-00006	61006-00109		
018G/022P-022G/030P	19005-00094	61006-00109		
030G/037P-037G/045P	19005-00093	61006-00109		
045G/055P-075G/090P	19005-00092	61006-00109		
090G/110P-110G/132P	19005-00091	/		
132G/160P-160G/185P	19005-00296	/		
185G/200P-315G/355P	/	/		
355G/400P-450G/500P	/	/		

Reactor and Filter Model Selection

VFD power	Input reactor	Output reactor	DC reactor	Input filter	Output filter
7.5kW	GDL-ACL0025-4CU	GDL-OCL0020-4CU	/	FLT-P04032L-B	FLT-L04032L-B
11kW	GDL-ACL0035-4AL	GDL-OCL0025-4CU	/	FLT-P04032L-B	FLT-L04032L-B
15kW	GDL-ACL0040-4AL	GDL-OCL0035-4AL	/	FLT-P04045L-B	FLT-L04045L-B
18.5kW	GDL-ACL0051-4AL	GDL-OCL0040-4AL	Standard built-in	FLT-P04045L-B	FLT-L04045L-B
22kW	GDL-ACL0051-4AL	GDL-OCL0050-4AL	Standard built-in	FLT-P04065L-B	FLT-L04065L-B
30kW	GDL-ACL0070-4AL	GDL-OCL0060-4AL	Standard built-in	FLT-P04065L-B	FLT-L04065L-B
37kW	GDL-ACL0090-4AL	GDL-OCL0075-4AL	Standard built-in	FLT-P04100L-B	FLT-L04100L-B
45kW	GDL-ACL0110-4AL	GDL-OCL0092-4AL	Standard built-in	FLT-P04100L-B	FLT-L04100L-B
55kW	GDL-ACL0150-4AL	GDL-OCL0115-4AL	Standard built-in	FLT-P04150L-B	FLT-L04150L-B
75kW	GDL-ACL0150-4AL	GDL-OCL0150-4AL	Standard built-in	FLT-P04150L-B	FLT-L04150L-B
90kW	GDL-ACL0220-4AL	GDL-OCL0220-4AL	Standard built-in	FLT-P04240L-B	FLT-L04240L-B
110kW	GDL-ACL0220-4AL	GDL-OCL0220-4AL	Standard built-in	FLT-P04240L-B	FLT-L04240L-B
132kW	GDL-ACL0265-4AL	GDL-OCL0265-4AL	Standard built-in	FLT-P04240L-B	FLT-L04240L-B
160kW	GDL-ACL0330-4AL	GDL-OCL0330-4AL	Standard built-in	FLT-P04400L-B	FLT-L04400L-B
185kW	GDL-ACL0390-4AL	GDL-OCL0400-4AL	Standard built-in	FLT-P04400L-B	FLT-L04400L-B
200kW	GDL-ACL0390-4AL	GDL-OCL0400-4AL	Standard built-in	FLT-P04400L-B	FLT-L04400L-B
220kW	GDL-ACL0450-4AL	GDL-OCL0450-4AL	Standard built-in	FLT-P04600L-B	FLT-L04600L-B
250kW	GDL-ACL0500-4AL	GDL-OCL0500-4AL	Standard built-in	FLT-P04600L-B	FLT-L04600L-B
280kW	GDL-ACL0500-4AL	GDL-OCL0560-4AL	Standard built-in	FLT-P04600L-B	FLT-L04600L-B
315kW	GDL-ACL0580-4AL	GDL-OCL0660-4AL	Standard built-in	FLT-P04800L-B	FLT-L04800L-B
355kW	GDL-ACL0660-4AL	GDL-OCL0660-4AL	Standard built-in	FLT-P04800L-B	FLT-L04800L-B
400kW	GDL-ACL0715-4AL	GDL-OCL0720-4AL	Standard built-in	FLT-P04800L-B	FLT-L04800L-B
450kW	GDL-ACL0840-4AL	GDL-OCL0820-4AL	Standard built-in	FLT-P041000L-B	FLT-L041000L-B
500kW	GDL-ACL1000-4AL	GDL-OCL1000-4AL	Standard built-in	FLT-P041000L-B	FLT-L041000L-B

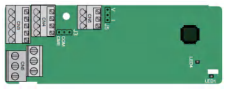
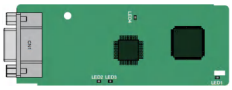
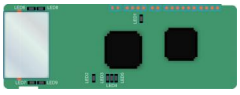
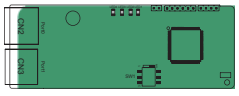
Note:

- The preceding table describes external accessories. You need to specify the ones you choose when purchasing accessories.
- The rated input voltage drop of input reactors is ⩾ 1.5%. The rated output voltage drop of output reactors is 1%.
- The input EMI meets the C2 requirements after an input filter is configured.
- For the selection of reactors with different material requirements than those listed above, please refer to the low-voltage VFD GDL series filter option brochure.

