

# GD350-UL Series

High-performance Multi-function VFD



## Introduction

GD350-UL is a brand new high-performance VFD which integrates the speed, torque, and position control. It has built-in STO function and standard LCD keypad. And it's highly extensible and flexible with quantities of extension cards. GD350-UL is widely available to satisfy in plastics, textiles, machine tools, food packaging, chemicals, printing, building materials, etc.



## Features

- Support multiple types of motors.
- Support both constant torque load and variable torque load.
- Keep running for a while when power off Instantaneously.
- Three card slots for rich variety of extension demands.
- Optional built-in PLC card for secondary development.
- Rich external interfaces can meet most applications.
- Bluetooth/WIFI access enables APP to replace traditional control operation.
- Built-in STO(SIL2) function make it safe and reliable.
- Built-in brake unit for VFDs of 220V ( $\leq 15\text{kW}$ ) and 460V ( $\leq 30\text{kW}$ ).

## Applications



## Model Selection

## GD350-045G/055P-4-UL

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Filed	Sign	Description	Contents
Abbreviation of product series	①	Abbreviation of product series	GD350: Goodrive350 high-performance multi-function VFD
Rated power	②	Power range+ load type	045: 45kW 055: 55kW G— Constant torque load P— Variable torque load
Voltage level	③	Voltage level	2: 3PH 200V-240V Rated voltage: 220V 4: 3PH 380V-480V Rated voltage: 460V 6: 3PH 520V-600V Rated voltage: 575V
Certification marking	④	Used in America	Certified by UL and CUL

## Power Ratings

Voltage	Model	Rated output power (kW)	Rated output horsepower (HP)	Rated input current (A)	Rated output current (A)	Dimension W*H*D (mm)	Net weight (kg)	
3PH 200~240V	GD350-0R7G-2-UL	0.75	1	5	4.5	126*186*185	2	
	GD350-1R5G-2-UL	1.5	2	7.7	7	146*256*192	3.5	
	GD350-2R2G-2-UL	2.2	3	11	10			
	GD350-004G-2-UL	4	5	17	16	170*320*219	6	
	GD350-5R5G-2-UL	5.5	7.5	21	20			
	GD350-7R5G-2-UL	7.5	10	31	30	230*330*217	7.8	
	GD350-011G-2-UL	11	15	43	42	255*400*242	11	
	GD350-015G-2-UL	15	20	56	55			
	GD350-018G-2-UL	18.5	25	71	70	270*555*325	30	
	GD350-022G-2-UL	22	30	81	80			
	GD350-030G-2-UL	30	40	112	110			
	GD350-037G-2-UL	37	50	132	130			
	3PH 380~480V	GD350-045G-2-UL	45	60	163	160	325*680*365	47
		GD350-055G-2-UL	55	75	200	200		
GD350-1R5G-4-UL		1.5	2	5	3.7	126*186*185		
GD350-2R2G-4-UL		2.2	3	5.8	5			
GD350-004G/5R5P-4-UL		4/5.5	5/7.5	13.5/19.5	9.5/14	146*256*192	3.5	
GD350-5R5G/7R5P-4-UL		5.5/7.5	7.5/10	19.5/25	14/18.5			
GD350-7R5G/011P-4-UL		7.5/11	10/15	25/32	18.5/25	170*320*219	6	
GD350-011G/015P-4-UL	11/15	15/20	32/40	25/32				
GD350-015G/018P-4-UL	15/18.5	20/25	40/47	32/38	230*330*217	7.8		

