

QUICK AND EASY

Whether you are installing, wiring, programming, or troubleshooting, the GA500 has features that help simplify the task for you.



NO POWER? NO PROBLEM!

The GA500 can be programmed without any power supply connected, even while the drive is still in the box. Simply plug into one of your PC's USB ports or any USB on-the-go device, start programming and enjoy the ease of commissioning.

Display
Easy-to-read LED display.

Keypad
Multi-directional buttons to help you intuitively navigate through drive menus and parameters. Tactile feel of the buttons lets you know when you've pressed a button.

Parameter Backup / Copy
Removable keypad allows you to back up and copy parameters to other drives.

24 VDC Power Input for Controller
Simplify your wiring and keep your control system operating even during standby or power outage.

- Power Range**
- 240 VAC, Single-Phase: 1/6 – 5 HP
 - 240 VAC, Three-Phase: 1/6 – 30 HP
 - 480 VAC, Three-Phase: 1/2 – 40 HP



USB Port
Easily connect your PC or mobile device to program the drive with or without power.

LED Status Ring
You can determine the drive status with a quick glance at the LED status ring and know the GA500 is ready and operating.

Finger Safe Terminals
Easily access terminals to make the wiring process faster and easier. No need to remove the cover.

SOLID HARDWARE

Reduce setup time to minutes using the setup wizard. Even without any drive parameter knowledge, the step-by-step wizard will guide you and get you up and running.



Enhance your experience with the optional LCD keypad.

OPTIONAL LCD KEYPAD

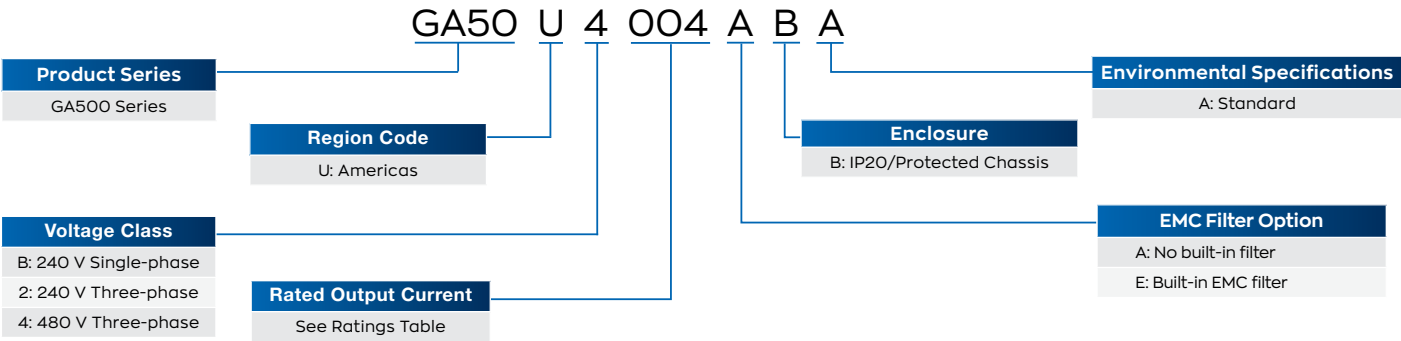
Advanced keypad navigation:

- High-resolution display
- Automatic backup function
- Copy function (4 parameter sets)
- Real-time clock
- Micro SD storage for data logging (up to 32 GB)
- Optional Bluetooth® version

Bluetooth® is a registered trademark of Bluetooth SIG, Inc. USA.

SPECIFICATIONS

Catalog Code Designation



RATINGS

Power Output (HP)		240 V Models								480 V Models			
		Single-Phase				Three-Phase				Three-Phase			
Normal Duty (ND)	Heavy Duty (HD)	Catalog Code	Output Amps		Frame	Catalog Code	Output Amps		Frame	Catalog Code	Output Amps		Frame
			ND	HD			ND	HD			ND	HD	
1/6	1/6	GA50UB001ABA	1.2	0.8	1.1	GA50U2001ABA	1.2	0.8	1.1				
1/4	1/4	GA50UB002ABA	1.9	1.6	1.1	GA50U2002ABA	1.9	1.6	1.1				
1/2	1/2									GA50U4001ABA	1.2	1.2	2.1
3/4	1/2	GA50UB004ABA	3.5	3	1.3	GA50U2004ABA	3.5	3	1.2				
1	3/4									GA50U4002ABA	2.1	1.8	2.2
1.5	1	GA50UB006ABA	6	5	2.4	GA50U2006ABA	6	5	1.4				
2	2									GA50U4004ABA	4.1	3.4	2.4
3	2	GA50UB010ABA	9.6	8	2.5	GA50U2010ABA	9.6	8	2.3				
3	3	GA50UB012ABA	12.2	11	3.2					GA50U4005ABA	5.4	4.8	2.5
4	3					GA50U2012ABA	12.2	11	2.4	GA50U4007ABA	7.1	5.6	2.5
5	4									GA50U4009ABA	8.9	7.3	2.5
N/A	5	GA50UB018ABA	N/A	17.6	4								
7.5	5					GA50U2021ABA	21	17.6	3.1	GA50U4012ABA	11.9	9.2	3.1
10	7.5					GA50U2030ABA	30	25	5				
10	10									GA50U4018ABA	17.5	14.8	5
15	10					GA50U2042ABA	42	33	5	GA50U4023ABA	23.4	18	5
20	15					GA50U2056ABA	56	47	6	GA50U4031ABA	31	24	6
25	20					GA50U2070ABA	70	60	7	GA50U4038ABA	38	31	6
30	25					GA50U2082ABA	82	75	7	GA50U4044ABA	44	39	8
40	30									GA50U4060ABA	60	45	8