Braking Unit Model Selection

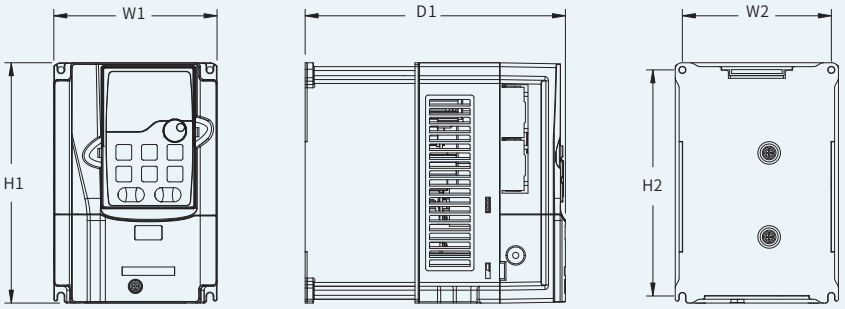
VFD model	Braking unit model	Resistance applicable for 100% braking torque (Ω)	Braking resistor dissipation power (kW)			Min. allowed braking resistance (Ω)
			10% braking ratio	50% braking ratio	80% braking ratio	
GD350A-7R5G/011P-4-S	Built-in braking unit	44	1.7	8.3	13.2	31
GD350A-011G/015P-4-S		32	2	11	18	23
GD350A-015G/018P-4-S		27	3	14	22	19
GD350A-018G/022P-4-S		22	3	17	26	17
GD350A-022G/030P-4-S		17	5	23	36	17
GD350A-030G/037P-4-S		13	6	28	44	11.7
GD350A-037G/045P-4-S		10	7	34	54	6.4
GD350A-045G/055P-4-S	DBU100H-110-4	8	8	41	66	
GD350A-055G/075P-4-S		6.5	11	56	90	
GD350A-075G/090P-4-S	DBU100H-160-4	5.4	14	68	108	4.4
GD350A-090G/110P-4-S		4.5	17	83	132	
GD350A-110G/132P-4-S	DBU100H-220-4	3.7	20	99	158	3.2
GD350A-132G/160P-4-S	DBU100H-320-4	3.1	24	120	192	2.2
GD350A-160G/185P-4-S		2.8	28	139	222	
GD350A-185G/200P-4-S		2.5	30	150	240	
GD350A-200G/220P-4-S	DBU100H-400-4	2.2	33	165	264	1.8
GD350A-220G/250P-4-S		2.0	38	188	300	
GD350A-250G/280P-4-S	Two DBU100H-320-4	3.6*2	21*2	105*2	168*2	2.2*2
GD350A-280G/315P-4-S		3.2*2	24*2	118*2	189*2	
GD350A-315G/355P-4-S		2.8*2	27*2	132*2	210*2	
GD350A-355G/400P-4-S		2.4*2	30*2	150*2	240*2	
GD350A-400G/450P-4-S	Two DBU100H-400-4	2.2*2	34*2	168*2	270*2	1.8*2
GD350A-450G/500P-4-S		2.0*2	38*2	186*2	300*2	

