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Goodrive350A Series

High-performance Multi-function VFD



Management Service

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Introduction

GD350A takes advantage of dedicated processor for motor control. It enhances scalability and usability with SVC, VC, STO, LCD keypad, etc. The unity of G/P models can accommodate most operational requirements. Besides, GD350A supports mobile APP operation and has secondary development function.

GD350A integrates versatile functions into drive, to meet various load and diversified needs.



Features

- High precision data
- Entire drive
- Fire mode
- Flexible secondary development
- Standard STO(SIL2)
- Optional wireless communication (Bluetooth/ WIFI)

Type Selection

GD350A – 5R5G/7R5P - 4 - B
① ② ③ ④

Sign	Description	Remark
①	Abbreviation of product series	GD350A: Goodrive350A high-performance multi-function VFD
②	Power range+load type	5R5G/7R5P: 5.5kW G: Constant torque load P: Fan and water pump
③	Voltage level	4: AC 3PH 380V(-15%)~440V(+10%) Rated voltage: 380V
④	Brake unit	B:Optional built-in braking unit

Power Ratings

Model	Rated power (kW)	Rated input current (A)	Rated output current (A)	Dimension W*H*D(mm)		Gross weight (kg)	
				Product	Package	Net	Gross
GD350A-1R5G/2R2P-4	1.5/2.2	5.0/5.8	3.7/5	126*186*185	290*210*265	2	3
GD350A-2R2G/003P-4	2.2/3	5.8/11	5/7				
GD350A-004G/5R5P-4	4/5.5	13.5/19.5	9.5/12.5	126*186*201	290*210*265	2.5	3.5
GD350A-5R5G/7R5P -4	5.5/7.5	19.5/23	14/17				
GD350A-7R5G/011P-4	7.5/11	25/30	18.5/23	146*256*192	343*230*270	3	4
GD350A-011G/015P-4	11/15	32/40	25/32	170*320*220	430*275*325	6	7
GD350A-015G/018P-4	15/18.5	40/45	32/38				
GD350A-018G/022P-4	18.5/22	45/51	38/45	200*340.6*208	490*315*315	8.5	10.5
GD350A-022G/030P-4	22/30	51/64	45/60				
GD350A-030G/037P-4	30/37	64/80	60/75	250*400*223	580*395*360	16	17
GD350A-037G/045P-4	37/45	80/98	75/92				
GD350A-045G/055P-4	45/55	98/128	92/115	282*560*258	680*425*380	25	29
GD350A-055G/075P-4	55/75	128/139	115/150				
GD350A-075G/090P-4	75/90	139/168	150/170				
GD350A-090G/110P-4	90/110	168/201	180/215	338*554*330	675*470*575	41	52
GD350A-110G/132P-4	110/132	201/265	215/260				
GD350A-132G/160P-4	132/160	265/310	260/305	500*870*360	971*631*565	85	110
GD350A-160G/185P-4	160/185	310/345	305/340				
GD350A-185G/200P-4	185/200	345/385	340/380				
GD350A-200G/220P-4	200/220	385/430	380/425				
GD350A-220G/250P-4	220/250	430/460	425/480	680*960*380	1086*826*595	135	165
GD350A-250G/280P-4	250/280	460/500	480/530				
GD350A-280G/315P-4	280/315	500/580	530/600				
GD350A-315G/355P-4	315/355	580/625	600/650				
GD350A-355G/400P-4	355/400	625/715	650/720	620*1700*560	1850*840*820	350	407
GD350A-400G/450P-4	400/450	715/840	720/820				
GD350A-450G/500P-4	450/500	840/890	820/860				
GD350A-500G-4	500	890	860				

Technical Specification

Function description		Specification
Power input	Input voltage (V)	AC 3PH 380V (-15%)–440V (+10%) rated voltage: 380V
	Input current (A)	Refer to Rated value
	Input frequency (Hz)	50Hz or 60Hz, allowable range: 47–63Hz
Power output	Output voltage (V)	0–input voltage
	Output current (A)	Refer to Rated value
	Output power (kW)	Refer to Rated value
	Output frequency (Hz)	0–400Hz

Function description		Specification
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	150% of rated current: 1min(G) 120% of rated current: 1min(P)
Running control performance	Frequency setup mode	Digital, analog, pulse frequency, multi-step speed Sinple PLC, PID, Modbus communication.
	Automatic voltage regulation function	Keep the output voltage constant when grid voltage changes.
	Fault protection function	Fault protection function Provide over 30 kinds of fault protection functions: overcurrent, overvoltage, under-voltage, over-temperature, phase loss and overload, etc.
	Speed tracking restart function	Realize impact-free starting of the motor in rotating Note: This function is available for 004G/5R5P and above models
Peripheral Interface	Terminal analog input	No more than 20mV
	Terminal digital input resolution	No more than 2ms
	Analog input	2 inputs, AI1: 0–10V/0–20mA; AI2: -10–10V
	Analog output	1 output, AO1: 0–10V /0–20mA
	Digital input	Four regular inputs; Max. frequency: 1kHz; Internal impedance: 3.3kΩ Two high-speed inputs; Max. frequency: 50kHz; supports quadrature encoder input; 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 port RO2A NO, RO2B NC, RO2C common port Contact capacity: 3A/AC250V, 1A/DC30V
	Extension interface	Three extension interfaces: SLOT1, SLOT2, SLOT3 Expandable PG card, programmable extension card, communication card, I/O card, etc.
Others	Installation mode	Support wall-mounting, floor-mounting and flange-mounting
	Temperature of running environment	-10–50°C, derating is required if the ambient temperature exceeds 40°C
	Protection level	IP20
	Pollution level	Level 2
	Cooling mode	Air cooling
	Brake unit	The VFD models of 037G/045P and lower contain built-in braking units. The braking units are optional parts for the 045G/055P–055/075P VFD models, and the braking units can be built in or externally connected.
	Certification	380V models fulfill the requirements of IEC61800-3 C3 Optional external filter should meet the requirements of IEC61800-3 C2

