

GD350-IP55 Series

High-protection Multi-function VFD



Goodrive350 -IP55

GD350-IP55 is INVT's latest high protection multifunction VFD. The IP55 protection rating provides the best protection experience for most harsh outdoor applications. GD350-IP55 also incorporates features such as ease of use, excellent performance, high scalability and wide usage. At the same time, an integrated AC switch also provides convenience and security for machine control and debugging.



Features



IP55 protection level



AC switch for safe control



Drive various motors



Strong scalability: support to insert 3 extension cards at the same time



Isolated air duct



Sectional cover design makes the wiring simple

Application



Aquaculture farm



Water treatment



Fan

Type Selection

GD350 – 004G/5R5P – 4 5 – AS

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Sign	Description	Remark
①	Abbreviation of product series	GD350: Goodrive350 high-performance multi-function VFD
②	Power range + Load type	004G/5R5P: 4kW G: Constant torque load P: Fan and water pump
③	Voltage level	4: AC 3PH 380(-15%)-440V(+10%)
④	Protection level	5: IP55 level
⑤	Special remark	AS: AC input switch

Note:

Brake units have been built in the 37kW and lower VFD models as standard configuration.

Brake units are not standard configuration for the 45-110kW VFD models. (If you want to use braking units for these models, add suffix "-B" at the end of the model codes in your purchase orders, for example, GD350-045G/055P-45-AS-B.)

Power Ratings

Case	Model	Constant torque				Variable torque			
		Power (kW)	Input current (A)	Output current (A)	Carrier (kHz)	Power (kW)	Input current (A)	Output current (A)	Carrier (kHz)
1	GD350-004G/0R5P-45-AS	4	13.5	9.5	8	5.5	19.5	12.5	4
	GD350-5R5G/7R5P-45-AS	5.5	19.5	14	8	7.5	23	17	4
2	GD350-7R5G/011P-45-AS	7.5	25	18.5	8	11	30	23	4
	GD350-011G/015P-45-AS	11	32	25	8	15	40	32	4
	GD350-015G/018P-45-AS	15	40	32	4	18.5	45	38	2
3	GD350-018G/022P-45-AS	18.5	45	38	4	22	51	45	2
	GD350-022G/030P-45-AS	22	51	45	4	30	64	60	2
4	GD350-030G/037P-45-AS	30	64	60	4	37	80	75	2
	GD350-037G/045P-45-AS	37	80	75	4	45	98	92	2
5	GD350-045G/055P-45-AS	45	98	92	4	55	128	115	2
	GD350-045G/055P-45-AS-B	45	98	92	4	55	128	115	2
	GD350-055G/075P-45-AS	55	128	115	4	75	139	150	2
	GD350-055G/075P-45-AS-B	55	128	115	4	75	139	150	2
6	GD350-075G/090P-45-AS	75	139	150	2	90	168	170	2
	GD350-075G/090P-45-AS-B	75	139	150	2	90	168	170	2
	GD350-090G/110P-45-AS	90	168	180	2	110	201	215	2
	GD350-090G/110P-45-AS-B	90	168	180	2	110	201	215	2
	GD350-110G-45-AS	110	201	215	2	-	-	-	-
	GD350-110G-45-AS-B	110	201	215	2	-	-	-	-

Size & Weight table

Case	Power (kW)	Net weight (kg)	Gross weight (kg)	Product size (mm)	Carton size (mm)
1	4-5.5	7	8.5	196*403*260.5	545*285*370
2	7.5-15	13	15.4	223*475*289.4	605*355*400
3	18.5-22	21	23.6	274*522*279.5	680*390*425
4	30-37	26.5	29.5	318*587*290	770*420*440
5	45-55	48.2	52	338*600*336.7	990*480*515
6	75-110	64	82.8	370*788*380	945*480*600

Product Specification

	Function description	Specification
Power	Input voltage (V)	-4 model: 3PH 380V(-15%)~440V(+10%)
	Input current (A)	50Hz or 60Hz, allowable range: 47~63Hz
Power output	Output Voltage (V)	0~input voltage
	Output frequency (Hz)	0~400Hz
Technical control performance	Control mode	SVPWM control, SVC, VC
	Motor type	Asynchronous motor, permanent-magnet synchronous motor
	Speed regulation ratio	Asynchronous motor 1: 200 (SVC); Synchronous motor 1: 20 (SVC) , 1:1000 (VC)
	Speed control precision	±0.2%(SVC), ±0.02%(VC)
	Speed fluctuation	± 0.3%(SVC)
	Torque response	<20ms(SVC) , <10ms(VC)
	Torque control precision	10%(SVC) , 5%(VC)
	Starting torque	Asynchronous motor: 0.25Hz/150% (SVC) Synchronous motor: 2.5 Hz/150% (SVC) 0Hz/200% (VC)
	Overload capacity	G type: 150%: 1min; 180%: 10s; 200%: 1s; P type: 120%: 1min;
Running control performance	Frequency setup mode	Digital, analog, pulse frequency, multi-step speed running, simple PLC, PID, Modbus communication, PROFIBUS communication, etc. Realize switch-over between the set combination and the set channel
	Automatic voltage regulation function	Keep the output voltage constant when grid voltage changes
	Fault protection function	Provide over 30 kinds of fault protection functions: overcurrent, overvoltage, undervoltage, over-temperature, phase loss and overload, etc.
	Speed tracking restart	Realize impact-free starting of the motor in rotating Note: This function is available for 004G/5R5P and above models
Peripheral interface	Analog input	2
	Analog output	1
	Digital input	4 S terminal, 2 HDI
	Digital output	1 Y1, 1HDO
	Relay output	2 programmable relay output, NO/NC contact; R01A, R01B, R01C R02A, R02B, R02C
	Communication interface	1 RS485 (non-isolated), 1 USB
	STO input	2 redundant input
Optional cards	Expansion interface	Maximum 3 expansion interfaces:SLOT1, SLOT2, SLOT3
	Expansion I/O card	4 DI, 1 AI, 1 AO, 1 DO, 2 RO
	Communication card	Optional Profibus-DP, CANopen, Profinet, EtherCAT, Ethernet/IP, Modbus TCP etc.
	PG card	EC-PG503-06: 5V Differential Incremental (H2)
		EC-PG504-00: Resolver type PG card (D1)
		EC-PG505-12: 5V/12V Multifunctional Incremental (H1)
		EC-PG505-24: 24V Incremental PG card
		EC-PG502: SIN/COS PG card
	Programmable card	EC-PG507-12: Multifunctional Incremental PG card; PLC card, 1 AI, 6 DI, 1 AO, 2 Relay, 1 RS485
	Wireless communication	Bluetooth, WiFi, realize wireless communication
Others	Installation mode	Wall mounting, flange mounting
	Temperature	-10~50℃ (Derating is required if the ambient temperature exceeds40℃)
	Protection level	IP55
	Cooling mode	Forced air cooling
	Braking unit	37kW or below: standard built-in 45kW or above: optional built-in
	STO level	SIL2
	EMC filter	380V models fulfill the requirements of IEC61800-3 C3, up to 30m cable length shielded,