Voltage	Model	Rated output power (kW)	Rated output horsepower (HP)	Rated input current (A)	Rated output current (A)	Dimension W*H*D (mm)	Net weight (kg)
3PH 380~480V	GD350-018G/022P-4-UL	18.5/22	25/30	47/56	38/45	230*330*217	7.8
	GD350-022G/030P-4-UL	22/30	30/40	56/70	45/60	255*400*242	11
	GD350-030G/037P-4-UL	30/37	40/50	70/80	60/75		
	GD350-037G/045P-4-UL	37/45	50/60	80/94	75/92	270*555*325	30
	GD350-045G/055P-4-UL	45/55	60/75	94/128	92/115		
	GD350-055G-4-UL	55	75	128	115		
	GD350-075P-4-UL	75	100	160	150	325*680*365	47
	GD350-075G/090P-4-UL	75/90	100/120	160/190	150/180		
	GD350-090G/110P-4-UL	90/110	120/150	190/225	180/215		
	GD350-110G-4-UL	110	150	225	215	500*870*360	76
	GD350-132P-4-UL	132	175	265	260		
	GD350-132G/160P-4-UL	132/160	175/215	265/310	260/305		
	GD350-160G/185P-4-UL	160/185	215/250	310/345	305/340		
	GD350-185G/200P-4-UL	185/200	250/270	345/385	340/380	750*1410*380	200
	GD350-200G/220P-4-UL	200/220	270/300	385/430	380/425		
	GD350-220G/250P-4-UL	220/250	300/340	430/485	425/480		
	GD350-250G/280P-4-UL	250/280	340/375	485/545	480/530		
	GD350-280G/315P-4-UL	280/315	375/425	545/610	530/600	620*1700*560	350
	GD350-315G/350P-4-UL	315/350	425/465	610/625	600/650		
	GD350-350G/400P-4-UL	350/400	465/535	625/715	650/720		
GD350-400G-4-UL	400	535	715	720	146*256*192	3	
GD350-500P-4-UL	500	670	890	860			
GD350-500G-4-UL	500	670	890	860			
GD350-0R7G-6-UL	0.75	1	3.3	2.1			
GD350-1R5G-6-UL	1.5	2	5	3.2	170*320*219	5.8	
GD350-2R2G-6-UL	2.2	3	7	4.5			
GD350-004G-6-UL	4	5	10	6.5	230*320*219	7.8	
GD350-5R5G-6-UL	5.5	7.5	13	9			
GD350-7R5G-6-UL	7.5	10	16.5	12			
GD350-011G-6-UL	11	15	19	16	270*555*325	30	
GD350-015G-6-UL	15	20	24	21			
GD350-018G-6-UL	18.5	25	29	27	325*680*365	47	
GD350-022G-6-UL	22	30	40	35			
GD350-030G-6-UL	30	40	47	45			
GD350-037G-6-UL	37	50	52	52	325*680*365	47	
GD350-045G-6-UL	45	60	65	62			
GD350-055G-6-UL	55	75	85	86			
GD350-075G-6-UL	75	100	95	98			
GD350-090G-6-UL	90	120	118	120	325*680*365	47	
GD350-110G-6-UL	110	150	145	150			

# Technical specification

Power input	Input voltage(V) & Power	3PH 200V~240V Rated voltage: 220V 0.75~55kW(1~75HP) 3PH 380V~480V Rated voltage: 460V 1.5~500kW(2~670HP) 3PH 520V~600V Rated voltage: 575V 0.75~110kW(1~150HP) Allowable voltage fluctuation: -15%~+10%
	Input frequency(Hz)	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%: 60s 180%: 10s 200%: 1s P type: 120%: 60s 150%: 10s 180%: 1s
Running control performance	Frequency setting mode	Digital, analog, pulse frequency, multi-step speed running, simple PLC, PID, Modbus communication, PROFIBUS communication, etc.
	Automatic voltage regulation	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. It's available for power ≥4kW
Peripheral interface	Analog input	2 inputs, AI1: 0~10V/0~20mA; AI2: -10~10V
	Analog output	1 output, AO1: 0~10V /0~20mA
	Digital input	4 regular inputs; max. frequency: 1kHz; internal impedance:3.3kΩ 2 high-speed inputs; max. frequency: 50kHz; supports quadrature encoder input
	Digital output	1 high-speed pulse output; max. frequency: 50kHz 1 Y terminal open collector output
	Relay output	2 programmable relay outputs. Contact capacity: 3A/AC250V, 1A/DC30V
	STO(Safety torque off)	Integrates safety function-STO, SIL2
	Standard LCD keypad	Maximum 16 lines text display as well as graphical display, Wizard Mode.
Optional expansion 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, etc.
	PG card	EC-PG503-05: 5V Differential Incremental EC-PG504-00: Resolver type PG card EC-PG505-12: 5V/12V Multifunctional Incremental EC-PG505-24: 24V Incremental PG card EC-PG502: SIN/COS PG card EC-PG507-12: Simple Incremental PG card
	Programmable card	PLC card, 1 AI, 6 DI, 1 AO, 2 Relay, 1 RS485
	Wireless communication	Bluetooth, WiFi, realize wireless communication
Others	Installation mode	Support wall-mounting, floor-mounting and flange-mounting
	Temperature	-10~50°C (Derating is required if the ambient temperature exceeds 40°C)
	Protection level	IP20 (With Optional Kits can support NEMA1)
	Cooling mode	Air cooling
	Reactor	3-phase 380~480: 220kW-500kW, standard built-in AC input reactors
	Brake unit	Built-in for VFDs of 220V (≤15kW) and 460V(≤30kW); Optional for VFDs of 220V (18.5~55kW), 460V(≥37kW), and 575V
	EMC filter	The VFDs of 460V are configured with built-in C3 filters, meeting the requirements of IEC61800-3 C2.