

GA500

Industrial AC Microdrive

The GA500 industrial AC microdrive is engineered to help you easily handle nearly any application. Sustainability, flexibility and ease of use are all designed into the drive, helping you make complicated tasks simple. It offers value with integrated features that would commonly be offered separately as external components, resulting in reduced cost, less installation space, and decreased set-up time.



Ratings

Power Output (HP)		240 V Models									480 V Models		
		Single-Phase				Three-Phase					Three-Phase		
Normal Duty (ND)	Heavy Duty (HD)	Catalog Code GA50U	Output Amps		Frame	Catalog Code GA50U	Output Amps		Frame	Catalog Number GA50U	Output Amps		Frame
			ND	HD			ND	HD			ND	HD	
1/6	1/6	B001ABA	1.2	0.8	1.1	2001ABA	1.2	0.8	1.1				
1/4	1/4	B002ABA	1.9	1.6	1.1	2002ABA	1.9	1.6	1.1				
1/2	1/2									4001ABA	1.2	1.2	2.1
3/4	1/2	B004ABA	3.5	3	1.3	2004ABA	3.5	3	1.2				
1	3/4									4002ABA	2.1	1.8	2.2
1.5	1	B006ABA	6	5	2.4	2006ABA	6	5	1.4				
2	2									4004ABA	4.1	3.4	2.4
3	2	B010ABA	9.6	8	2.5	2010ABA	9.6	8	2.3				
3	3	B012ABA	12.2	11	3.2					4005ABA	5.4	4.8	2.5
4	3					2012ABM	12.2	11	2.4	4007ABA	7.1	5.6	2.5
5	4									4009ABA	8.9	7.3	2.5
N/A	5	B018ABA	N/A	17.6	4								
7.5	5					2021ABA	21	17.6	3.1	4012ABA	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					2056ABM	56	47	6	4031ABA	31	24	6
25	20					2070ABM	70	60	7	4038ABA	38	31	6
30	25					2082ABM	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)				4.25 (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 enclosures. For other enclosure types and enclosure adapters, please visit 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/s ² 20 to 55 Hz: 5.9 m/s ²
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, REACH, 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