

# GA501

## INDUSTRIAL AC MICRODRIVE WITH EMBEDDED ETHERNET

The GA501 industrial AC microdrive is designed for connected, modern industrial automation. Embedded dual-port Ethernet supports multiple industrial protocols and flexible network topologies without added option cards.

This built-in connectivity simplifies system design, reduces wiring, and shortens setup time, while lowering total cost and making installation and commissioning faster and more convenient.



### RATINGS

Power Output (HP)		240 V Models									480 V Models			
		Single-Phase				Three-Phase					Three-Phase			
Normal Duty (ND)	Heavy Duty (HD)	Catalog Code GA51U □□□□□□□□	Output Amps		Frame	Catalog Code GA51U □□□□□□□□	Output Amps		Frame	Catalog Code GA51U □□□□□□□□	Output Amps			Frame
			ND	HD			ND	HD			ND	HD	ND	
1/6	1/6	B001ANA	1.2	0.8	1.1	2001ANA	1.2	0.8	1.1					
1/4	1/4	B002ANA	1.9	1.6	1.1	2002ANA	1.9	1.6	1.1					
1/2	1/2									4001ANA	1.2	1.2	2.1	
3/4	1/2	B004ANA	3.5	3	1.3	2004ANA	3.5	3	1.2					
1	3/4									4002ANA	2.1	1.8	2.2	
1.5	1	B006ANA	6	5	2.4	2006ANA	6	5	1.4					
2	2									4004ANA	4.1	3.4	2.4	
3	2	B010ANA	9.6	8	2.5	2010ANA	9.6	8	2.3					
3	3	B012ANA	12.2	11	3.2					4005ANA	5.4	4.8	2.5	
4	3					2012ANA	12.2	11	2.4	4007ANA	7.1	5.6	2.5	
5	4									4009ANA	8.9	7.3	2.5	
N/A	5	B018ANA	N/A	17.6	4									
7.5	5					2021ANA	21	17.6	3.1	4012ANA	11.9	9.2	3.1	
10	7.5					2030ABA	30	25	5					
10	10									4018ABA	17.5	14.8	5	
15	10					2042ABA	42	33	5	4023ABA	23.4	18	5	
20	15					2056ABA	56	47	6	4031ABA	31	24	6	
25	20					2070ABA	70	60	7	4038ABA	38	31	6	
30	25					2082ABA	82	75	7	4044ABA	44	39	8	
40	30									4060ABA	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)				4.27 (108)						5.53 (140)		6.69 (170)	5.51 (140)	7.09 (180)	8.66 (220)	7.48 (190)
Depth	3.56 (90.5)	4.82 (122.5)	5.22 (132.5)	5.61 (142.5)	3.76 (95.5)	4.47 (113.5)	5.65 (143.5)	5.98 (152)	6.63 (168.5)	6.20 (157.5)	6.99 (177.5)	7.56 (192)	5.75 (146)	5.87 (149)	7.60 (193)	8.27 (210)	

Dimensions shown in inches (mm). Information on this page represents IP20 enclosures.

# GA501 SPECIFICATIONS

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Operating Environment	
Ambient Temperature	-10 to +50°C (IP20/Protected Chassis), up to +60°C with derating
Storage Temperature	-20 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
Vibration	Without DIN rail attachment: 10 to 20 Hz: 9.8 m/s <sup>2</sup> ; 20 to 55 Hz: 5.9 m/s <sup>2</sup>
	With DIN rail attachment: 10 to 20 Hz: 3.9 m/s <sup>2</sup> ; 20 to 55 Hz: 2 m/s <sup>2</sup>
Protection Design	IP20/Protected Chassis (Standard)
Mounting	Side-by-side, DIN rail up to 7.5 HP, external heatsink
Conformal Coating (PCBs)	IEC 60721-3-3, Class 3C2 (chemical gases), Class 3S2 (solid particles)
Standards	CE, UL, cUL, RCM, EAC, RoHS
Functional Safety	IEC/EN 61800-5-2: STO, IEC/EN 61508: SIL3, EN ISO 13849-1: PLe
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: 1/2 to 40 HP (0.4 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	(2) Multi-function digital inputs (24 VDC)
	(1) Multi-function analog input (0 to -10 VDC)
	(2) Safe Torque Off (STO) inputs
	(1) Relay output (form C)
Terminal Type	I/O: Spring tension type; Main circuit: Cage clamp screw-type
Communications	Dual Port: EtherNet/IP™, PROFINET®, Modbus TCP/IP, EtherCAT® BACnet/IP®, MECHATROLINK-4
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	
Additional Options	Bluetooth keypad, LCD keypad, Remote keypad mounting attachments, Attachment for external heatsink, External EMC filters, AC reactors, DC chokes, braking resistors

IT'S PERSONAL