Expansion Card Selection

Name	Model	Specifications	Ordering code
I/O expansion card 1	 EC-IO501-00	• Four digital inputs • One digital output • One analog input • One analog output • Two relay outputs: one double-contact output and one single-contact output	11023-00083
I/O expansion card 2	 EC-IO502-00	• Four digital inputs • One PT100 • One PT1000 • Two relay outputs: single-contact NO output	11023-00119
PROFIBUS-DP communication card	 EC-TX503D	Supporting the PROFIBUS-DP protoco	11023-00151
CAN multi-protocol communication card	 EC-TX505D	• Based on the CAN2.0A and CAN2.0B physical layer • Supporting the CANopen protocol • Adopting INVT master-slave control proprietary protocol	11023-00164
PROFINET communication card	 EC-TX509C	Supporting the PROFINET protocol	11023-00149
EtherNet IP multi-protocol communication card	 EC-TX510B	• **Set the switch to EtherNet IP:** 1.Supporting the EtherNet IP protocol and the EtherNet IP slaves; 2.Supporting the EtherNet IP protocol and the EtherNet IP slaves; 3.Equipped with two EtherNet IP ports, supporting 10/100M half/full duplex operating; 4.Equipped with two RJ45 interfaces, which do not distinguish the direction and can be swappable; 5.Supporting star and line IP network topologies. • **Set the switch to Modbus TCP:** 1.Supporting the Modbus TCP protocol and Modbus TCP secondary nodes; 2.Equipped with two Modbus TCP ports, supporting 10/100M half/full duplex operating; 3.Supporting star and line TCP network topologies. • **Set the switch to Ethernet:** 1.Supporting INVT Ethernet protocol; 2.Supporting the connection to INVT's host controller monitoring software INVT Workshop for monitoring and oscillography, allowing multi-card networking monitoring.	11023-00197

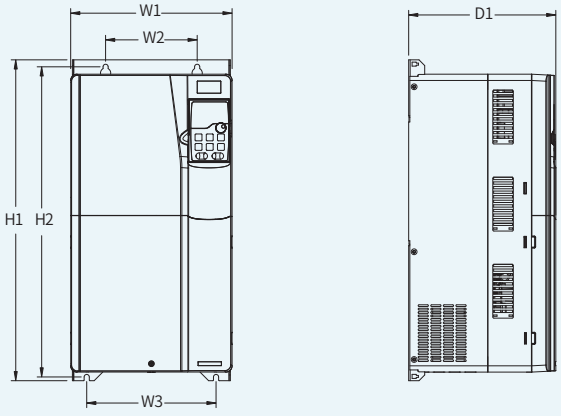
Installation Method

Wall-mounting dimensions



Product outline and mounting dimensions for 380V 7R5G/011P–037G/045P models

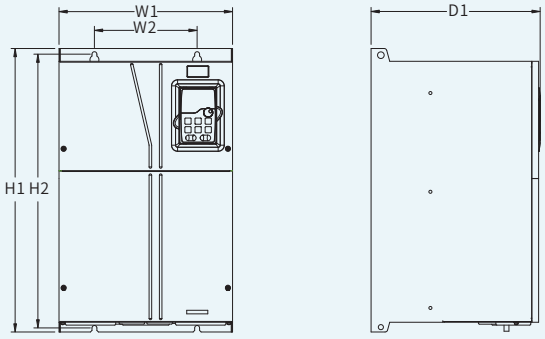
VFD model	Outline dimensions (mm)			Installation dimensions (mm)		Mounting hole diameter (mm)	Fixing screw
	W1	H1	D1	W2	H2		
7R5G/011P	146	256	192	131	243.5	Ø6	M5
011G/015P~015G/018P	170	320	220	151	303.5	Ø6	M5
018G/022P~022G/030P	200	340.6	208	185	328.6	Ø6	M5
030G/037P~037G/045P	250	400	223	230	380	Ø6	M5



Product outline and mounting dimensions for 380V 045G/055P–075G/090P models

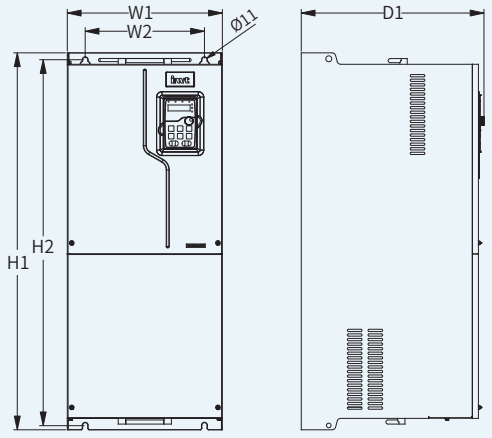
VFD model	Outline dimensions (mm)			Installation dimensions (mm)			Mounting hole diameter (mm)	Fixing screw
	W1	H1	D1	W2	W3	H2		
045G/055P~075G/090P	282	560	258	160	226	542	Ø9	M8