Extension cards

Name	Model	Specifications	Ordering information
IO 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
IO expansion card 2	EC-IO502-00	Four digital inputs; One PT100; One PT1000; Two relay outputs: single-contact N.O. output	11023-00119
Bluetooth communication card	EC-TX501-1	•Supporting Bluetooth 4.0 •With INVT's mobile phone APP, you can set the parameters and monitor the VFD status through Bluetooth communication. •Maximum communication distance in an unobstructed environment: 30 meters •EC-TX501-1 with a built-in antenna, applicable to molded case machines •EC-TX501-2 with an external sucker antenna, applicable to sheet metal machines	11023-00088
	EC-TX501-2		11023-00089
Wi-Fi communication card	EC-TX502-1	•Meeting requirements of IEEE802.11b/g/n •Achieving local or remote monitoring through Wi-Fi communication with the mobile INVT Workshop •Maximum communication distance in an unobstructed environment: 30 meters •EC-TX502-1 with a built-in antenna, applicable to molded case machines •EC-TX502-2 with an external sucker antenna, applicable to sheet metal machines	11023-00101
	EC-TX502-2		11023-00102
PROFIBUS-DP communication card	EC-TX503D	Supporting the PROFIBUS-DP protocol	11023-00151
CAN multi-protocol communication card	EC-TX505D	•Based on the CAN2.0A and CAN2.0B physical layer •Supporting the CANopen protocol, selectable through a switch •Supporting INVT master/slave control proprietary protocol, selectable through a switch	11023-00164
PROFINET communication card	EC-TX509C	Supporting the PROFINET protocol	11023-00149
Ethernet/IP multi-protocol communication card	EC-TX510B	Supporting the Ethernet/IP, Modbus TCP, and internal Ethernet protocols, selectable through a switch	11023-00197
Programmable card	EC-PC502-00	•Adopting the global mainstream programmable card development environment, supporting multiple programming languages such as the instruction language, ladder diagram, and sequential function chart •Supporting resumable commissioning and task period execution mode selection •Providing a user program storage space of 16K steps and data storage space of 8K words •Six digital inputs •Two relay outputs •One analog input and one analog output •One RS485 communication channel, allowing master/slave switchover through the host controller •Supporting saving data of 1K words at power down	11023-00146
Sin/Cos PG card	EC-PG502	•Applicable to Sin/Cos encoders with or without CD signals •Supporting the frequency-divided output of A, B, and Z •Supporting input of pulse train reference	11023-00109
Incremental PG card with UVW	EC-PG503-05	•Applicable to differential encoders of 5V •Supporting the orthogonal input of A, B, and Z •Supporting the pulse input of phases U, V, and W •Supporting the frequency-divided output of A, B, and Z •Supporting input of pulse train reference	11023-00085
Resolver PG card	EC-PG504-00	•Applicable to resolver encoders •Supporting frequency-divided output of resolver-simulated A, B, and Z •Supporting input of pulse train reference	11023-00086
Multi-function incremental PG card	EC-PG505-12	•Applicable to OC encoders of 5V or 12V •Applicable to push-pull encoders of 5V or 12V •Applicable to differential encoders of 5V •Supporting the orthogonal input of A, B, and Z •Supporting the frequency-divided output of A, B, and Z •Supporting input of pulse train reference	11023-00087
24V incremental PG card	EC-PG505-24B	•Applicable to OC encoders of 24V •Applicable to push-pull encoders of 24V •Applicable to differential encoders of 24V •Supporting the orthogonal input of A, B, and Z •Supporting the frequency-divided output of A, B, and Z •Supporting input of pulse train reference	11023-00139
Simplified incremental PG card	EC-PG507-12	•Applicable to OC encoders of 5V or 12V •Applicable to push-pull encoders of 5V or 12V •Applicable to differential encoders of 5V	11023-00115
24V simplified incremental PG card	EC-PG507-24	•Applicable to OC encoders of 24V •Applicable to push-pull encoders of 24V •Applicable to differential encoders of 24V	11023-0012
GPRS expansion card	EC–IC501-2	•Supporting IoT monitoring •Supporting remote VFD upgrade	11023-00130
4G expansion card	EC-IC502-2-CN EC-IC502-2-EU EC-IC502-2-LA	•Supporting standard RS485 interface •Supporting 4G communication •CN: Domestic version; EU: European and American version; LA: Latin American version. Note: The 4G SIM card is standard for the domestic version.	11095-00009 11095-00017 11095-00018
24V power supply expansion card	EC-PS501-24	•Input voltage range: DC18–30V(Rated 24VDC)/2A •Three channels of output voltage: +5V/1A (±5%), +15V/0.2A (±10%), -15V/0.2A (±10%)	11023-00135

Note: Contact us for details about the EtherCAT communication card, relay card, 24V power supply card, GPRS expansion card with anti-vibration and high precision GPS positioning functions.