APPROXIMATE DIMENSIONS

Frame Size	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	4	5	6	7	8
Height	5.04 (128)												10.24 (260)	11.81 (300)	13.78 (350)	
Width	2.68 (68)				4.25 (108)				5.51 (140)		6.69 (170)	5.51 (140)	7.09 (180)	8.66 (220)	7.48 (190)	
Depth	2.99 (76)	4.25 (108)	4.65 (118)	5.04 (128)	3.19 (81)	3.90 (99)	5.08 (129)	5.41 (137)	6.06 (154)	5.63 (143)	6.42 (163)	7.09 (180)	5.51 (140)	5.63 (143)	7.36 (187)	8.03 (204)

Dimensions shown in inches (mm).
Information on this page represents IP20/Protected Chassis type enclosures without the built-in EMC filter.
For other enclosure types and enclosure adapters, please visit [yaskawa.com](https://www.yaskawa.com).



SPECIFICATIONS

Operating Environment	
Ambient Temperature	-10 to +50°C (IP20/Protected Chassis), -10 to +40°C (IP20/UL Type 1), up to +60°C with derating
Storage Temperature	-40 to +70°C (short-term temperature during transportation)
Humidity	95% RH or less (non-condensing)
Altitude	Up to 1000 m without derating, up to 4000 m with derating
Shock	10 to 20 Hz: 9.8 m/s² 20 to 55 Hz: 5.9 m/s²
Protection Design	IP20/Protected Chassis (Standard), IP20/UL Type 1 kit (Optional)
Mounting	Side-by-side, DIN rail, external heatsink
Conformal Coating (PCBs)	IEC 60721-3-3, Class 3C2 (chemical gases), Class 3S2 (solid particles)
Standards	CE, UL, cUL, KC, RCM, EAC, RoHS
Functional Safety	IEC/EN 61800-5-2: STO, IEC/EN 61508: SIL3, EN ISO 13849-1: PL _e
Power Ratings	
Overload Capacity	110%/1 min. (Normal Duty) or 150%/1 min. (Heavy Duty)
Rated Voltage	200 to 240 V, -15 to +10% 380 to 480 V, -15 to +10%
Capacity Range	240 V, Single-phase: 1/6 to 5 HP (0.1 to 3.7 kW) 240 V, Three-Phase: 1/6 to 30 HP (0.1 to 22 kW) 480 V, Three-Phase: 1/4 to 40 HP (0.2 to 30 kW)
Input Frequency	50/60 Hz, +/-5%
Output Voltage Accuracy	+/-5%
Output Frequency	0 to 590 Hz (special software for up to 1000 Hz)
Control Method	V/f, Open Loop (IM/PM), Advanced Open Loop (PM), EZ Open Loop Vector
Motor Control	Induction Motor (IM), Interior or Surface Permanent Magnet Motor (IPM/SPM), Synchronous Reluctance Motor (SynRM)
Standard I/O	(7) multi-function digital inputs (24 VDC) (2) multi-function analog inputs (0 +/-10 VDC, 4-20 mA) (1) multi-function pulse input (2) Safe Torque Off (STO) inputs (1) fault relay output (form C) (2) multi-function photocoupler outputs (1) multi-function analog output (0 - 10 VDC, 4-20 mA) (1) multi-function pulse output (1) RS-485 (Modbus RTU)
Additional Functions	Integrated PID controller with sleep function, automatic load distribution for multiple axes (droop control), automatic main power loss ride through, speed search function for smooth start of coasting motors, braking with over-magnetization for fast stop without braking resistors, energy-saving function, automatic restart after failure, overvoltage suppression, virtual input/output custom configuration, application presets, vibration suppression
Options	
Communications (Requires Additional Mounting Kit)	CANopen®, CC-Link, DeviceNet™, EtherCAT®, Ethernet/IP™, Ethernet/IP Dual Port, MECHATROLINK-II, MECHATROLINK-III, Modbus/TCP, Modbus/TCP dual port, PROFIBUS-DP®, PROFINET®, LONWORKS
Additional Options	Bluetooth keypad, LCD keypad, Attachment for external heatsink, External EMC filters, AC reactors, DC chokes, Network communications adapter, LCD keypad attachment, braking resistors



To learn more about the GA500 and see how it can make your day-to-day life easier, please visit <https://www.yaskawa.com/ga500>.