Wall-mounting dimensions



Product outline and mounting dimensions for 380V 090G/110P–110G/132P models

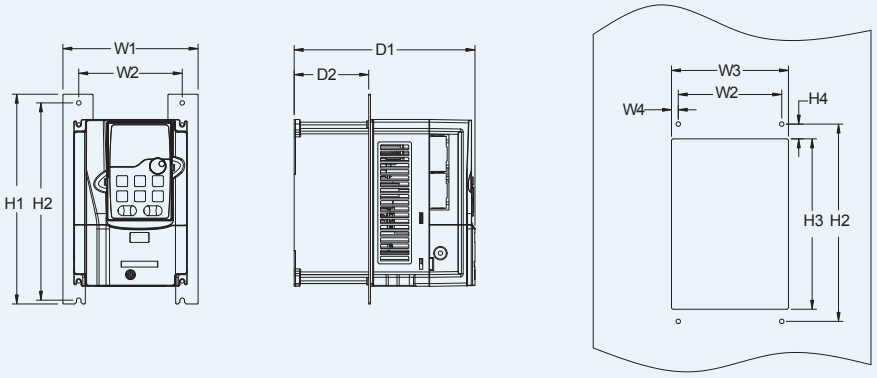
VFD model	Outline dimensions (mm)			Installation dimensions (mm)		Mounting hole diameter (mm)	Fixing screw
	W1	H1	D1	W2	H2		
090G/110P~110G/132P	338	554	337	200	535	Ø9.5	M8



Product outline and mounting dimensions for 380V 132G/160P–160G/185P models

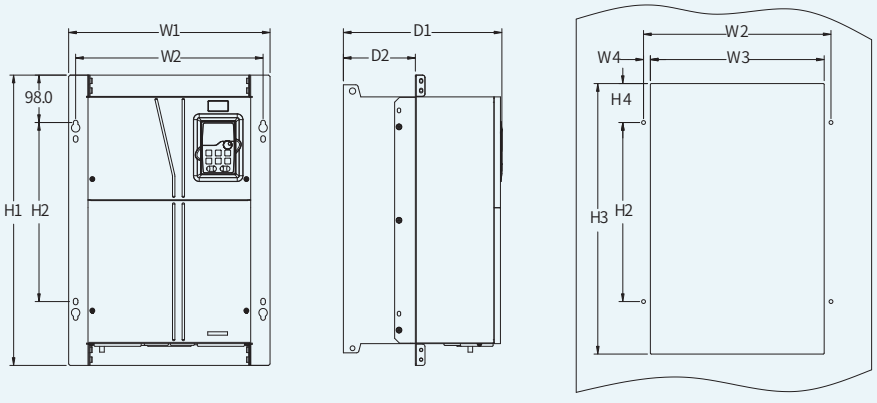
VFD model	Outline dimensions (mm)			Installation dimensions (mm)		Mounting hole diameter (mm)	Fixing screw
	W1	H1	D1	W2	H2		
132G/160P~160G/185P	338	825	398	260	800	Ø11	M10

Flange mounting dimensions



Flange mounting dimensions and hole positions for VFDs of 380V 7R5G/011P–075G/090P

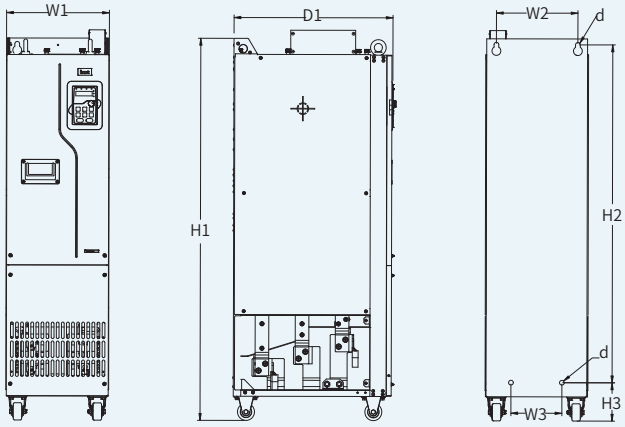
VFD model	Outline dimensions (mm)			Installation dimensions (mm)							Mounting hole diameter (mm)	Fixing screw
	W1	H1	D1	W2	H2	D2	W3	H3	W4	H4		
7R5G/011P	170.2	292	192	131	276	84.5	150	260	9.5	6	Ø6	M5
011G/015P~015G/018P	191.2	370	220	151	351	113	174	324	11.5	12	Ø6	M5
018G/022P~022G/030P	266	371	208	250	250	104	224	350.6	13	20.3	Ø6	M5
030G/037P~037G/045P	316	430	223	300	300	118.3	274	410	13	55	Ø6	M5
045G/055P~075G/090P	352	580	258	332	400	133.8	306	570	12	80	Ø9	M8



Flange mounting dimensions and hole positions for VFDs of 380V 090G/110P–160G/185P

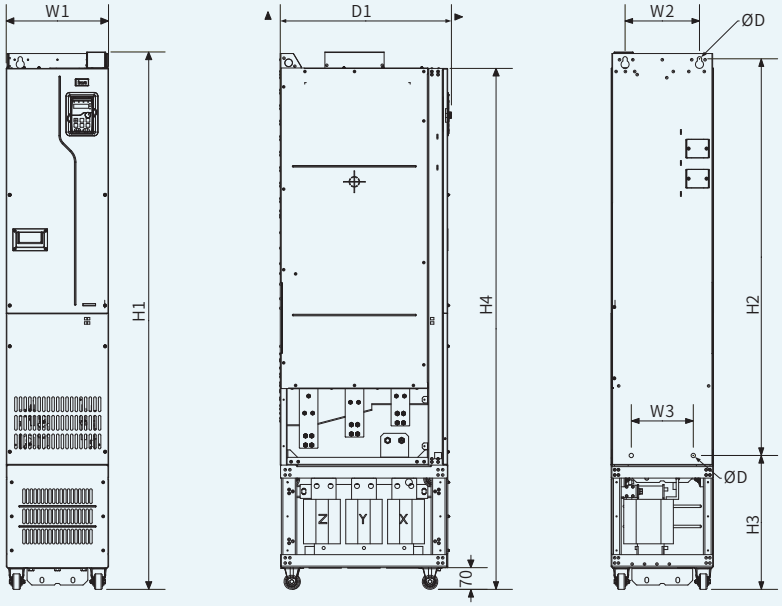
VFD model	Outline dimensions (mm)			Installation dimensions (mm)							Mounting hole diameter (mm)	Fixing screw
	W1	H1	D1	W2	H2	D2	W3	H3	W4	H4		
090G/110P~110G/132P	418.5	600	337	389.5	370	149.5	361	559	14.2	108.5	Ø9.5	M8
132G/160P~160G/185P	428	868	398	394	625	183	345	830	24.5	80	Ø11	M10

Floor mounting dimensions



Floor-mounting diagram for 380V 185G/200P–450G/500P models

VFD model	Outline dimensions (mm)			Mounting hole distance (mm)				Mounting hole diameter (mm)	Fixing screw
	W1	H1	D1	H2	H3	W2	W3		
185G/200P~315G/355P	330	1288	552	1150	122	225	185	Ø13	M10
355G/400P~450G/500P	330	1398	552	1280	101	240	200	Ø14	M10



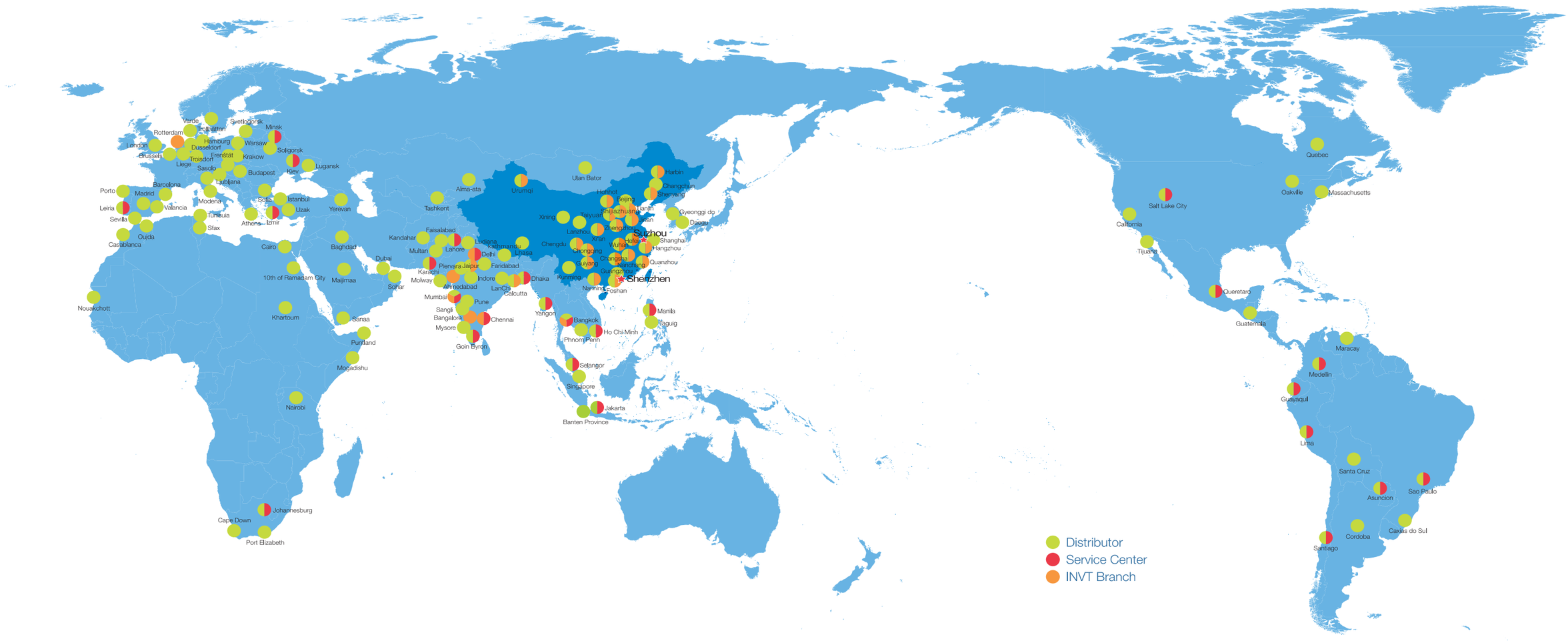
Floor-mounting diagram for 380V 185G/200P–450G/500P models

VFD model	Outline dimensions (mm)				Mounting hole distance (mm)					Mounting hole diameter (mm)	Fixing screw
	W1	W4	H1	D1	H2	H3	H4	W2	W3		
200G/220P~315G/355P-L3	330	390	1619	552	1150	453	1571	225	185	Ø13	M10
355G/400P~450G/500P-L3	330	390	1729	552	1280	432	1681	240	200	Ø14	M10

Ordering Guide

Product type	Ordering code	Product model	Remarks
VFD	11001-02783	GD350A-7R5G/011P-4-S	/
	11001-02784	GD350A-011G/015P-4-S	/
	11001-02785	GD350A-015G/018P-4-S	/
	11001-02786	GD350A-018G/022P-4-S	/
	11001-02787	GD350A-022G/030P-4-S	/
	11001-02788	GD350A-030G/037P-4-S	/
	11001-02789	GD350A-037G/045P-4-S	/
	11001-02790	GD350A-045G/055P-4-S	/
	11001-02791	GD350A-055G/075P-4-S	/
	11001-02792	GD350A-075G/090P-4-S	/
	11001-02793	GD350A-090G/110P-4-S	/
	11001-02794	GD350A-110G/132P-4-S	/
	11001-02795	GD350A-132G/160P-4-S	/
	11001-02796	GD350A-160G/185P-4-S	/
	11001-02797	GD350A-185G/200P-4-S	/
	11001-02798	GD350A-200G/220P-4-S	/
	11001-02799	GD350A-220G/250P-4-S	/
	11001-02800	GD350A-250G/280P-4-S	/
	11001-02801	GD350A-280G/315P-4-S	/
	11001-02802	GD350A-315G/355P-4-S	/
	11001-02803	GD350A-355G/400P-4-S	/
	11001-02804	GD350A-400G/450P-4-S	/
	11001-02805	GD350A-450G/500P-4-S	/
Expansion card	11023-00083	EC-IO501-00	I/O expansion card 1
	11023-00119	EC-IO502-00	I/O expansion card 2
	11023-00197	EC-TX510B	EtherNet IP multi-protocol communication card
	11023-00164	EC-TX505D	CAN multi-protocol communication card
	11023-00149	EC-TX509C	PROFINET communication card
	11023-00151	EC-TX503D	PROFIBUS-DP communication card
LCD keypad	11022-00091	KEY-LCD01-ZY-350	LCD keypad

Marketing Service Network



Your Trusted Industry Automation Solution Provider

@invtelectric

E-mail:overseas@invt.com.cn Website:www.invt.com

SHENZHEN INVT ELECTRIC CO.,LTD. INVT Guangming Technology Building, Songbai Road, Matian, Guangming District, Shenzhen, China

Industrial Automation:
- HMI
- PLC
- VFD
- Servo System
- Elevator Intelligent Control System
- Rail Transit Traction System

Electric Power:
- UPS
- DCIM
- Solar Inverter
- New Energy Vehicle Powertrain System
- New Energy Vehicle Charging System
- New Energy Vehicle Motor

66003-00366 202412(V1.0)